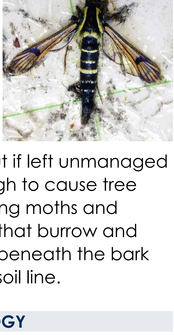
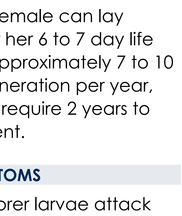
Greater Peachtree Borer
(*Synanthedon exitiosa*)



The greater peachtree borer is native to North America and its fruit hosts include peach, nectarine, apricot, prune, and chokecherry. It is a sporadic pest in Utah stone fruit orchards, but if left unmanaged it can be severe enough to cause tree loss. Adults are clearwing moths and larvae are caterpillars that burrow and feed in the cambium, beneath the bark near or just below the soil line.

BIOLOGY



Greater peachtree borer overwinters as larvae under the bark at the base of a tree, usually below ground level. They pupate in the top layer of soil, within a few inches of the host tree, or in the tree near the bark surface. Adults emerge in early summer, approximately mid June through early September in northern Utah and 3 to 4 weeks earlier in southern Utah. Mating occurs immediately after emergence. Females can lay eggs within 30 minutes of mating and each female can lay 200 to 1200 eggs over her 6 to 7 day life span. Eggs hatch in approximately 7 to 10 days. There is one generation per year, but some larvae may require 2 years to complete development.

SYMPTOMS

Greater peachtree borer larvae attack only the lower 12 inches of the host trunk, and usually enter at or just below ground level. Larvae will occasionally feed in larger roots near the soil surface. Larvae tunnel between the inner bark and sapwood in the cambium, and can girdle and kill young trees in one season. Symptoms include loose, dead bark and masses of gummy sap mixed with frass exuding from entry and exit holes. Leaves may turn yellow and wilt, and the tree canopy will eventually die back.

DEGREE DAY MODEL

The development of greater peachtree borer can be predicted based on accumulated heat over time, called degree days (DD). Using DD will help to more accurately time insecticide applications and reduce the number of applications to a minimum. Degree days are accumulated starting on March 1, with lower and upper thresholds for development at 50°F and 88°F.

Degree Days	Management Event
400 - 500	• Place traps in orchard
600	• First moths are expected in high population areas • Begin treatment
950	• First moths are expected in low population areas • Begin treatment

MANAGEMENT

Insecticides:

Only a small number of products (permethrin, carbaryl) are registered for peachtree borer that have adequate longevity to protect trees. Apply the first application according to DD recommendations (generally early July in northern Utah and 3-4 weeks earlier in southern Utah). Repeat applications based on product guidelines.

Mating Disruption:

Mating disruption (MD) of greater peachtree borer has been proven effective in Utah, even in peach orchards as small as 1 acre. Place pheromone dispensers throughout the orchard immediately after first trap catch. Only a single application is required as dispensers may release pheromone up to 120 days. Effective MD should completely shut-down moth catch in pheromone traps.

Biological Control:

The entomopathogenic nematodes, *Steinernema carpocapsae* and *Heterorhabditis bacteriophora*, have been shown to control borer larvae if sprayed on frass-surrounded bark cracks during the summer. This method helps with killing borer larvae that have already infested the tree, so is not a preventive control.