Kentucky Nursery LISTSERV Bulletin

University of Kentucky Nursery Crops Team

End of April 2015

The Borers of May

In this month's issue, we focus on boring insects that have management controls in early to mid May. A complementary publication for the nursery and landscape industry from UK Horticulture is HO-94 Trees with Minimal Insect and Disease Problems for Kentucky Landscapes.

Common Questions…

Q: Some of my plants are finally showing evidence of winter injury. Which plants might recover and which should be removed? What should I do to manage winter injury on landscape plants?

A: The winter of 2014-2015 approached all-time historic lows in many parts of the Commonwealth. Particularly hard-hit were evergreens and marginally hardy plant species.

*Rule number one in addressing winter injury is to **be patient**. If the foliage or the tips have been damaged but the stems and buds are still green, wait until the plant puts out new growth before deciding if the plant should be pruned or removed. Sheering dead foliage will immediately improve the appearance of the plant, but pruning should not be done until after the chance of last frost has passed.*

For more details, see the recently published article:

Winter Injury Visible on Landscape Plants
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Lesser Peachtree Borer—Image: University of Kentucky Publication ID-93: Stone Fruits

In This Issue

Larvae and pupal case of lesser peach tree borer under bark of infested wound—Image: Clemson Extension

Control: Control of lesser peach tree borers in commercial orchards relies on preventing larval establishment underneath the bark. Once under the bark, chemical control is usually ineffective. Insecticides should be timed just before or to coincide with egg hatch.

In commercial orchards, insecticides applied with an air-blast sprayer will do little for lesser peachtree borer control. Directed sprays should be applied uniformly to drench the trunk and scaffold limbs to about eight feet above ground. Thorough coverage of the trunk and limbs is necessary.

Lesser Peachtree Borer

Host Plants: Ornamental Fruit Trees

Life Cycle: While the peachtree borer and lesser peachtree borer are similar in biology and management, there are some significant differences. The peachtree borer primarily attacks young non-bearing or unmanaged trees at or below the soil line. The lesser peachtree borer attacks older trees and does not confine its activity to the lower trunk but can be found in the scaffold limbs, branches, and the trunk above ground.

Larvae of the lesser peachtree borer are usually found under the bark of wounds. Infestation by the lesser peachtree borer is often identified by oozing of gum on the outer bark where the borer started its attack. The gum is usually mixed with reddish-brown frass. Bark eventually peels off of damaged areas, predisposing the tree to attack by other pests and diseases. Frequently empty brown pupal cases can be found partially exposed at the head of the larval gallery. Branches can be girdled by these borers and die. segments of the lesser peachtree borer have narrow yellow bands, while the male peachtree borer has 3 to 4 narrow yellow bands on the abdomen.

Larvae of the lesser peachtree borer are similar to other clear-wing borer larvae. They are about 1 inch long when mature. The head is light brown and the body is creamy white, but may be pinkish in some individuals.

More Information:

ENTFACT-213 Lesser Peachtree Borer

Bronze Birch Borer

Host Plants: Birch

Pest Information: *Agrilus anxius*, is a severe pest of white or paper birch, especially cultivated or stressed trees. Early symptoms include sparse foliage and chlorotic leaves in the upper crown, followed by twig and branch dieback from the top down. With successive years of attack, the tree becomes progressively weaker until it is killed.

Dead or dying limbs will have numerous D-shaped adult exit holes, each about the size of a BB shot. Adult bronze birch borers are slender, olive-bronze beetles about ½-inch long. In Kentucky, adults begin emerging and laying eggs in mid-May. Native white-barked birches (e.g., *Betula papyrifera, B. populifolia*) are somewhat less susceptible than European white birch (*B. pendula*) and other exotic birches.

