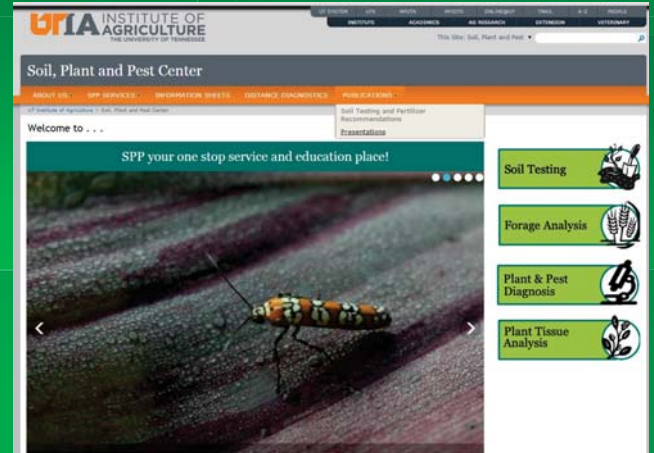


Crape Myrtle Bark Scale And Japanese Maple Scale Identification and Control

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Find PDFs of presentations and links to new publications at the Soil Plant and Pest Center web site under publications and presentations



Crape Myrtle Bark Scale *Eriococcus lagerstroemia*



Images courtesy of M. Merchant, Texas A&M AgriLife Extension

Crape myrtle bark scale
is a type of felt scale



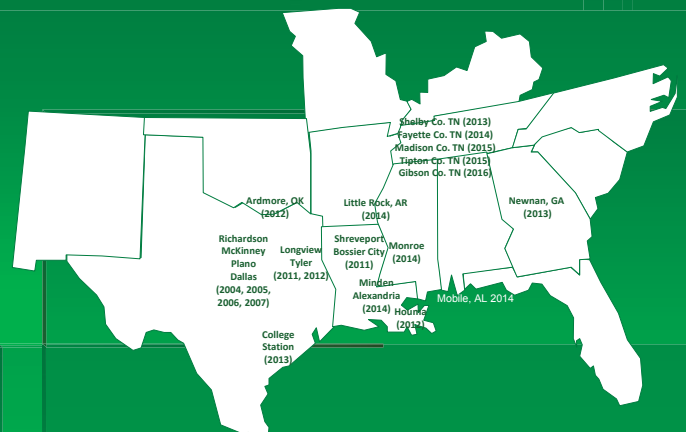
Crape Myrtle Bark Scale

New fact sheets at: http://www.uaex.edu/Other_Areas/publications/pdf/fsa-7086.pdf
And <http://www.agrilifebookstore.org/product-p/eht-049.htm>



Image courtesy of M. Merchant, Texas A&M AgriLife Extension

Crape Myrtle Bark Scale Populations - USA



In 2014, CMBS was also detected in Bernalillo County, New Mexico. In March 2015, CMBS was found in south Mississippi.

Stress Induced By the Scale



'Natchez' crape myrtle on left treated with dinotefuran on May 28, blooms better, appears more thrifty and lacks honeydew and black sooty mold compared to untreated one on right (Courtesy of J. Robbins, University of Arkansas)



