



Bug-Wise

No. 9

July 15, 2008

Office: 1-662-325-2085

Peach Tree Borers: Before discussing peach tree borers (PTB) we should mention there is a disease that causes symptoms that are sometimes mistaken for PTB injury. Gummosis is a fungal disease caused by *Botryosphaeria dothidea*. This disease causes trees to exude balls of gummy sap through the bark lenticles along the trunk or infected limbs. If a tree has numerous balls of gummy exudate that occur up the trunk well above the soil line or on scaffold limbs and do not contain frass or sawdust they are most likely due to gummosis, especially if these symptoms occur before mid-August. Check with a plant pathologist for identification and control recommendations if you suspect gummosis.

Peach tree borers are important pests of peaches, both commercial peaches and dooryard peaches, as well as plums and nectarines. They also attack ornamental prunus species, such as cherry laurel, flowering cherries and purpleleaf plums. PTB infestation is often accompanied by gummy, frass-filled exudates at the site of attack, but heavy infestations normally occur in late summer and fall.

There are actually two species of peach tree borers, peach tree borer, *Synanthedon exitiosa*, and lesser peach tree borer, *Synanthedon pictipes*. Peach tree borers usually focus their attack on the lower 10 to 12 inches of the trunk to around three inches below ground level. Lesser peach tree borers attack higher on the trunk and on larger scaffold limbs.

Adult PTB are wasp-like, day-flying moths. Females of *S. exitiosa* lay eggs on the bark of the tree near the ground, especially around injured areas. The eggs hatch in around seven days and the larvae bore into the bark where they feed on the cambium, growing to about an inch in length. Their feeding weakens the tree and infestations by multiple larvae can girdle even large trees. PTB overwinter as partially grown larvae in their galleries under the bark. If PTB is not controlled, trees will often from cumulative damage resulting from repeated attacks. Young, small diameter trees are especially vulnerable.

The key to controlling PTB is to kill the newly hatched larvae before they have a chance to bore into the bark. This means applying a trunk spray with a long residual insecticide at the proper time of year so the newly hatched larvae have to crawl through the insecticide residue as they bore into the bark. Although low numbers of moths may be active in June and July, heavy PTB moth flight does not occur until August and September, usually peaking around early September. This is the time to apply basal trunk sprays for PTB control.

Peach Tree Borer Control in Commercial Orchards: Lorsban (chlorpyrifos) is the treatment of choice for peach tree borer control in commercial orchards. Do not apply before harvest is complete. Mix according to label directions and apply as a low pressure spray to the trunk and lower scaffold limbs, taking special care to treat the base of the tree and exposed root flare. Do not treat foliage. Usually a single application, applied around mid-August (or after harvest on late-maturing varieties), is sufficient. Thionex (Endosulfan) is also recommended for use in commercial orchards, but two applications are recommended—one in early August and a second in early September. Commercial growers rely on the cover sprays they apply to control other pests to control the few PTB moths that fly earlier in the season.

Mating-disruption, by intensive, timely use of pheromone impregnated lures, can be a useful PTB control method for commercial growers, but do not confuse the use of pheromone traps with mating disruption. Pheromone traps can be useful for timing PTB sprays, because they indicate when moths are actively flying, but they do not provide mating disruption.

Peach Tree Borer Control for Homeowners: There are currently no good insecticide treatments specifically labeled for homeowners to use to control peach tree borers. Chlorpyrifos (Lorsban) and endosulfan [Thiodan] are no longer labeled for homeowner use and few of the insecticides labeled for homeowners to use on peaches are specifically labeled for peach tree borers. The best option available to homeowners at this time is to select a formulation of permethrin that is labeled for use on fruit trees and apply as a basal trunk spray, using the maximum labeled rate. Make the first treatment in early August and retreat every two to three weeks through the end of September. Hi-Yield Garden Pet and Livestock Spray is one example of a 10% permethrin concentrate that is labeled for use on peaches and plums, and this product is labeled for lesser peach tree borer. The highest rate labeled for fruit trees is 0.5 fl. Oz/gallon of spray. Gardeners treating ornamental cherries and plums may use up to 3 fl. Oz/gallon. This higher rate is specified in the section of the label regarding bark beetle and borer control in ornamental trees and shrubs. Avoid applying permethrin sprays to foliage because permethrin can flare spider mite populations, and there are no good homeowner options for spider mite control.

Maintaining healthy vigorous trees, pruning properly and avoiding mechanical injury to the bark will help make trees less susceptible to PTB.

Organic gardeners may wish to use insect parasitic nematodes to control PTBs. Some studies have shown significant levels of control by timely application of the *Steinernema* nematodes, though control can be erratic. NemAttack is one example of commercially available insect parasitic nematodes. These nematodes only attack insects; they do not damage plants. Nematodes are living organisms and must be handled and applied correctly in order to work. Follow use directions from supplier.

Hand worming is an old home remedy that may be of interest to homeowners with only one or two trees. This is best done in late fall or early spring when larvae are large. Use a flexible length of wire to probe borer galleries with the goal of puncturing and killing the caterpillar before it can do more damage. You do not have to actually remove the caterpillar from the gallery; if you puncture it, it will most likely die. Trying to dig the caterpillar out with a knife may damage more cambium tissue than it saves. Keep in mind that gallery entrances are often just below ground level. At one time, PDB moth crystals were used as a treatment for PTB, but this treatment is no longer recommended.

Woolly Pine Scale: This year we have seen several cases of pine trees with large masses of white cottony material around the base of the needles. They look like flocked Christmas trees! This is due to infestations of woolly pine scale, *Psuedophillippia quaintancii*. This is a 'soft scale' that produces honeydew, and heavily infested trees may also be covered with black sooty mold. The scales also produce the waxy white material that makes infestations so obvious.

Woolly pine scale seems to be more common than usual throughout many southeastern states this year. Populations are cyclic and infestations should soon begin to decline even if no treatments are applied. Large pine trees are difficult to spray and the 'do nothing approach' will often be the best option for dealing with this pest. However, heavy infestations can cause branch die back and reduced tree vigor. If treatment is desired to protect young, high value landscape trees or small ornamental pines apply a foliar spray of neem oil (Fertilome Triple Action Plus is one example) or a 1% spray of horticultural oil (Volck Oil is one example) according to label directions.

Blake Layton, Extension Entomology Specialist

This information is for educational and preliminary planning purposes only. Brand names mentioned in this publication are used as examples only. No endorsement of these products is intended. Other appropriately labeled products containing similar active ingredients should provide similar levels of control. Always read and follow the insecticide label.