GROWERTALKS

Pest Management

6/30/2026

Managing Crape Myrtle Bark Scale in the Mid-Atlantic

Laura Nixon, Sheena O'Donnell, Suzanne Klick, Tracy Wootten & Brian Kunkel



Crape myrtle bark scale (CMBS; *Acanthococcus lagerstroemiae Borchsenius*, 1960) is an invasive felt scale, which was first detected in the U.S. in Texas in 2004. Crape myrtle bark scale was confirmed to be present in Maryland and Delaware in 2020, which are the locations of the work we'll discuss in this article.

Figure 1. A healthy crape myrtle in bloom (left), a crape myrtle in bloom, which is infested with crape myrtle bark scale (middle), and a heavily infested crapemyrtle (right).

As the name suggests, CMBS is a significant pest on crape myrtle trees. Felt scale, like soft scale, feed on plant phloem and excrete copious amounts of honeydew, which coats the plant and foliage below, and propagates the growth of black sooty mold. The combination of CMBS feeding and black sooty mold coating can stunt the growth and potentially affect the flowering of crape myrtles (Figure 1). Although many reports state that CMBS doesn't lead to plant death, we've observed the decline and subsequent death of heavily infested crape myrtles.

There are multiple generations of CMBS throughout the growing season, with reports of between two and five generations per year, but the phenology in our region hasn't been confirmed. In colder climates, CMBS primarily settle as later instar nymphs, although in warmer regions adult females with ovisacs can also overwinter in bark crevices. In the spring, overwintering nymphs resume development, followed by adult females constructing white, felt-like sacs to lay between 50 and 250 eggs. First generation of egg hatch is predicted at 724 GDD (growing degree days), which falls around mid to late May in Maryland and Delaware. Both eggs and crawlers of this species are dark pink-colored, making them easier to observe and identify.

Figure 2. (chart left) The average number of crape myrtle bark scale crawlers per cuttingfrom five potted crape myrtle trees in Central Maryland in 2023 by growingweek. The two crawler peaks are labeled with the coinciding growing degreedays.

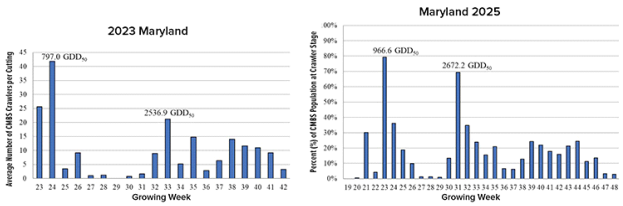


Figure 3. (chart right) The percentage of the crape myrtle bark scale population at the crawlerstage in Maryland in 2025 by growing week. The two crawler peaks are labeled withthe coinciding growing degree days.

The two common methods to scout for scale insects are branch counts and double-sided tape. Branch counts remove small sections of infested branches, which are brought into a laboratory and counted under a microscope. This method is considered more laborious than using double-sided tape, but provides a more accurate picture of the whole population. The double-sided tape method involves deploying sections of sticky tape around branches and checking regularly for CMBS crawlers. The tape is removed from branches and inspected with a hand lens looking for the pink-colored crawlers. This technique is less time-consuming and doesn't require expensive equipment, but only provides an estimate of the crawler activity on a plant. However, crawlers are the most vulnerable life stage for treating, thus identifying crawler peak times is essential for management.



Neonicotinoids have been widely used in scale management; however, these have severe impacts on beneficial insect health. Some alternative systemic insecticides may include flupyradifurone or cyantraniliprole. Horticultural oil, insect growth regulators and insecticidal soap are effective when applied during peak crawler activity. Our goal in this project was to determine when crawlers are active and how monitoring with double-sided tape compared to the information obtained during the more laborious visual counting of populations on branch samples. Our sampling dates were correlated with GDD at the study locations.

Chilocorus adult on aninfested crape myrtle.

Methods

In Maryland, we assessed CMBS crawler timings and densities by taking cuttings from infested crape myrtle trees. In 2023, five potted crape myrtle trees were maintained at the Central Maryland Research & Education Center and sampled weekly between June 5 and November 1. Three inches of infested branch were pruned from each tree and transferred to the lab for counting under a microscope.