Overwintering nymphs in bark cracks



Overwintering nymph



Overwintering nymphs

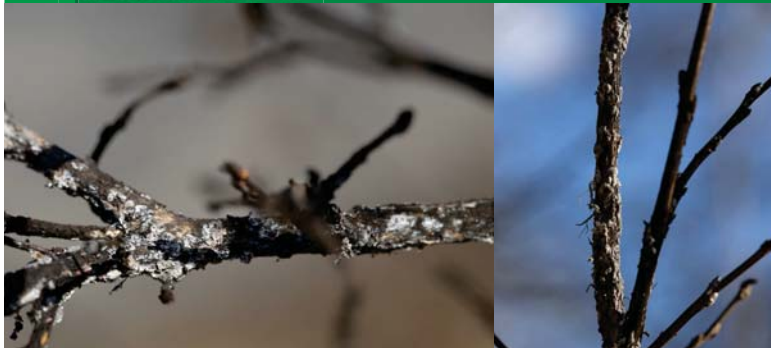


Overwintering nymph exuding wax filaments



A multipronged integrated pest management approach to crape myrtle bark scale

- First, apply a dormant application of horticultural oil



Adult Female
without cover
Dorsal View



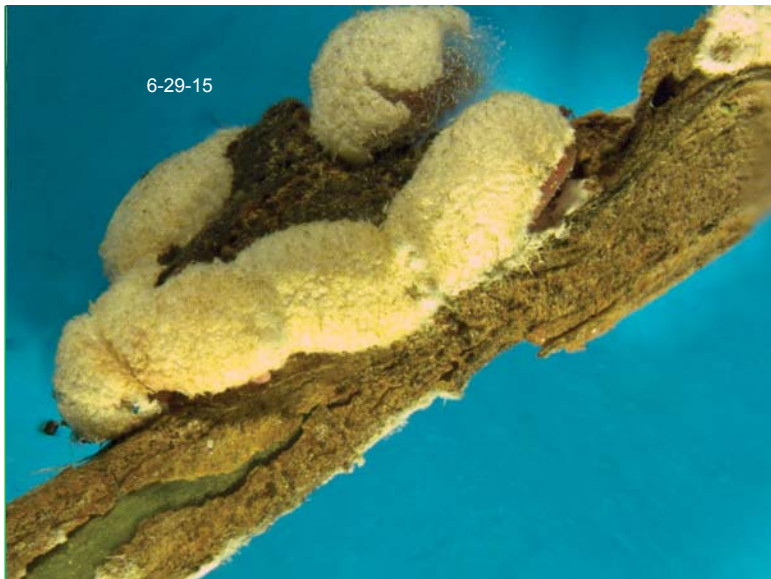
Adult Female
without cover
Ventral View



Adult female without cover lateral view



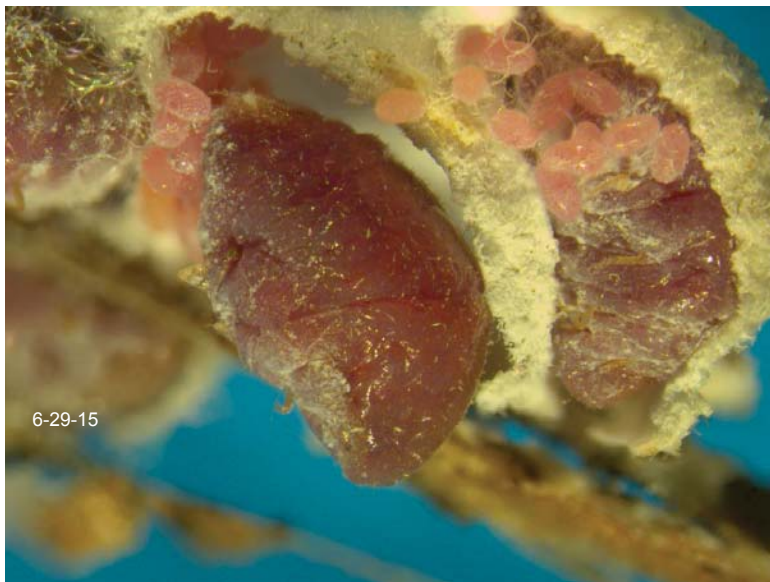
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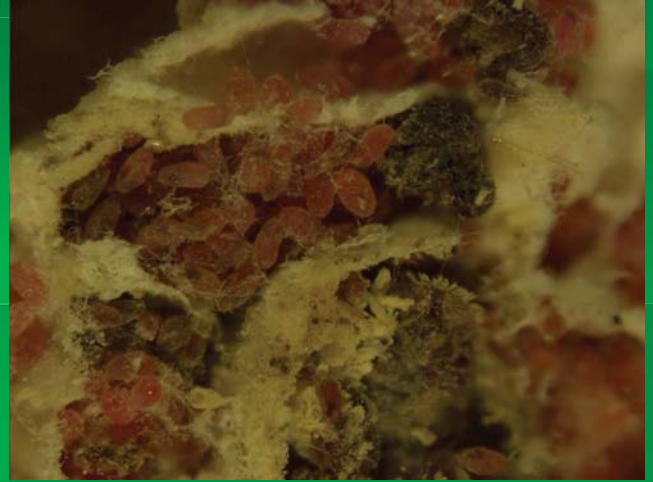
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Gravid females
producing eggs





Crape Myrtle Bark Scale Eggs Indicate that Crawlers Will Soon Follow



Pressure washing crape myrtle



Image by Janet Creech of a brave and dedicated employee of Don Williams Landscaping LLC, Shreveport, LA

