

Peachtree Borers in the Home and Commercial Peach Orchard¹

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The peachtree borer, *Synanthedon exitiosa* (Say), and the lesser peachtree borer, *S. pictipes* (Grote and Robinson), are the most important pests of peach in the southern United States. The larvae of these day-flying moths mine beneath the bark of the trunk and scaffold limbs of peach trees of all ages. Feeding damage by these larvae weakens trees and decreases productivity. If there is complete girdling of the trees by the larvae, tree death can occur.

Peachtree borer (PTB) moths are known as “clear-wing borers.” They are strong fliers and may be mistaken for bees or wasps. Other members of this group of destructive hardwood pests include the dogwood borer, the ash borer, and the oak borer.

Adult PTB (Figure 1) begin emerging during April or May in Florida. Adults are present throughout the summer, and their peak numbers occur during September and October. There is one generation per year.

PTB females are attracted to wounds exuding gum, but this is not necessary for oviposition. Eggs are laid in cracks and crevices in the lower trunk area. Larvae are cream to yellow in color with a brown head capsule and are approximately an inch long when full grown (Figure 2).

The larvae enter the tree through cracks or wounds in the bark and mine beneath the bark from 6 inches above the ground to the root crown. PTB larvae may be detected by



Figure 1. Adult female (top) and male (bottom) of the peachtree borer. Credits: University of Florida

masses of gum and sawdust (Figure 3). However, gum and sawdust are not always evident, and close scrutiny of tree trunks at ground level is often necessary to detect PTB infestations.

Larvae of the PTB overwinter and pupate after a period of feeding the following spring. There are seven instars (stages between molts). The pupae remain under bark until

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Figure 2. Damage and larval feeding on trunk of peach tree by peachtree borer larvae.
Credits: University of Florida



Figure 4. Peachtree borer pupal case protruded from the tree indicates borer emergence.
Credits: University of Florida



Figure 3. Gummosis at ground level of peach tree infested by the peachtree borer.
Credits: University of Florida

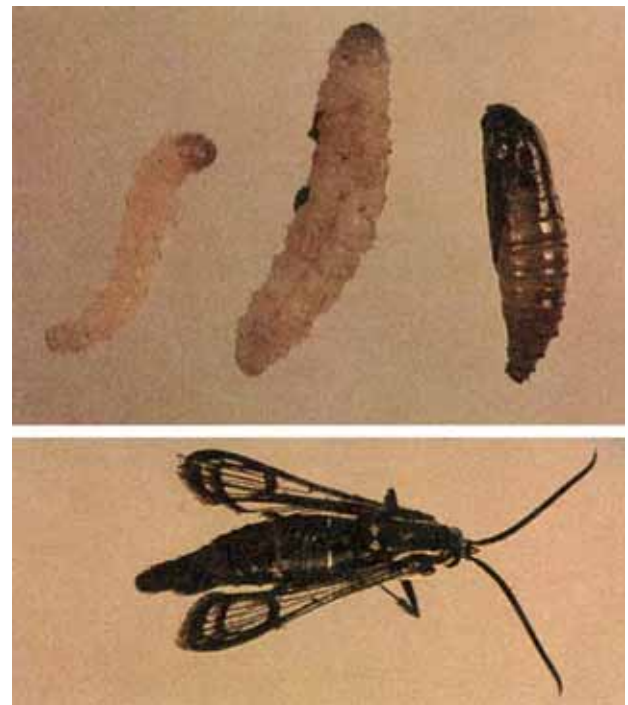


Figure 5. Larvae, pupa and adult of the lesser peachtree borer.
Credits: University of Florida

just prior to adult emergence. At this time they project themselves partially out of the bark, and the adult emerges (Figure 4). The pupal cases remaining can easily be seen on infested trunks and used to monitor adult emergence.

The lesser peachtree borer (LPTB) (Figure 5) usually begins flight in February or March and is continually present until November or December. Adults may be present in some parts of Florida throughout the year. The LPTB has two generations per year. Peak populations in Florida occur in March and April and are stable through November.

LPTB females lay their eggs on the trunk above ground, but infestations are higher on the scaffold limbs (Figures 6 and 7) chiefly in areas previously injured by machinery, disease, or weather, and in crotches or under loose bark. LPTB larvae are similar in appearance, feeding habits, and damage to PTB larvae, although LPTB are somewhat smaller and do not feed below ground. Lesser peachtree borers pupate beneath the bark and also project the pupal case outside the bark prior to emergence.

Infestations by borers are closely associated with diseased, damaged or otherwise weakened trees. Therefore, it is important to maintain thrifty trees and to avoid unnecessary damage to trees from orchard or homeowner machinery. A weed-free herbicide strip under trees precludes the need of moving machinery close to tree trunks. However, prior damage to trees is not a prerequisite for borer infestations. It is necessary for both homeowners and commercial growers to monitor trees for signs of infestation. This can be done by looking for gummosis and sawdust produced by the larvae or for the pupal cases. Often these signs—especially pupal cases—mean considerable damage has occurred. An alternate method is to use trunk cover sprays at scheduled times during the season, or to monitor for the presence of adult moths using commercially available pheromone traps and to spray at the times of peak adult flight and do not feed below ground. Lesser peachtree borers pupate beneath the bark and also project the pupal case outside the bark prior to emergence.

Currently, researchers are monitoring for PTB and LPTB for central and south Florida peach cultivars. Ongoing monitoring efforts will provide improved management information for peaches in this region of Florida.

Control

Several chemicals are registered for use against borers (See *Insect Management on Peaches*, <http://edis.ifas.ufl.edu/IG075>, for approved, registered compounds). These chemicals must be applied using a sprayer with a handgun so that the trunk and scaffold limbs are adequately covered.



Figure 6. Gummosis caused by lesser peachtree borer on lower limbs. Credits: University of Florida

Airblast sprayers and other moving application equipment will not give adequate coverage of the inner trunk and limbs. This is especially true if chemicals are applied to trees in full leaf.

Research has shown that entomophagous nematodes are very efficacious against both species of peachtree borers. The peachtree borer is especially susceptible as it feeds in the moist areas around the root crown. The lesser peachtree borer is harder to control because the nematodes need moisture to survive and the scaffold limbs are not moist enough. Research by the author (RF Mizell) with others has demonstrated that use of Barricade™ in conjunction with aqueous sprays of nematodes can be effective against lesser peachtree borer.

Precautions for Use of Chemicals

- Read the entire label, including the small print, before opening the container. Be sure the pest and plant involved are listed on the pesticide container label.
- All insecticides are poisons, and the safety precautions on the container labels must be followed.
- Keep pesticides from getting into fish ponds, streams, and water supplies.
- Avoid drift of pesticides to adjacent areas or to crops that may be eaten by man or animals.
- Store pesticides in their original labeled containers, out of reach of children and pets, preferably under lock and key.
- Dispose of leftover spray materials and empty containers promptly and safely.



Figure 7. Damage—gummosis and sawdust—caused by feeding of lesser peachtree borer.

Credits: University of Florida