Management: Timing sprays prevent infestation is critical and is done best based on the blooming of indicator plants. Spray susceptible birches twice at 3-week intervals, beginning about the time of first bloom of Washington hawthorn (*Crataegus phaenopyrum*), little-leaf linden (*Tilia cordata*), tree lilac (*Syringa reticulata*), or northern catalpa (*Catalpa speciosa*). River birch, *Betula nigra*, is not susceptible to this pest.

More Information: ?

ENTFACT-43 Insect Borers of Trees and Shrubs

D-shaped holes left by the adult bronze birch borer beetles as they emerge from limbs or trunks. Image—UK Entomology

Larva of the Bronze Birch Borer. Image—G. Heaton, US Forest Service

Flatheaded appletree borer—Image J. Solomon, USDA Forest Service

Flathead Appletree Borer—Image University of Illinois Extension

Flathead Appletree Borer

Host Plant: Crabapple, Dogwood, Hawthorn, Red Maple, Oak and others

Pest Information: Adults emerge from infested trees in early May and begin laying eggs on tree bark until midsummer. Newly hatched borers chew directly through the bottom of the egg into the tree cambium. They generally tunnel upward in a spiral until late fall, when full-grown larvae tunnel beyond the cambium into the heartwood and overwinter in protected galleries. One generation is produced per year.

Feeding larvae cut winding tunnels beneath the bark, destroying phloem and cambium, girdling the trunk. Vascular damage from borers can result in disfigured trunks, chlorotic, sparse foliage and sucker growth, and can lead to plant death. Callus rolls and gnarled scars develop as healthy tissue grows around the wounded areas. Adult beetles create a 3/16" D-shaped exit hole when leaving the tree. Trees may break at the point of infestation. The cull rate can be substantial.

Management: Vigorous trees will often produce enough sap to drown the larvae in the galleries. The best control is to keep the trees healthy and vigorous. Borers are more likely to attack stressed plants, especially newly planted trees. Fall planting is less stressful than spring. Prevent injuries to tree bark from lawn mowers and trimmers.

Several parasitic wasp species attack this pest.

ENTFACT-43 Insect Borers of Trees and Shrubs

UT Extension—W289-Q Flatheaded Appletree Borer IPM Quick Facts

Dogwood Borer larva Image—University of Missouri Extension

Adult Female Dogwood Borer Image—

Dogwood Borer

Host Plant: Dogwood

Pest Information: The dogwood borer, Synanthedon scitula, is the most common and destructive pest of flowering dogwoods in the landscape. Borer larvae tunnel and feed in living wood, destroying vascular tissues and causing loss of vigor, structural weakness, branch dieback, or complete girdling and death of trees. Infestation sites may also provide entry points for disease. Trees in urban landscapes, which may already be under stress, are especially prone to borer attack. Because borer-infested plants may not legally be sold, economic thresholds for borers in nurseries are very low.

Management: Active borers expel coarse, brown, sawdust-like frass (fecal material and wood particles) that accumulates around holes or cracks in bark or at the base of infested plants. In some hosts, especially *Prunus* spp., frass may be mixed with gum. Empty, tan-colored pupal skins, left partially protruding from the bark when adults emerge in the spring, are another sure sign that borers are present.

Lindane and Dursban (chlorpyrifos) are registered for control of chewing borers on lilac, dogwood, rhododendron, oak, ash, and flowering fruit trees. Lindane, Throdan, and Dursban provide good control of dogwood borer. Dogwood trees should be sprayed in late May (i.e., around the week of Memorial Day, or when hawthorn and liffleleaf lindens are blooming). This will leave an insecticidal residue on the bark that will kill young borers as they hatch and attempt to bore into the tree.

More Information:

ID-67 The Flowering Dogwood

The University of Kentucky's **Nursery Crop Extension Research Team** is based out of two locations across the bluegrass to better serve our producers.

The **University of Kentucky Research and Education Center (UKREC)** in **Princeton** serves western Kentucky producers while our facilities and personnel on main campus in **Lexington** serve central and eastern Kentucky producers.

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