Tuliptree scale

Toumeyella liriodendri
Order Hemiptera, Family Coccidae; soft scales
Native pest

Host plants: Tuliptree and magnolia are the preferred hosts, but this insect may also occur on basswood, buttonbush, hickory, linden, redbud, and walnut

Description: Adult females are 6 mm to 12 mm. From August–September, the scales are large, convex, and orange with black mottling at the body margins. Then they die and turn brownish, but often remain attached for long periods, often one or two years, and are often mistaken for live scales the following spring. Crawlers are dark red.

Life history: Overwintered scales mature during the spring. Males emerge in June and mate with females. Live crawlers are produced, sometimes as many as 3,000 per female in late August and September. There is one generation a year.

Overwintering: Immatures on twigs.

Monitoring: This scale produces large quantities of honeydew, accompanied by sooty mold. The insects feed from spring through early August. Small trees may be killed by repeated, heavy infestations. All trees may suffer leaf yellowing, premature leaf drop, and branch dieback. Look for immatures overwintering on twigs. Look for developing females, beginning in spring, wherever honeydew and sooty mold occur. Ants may need to be controlled, as they protect scales from predators and parasitoids.

Biological control: Use oil sprays for control if populations are large, and natural enemies are present. Ant populations may need to be controlled, as they protect the scales from predators and parasitoids.

Chemical control: *General information.*

Conservation of beneficial insects: Use short duration, low residual insecticides, such as horticultural oil, insecticidal soap, and insect growth regulators (IGR).

Foliar applied broad spectrum insecticides, such as acephate, carbaryl, imidacloprid, and pyrethroids: Use only when scale populations are high to rescue trees; beneficial insects will also be killed.

Dormant season oil treatments: Use for soft scales that overwinter as immatures.

Summer oil treatments: Oil smothers exposed eggs, crawlers, and immature females.

Insect growth regulators (IGR), such as pyriproxifen: Use for crawlers as they disrupt molting.

Sooty mold and honeydew on star magnolia caused by tuliptree scale. (243)
Photo: Cliff Sadof

Tuliptree scale female. (243)
Photo: John Davidson

Tuliptree scale females in midsummer. (243)
Photo: Cliff Sadof

Tuliptree scale (continued)

Soil applied systemic insecticides or trunk injections, such as imidacloprid: Apply imidacloprid in fall for crawlers in spring. Less harmful to beneficial insects than foliar applied, broad spectrum insecticides.

Plant mortality risk: Medium to high

Biorational pesticides: horticultural oil, insecticidal soap, pyriproxifen

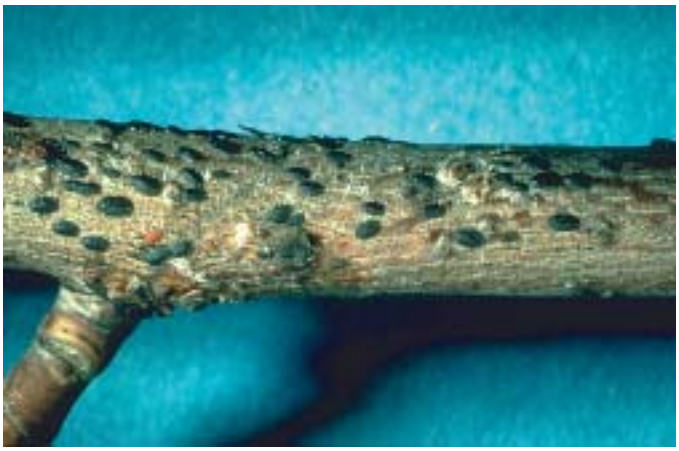
Conventional pesticides: acephate, bifenthrin, carbaryl, chlorpyrifos (nursery only), deltamethrin, fluvalinate, imidacloprid, lambda-cyhalothrin, malathion, permethrin

Tuliptree scale crawlers in September. (243)
Photo: Cliff Sadof

Male tuliptree scale. (244)
Photo: John Davidson

Dead tuliptree scale female with settled crawlers. (244)
Photo: John Davidson

Adult male tuliptree scale mounted on a slide. (384)
Photo: John Davidson



Tuliptree scale nymphs. (243)
Photo: John Davidson