

Crape Myrtle Bark Scale

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Sooty mold on Crape Myrtle

Crape Myrtle trees in North Carolina have a new pest, the Crape Myrtle Bark Scale (CMBS). It was first discovered in the United States in 2004 in Texas. By August 2016, when it was detected in North Carolina, it had also spread to 15 other states.

In North Carolina, it was first found in the city of Mooresville, in Iredell County just north of Charlotte, in a landscape setting. CMBS was determined to be well established at the time of its discovery, leading researchers to believe it to have been in the state for an extended period of time already.

Crape Myrtle Bark Scale (*Acanthococcus =Eriococcus*) is native to Asia and can live on a variety of plants there. It has been reported on 16 genera. Here in the United States, it has been found on Crape Myrtle (*Lagerstroemia indica*) and American Beautyberry (*Callicarpa Americana*) but there is potential for many more.

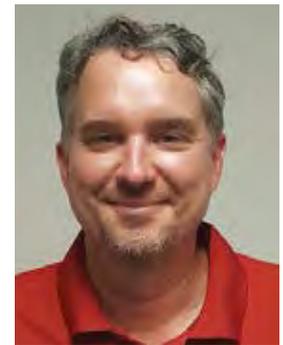
Life Cycle

Adult female CMBS produce a felt type substance around their bodies and lay between 100-350 eggs under the felt. Like other scale insects, the female body shortens to make room for eggs as they are produced. When eggs hatch, small pink nymphs, or “crawlers,” emerge. As these crawlers age, their color can range from pink to brown or grayish. Both adult females and nymphs bleed pink when crushed. Only the adult males are winged, to be able to fly and impregnate female CMBS.

Since this is a new pest for North Carolina, there is still much to learn in our region. For now, we have to rely on observations from its native habitat. In Asia, CMBS can have two to four generations a year depending on environmental temperature. The complete life cycle from egg to adult can take between 56-83 days in some



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Pink blood from Crape Myrtle Bark Scale.



Nymph or crawler CMBS on double-sided sticky tape, adults are white.

While CMBS is not fatal to its hosts, it can greatly reduce the appearance of the tree and aesthetics of the landscape. Preventing CMBS from entering a landscape or nursery is the best management strategy.



Adult CMBS often like to settle in cracks and crevices.



Sooty Mold on Crape Myrtle leaves.

parts of China. It is thought that they can overwinter in any life stage but do so mostly as nymphs in the United States.

Damage

While CMBS is not fatal to its hosts, it can greatly reduce the appearance of the tree and aesthetics of the landscape. Large amounts of honeydew produced by adults and nymphs coat portions of the trunk, branches and leaves. Sooty mold grows on the honey dew, turning the branches of the Crape Myrtle and surrounding plants black, which can restrict growth, decrease flowering and reduce photosynthesis.

Not all Crape Myrtle with large amounts of sooty mold have CMBS. Another common pest, Crape Myrtle Aphids (*Tinocallis kahawaluokalani*) also expels honeydew that leads to sooty mold formation. All trees with sooty mold should be inspected. Aphids are always found on leaves, while CMBS is found on the trunk, branches and twigs. Infestations can be found high in the tree so it can be difficult to spot CMBS on large trees unless the entire tree is inspected.

Management

We are in the process of determining the most effective treatment times and products to be administered to slow the progress of this pest in the North Carolina landscape and decrease the chances of occurrences in nursery material. A study that models research done at Texas A&M and Louisiana State University began this summer. NCNLA recently funded a full year study to take place in Summer 2018.

Information by Dr. Erfan Vafaie of Texas A&M reveals that crawlers peak in mid-April to early May. Texas is in a different climate zone than North Carolina so these dates may vary for us. To monitor crawlers, double-sided sticky tape is placed on infested branches of the tree. Monitoring, counting and replacing of the tape

occurs weekly. As data is gathered, the most effective treatment dates will be recommended for the Piedmont region and surrounding areas of North Carolina.

Treatment information, also from Texas A&M, shows the most promising contact insecticide is bifenthrin, which should be applied to the bark at peak crawler emergence and then in two-week intervals to kill later generations. To avoid unintended harm to pollinators (honey bees, etc.) administer bifenthrin and other pesticides when pollinators are not present, typically in the early morning or evening hours. Systemic products such as imidacloprid and dinotefuran should be applied at bud break as a root drench to give enough time for the product to get into the tree before peak crawler stage.

Preventing CMBS from entering a landscape or nursery is the best management strategy. Crawlers can be transported in a variety of ways, including by humans, birds and the wind. Movement over large areas can happen as humans relocate infested plants, tools and equipment.

- Exclude these pests from new locations using scouting and sanitation.
- Work in areas that are infested at the end of the day.
- Sanitize your tools before leaving a location.
- Never move from an infested site to a clean site.
- Before trees are accepted, carefully examine them for scale and reject any you suspect infested.

Currently, the North Carolina Department of Agriculture (NCDA) is not regulating this pest. Homeowners and landscapers do not need to report infestations to NCDA. However, if CMBS was found in a nursery, growers would not be allowed to sell these plants until the infestation is eliminated. Employees with NCDA are currently working to find an insect/pathogen natural enemy — with luck, this could add another management strategy to our list. 🌿