

Peach Twig Borer

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The peach twig borer, *Anarsia lineatella* Zeller, is the larva of a medium-sized gray moth. It is the major pest of peaches in Central Texas. Although it is present in the eastern portions of the State, it is usually of minor significance. The name of this insect should not be confused with that of the peach tree borer which attacks the trunks of peach and plum trees in East Texas.

The peach twig borer has a minimum of three generations per year. Early generations of the peach twig borer larvae bore into buds and developing shoots of peach and plum trees causing them to wilt and die. Damage is similar to that caused by the oriental fruit moth. Later generations attack peach fruits, either penetrating to the pits or hollowing out areas beneath the skin up to 1/4 inch in diameter. Varieties which mature fruit late in the season are damaged most severely. Early maturing plums are rarely attacked.

The adults are dark-gray moths with lighter gray markings. They have a wingspread of about 5/8 inch. The young larvae are light brown with black heads. Mature larvae average 3/8 inch in length and are reddish-brown with yellow-white bands around the body.

As an immature larva, the peach twig borer passes the winter beneath the bark in a hollowed-out cell called a hibernaculum. Larvae become active in early February and feed on the bark until the trees are in the pink bud stage. Then, generally in early March, the larvae move upward to tunnel and mature in the developing shoots. First evidence of larval activity is the appearance of wilted shoots when early flowering varieties are in full bloom and foliage is beginning to emerge.

Upon reaching maturity, the larvae migrate to the larger branches and pupate in between the roughened areas on the bark. Pupation is initiated in early April and continues into early May. Most adults appear during a 2-week period in late April and early May. First generation egg deposition reaches a peak in the first half of May and continues until early June.

Four to seven days are required for the eggs to hatch. Even though the vast majority of eggs are deposited on the fruit, the first generation larvae almost invariably leave and move to the shoots to feed. In rare instances larvae may feed briefly on the green fruit before moving to the shoots. Apparently the fruit is not attractive until it passes the pit-hardening

stage. However, when the fruit of early ripening varieties matures in late May or early June, earlier than usual, it is attacked by the larvae. Approximately three weeks are required for the completion of the larval stage. Then the pupal stage requires another four to eleven days and generally occurs in late May and early June. The first generation adults emerge during the first half of June. They continue depositing eggs until mid-July.

The eggs hatch in five to six days and the second generation larvae become active in mid-June and early July. Peach varieties which ripen in late July and August frequently suffer heavy damage from this generation of larvae. The larvae prefer to tunnel in the shoots of trees of varieties which the fruit has already been harvested or is not yet ripe. Pupae of the second generation appear during late June and July. The majority of second generation moths emerge during the last three weeks in July and the peak of egg deposition occurs during the last week in July.

Due to the overlapping of second and third generations in late July and early August, peaches are usually infested with larvae of both generations. In early August, the larvae feed on the fruit of late-maturing varieties and on the tender shoots of early maturing varieties which have recovered from the fruit load and are producing succulent growth. Pupae of the third generation appear between August and early September with the majority appearing in late August. Third generation adult emergence and egg deposition continue from mid-August until mid-September.

During the first 2 weeks of the egg laying period, eggs of third generation adults are deposited on late-maturing peaches. The larvae which hatch from these eggs reach maturity, pupate and emerge as adults of the fourth generation in mid-September. It is probable that eggs deposited by the adults in late September and October produce larvae of the fifth generation which migrate down the limbs and seek hibernation quarters.

Larvae from eggs, deposited by the third generation moths during the latter half of the egg laying period in early September, feed briefly on the terminals and then move into a hibernacula under the bark where they feed until winter. Beginning in mid-September, hibernacula may be found in crotches of trees.

Suggested Control of Peach Twig Borer in Peaches

Early-season sprays in the pink bud, petal fall and shuck split stages are important in the control of this insect. The overwintered larvae move from one shoot to another to complete feeding and to roughened areas on the bark for pupation during the period in which these sprays are applied. Good initial control can be obtained using only the petal fall and shuck split sprays. *However, it is usually best to make the pink bud application also since inclement weather may delay petal fall or shucksplit applications.* Poor control results if only one spray is applied. Apply succeeding sprays at the time of egg deposition of later generations to kill the moths and young larvae as they hatch.

Biological control – *Bacillus thuringiensis* (Bt) products have been effective if applied when larvae are first noticed and before they tunnel into twigs, buds or fruit.

Pheromone traps baited with peach twig borer lures are useful in monitoring moths, which is a very useful tool to help determine the possible need to apply spray treatments. These traps should be hung 6-7 feet high in the tree, 1-3 feet from the outer drip-line and should be monitored twice per week. The pheromone traps can serve as a notification tool to signal the time when more careful monitoring for the borers needs to begin. Careful examination of developing shoots and buds (spring) and fruit (summer) for presence of larvae will then trigger spray application. Follow the manufacturer's recommendation on dispenser replacement intervals.

Commercial producers may refer to TCE publication B-1689 Insects and Disease Control on Peaches, Apricots, Nectarines and Plums for insecticide, rates and remarks. Homeowners please refer to TCE publication B-5041 Homeowner's Fruit and Nut Spray Guide.



Peach Twig Borer (Egg).



Peach Twig Borer (Adult).





Hibernaculum.

Growing Shoot Damage.