Crape Myrtle Bark Scale

Peeled back to show eggs



Washing off Crape Myrtle Bark Scale

- As needed, use a JD9-C spray gun at 125 – 150 psi with insecticidal soap solution or a power washer to physically remove scale

Overwintering exposed scale on 2-18-16



Peeled back scale showing hundreds of eggs on July 30



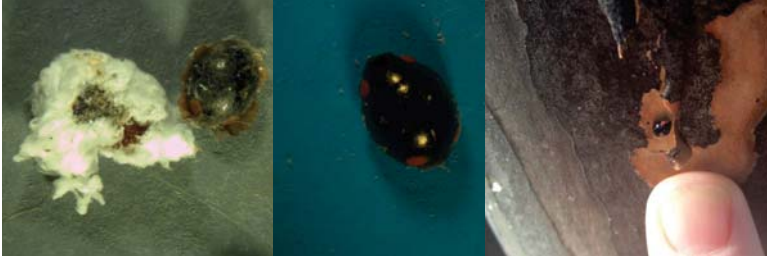
Pressure washing

- Cultural practices for removal of wax scales and sooty mold from ornamentals, D. W. Held, C. Wheeler, and W. McLaurin, SNA Research Conference Vol. 51 2006, pp141-144.
- Pressure washing with 15 degree tip on wand removed less than or equal to 20% of the sooty mold from crape myrtle leaves
- Removed >80% of the Florida wax scale on holly leaves at 870, 1160, 1450 & 1740 psi

Can pressure washing improve biological control?

- With reduced scale populations, predaceous lady beetles have better predator to prey ratios needed to achieve an acceptable level of biological control

Hyperaspis bigeminata



Spring soil applications in the landscape

- thiamethoxam (Meridian 25WG)
- imidacloprid (Merit and other brand names)
- dinotefuran (Safari 2 G)
- Safari 20 SG

Trunk spray applications

- Safari 20 SG
- Spray bark on root flare and on trunk between soil surface and 4-5 above the soil surface
- Apply only with a low volume sprayer operating at less than 20 psi to prevent bounce back and drift of spray droplets

Additionally, target scale crawlers using foliar sprays

- The key to effective scale control is to apply an insecticide with thorough coverage when the crawlers have emerged from the eggs
- Thus, monitoring for crawlers is essential to determine the proper timing of the insecticide sprays

Scale Monitoring

- Sticky traps can be made to catch the emerging scale crawlers
- Use double sided Scotch tape, black electrical tape, or even white tape coated with a thin layer of petroleum jelly (Tape color depends on crawler color)
 - Use white tape for crape myrtle bark scale crawlers
- Flag the branch and check several times per week starting 10-14 days before expected emergence



Targeted crawler spray applications

- Target crawlers with insecticide sprays when they emerge around May and again for second generation crawlers in early August



Bark and foliar sprays for scale control

- Conservation of beneficial insects is very important
- Apply insect growth regulators (IGRs) such as pyriproxyfen (Distance, Fulcrum) & buprofezin (Talus 70 DF)

Dormant pruning in the landscape removes much but not all the scale



Moderate pruning



Heavy pruning



Heavy pruning of older plants



Coppicing will kill crape myrtle bark scale



Images courtesy
of M. Halcomb,
UT Extension

Japanese Maple Scale

- Very small, white body
- Generalist – attacks numerous species!
 - cherry, dogwood, *Euonymus*, holly, hornbeam, *Itea*, lilac, linden, magnolia, maple, pyracantha, privet, *Prunus*, redbud, serviceberry, *Stewartia*, *Styrax*, yellowwood, & *Zelkova*



Image courtesy of A. Fulcher, UT

Japanese Maple Scale:

An Important New Insect Pest in the Nursery and Landscape

Amy Fulcher, Assistant Professor, Plant Sciences
Frank Hale, Professor, Entomology and Plant Pathology
and Mark Halcomb, Area Specialist, UT Extension

Introductory Information

A relatively new pest has been identified in Tennessee and several other states that is proving to be a difficult pest to control. The insect is Japanese maple scale (*Lopholeucaspis japonica* Cockerell), and, unfortunately, it infests many more plant species than just Japanese maple. The insect's

