

(revision date:5/20/2014)

Walnut: Walnut twig beetle

Use Integrated Pest Management (IPM) for successful plant problem management.

Biology

The walnut twig beetle (WTB) is a small bark-boring beetle (*Pityophthorus juglandis*) believed to be native to the southwestern US. Not a great deal is known about the beetle's life cycle, but it is believed that two or more generations may develop per growing season in warmer areas. Adults are tiny yellow-brown beetles (around 1/16" long) with lines of puncture marks along the wings. They breed and feed in the bark tissues of various species of walnut trees, including black (*Juglans nigra*), Arizona (*J. major*), California (*J. hindsii* and *J. californica*), and English (*J. regia*) walnuts. Adults bore into the bark of branches (they prefer branches around 3/4" in diameter and larger) and the trunk, where they feed and lay eggs. Larvae develop and pupate in the living tissues of the bark. Emerging adults produce a tiny exit hole in the bark, often on the underside of branches. Adults from late summer and fall generations are believed to overwinter in chambers they bore in the thick outer bark of trunks. Upon emergence in spring, overwintering adults fly to new sites, often in the upper limbs of host trees. Some of the larvae may also overwinter. Beetle entry/exit wounds may show a small amount of staining, particularly on English walnut, but this is not consistent. WTB may be confused with other boring beetles, but damage by WTB is always limited to the live bark tissues. Localized staining and discoloration around the beetle tunnels may be seen in trees infected with Thousand Cankers Disease (TCD). See Walnut: Thousand cankers disease for more information.

Management Options

Non-Chemical Management

- ~ Do not plant susceptible species in areas where TCD is known to occur.
- ~ Maintaining excellent tree health by providing adequate water and good nutrition may help slow progress of the disease, but will not prevent infection or eventual death of infected trees.
- ~ In known TCD areas, do not move live plant material or raw wood (branches, chips, logs, firewood, stumps, etc.) from susceptible trees. Beetles are able to complete their lifecycle in cut wood and can also reinfest cut logs that retain any bark.
- ~ Beetles have been observed to survive in large-diameter, freshly cut chips. However, chips will dry and become unsuitable host material for both beetles and fungus in a relatively short time, so chipping is considered one of the better ways to deal with infested materials.
- ~ Wood from TCD-affected trees should be milled and used locally to prevent spread of WTB and TCD into new areas. Milled, bark-free lumber will not support WTB, but it is not known how long dried logs or slabs that retain bark can be reinfested.

Select non-chemical management options as your first choice!

Chemical Management

IMPORTANT: *Visit Home and Garden Fact Sheets for more information on using pesticides*

Currently there are no known effective controls for TCD once it has become established in a tree. There are no chemical options recommended for home use for either TCD or WTB.

Walnut: Walnut twig beetle

Images



~ Caption: Walnut twig beetle adult
~ Photo by: S. Valley, ODA