

UCSU 20/6.22/5.566/2002
c.2



I N S E C T S E R I E S

RECEIVED
JUN 11 2004
STATE PUBLICATIONS
Colorado State Library

TREES & SHRUBS

Peach Tree Borer

no. 5.566

by W.S. Cranshaw¹

Quick Facts...

The peach tree borer is the most destructive insect pest of peach, cherry, plum and other stone fruits in Colorado.

The immature (larva) stage of the peach tree borer damages trees.

Peach tree borer can be difficult to control because the larval stage is not easily accessible with insecticides after it moves under the bark.

The most effective controls are preventive insecticide applications at the vulnerable egg and early larval stages.

Paradichlorobenzene (PDB) moth crystals may also help control infestations.

Life History and Habits

The peach tree borer (also called the peach crown borer) is the most destructive insect pest of peach, cherry, plum and other stone fruits (*Prunus* spp.) in Colorado. The insect feeds under the bark of the tree, where it cuts deep gouges. When abundant, peach tree borers seriously weaken and even kill trees. In most areas of the state, it is necessary to periodically control this insect to maintain tree vigor.

The entire life cycle of the peach tree borer requires one year to complete. The immature (larva) stage produces tree damage. Upon hatching from the eggs, young larvae immediately tunnel into the sapwood of the tree, usually through cracks and wounds in the bark. Larvae continue to feed and develop until the onset of cold weather. Most activity occurs a few inches below ground on the trunk and larger roots. The insects spend the winter as partially grown larvae below ground under the bark.

With the return of warmer weather in early spring, the larvae again feed on the tree. Injury is most extensive at this time because the maturing insects feed more. The larvae finish feeding and change to the pupal stage in late May through early July. Pupation occurs in a cell made of silk, gum and chewed wood fragments located just below the soil surface.

The pupal stage lasts almost one month. Adult borers then emerge. They often pull out the pupal skin in the process. This skin may be seen at the base of the tree. Adults are a kind of clearwing moth that fly during the day and superficially resemble wasps (Figures 1 and 2). Adult activity may begin as early as mid-June but primarily occurs during July and August. After mating, the female moth lays up to 400 eggs on the bark of the lower trunk and in soil cracks near the tree base. Eggs generally hatch in about 10 days.

External evidence of peach tree borer tunneling is a wet spot on the bark or the presence of oozing, gummy sap. The sap is clear or translucent and often dark from the sawdust-like excrement of the insect. Most injuries occur along the lower trunk beneath the soil line. Lower branches rarely receive injuries. (Note: Oozing wounds on peach that produce an amber-colored gum may be caused by cytospora canker, a fungus disease often confused with peach tree borer. See fact sheet 2.937, *Cytospora Canker*).

Preventive Sprays

Peach tree borer can be difficult to control because insecticides cannot reach the damaging larvae after they move under the bark. The most effective controls are preventive insecticide applications at the vulnerable egg and early larval stages, while the insect is on the tree bark.

**Colorado
State**
University
Cooperative
Extension

Putting Knowledge to Work

© Colorado State University
Cooperative Extension. 3/02.
www.ext.colostate.edu

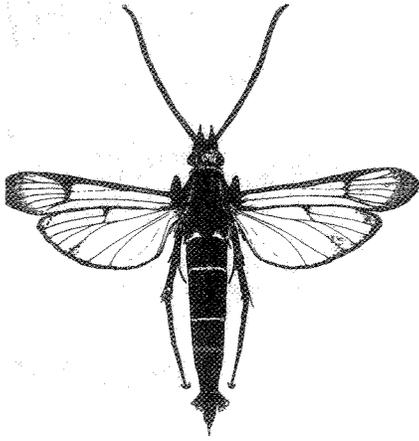


Figure 1: The male adult peach tree borer moth is marked by thin, light bands on the abdomen. Males are attracted to pheromone traps.

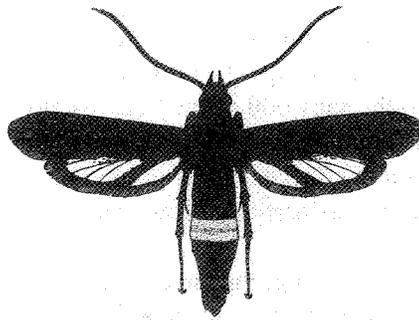


Figure 2: The heavier-bodied female peach tree borer moth has a broad band of orange or red.

In Colorado, egg laying occurs during the middle of the growing season. In warmer areas, it may begin July 1 and continue into September. In general, peak egg laying occurs from mid-July to mid-August.

As a general guideline, apply preventive trunk sprays the first or second week in July and again in August if flights continue. Better determination of egg-laying occurrence is possible using pheromone (sex attractant) traps that capture adult insects. In some areas of Colorado, particularly in fruit-growing areas of the West Slope, information on pheromone trap catches is available through your Colorado State University Cooperative Extension county office. Pheromone traps also are available through some garden supply catalogs.

Peach tree borer is controlled in commercial orchards by insecticides that contain permethrin (Pounce, Ambush) or esfenvalerate (Asana). Insecticides containing these active ingredients (permethrin, esfenvalerate) are recently becoming available in some garden centers. Perhaps more widely available is carbaryl (Sevin). Some formulations of this insecticide allow use on fruit-bearing trees.

Other Controls

Paradichlorobenzene (PDB) moth crystals, used as a fumigant, may help control infestations of peach tree borer within a tree. After clearing away leaves and other debris from around the tree base, place the crystals in a band 1 to 2 inches from the base of the tree trunk. Cover the crystals with enough soil to create a 5- to 10-inch packed mound around the plant. The crystals release a gas at temperatures above 60 degrees F. The gas penetrates the trunk to kill peach tree borer larvae. Applications of PDB crystals are best made in late September or early fall but also can be applied in late spring.

PDB can injure plants. To avoid plant injury, follow these precautions:

1. Do not allow the crystals to touch the tree bark.
2. Adjust the amount of crystals used by tree size. Use 1/4 ounce on a first-year tree, 1/2 ounce on a 2-year-old tree, 3/4 ounce on a 3- to 5-year-old tree, and 1 to 2 ounces on a large, well-established tree.
3. Remove the soil mound three weeks after the application.

With some effort, many larvae can be dug out of the tree or killed by puncturing them with a strong, thin wire. Be careful with these methods because they may cause more mechanical injury to the tree than the borer itself.

Maintaining tree vigor through proper tree care (water, fertilization, pruning, etc.) can greatly affect how well the tree can tolerate borer injury. Avoid any unnecessary wounding around the lower trunk; this area is often attacked. Extra care of already damaged trees is particularly important.

The use of insect parasitic/predator nematodes (see 5.573, *Insect Parasitic Nematodes*) has given inconsistent control of peach tree borer larvae. If they are used, it is suggested that they be applied in a large volume of water to adequately moisten the soil. Also, use them only if soil temperatures are at least 50 degrees. Insect parasitic nematodes are available through many nursery catalogs and some local nurseries.