Appearance

Japanese maple scale (JMS) is a small, oystershell-shaped, armored scale (Figure 1). The waxy coating over the body is white, but the female, eggs and crawlers (the immature stage) are lavender (Figures 2 and 3). Scales are most commonly found on bark but can be found on leaves, in particular, leaves of

- Two generations per year in KY, TN and MD
- East coast, south of us, and spreading
- While this pest has been in many states for years it has recently become an emerging nursery pest (KY in 2006, TN in 2010)
- New on-line fact sheet at: <https://utextension.tennessee.edu/publications/Documents/W277.pdf>



Adult Female (Dorsal)



Japanese maple scale on euonymus



Image courtesy of David Cook, UT Extension



College of Agriculture, Human
and Natural Science
Cooperative Extension

Japanese Maple Scale in the Nursery

Karla Adesso and Adam Blalock

ANR-ENT-01-2015

Scale insects are serious and damaging pests to trees, shrubs and herbaceous plants. A scale infestation will reduce plant growth, vigor, and yields. There are hundreds of different species of scale and scale-like insects, but only a fraction of them are of economic concern. Some species of scale secrete a waterproof waxy shell that protects them from the environment and water based insecticides, making them difficult to control. In Tennessee nurseries, landscapes, and orchards, there are many different species of scale that you may encounter, but one of the most common and problematic is the Japanese maple scale (*Lopholeucaspis japonica*).

Japanese Maple Scale:

Japanese maple scale (JMS) is an armored scale that was first introduced to the eastern United States in the early part of the 20th century. Since then, it has spread to many areas of the country, including Tennessee. The reproductive potential of JMS is enormous. In three years, at two generations per year, a single male and female scale have the potential to spawn millions of new scales. Under natural conditions, scale predators, parasites, disease and sub-optimal environmental conditions prevent scale numbers from reaching these levels. Nursery



Image 1 (top). The individual Japanese maple scales are oyster-shaped, 1-2 mm long, and off-white in color.

Image 2 (bottom). If left, un-treated,

http://www.tnstate.edu/extension/documents/Japanese_Maple_Scale_in_the_Nursery.pdf

Japanese maple scale control test

- An annual application of dormant oil is recommended but another control method should be used to gain control of infestations

http://www.tnstate.edu/extension/documents/Japanese_Maple_Scale_in_the_Nursery.pdf

Japanese maple scale control test

- From foliar insecticide sprays, insect growth regulators (IGRs) such as pyriproxifen (Fulcrum) were one of the most effective chemicals for reducing scale populations
- Timing is critical so that the crawler stage can be sprayed with the IGRs Fulcrum, Distance and Talus

http://www.tnstate.edu/extension/documents/Japanese_Maple_Scale_in_the_Nursery.pdf

Japanese maple scale control test

- 0.5-1.0 % summer oil should be added to the IGRs to aid in the spread of the chemicals
- Additionally, the oil application will loosen the scale covers, allowing for more synchronous emergence of crawlers – bringing them in direct contact with the IGR

http://www.tnstate.edu/extension/documents/Japanese_Maple_Scale_in_the_Nursery.pdf

Japanese maple scale control test

- Discus N/G provide the best results from the systemic soil drenches at the end of the first year of monitoring
- Note that Discus N/G contains imidacloprid and cyfluthrin. Imidacloprid is what is impacting the scale since it is systemic while the cyfluthrin is not
- Imidacloprid insecticides for landscape use include Merit and other brands

http://www.tnstate.edu/extension/documents/Japanese_Maple_Scale_in_the_Nursery.pdf

Japanese maple scale control test

- Discus N/G significantly reduced but did not eliminate Japanese maple scale in the first year
- However, by year two, Discus N/G treated trees had no visible signs of JMS

http://www.tnstate.edu/extension/documents/Japanese_Maple_Scale_in_the_Nursery.pdf

Japanese Maple Scale Chemical Control

- All season horticultural oil targeting adults and eggs during dormant period (late fall or early spring) apply when temperature is above 60°F
- Imidacloprid (Merit and other brands) as a spring drench
- In spring and summer target the crawlers with:
- pyriproxifen (Distance, Fulcrum) – IGR or
- buprofezin (Talus 70DF) – IGR
- horticultural oil (0.5-1 percent) can be tank-mixed with Distance, Fulcrum or Talus for improved control)

Questions?



<https://extension.tennessee.edu/publications/Documents/PB1595.pdf>
<https://extension.tennessee.edu/publications/Documents/PB1594.pdf>

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