

Flatheaded Appletree Borer

Chrysobothris femorata

Description

Adult beetles are oval shaped with a flattened body, dark green-bronze in color and about ½ inch long. Larvae are cream-colored and the first segment of their thorax is large and flattened. The full-grown larvae are about 1 inch long, and have large, black chewing mouthparts.

HOST PLANTS

- Apple
- Beech
- Cotoneaster
- Dogwood
- Elm
- Flowering Crabapple
- Hawthorn
- Linden
- Maple
- Oak
- Sycamore
- Willow
- Many other deciduous hosts

Life Cycle

Adults emerge from infested trees and begin laying eggs on the bark in late spring and throughout the summer. Newly hatched borers chew directly through the bottom of the egg into the tree. In late fall, full grown larvae tunnel deeper into the tree into the heartwood and overwinter in the galleries. Only one generation is produced in a year.

Monitoring

In the winter, tag infested trees and remove plate-like frass to facilitate monitoring. Focus scouting on the lower 12" of trunk; look for swollen, spiraling galleries circling the trunk. In the late spring return to tagged trees and monitor for the appearance of D-shaped openings, signifying adult emergence; schedule sprays on adult emergence. Sap may indicate current infestations.

Damage Symptoms



Vascular damage from borers can result in chlorotic leaves, sparse foliage, branch dieback, and plant death.

When adult beetles emerge from trees, they leave a large D-shaped hole measuring around 3/16-inch. Larvae make winding tunnels under the bark destroying phloem and cambium that girdle the trunk. As trees grow around the wounded areas, a callus roll and gnarled scars develop. Plant mortality is high for stressed or newly planted trees.



Integrated Pest Management

BIOLOGICAL CONTROL

Parasitic wasps attack this pest and woodpeckers eat larvae.

CULTURAL CONTROL

Borers are more likely to attack plants that are stressed or newly planted. Taking steps to promote overall plant health will help minimize infestations. Keep trees in vigorous growing conditions through proper planting, appropriate fertilization and adequate irrigation during drought periods. Avoid deep planting. Prevent injuries to tree bark from lawn mowers and trimmers. Avoid pruning just before or during borer flight periods. Mulch around trees to prevent grass and woody vegetation from growing around the base of the tree.

CHEMICAL CONTROL

Please refer to http://eppserver.ag.utk.edu/redbook/sections/trees_flowers.htm for the most up to date recommendations.

Resources

Photo credits: Dr. Amy Fulcher, University of Tennessee

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University of Tennessee Publication SP 547. <http://extensiontest.utk.edu/publications/Documents/sp547.pdf>