

Bronze Birch Borer

By
Scott Hininger
University of Wyoming Extension
Sheridan County
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Bronze Birch Borers are members of the flatheaded borers and feed and reproduce on stressed and dying trees. They have been identified in northern Wyoming. Most native trees (birch, oak, honey locust, basswood, maple and ironwood) are attacked by native flatheaded borers.

Most Asian and European species and cultivars of white barked birch that are planted in landscapes are very susceptible to attacks by the bronze birch borer. Native species of white barked birch, such as paper and gray birch have evolved with the borers and are much more resistant when the trees are healthy. Many North American native non-white barked species also have significant resistance to bronze birch borers. Yellow birch and sweet birch are also generally resistant to bronze birch borer unless stressed, and river birch appears to be immune.

Adult bronze birch borers are one quarter to one half inch long dark colored bronze beetles. The larvae of are up to one inch long when fully grown, pale white with a flattened body and two pincer-like tails at their rear end. The head is mostly hidden; only the mandibles are easily seen. They pupate in spring and start to emerge as adults in early June and continues into July. The adults live for two to five weeks, feeding on leaves, mating and laying eggs in branch crotches or bark crevices of host trees.

The eggs hatch and small larvae chew through the bark to get to the nutritious phloem as well as the outer xylem tissue. As larvae feed, they create galleries that become packed with their droppings. Most larvae will consume enough tissue through summer and fall feeding to complete their life cycle in one season.

Trees stressed by factors such as sustained drought or wind are especially susceptible to attacks by the bronze birch borer. Trees under stress have a reduced ability to acquire and distribute water and carbohydrates throughout their canopy which leads to reduced tree defense against the borer larvae. However, the galleries created by the larvae cause significant damage to trees. These galleries disrupt the transport of water and nutrients in infested trees. The initial symptom is often branch dieback at the top of the tree. If the tree continues to decline, dieback extends down into major branches and eventually into the main stem. Bronze birch borer galleries can be observed as ridges of raised, bumpy callus tissue on the bark of infested birch.

Mature trees that are attractive to bronze birch borer are usually water stressed. The most important management step that can be taken is to keep trees well-watered. In addition, if any changes are being made to the landscape, make sure to protect the roots of the trees that will remain on the property. Root damage caused by soil compaction or root severing due to heavy equipment will stress trees and making them more attractive and susceptible to damage from borers. Remember that the roots can extend well beyond the canopy of the tree.

Treating trees with insecticides to kill borers is only effective if the tree is in the initial stages of decline and dieback. When over 40% - 50% of the canopy has been killed by borers, the effectiveness of insecticides is greatly diminished and a treatment should not be made.

There are systemic insecticides available for treating bronze birch borer. Imidacloprid (Bayer) is applied as a liquid drench to the soil around the trunk of the tree. Dinotefuron (Safari) is applied as granules to the soil directly around the tree.



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