



Pest e-alerts



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Crapemyrtle Bark Scale: Biology and Management

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Crapemyrtle bark scale (CMBS), *Acanthococcus lagerstroemiae* (Fig. 1), an exotic insect pest from Asia, continues to wreak havoc on crapemyrtles planted in ornamental landscapes across Oklahoma. First detected in northern Texas in 2004, CMBS is spreading throughout much of the southern U.S. This scale pest is now found in ten Oklahoma counties including Bryan, Canadian, Carter, Cleveland, Comanche, Marshall, Oklahoma, Payne, Pushmataha, and Tulsa. By far, Tulsa County has the most activity from this new pest based on reports I've received from homeowners, arborists, and landscape professionals.

Crapemyrtle is a popular landscape plant throughout the southern U.S., generating \$46 million in wholesale farm revenue each year. Crapemyrtle bark scale diminishes the appearance of infested trees and shrubs by depositing honeydew on the branches and foliage, which encourages the growth of black sooty mold (Figs. 2 and 3). Although CMBS is not fatal to affected crapemyrtles, infested plants exhibit inferior aesthetic quality due to the presence of scale bodies, black sooty mold, and a reduction in flower size and quantity. While CMBS crawlers (nymphs) can spread naturally via wind, movement of infested nursery stock is the main avenue for spread of this exotic pest.



Figure 1. Crapemyrtle bark scale. Photo credit: Rick Grantham, Oklahoma State University.

Identification and Life Cycle

Crapemyrtle bark scale is closely related to azalea bark scale, both of which occur in the family Eriococcidae (bark or felt scales). Adult females are white to gray and felt like (Fig. 1). They can be



Figure 2. Black sooty mold on crape myrtle leaves. Photo credit: eXtension.org.

found encrusting twigs and trunks of crape myrtles, and they exude a pink blood-like liquid when crushed (Fig. 4). Initial detections are usually made by homeowners who notice the presence of black sooty mold on their crape myrtles. This often leads to the initial diagnosis as crape myrtle aphid, another sucking pest of crape myrtles that is prevalent in some areas of the southern U.S. However, the appearance of white scale bodies on bark and the pink liquid associated with crushed scales are diagnostic characteristics of CMBS. Under magnification, adult females are pink and measure about 2 mm (~ 0.8 inches) long, and pink eggs and crawlers may be present (Fig. 5).



Figure 3. Black sooty mold on crape myrtle trunks. Photo credit: Jim Robbins, University of Arkansas, bugwood.org.



Figure 4. Pink liquid from crushed crape myrtle bark scales and egg sacs. Photo credit: Mengmeng Gu, Texas A&M AgriLife Extension Service, bugwood.org.



Figure 5. Eggs (top) and crawlers (bottom) of crape myrtle bark scale. Photo credit: Rick Grantham, Oklahoma State University; and Helene Doughty, Virginia Tech, bugwood.org, resp.

As they mature, crape myrtle bark scales secrete waxy deposits that become felted or matted into a thick white or gray scale covering. When the waxy scale cover is removed, adult females are wingless and sessile (i.e., permanently attached to the host plant). Females lay eggs under the scale cover from May through September. Crawlers emerge from under the scale cover within a day or two, and disperse to new areas of the same plant or are windblown to new host plants. There may be as few as two generations in USDA Hardiness Zone 8 and up to four generations in Zones 9 and 10, based on observations from similar climatic zones in China (see Gu et al. 2014 for details). This

means that two generations of CMBS are likely for areas of Oklahoma north of I-40 but areas south may experience three and possibly four generations.

