Peachtree Borer

Borers that feed under the bark of peach trees are one of the most serious pest problems in commercial peach orchards and in home peach plantings. Borers also attack cultivated plums, cherries, nectarines, and apricots, and wild cherries and plums. There are two species of borers: the peachtree borer *(Synanthedon exitiosa),* which is sometimes referred to as the greater peachtree borer, and the lesser peachtree borer *(Synanthedon pictipes).* The peachtree borer is common in young nonbearing trees or in unmanaged plantings, while the lesser peachtree borer is common in large managed orchards.

Damage
The peachtree borer attacks healthy bark near the soil line, usually just below the ground line or in the lower 30 cm (12 inches) of the trunk. Borers can kill young trees when trunks are girdled by feeding. Borers feed on the growing inner bark of trees, and tunnel between the inner bark and the sapwood. The bark eventually peels off of damaged areas. Damage weakens the tree and predisposes it to attack by other pests and diseases. A gummy mass mixed with sawdust is usually found on the outer bark at the place where a borer started an attack. Entries are often found where there are cankers or wounds caused by other factors such as winter injury.

Figure 1-Peachtree borer larva (1), cocoon (2), empty pupal case (3), and cocoon with pupa emerging (4).
From Gossard & King, 1918, Ohio Agric. Experiment Station Bulletin 329.

Appearance
The adult peach tree borers are moths that look more like wasps than moths. The adult female peachtree borer has a distinctive appearance; she has a dark blue-black body with an orange band on the abdomen, dark blue front wings, and clear hind wings. The adult male is blue-black, marked with narrow yellow bands on the abdomen, thorax, head, and leg; front wings and hind wings are clear but the edges and veins are outlined with blue-black scales. The male is 18 to 33 mm long, the transparent portions of his wings are strongly tinged with yellow, and at least 3 to 4 narrow bands of yellow are usually visible on the abdomen. Eggs are small, oval, reddish brown, and hard. The larva is dull white with a brown head and three pairs of short jointed legs. Larvae are 1.5 mm (1/16 inch) when first hatched, and 30 mm (5/4 inch) when fully grown.

Life Cycle
Peachtree borer has only one generation per year. It over winters as an inactive larva under the bark, and resumes

feeding and completes its larval stages in spring and early summer. When fully grown, the larva pupates under bark or in the soil near the tree base, then emerges as a new adult. The adult is the only stage that leaves the tree.

In central Ohio, peachtree borer adults start to emerge in mid-June; emergence peaks in midsummer and extends into September. Emergence is greater on days after a rain. Soon after adults emerge, the female moths lay eggs under bark scales or on rough bark. Each female lays about 400 eggs. Eggs hatch in eight to ten days into larvae that bore into the tree.

Monitoring
While pruning in early spring, growers should look for symptoms of peachtree borer activity at the base of the tree. If symptoms are found, then a more intensive control strategy is needed than if symptoms are not found.

Non-Chemical Control

Natural Control Ants, spiders, and lacewings prey on larvae in exposed locations, and birds feed on larvae and adults. These natural enemies are not capable of adequately controlling borers.

Mechanical Control In small plantings, borers can be effectively controlled by killing larvae mechanically. In the spring at the time buds are bursting, insert a knife or wire into holes that indicate where borers are located, with the intention of smashing the larvae. This can also be done in late fall.

Chemical Control
Chemical control is preventive when insecticide is applied to trees before borer eggs hatch, so that small borer larvae contact a toxic residue as they crawl into trees. Control may also be achieved by fumigant action of the insecticide, which can kill larvae already in trees at the time of application. An insecticide with long residual action gives the best control of peachtree borer. Protection from peachtree borer is most critical during the first three to five years after planting. When new trees are planted, the roots and crowns should be dipped in insecticide before planting; this will protect them from borers during their first year. In established plantings, insecticide should be applied as a bark drench at a rate of one-half to one gallon of spray mix per tree. Thorough coverage is necessary. The insecticide should run down the trunk and soak the ground at the base of the tree. Any prunings, debris, or weeds at the base of trees should be removed so that they do not block the treatment.

Timing
The best time to treat and the number of insecticide applications needed for peachtree borer control depend on whether trees are known to be infested with this pest. One insecticide treatment is adequate in orchards where trees' show little or no sign of peachtree borer infestation; the best time to treat is at the time of peak adult flight, which is usually in early August. In orchards where borer injury is found on most trees, two treatments should be made: the first about 10 days after adults begin to emerge (late June) and the second at peak emergence about six weeks later (early August).

Insecticides in Home Fruit Plantings
Lindane or multipurpose orchard pesticide may be used, and some brands of chlorpyrifos (Dursban), endosulfan, and carbaryl (Sevin) are labeled for this use in home plantings. Insecticide should be applied to the bark by a paint brush or a hand sprayer.

Information obtained through the Ohio State Extension Factsheet HYG-2032-94