

Walnut Twig Beetle

Pityophthorus juglandis

by Lorraine Van Slooten

The walnut twig beetle is a very small (about 1/16 in. long), reddish brown phloem-feeding bark beetle native to Arizona, California and New Mexico. It has now spread throughout the western U.S. states from the Mexican border north to Utah & Washington, all areas where eastern black walnut trees (*Juglans nigra*) had been planted as ornamentals. The widespread decline in the West of these walnut trees during the last decade has been linked to *Geosmithia morbida*, a

and exit holes on the branches before the branch dies. The large numbers of cankers under the bark are responsible for the name of the disease causing black walnut and also butternut (*Juglans cinerea*) mortality –

Thousand Cankers Disease.

In 2010 the disease was found on black walnut trees in Tennessee, the first location in the trees' native range east of the Mississippi River. This was followed

in 2011 by its confirmation on trees in Virginia and Pennsylvania; 2013 in Ohio. Also in 2013 both the beetle and the fungus were reported on black walnut trees in northern Italy. According to the U.S. Dept. of Agriculture Forest Service: "Thousand Cankers Disease is

mainly on the transport of beetle-infested lumber and firewood to new areas. The beetles are most active from April to October and walnut trees seem to be most susceptible to TCD when they are actively growing in the same time frame. Since there are currently no treatments for infected trees, management of TCD depends on sanitation and prevention.


Visual inspection of walnut trees for foliage and/or branch dieback is currently the best method for detecting TCD. Pheromone-baited traps that are placed near walnut trees can also be of assistance in detecting and monitoring the presence of the walnut twig beetle. 

Photo credit: Curtis Utley, CSUE, Bugwood.org

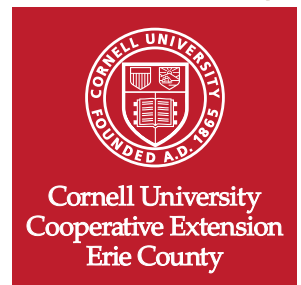


fungus carried by the walnut twig beetle. The beetles construct egg galleries across the grain of the phloem, introducing the fungal spores as they go. Infection by the fungus causes round or oblong cankers around the galleries that eventually enlarge and kill the phloem and cambium. A tree can die in as few as three years from the initial infestation.

An early symptom is yellowing foliage at the crown of the tree that turns into browned and wilted foliage. Bark surfaces may not have any symptoms except for thousands of tiny beetle entrance

expected to spread in eastern forests because of the widespread distribution of eastern black walnut trees, the susceptibility of this tree species to the disease and the capability of the fungus and beetle to invade new areas and survive in a wide range of climate conditions."

Black walnut lumber is valuable for making furniture, veneers and flooring as well as for wood-working, so quarantines to prevent disease spread have been put in place in several regions of the U.S. TCD spread has been blamed



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