



St. Croix  
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# TREE FACTS

## BRONZE BIRCH BORER

Bronze birch borer (*Agrilus Anxius Gory*) is a serious pest of birch trees in the Midwest. It can severely injure or kill most birch species, but most often it injures varieties of European white birch planted as shade and ornamental trees.

Like most wood-boring beetles, the bronze birch borer is really a secondary problem. It usually attacks trees under stress or in a weakened condition because of drought, disease, nutrient deficiency, construction injury, or excessive exposure to the sun. Planting birch in a poor location is the most common reason for problems with bronze birch borer in Wisconsin. Vigorous healthy trees, planted in favorable surroundings are less attractive to the borer and more likely to survive an attack.

The usual first sign of attack is a thinning or dieback of branches in the upper third of the tree. Leaves on infested branches may be unusually small or show marginal browning in May or June. Larvae cause the damage by feeding under the bark and girdling the branches. Girdling prevents movement of food and water to tissues above the attack site. Ridges under the bark are formed by this feeding and are an early indicator of the pest and can help us estimate severity.

Over time, the attacks progress downward to lower branches and the trunk. Typically, borers kill trees in 3-4 years. Trees planted in very poor sites or planted in borer-infested areas may die in 1 year.

### LIFE CYCLE

Bronze birch borers belong to a group of beetles called the metallic woodborers because of the adult beetles' iridescent color. They spend the winter as larvae in small cells just beneath the bark. Full-grown larvae are 1/2-1 inch long, white, and slender with dark brown jaws. They also have a slightly flattened, enlarged area directly behind the head, and two brownish projections on the last segment of the body.

Larvae pupate in spring and adults emerge during May, June, and July. The adults chew their way through the bark, leaving characteristic 1/8 inch, D-shaped exit holes, which are useful in identifying birch borer problems. Adults are slender, greenish- to bluish-black metallic beetles. They are 3/8 inch long with blunt heads and pointed bodies. Adult females live for 3 weeks and deposit eggs under loose bark or in cracks or crevices on the trunk.

Eggs hatch within 2 weeks, and larvae bore into the tree and feed on the inner and outer wood layers. Larvae usually reach maturity by late fall. However, predicting wood

borers' exact stage of growth at any given time of year is not possible; factors like tree vigor and weather conditions make it possible to find all larval stages during winter.

### CONTROL

#### CULTURAL

Selecting the proper site is very important. Avoid exposed terraces and locations subject to severe soil compaction or drought conditions. Planting a white birch by itself in a sunny, southerly exposed lawn will surely lead to water or temperature stress problems and ultimately to borer attack. Planting trees in semi-shaded, moist sites leads to fewer problems.

Try to keep trees healthy. Because birches have a shallow root system, water them during droughts or if they are growing in light soil. It also helps to keep the soil around the birch cool by planting low-growing bushes or shrubs. Fertilizer helps trees withstand light infestations and fight off borer attacks.

#### CHEMICAL

Early identification is critical in our success to managing this insect. These trees can most likely be treated using soil injections or basal drench treatments. It is important to know that in well cared for trees, some soil injected treatments can take approximately three months to translocation. If a tree is stressed by other factors it may take longer. If diagnosis is made early in the growing season we need to question whether or not the tree can tolerate another three months of internal damage. If not we may need to consider more immediate options such as Trunk injected insecticides. Because these options are invasive in nature they should be considered a last resort reserved only for trees showing early evidence of excessive die back, or that are held in higher than average regards by their owners. Trunk injections offer an almost instantaneous knock down.

Please contact our arborists for the best care for your birch trees.

### Quick Facts

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