5-14-2013

W289-Q IPM QuickFacts Series: Flatheaded Appletree Borer

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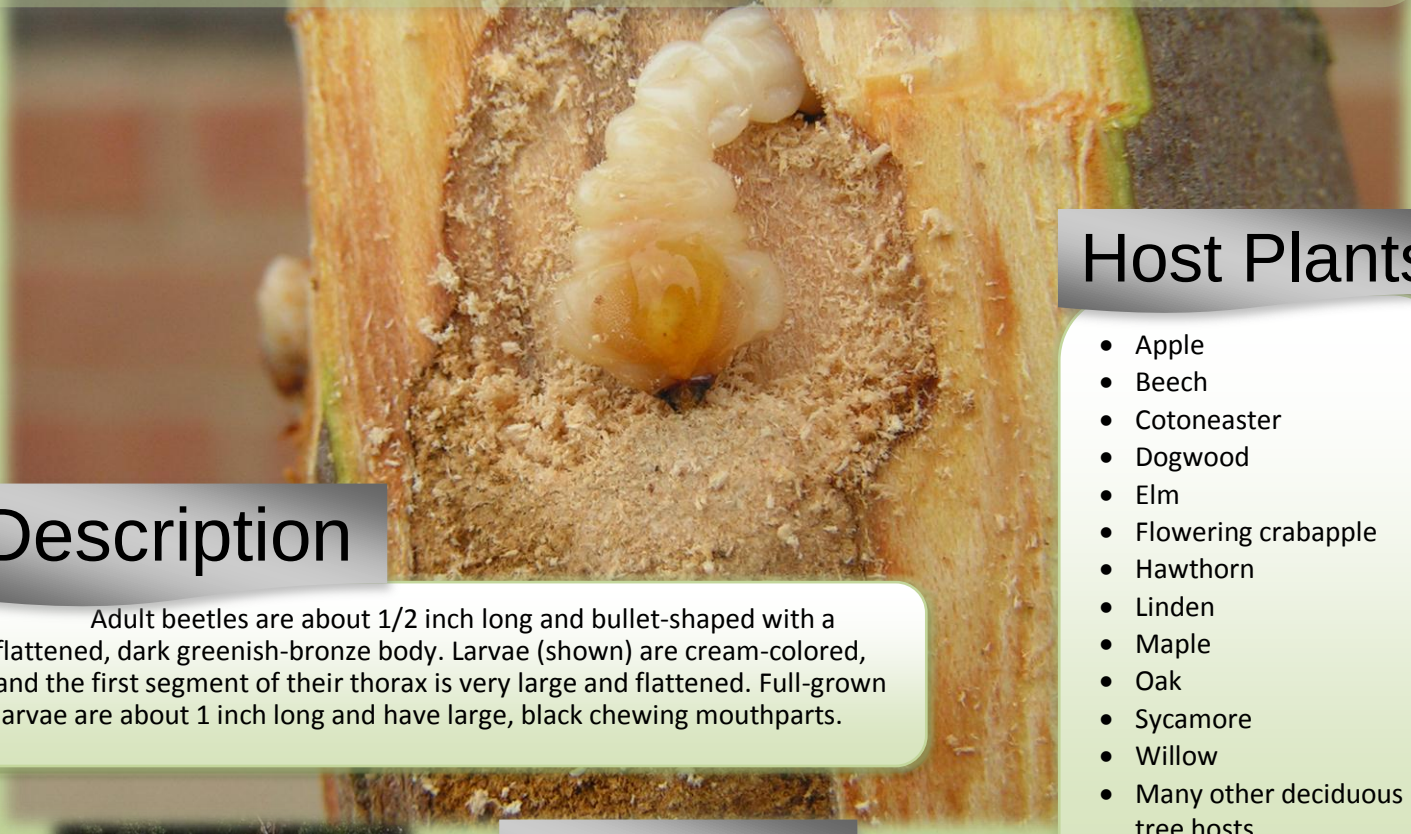
UT Extension
W289-Q

Flatheaded Appletree Borer

Chrysobothris femorata and related species



Description

Adult beetles are about 1/2 inch long and bullet-shaped with a flattened, dark greenish-bronze body. Larvae (shown) are cream-colored, and the first segment of their thorax is very large and flattened. 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 tree hosts

