

FOREST HEALTH

Monitoring Our Walnuts

By Lisa Bowers, Forest Health, ODNR Division of Forestry

What might be in store for another of our native trees in Ohio? The eastern black walnut, *Juglans nigra*, needs our attention. This native tree, valued for its timber and nuts, is found in our forests and residential areas. Recently in Tennessee, eastern black walnut trees were found to be infested with Thousand Cankers Disease of black walnut (TCD). TCD infestations were confirmed in late July 2010 in four counties around Knoxville. This was the first discovery of this disease in the native range of eastern black walnut. Based on the level of deterioration of the infested trees, experts suspect that TCD has been in Tennessee for several years. However, it is too soon to be certain how this disease may act in the native range of eastern black walnut.

>[MAP OF TENNESSEE TCD-in-TN Interstates.jpg](#)

([Janis-optional use??](#))

Caption:

Tennessee infestation discovered July 2010. This area around Knoxville is the first known infestation of TCD east of Colorado.

The walnut twig beetle, *Pityophthorus juglandis* and the newly identified fungus, *Geosmithia morbida* are the causes of this disease. Both of these are only known to occur on walnut species. The walnut twig beetle is thought to be native to Arizona walnut (*Juglans major*) in the southwestern United States and Mexico, and not to our eastern black walnut. But, as we have learned with other pests and diseases, the beetle and the fungus can be transported. Adult twig beetles carry fungal spores when they are constructing galleries. The fungal spores are then introduced into the bark. The fungus causes distinctive circular or oblong dead areas called cankers in the bark and eventually kills the cambium. Tree symptoms progress from yellowing foliage to brown wilted foliage and then branch mortality. With a close look, you may be able to see the tiny circular entrance and exit holes created by the beetles on dead and dying branches. There may also be signs of cracking on the bark near the areas of the cankers. Experts say that it takes many years of continuous feeding to deliver enough fungus to kill the tree. Once crown symptoms begin to appear, death of the tree may occur within three years.

>PHOTO OF PENNY KCanker_10

Caption:

Dead walnut twig showing the exit holes of the mature walnut twig beetle. A single four foot block of walnut was found to contain more than 20,000 beetles.

The best line of defense is early detection. The ODNR Division of Forestry, Ohio State University Extension, and the Ohio Department of Agriculture have formed a Task Force Group to determine the best techniques to combat the problem if Thousand Cankers Disease arrives in Ohio. If your eastern black walnut has these symptoms and you suspect that it may have TCD, contact the Ohio Department of Agriculture, Ohio Division of Forestry, or an OSU Extension Office for assistance. Samples can also be submitted to the Ohio Plant & Pest Diagnostic Clinic located in Reynoldsburg at the Ohio Department of Agriculture headquarters.

Map courtesy of the U.S. Department of Agriculture

Photo courtesy of Whitney Cranshaw, Colorado State University