Management

Crapemyrtle bark scale appears to be difficult to control without the use of systemic insecticides, which are used to control most sucking pests. However, at this time I am not recommending use of systemic, neonicotinoid insecticides (i.e., products containing imidacloprid, dinotefuran, clothianidin, and thiamethoxam) for control of CMBS because of the risk these active ingredients pose to pollinating insects such as honey bees and bumble bees and the long flowering period of crapemyrtles that extends throughout most of the growing season. Therefore, current management recommendations for CMBS infestations in Oklahoma include the following:

1. Carefully inspect crapemyrtles prior to purchase for signs and symptoms of CMBS, including the presence of white to gray scale bodies on bark, honeydew, and/or black sooty mold. Always buy plants that are free of mechanical damage such as bark wounds that may serve as “points of entry” for CMBS.
2. The bark of infested plants can be scrubbed with a soft brush and a mild solution of dishwashing soap and water. Washing removes many of the female scales and egg masses as well as buildup of black sooty mold on branches and trunks.
3. If this is a common pest on your crapemyrtles then horticultural oil may be effective when applied during the winter at a dormant application rate. Ensure adequate coverage of the entire tree and use enough oil to reach behind loose bark, branch crotches, and other crevices.
4. Lady beetles in the genus, *Chilocorus* (Fig. 6, red circles), are effective predators of many scale insects. However, predation of CMBS occurs too late in the season for effective reduction in the growth of black sooty mold. Over time, additional predators and parasitoids may be discovered attacking CMBS and contributing to natural control of this pest.

For a complete list of products available for managing scale insects in nurseries, see Oklahoma Cooperative Extension Service publication, CR-7092: Management of Insects and Mites in Tree Nurseries. If you observe crapemyrtles showing signs and symptoms of CMBS infestation, please notify Dr. Eric Rebek (405-744-4846; eric.rebek@okstate.edu), State Extension Specialist for Horticultural Insects, or contact your local county extension educator.

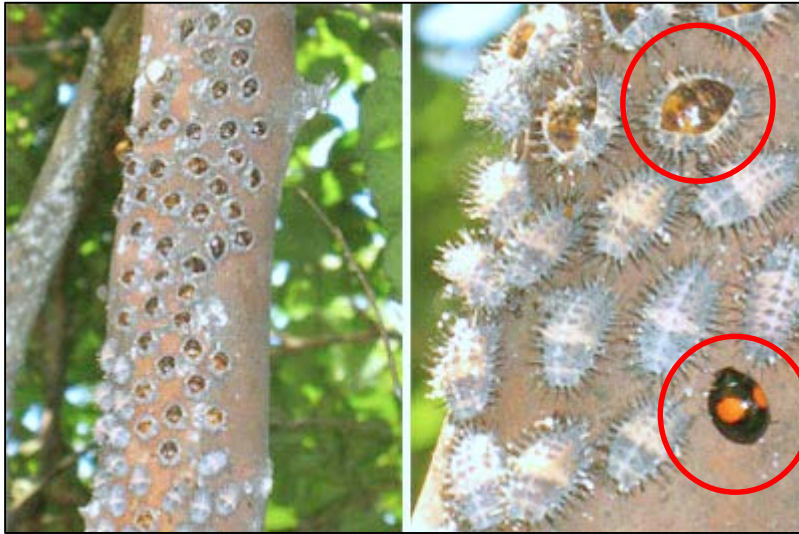


Figure 6. Lady beetles in the genus, *Chilocorus*, are predators of crapemyrtle bark scale. Shown are pupae (left), pre-pupae and one adult (right). Photo credit: Texas A&M AgriLife Extension Service.

References

Gu, M., M. Merchant, J. Robbins, and J. Hopkins. 2014. EHT-049: Crape Myrtle Bark Scale, A New Exotic Pest. Texas A&M AgriLife Extension. Available at: www.eddmaps.org/cmbs/Resources/TAMUCrapemyrtlebarkscaleEHT-049.pdf.

Merchant, M. 2014. Crape Myrtle Bark Scale Reduces Bloom. Insects in the City blog. Texas A&M AgriLife Extension. Available at: <http://citybugs.tamu.edu/2014/08/14/crape-myrtle-bark-scale-reduces-bloom/>.

Rebek, E.J. 2015. CR-7092: Management of Insects and Mites in Tree Nurseries. Oklahoma Cooperative Extension Service. Available at: <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-9865/CR-7092web.pdf>.

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