

Crape Myrtle Bark Scale

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Crape Myrtle Bark Scale (CMBS), *Acanthococcus lagerstroemiae*, is a tiny invasive insect that has been steadily spreading across the south and southeast. As its name implies, it feeds and reproduces primarily on crape myrtle trees, but has been reported from some other hosts. Infestations appear as whitish-gray waxy patches on stems and trunks, but rarely on foliage. These bugs often congregate in branch crotches and pruning sites. While easy to identify, homeowners may not notice infestations of this pest until it becomes severe, at which point scale bugs can be difficult to control.

Like many members of the insect order Hemiptera, scale bugs are phloem-feeders, producing copious amounts of sugary waste called honeydew as they feed on the plant's sap. As a result, a host tree can become covered with black sooty mold growing on the honeydew. Crape myrtle bark scales will not usually kill a healthy tree, but they can reduce the amount and size of blooms, and the sooty mold makes trees less attractive. Honeydew and mold can also coat lawn furniture, vehicles or other landscape elements situated beneath heavily infested trees. Honeydew can also be associated with aphids or whiteflies on a variety of other vegetation. Bees, wasps and ants will sometimes be attracted to feed on honeydew as a food source.

Native to Asia, CMBS was first reported in 2004 around Dallas, Texas. They have gradually been expanding their range ever since, often assisted by human movement of infested horticultural stock. With no natural enemies or effective predators in the U.S. this pest can build up large populations. There are several options for controlling these insects, depending on the level of infestation and size and number of the trees needing treatment.



CMBS infestations may appear as many small felt-like spots on trees. Photos by [Jim Robbins](#) [CC BY-NC]



Scale bugs exude a waxy protective layer as they grow. Once mature they will remain in a single spot.
 Photos by [Jim Robbins](#) (left), [Robby Deans](#) (middle) and [Royal Tyler](#) (right) [CC BY-NC]

Identification & Life Cycle

Fully mature females are wingless and sessile, remaining in a single location while feeding on plant fluids and producing eggs. They grow a protective waxy covering as they mature, with a felt-like appearance. Females lay 60-250 pinkish-colored eggs beneath this covering and soon die. Within about a week, small pink nymphs emerge and disperse up and down the trunk and branches of host trees. These mobile immature forms are referred to as the “crawler” stage.

Females settle into one location to feed, often under loose exfoliating bark, making control by predators and pesticides more difficult. After the first molt, nymphs lose their legs and antenna and become sessile, remaining in the same location for the rest of their lives, feeding and excreting honeydew. Females must mate before they can produce eggs. Males pupate and develop antennae, a single pair of wings and two long white caudal filaments, but lack functional mouthparts. Males will actively seek stationary females to complete the life cycle. CMBS can have at least 2 generations per year in Arkansas (perhaps up to 4). Both eggs and adult females can overwinter under loose bark and in cracks and crevices on trees.



Adult males must seek sessile female mates.
 Photo from [Xie, et al. Sci Rep 12, 11472 \(2022\)](#)

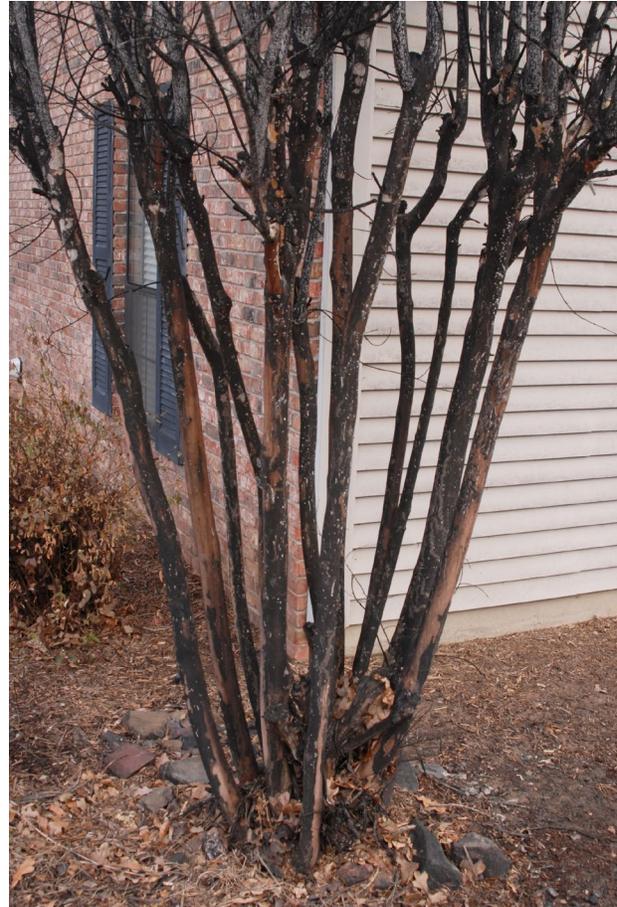


Newly emerged crawlers, dispersing on tree surface.
 Photo by [Jason Pavel](#), uaex.uada.edu

Symptoms & Damage

Identification of CMBS is easy, as these are the only scale insect known to infest crape myrtle in the United States. Homeowners may notice dark areas where honeydew has promoted sooty mold growth, along with whitish patches of scale bugs and shed skins. All life stages can be present. Early infestations may congregate at branch crotches or near pruning scars. Scale bugs are often found on upper branches and small twigs. They often remain on the undersides of horizontal branches, avoiding direct sunlight. Ants may be seen moving up and down tree trunks, collecting the sugary honeydew from scales. If ants are observed, follow them to note if they are visiting CMBS.