In 2025, we moved sampling to mature street trees in University Park, Maryland. Eight infested trees were sampled weekly in the same way for CMBS between May 5 and November 25. In 2023, only the number of CMBS crawlers was counted per branch cutting, and Figure 2 shows this average number per tree. In 2025, every life stage of CMBS present on the cuttings was identified and counted; therefore, Figure 3 shows the percentage of all CMBS that are in the crawler stage.

We investigated crawler activity in Georgetown, Delaware, at the Carvel Research & Education Center farm from 2023 to 2025. Samples were collected from the beginning of May until the end of October every year. We planted 15 infested crape myrtles (Choctaw or Tonto) 5-m apart in 2022 and mulched the trees annually to a depth of 2.5 to 5.0 cm. Clear double-sided tape was cut to 2.5-cm squares and wrapped around a branch at chest height for each cardinal direction. Tape squares were removed from trees weekly and adhered to labeled index cards, which were brought into the laboratory. These cards were examined under a dissecting scope to count the number of crawlers stuck to both sides of the tape.

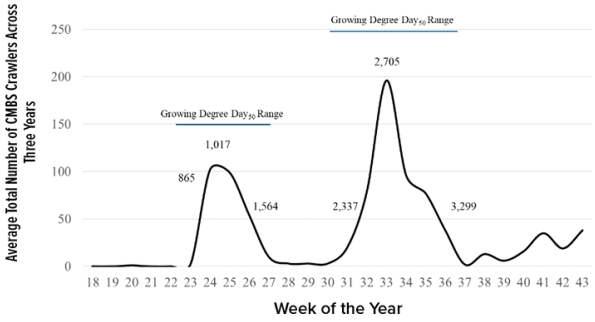


Figure 4. The average number of total crawlers obtained from double-sided tapecounts obtained from weekly samples of 15 crape myrtles in Georgetown, Delaware,in 2023 through 2025. Numbers on the graph correspond to the average number of
growing degree days50 for the beginning, height and decline of the activity period forthe first and second generation, respectively.

The total number of crawlers found per 15 trees for each week were averaged across the three years and are presented graphically. The GDD when the crawlers were collected were averaged across the three years and are used to create a range of crawler activity and a GDD50 value for peak activity.

Crawler activity

Crawler activity for the first generation observed in Maryland was in Weeks 24 and 23, or 797 or 967 GDD50 for 2023 or 2025, respectively (Figure 2 and 3, respectively). First-generation crawler activity appeared to diminish around Week 26 or 27 (Figure 2 and 3). The second period of greater crawler activity began about Week 33 in 2023 (Figure 2) and in Week 30 in 2025 (Figure 3). Peak activity was observed at 2,537 and 2,627 GDD50, respectively.



In 2025, the scale encountered on branch samples during Week 23 were composed of about 77% crawlers, but only 69% crawlers during Week 31. The proportion of crawlers found throughout the remainder of the sampling period fluctuated widely between 5% and 25% (Figure 3).

Long-legged flyon crape myrtle.

The crawler activity in Delaware began to increase significantly around 865 GGD50 at Week 23 and diminished by around 1,564 GDD50 at Week 27. The peak crawler activity for the first generation in Delaware was observed at an average of 1,017 GDD50, which was about Week 24. The second noticeable crawler activity period in Delaware was about 2,337 GDD50 at Week 31 and started to diminish in activity around 3,299 at Week 36. The peak of this second generation of crawlers was around 2,705 GDD50 during Week 33 (Figure 4). We observed a prolonged decrease in crawler activity in the second generation compared to the first.

Summary

Crape myrtle bark scale has two generations per year in Maryland and Delaware, with some crawler activity occurring into the fall. Monitoring crawler activity using tape provides similar peak activity indicators as the more

laborious visual scouting. Crawler activity detected by both methods were usually within a week of each other and in close proximity with regards to calculated GDD. Nursery operators and landscape professionals should be able to use the GDD calculated from our research to better target crawlers with insecticide applications to manage this pest.

Further research should continue on refining treatment windows and impacts of insecticide applications on non-target arthropods visiting infested trees. **GT**

Laura Nixon is an Extension Specialist—Ornamental Entomology and IPM, Sheena O'Donnell is a Technician and Suzanne Klick is Lead Agricultural Technician at University of Maryland Extension based at the Central Maryland Research & Education Center. Brian Kunkel is Ornamentals IPM Extension Specialist at the University of Delaware. Tracy Wootten is a Horticulture Extension Agent for the University of Delaware at the Carvel Research & Education Center.