## Borer Insects of Trees & Shrubs

Wood-boring insects are among the most destructive pests of trees and shrubs. Most borers are the larvae stage that tunnel under the bark and in the living wood, destroying water and sap conducting tissues. Most borers cause damage to stressed plants, fix that stress, and the plant can survive. Often, by the time someone notices the borers, it's too late to fix the stress, it's time for chemical control.

These insects can be separated by four different groups. Each group has different characteristics and control strategies. Timing of control for your area is best determined your local extension office.

Metallic Beetles / Flatheaded Borers (see image 2). Will attack young plants or plants damaged near the base of the plant, (pruning cuts, weed-eater or mower damage). After maturing under the egg, they burrow directly through the bark and establish themselves, feeding in the sapwood (see image 3). These borers pack frass behind them as they tunnel, so no saw dust will be seen outside the plant. Common flatheaded borers include; bronze birch borer, flatheaded appletree borer, emerald ash borer and more.

Control in most cases can be done on non-edibles with *FL Systemic Tree & Shrub Drench*. Apply at the base of the plant once per year. On edibles such as fruit trees, trunk applications in May & June with *HY Lawn, Garden, Pet & Livestock Spray* can be used.

Long Horned / Roundheaded Borers (see image 1). This is a very large group of borers and is harder to simplify. Most emerge from eggs laid in bark slits or under the ground at the base of the plant. Many move around on the surface, until they find an area to enter the plant. These will leave saw dust outside the hole or at the base of the plant. Some will feed just below the bark for a short period of time, then move into the heartwood of the plant (see image 4). Common roundhead borers include; cottonwood borer, poplar borer, locust

borer, painted hickory borer, redheaded ash borer, twig girdler and more.

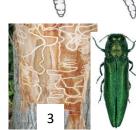
Control of these borers require knowledge of the insect and proper timing. Since many of these borers don't feed in the sapwood, systemics are not very effective. *HY 38 Plus* or *HY Bug Blaster* are usually the first choice due to how long the residue lasts (3 to 4 weeks).

Moth Borers There are two types of moth borers: clearwing (see image 5) looks like a wasp, others appear as moths (see image 6). These borers can have a multiyear life cycle and a female can lay up to 1000 eggs per year. Varieties include; ash/lilac borer, carpenter worms, peachtree borers and more.

Control for these borers is *HY 38 Plus* with proper timing, or *HY Lawn Garden, Pet & Livestock Spray*, systemics are not effective at all.

Shothole Borers (see image 7). These rarely seen beetles are very small and very prolific. They will have multiple generations per year and can cause significant damage, usually on stressed trees. In most cases, control is not recommended, *HY 38 Plus* would be the best choice.





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