

Magnolia and Tuliptree Scale (*Neolecanium cornuparvum* and *Toumeyella liriodendri*)

Order: Hemiptera; **Family:** Coccidae

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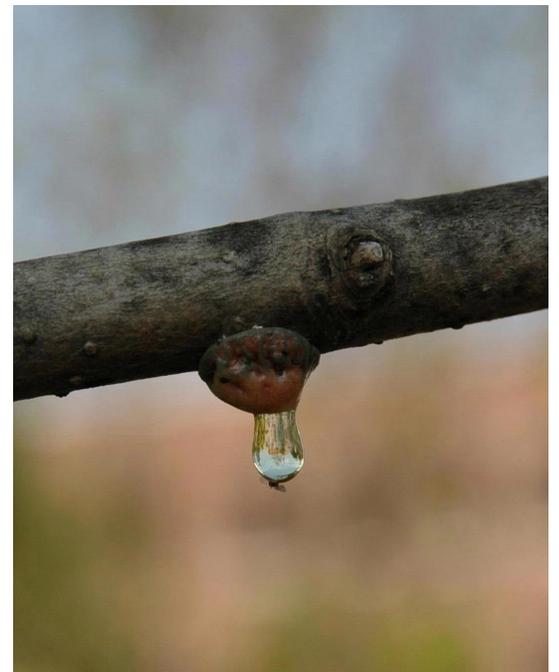
Hosts:

Magnolia scale is one of the largest soft scales found in the U.S. and feeds on the sap of magnolias, particularly star magnolia, lily magnolia, cucumber tree magnolia, and saucer magnolia. Tuliptree scale is often misidentified as magnolia scale, but it feeds on tuliptree (yellow popular), magnolias, and sometimes



Identification

Magnolia scale is approximately ½ inch in diameter. The females are pink-orange to brown in color, while the males are white in color. Overwintering nymphs are black with a median ridge. Magnolia scale excrete a waxy powder and copious amounts of honeydew; whereas, tuliptree scale only produces large amounts of honeydew. Large deposits of honeydew can give the plant a shiny appearance until the fungus, sooty mold, colonizes the honeydew turning it gray to black. Heavy infestation can cause branch dieback or plant death. Tuliptree scales are about 1/3 inch in diameter and may be grayish green



Biology

Both overwinter as immature nymphs and resume feeding in the spring. Nymphs mature from late July to August; males emerge as a fly-like insects and mate with females. Females give birth to crawlers during late August to September. Magnolia scale crawlers are typically active around 2,075—3,247 (2,746 peak) GDD₅₀ and tuliptree scale crawlers between 2,016—3,212 (2,860 peak) GDD₅₀. The crawlers eventually settle down on the plant to overwinter. Magnolia scale has only one generation per

Management Strategies

Scale control may need to be applied over several growing seasons, with proper timing. Applications should target newly emerged crawlers because once the scale settles, the waxy covering they excrete protects them from insecticides. Consequently, contact insecticides are less effective against settled nymphs and adults. Over-fertilization and plant stress provide situations favorable to scale populations; thus this should be avoided. High levels of infestations can lead to branch dieback or death of smaller trees. Branches that are highly infested may need to be pruned out to reduce sources of infestation to the rest of the tree. Horticultural oil and insecticidal soap will require multiple applications because there is little residual activity with these products. Systemic products like imidacloprid should be applied as a drench weeks before crawler emergence so the plant has an opportunity to acquire the insecticide through the roots. Natural enemies such as lady beetles, lacewings, and parasitoids attack both scale species. Some products available for use are in the following table.

Insecticide Common Name	Product name (professionals)	Product name (homeowners)
Acephate	Orthene	Bonide Systemic Insect Control
Abamectin	Avid	
Carbaryl	Sevin	Sevin, Bonide Fruit & Tree Spray, etc...
Pyrethroids	Talstar, Scimitar, others	Active ingredients end in “-thrin”; e.g., bifenthrin, cyhalothrin, deltamethrin, etc...
Dinotefuran	Safari	Green Light Tree & Shrub Insect Control with Safari
Buprofezin	Talus	
Insecticidal Soap	M-Pede	Garden Safe Insecticidal Soap Insect Killer Bonide Insecticidal Soap Multipurpose Insect Control
Imidacloprid	Zenith	Bayer Advanced Products, look at active ingredient listing
Horticultural Oil	Many options	Bonide All Seasons Spray Oil
Acetamiprid	Tristar	Ortho Rose Pride Insect Killer

Sources:

Hoover, G. (November 2003). Euonymus Scale – Entomology. The Pennsylvania State University College of Agricultural Sciences.

Townsend, L. (March 2005). Euonymus Scale. University of Kentucky College of Agriculture.

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