



## Flatheaded appletree borer

*Chrysobothris femorata*

Order Coleoptera, Family Buprestidae;  
metallic woodboring beetles, flatheaded borers  
Native pest

**Host plants:** Apple, beech, cotoneaster, dogwood, elm, linden, maple, oak, sycamore, willow, and many other deciduous hosts

**Description:** Adult beetles are oval and flattened, approximately 9–16 mm long, dark greenish bronze above and brown beneath. The wing covers are marked by two wavy, indented light bands. Larvae are 25–30 mm long and legless. The first segment of their thorax is broad and flattened, giving the insect its name. The true head is brown and the larval body cream-colored.

**Life history:** Adults emerge throughout the summer, beginning in May. Eggs are deposited under bark or in bark cracks, and larvae bore into the bark and feed on phloem of both trunk and branches. In the following spring, mature larvae bore into the heartwood to pupate. There is one generation a year.

**Overwintering:** Larvae in galleries.

**Damage symptoms:** Larvae are particularly destructive to weak, young, newly planted and/or improperly planted trees. Young trees are often girdled and killed. Older trees are frequently injured by the loss of bark patches above damaged areas. Larval damage may be first noticed as dieback of larger branches. Oval exit holes can be seen.

**Monitoring:** Look throughout the summer for adults on exposed, sunny patches of bark. Look for signs of dieback. Also look for sap oozing from cracks in the bark and look under the bark at those points to detect larval galleries.

**Cultural control:** Keep trees in vigorous growing condition. Adequate watering and fertilization are essential. Deep planting should be avoided.

**Chemical control:** If large populations of adult beetles are observed on bark, spray the bark of trunk and limbs three times. Spray approximately the third week of May, the second week of June, and the first week of July.

**Biological control:** Twelve species of parasitic wasps attack this pest. Woodpeckers also consume many larvae.

**Plant mortality risk:** High, for newly planted or stressed trees.

**Biorational pesticides:** None

**Conventional pesticides:** chlorpyrifos (nursery only), imidacloprid, permethrin



Damage to trunk in Bradford callery pear caused by flatheaded appletree borer. The weakened tree broke in a windstorm. (119)  
Photo: Cliff Sadof



Flatheaded appletree borer adult. (119)  
Photo: James Solomon, USDA Forest Service, The Bugwood Network, University of Georgia



Flatheaded appletree borer adult. (119)  
Photo: John Davidson



## Flatheaded appletree borer (continued)



Flatheaded appletree borer larva, Buprestidae (bottom), and roundheaded borer larva, Cerambycidae (top). (120)

Photo: David Laughlin



Photo taken in the lab of flatheaded appletree borer eggs. Usually eggs are not deposited in masses (121)

Photo: David Laughlin