Life Cycle

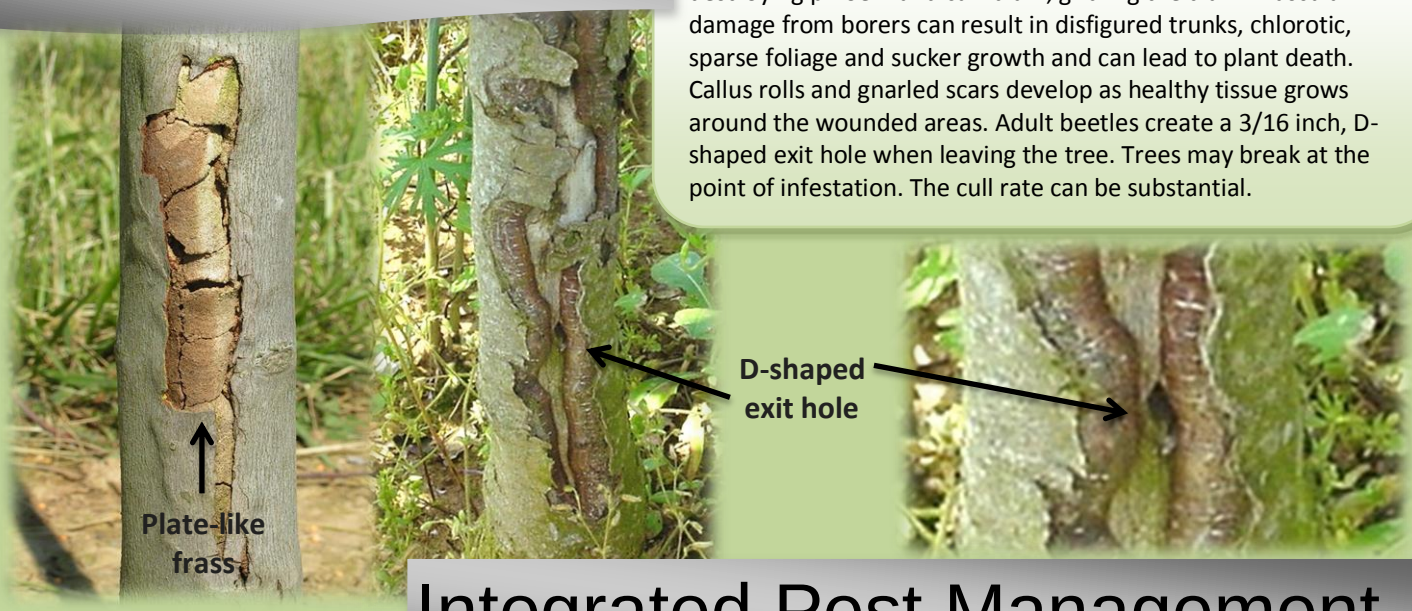
Adults emerge from infested trees in early May and begin laying eggs on tree bark until midsummer. Newly hatched borers chew directly through the bottom of the egg into the tree cambium. They generally tunnel upward in a spiral until late fall, when full-grown larvae tunnel beyond the cambium into the heartwood and overwinter in protected galleries. One generation is produced per year.

Monitoring

In the winter, monitor trees entering their second year of production. Focus on the lower 18 inches of trunk and look for sunken areas of bark and swollen, spiraling trunk cracks. Tag infested trees and brush away any plate-like frass. This will facilitate later monitoring. In late April to early May, return to tagged trees and check weekly or more often for presence of D-shaped holes that will signify that adults have emerged. Schedule protective insecticide sprays to coincide with adult emergence.

Damage Symptoms

Feeding larvae cut winding tunnels beneath the bark, destroying phloem and cambium, girdling the trunk. Vascular damage from borers can result in disfigured trunks, chlorotic, sparse foliage and sucker growth and can lead to plant death. Callus rolls and gnarled scars develop as healthy tissue grows around the wounded areas. Adult beetles create a 3/16 inch, D-shaped exit hole when leaving the tree. Trees may break at the point of infestation. The cull rate can be substantial.



Integrated Pest Management

Biological Control

Several parasitic wasp species attack this pest, and woodpeckers eat larvae.

Cultural Control

Borers are more likely to attack stressed plants, especially newly planted trees. Fall planting is less stressful than spring. Take steps to promote overall plant health to help minimize stress and borer attack. Maintain good 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 and during borer flight periods. Mulch around the base of trees to prevent growth of weeds, grass and woody vegetation, but do not pile mulch against the trunk.

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: Amy Fulcher, University of Tennessee

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Publication funded by USDA Extension IPM Grant in partnership with University of Kentucky Integrated Pest Management Program.
The authors thank M. Halcomb, B. Klingeman, W. Russell and F. Hale for their careful review.