Tree damage is largely aesthetic in most cases. Heavy or persistent infestations can cause foliage to turn yellow or drop. Branch die-back, stunted growth or even death is possible, but in mature trees damage is seldom drastic. Infested trees may lose vigor and have delayed or absent blooms. Larger trees are less affected than smaller ones.



Damage to mature trees is mostly aesthetic.
Photo by [Jim Robbins](#) [CC BY-NC]

CMBS feeds primarily on crape myrtle (with both species native to Asia). This scale bug has also been observed on American beautyberry (*Callicarpa americana*) in the U.S. and has been reported from numerous other plant hosts in Europe and Asia. Continued monitoring of this pest will be needed to determine the full economic and ecological threat it may become.

Control & Management

Maintain good general plant and landscape health with proper water and soil fertility. Applying too much nitrogen fertilizer (to trees or as a turfgrass application) can encourage scale and aphid populations to increase. The worst infestations are often associated with shady conditions, so newly planted crape myrtles should be placed in full sun wherever possible.

Always inspect crape myrtles and other plants when purchasing from a nursery or transplanting to your yard. Human-assisted movement of these and other pests helps them to spread over very long distances in a short time period. If a plant is found to be infested in a new area, destroying and removing a single tree may be the most effective and appropriate remedy, rather than unsuccessfully attempting to save the tree and risk spreading the pest to multiple other hosts in the same area.

Small limbs which are heavily infested can be pruned off and disposed of. Do not put them in a compost pile or leave them out on the curb for yard-waste pick-up. Left exposed in an open truck or stacked on the curb leads to a possibility that millions of tiny crawlers could spread to neighboring properties, thus accelerating the expansion of this invasive insect's range. Instead, double bag cuttings and put them into regular trash pickup. While a common practice, pruning crape myrtle by topping them ("crape murder") is very bad for the plant. This weakens trees and makes them more susceptible to both insects and disease.

Washing the tree trunk and reachable limbs thoroughly with a warm solution of dishwashing soap and a soft brush can kill a large number of CMBS, making other successive treatments more effective. Washing also removes much of the honeydew and sooty mold buildup. Do not power wash a tree, as this can damage bark. Insecticidal soaps alone may be effective, but need to be reapplied frequently and thorough coverage with these is necessary to kill a sufficient number of insects. Such labor-intensive methods are easier for smaller plants or for early-stage infestations, but is more difficult for larger trees and those with heavy infestations.

Horticultural oils have not been demonstrated to be effective against CMBS. However, once all the leaves have fallen, tree trunks and crotches can be saturated with a dormant oil. Again, thorough coverage is important. Use a sufficient volume of oil to penetrate behind loose bark and into cracks and crevices. Dormant oil sprays can help control a variety of insect pests, but is more effective on young insects and less effective on more mature insects, so timing and early intervention are key.

For severe cases, a systemic product can be applied to the soil and watered in. When applied to the root zone and taken up by the tree, these are among the most efficient ways to control sap-feeding pests. These work best when applied in the spring when new growth is beginning, and can control bark scale for up to a year. A few suggested products include **dinotefuran** (Greenlight Tree and Shrub Insect Control , Ortho Tree & Shrub Insect Control Ready To Use Granules) or **imidacloprid** (Merit, Bio Advanced Scientific Solutions Systemic Tree and Shrub Insect Control, Bayer Advanced Garden Tree and Shrub Insect Control). **Beta-cyfluthrin + imidacloprid** (Bayer Advanced Dual Action Rose & Flower Insect Killer Ready-To-Use) can be effective against the crawler stage as well when applied topically. Use of systemic insecticides has been linked to risks to pollinators. However, judicious treatment of isolated trees within a larger landscape of other floral resources can protect the tree and minimize risk to pollinators.



CMBS in the mobile crawler stage.

Photos by [Jim Robbins](#) [CC-BY-NC 3.0]

Examples of products and trade names listed here are for the convenience of consumers. Inclusion or omission of any product does not constitute any endorsement or disapproval on the part of the University of Arkansas Division of Agriculture. Refer to [MP-144](#) for specific current treatment recommendations. Consumers are responsible for reading and following all label instructions when using any pesticide product. **The label is the law!**