

Garth Davis, Graduate Student
Plsc 464
Homework #4

Bronze Birch Borer

Problem

I found a European white birch (*Betula pendula*) that looked as if it were dying from the top down (figure #1). The new growth at the top of the tree is being affected. Closer examination of the tree revealed raised ridges and D-shaped holes in the bark. The overall health of the tree is poor. The problem is causing serious harm to the plant.

Cause

I believe that the cause of the dieback in the European white birch I saw is the bronze birch borer (*Agrilus anxius*). This is a slender beetle about ½-inch in length. The larva of this beetle is what causes damage to certain birch trees. The larva feed under the bark girdling the branch or the tree causing wilting and death. This insect is a native of North America and attacks birch trees in most of North America including Idaho, Washington, and Oregon. The D-shaped holes found in the bark might be stained with rust colored sap. These holes are emergence holes made by adult beetles (Shetlar 2000).

Remedy

There are several suggested strategies for avoiding and treating trees infected with bronze birch borers. The first strategy is to provide the proper habitat for the birch tree to grow in including the following: shaded, semi-moist areas on the north and east sides of buildings, and proper fertilization to keep the tree growing vigorously. Another strategy would be to use birch trees that are less susceptible to bores. These include river, gray, and monarch birch trees.

To protect susceptible trees you can apply insecticide to tree bark at appropriate times to kill larvae hatching from eggs. Finally you can use systemic insecticide to control active borers, but an often a lot of damage has already occurred. If you choose to use chemicals to control bronze birch borers you should consult a professional about commercial insecticides available on the market (Shetlar 2000).



Figure 1. European white birch exhibiting dieback caused by the bronze birch borer.



Figure 2. D-shaped exit hole of bronze birch borer.

References

Shetlar, David. "Bronze Birch Borer Management". *Ohio State University Fact Sheet*. 2000. 11 Nov. 2003. Available online<<http://ohioline.osu.edu/hyg-fact/2000>>