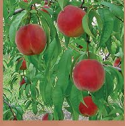




Stone Fruit IPM for Beginners

Developed by the Great Lakes Fruit Workers and funded by a working group grant from the North Central Integrated Pest Management Center



Chapter 28

Shothole borers

Arthur Agnello, Cornell University

Shothole borer

Scolytus rugulosus (Müller)

Hosts



The shothole borer is a pest of peach, cherry and plum and is found in all areas of the U.S. and Canada where stone fruits are grown.

Time of concern

In early June, the beetles appear on suitable trees and begin to excavate brood chambers between the bark and sapwood. Eggs deposited in the chambers hatch in three to four days and the grubs feed for up to 36 days, pupate and emerge as adults about 10 days later. There are two generations of this insect in the Northeast, with the second occurring around the end of July.

Damage, symptoms and pest cycle

This small, cylindrical dark beetle is normally found in dead or dying wood, but can be attracted to living trees (including peach, cherry and other stone fruits,



J.R. Baker & S.B. Bambara, NCSU, Bugwood.org

as well as apple and crabapple) that are stressed or otherwise in an unhealthy condition. When populations are very numerous, healthy trees will be attacked. A tree that is moisture-stressed will often be attacked first, even before the tree gives any outward appearance of the problem.

The adult female chews a small hole, about the size of a pencil lead, through the bark and creates a burrow or brood chamber in the bark and wood. The holes are sometimes indicated by a small amount of sawdust or borings on the tree's bark. On peach, cherry and other stone fruits these holes are usually covered and sealed in by dried droplets of gum, which hang from twigs like tear drops. Individual eggs are laid into each burrow, after which the larvae hatch and

burrow between the bark and sapwood at right angles from the brood chamber, creating grooves in the wood that resemble centipedes and are visible by removing the bark.



NYSAES

Shothole borer larval damage to plum.

This pest attacks the trunk, branches and twigs of suitable trees. All the inner bark and surface of the sapwood is quickly converted to dust by the primary wounds of the beetles and the more extensive burrowing of the numerous larvae.



M. Mailoux, MAFPAQ, Québec

Holes and burrowing damage in tree limb.

When the insects are abundant, the fruit clusters wilt and the leaves associated with them become brown, resembling a fire blight infection. Woodpiles in the immediate area are often the source of infestations of emerging beetles, often in early June.

IPM steps for beginners

This is not an easy problem to solve and extensive damage of this type often kills the tree. Contacting the grubs with an insecticide is naturally very difficult, because they are concealed inside the wood in galleries during development.

A broad-spectrum insecticide applied when the adults are active is of value in controlling this insect. During winter, all badly diseased trees or branches in or near the orchard should be cut out and all prunings promptly burned. Infested firewood should be burned before spring following cutting. Trees that are in a backward, somewhat sickly condition should be given a heavy treatment in the spring with some strong nitrogenous fertilizer, applying the material to the soil surface above the tree roots.