

## **BORERS**

## Host Plants and Description

Borers attack many plants, especially trees and shrubs, but also vegetable crops, bulbs, and flowering plants. Usually, borers are the larval stage of a beetle or moth, and resemble worms or caterpillars. The adult stage of certain beetles can also be borers. Most often, borers enter plants through injuries in the bark or stem. Many borers work under the bark, but others concentrate on the terminal shoots. Still others burrow into the heartwood. Eggs are frequently laid in bark crevices, in scars or wounds, in needles, or on tree trunks.

## Plant Damage and Symptoms

Symptoms include a gummy substance, holes, loose bark or a sawdust-like material at the base of the trunk, or holes at twig ends. The first sign of borer damage is often plant decline. Upper branches may wilt, yellow or die. Often a tree will develop winding callus tissue to cover the area where borers are tunneling. Borers that concentrate in the heartwood may make a tree more susceptible to wind damage and rot. Those that work beneath the bark often girdle the tree, causing it to die. Look for the borers under the bark or in holes.

## **Controls**

Maintain healthy plants. Avoid transplant shock, improper planting, flooding, drought, injury or soil compaction.

Lessen transplant shock by thinning the top growth on newly planted balled and burlapped trees. Plant trees at the proper depth. Incorporate organic matter into the hole, and use a good grade soil. Water thoroughly and mulch the root zone.

Water during dry spells, fertilize properly, mulch, and prune out any weak branches. Avoid mechanical injury to plantings from lawn mowers or string-trimmers.

Do not plant trees that are very susceptible to borers, or choose resistant varieties. Birches that are resistant to the bronze birch borer include river birch and 'Heritage.'

Hi-Yield Lawn, Garden, Pet & Livestock Insect Control ( Permethrin ) is a recommended chemical control for borers in trees. Be sure to thoroughly soak the trunk up to five feet from the base and repeat applications as recommended on the label. The product must be present on the trunk as the borers ' eggs hatch.

Use carbaryl, rotenone or permethrin to treat squash vine borers and Ferti-lome Borer, Bagworm, Tent Caterpillar & Leafminer Spray (Spinosad) to treat Iris borers. (See separate sheet.)