RESEARCH LABORATORY TECHNICAL REPORT

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Bronze Birch Borer

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The bronze birch borer (*Agrilus anxius*) is a native pest to North America. This insect is found in southern Canada and the northern United States and is a serious pest of native white or paper birch and the European white birch. Bronze birch borer attacks are more frequent on ornamental birches planted in the urban environment than native birches growing in natural forests.

Damage

Bronze birch borer is considered an opportunistic pest since it usually attacks trees that are weakened due to drought, stem decay, heavy pruning, and prolonged defoliation. Stem and twig dieback that begins in the upper tree canopy indicate symptoms of tree stress (Figure 1). Stressed trees attract bronze borer adults that lay eggs along the main stem and crotches of large branches. Rapid tree dieback and decline ensues once borers invade dead and dying stem tissue.

Figure 1: Stem and twig dieback associated with bronze birch borer

Bronze birch borer larvae cause significant feeding injury by producing tunnels beneath the bark layer. The winding tunnels in the cambium cause girdling of the stems that disrupts water and nutrient transport. Borer larvae produce D-shaped exit holes in the outer bark as they emerge from dead or dying stem tissue (Figure 2).

Figure 2: D-shaped exit holes on stem

Description

The adult bronze birch borer beetle is flat, elongate in shape, and olive-green to black with a metallic bronze

Figure 3: Bronze birch borer adult

overtone (Figure 3). The adult beetle ranges in size from 7-11 mm in length. Adults emerge from dead wood from mid-June until early August. Adults deposit eggs in branch crotches and crevices on the tree stem until mid-August. Bronze birch borer larvae are flat, elongate, legless, and have a brown head and white body with forceps at the end of the body. Larval development occurs over 1-2 winters depending on the condition of the tree.

Control

Healthy, vigorous birches are most resistant to bronze birch borer attack. Good tree vitality can be accomplished through fertilization according to soil test reports, irrigation during dry periods, proper pruning, and appropriate mulching of the root zone. Pruning should occur when early dieback symptoms are evident in the upper crown. Fall pruning is encouraged since it limits fresh wounds and sap bleeding that may attract adult borers. Preventative and therapeutic chemical treatments may be applied in areas that have a history of bronze birch borer activity. Please contact your Bartlett Arborist Representative to learn about control options for this pest.

Founded in 1926, The Bartlett Tree Research Laboratories is the research wing of Bartlett Tree Experts. Scientists here develop guidelines for all of the Company's services. The Lab also houses a state-of-the-art plant diagnostic clinic and provides vital technical support to Bartlett arborists and field staff for the benefit of our clients.