



# Thousand Cankers Disease: Killing Black Walnut in Pennsylvania

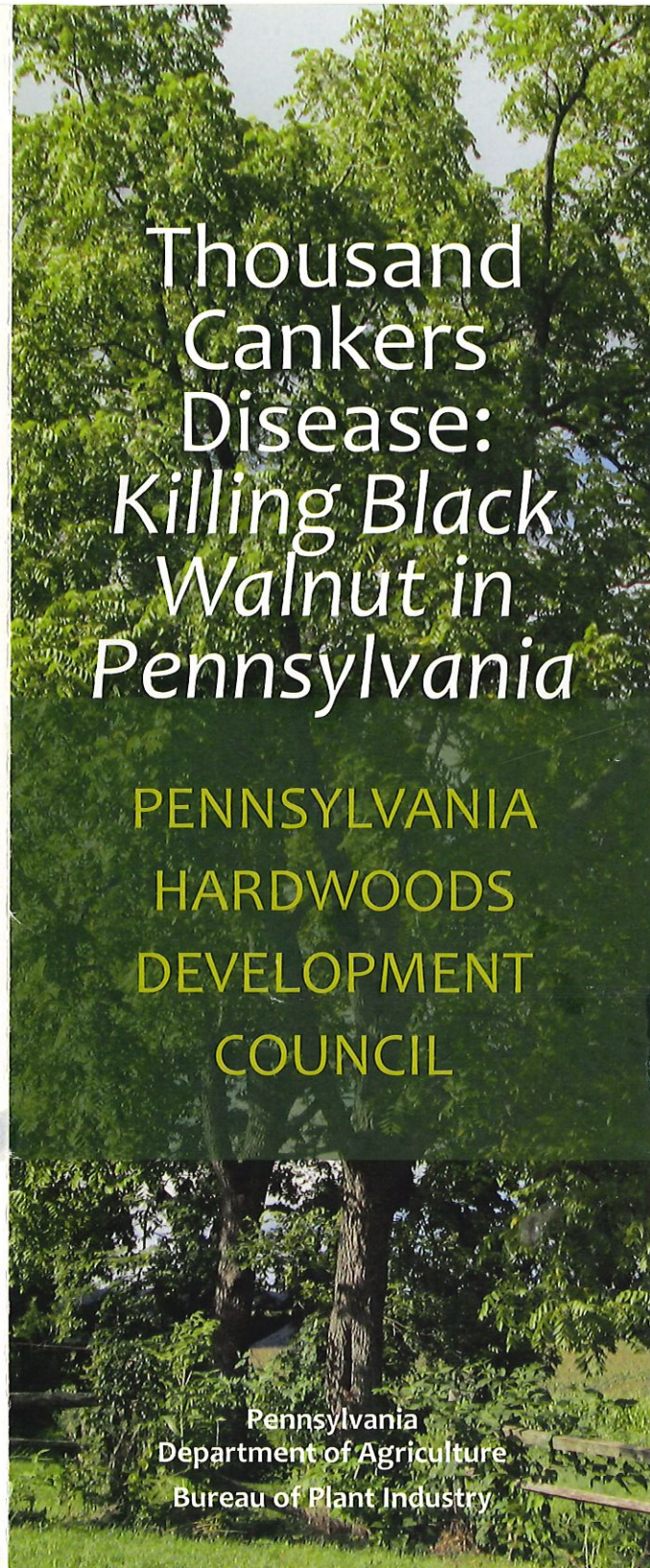
PENNSYLVANIA  
HARDWOODS  
DEVELOPMENT  
COUNCIL



Pennsylvania Department of Agriculture

Bureau of Plant Industry  
Hardwoods Development Council  
2301 N. Cameron St.  
Harrisburg, PA 17110

Phone: 866.253.7198  
Email: [Badbug@pa.gov](mailto:Badbug@pa.gov)



Pennsylvania  
Department of Agriculture  
Bureau of Plant Industry

## What is Thousand Cankers Disease?

Thousand Cankers Disease (TCD) is caused by the fungus *Geosmithia morbida*, carried by the Walnut Twig Beetle. The beetle burrows beneath the bark of black walnut trees, introducing the fungus and causing small cankers to form. As more beetles attack the tree, the number of cankers increases, slowly starving the tree of nutrients and causing the tree to die within 10 years of initial infestation.

There is no known cure or control for the disease. In 2011, Pennsylvania confirmed its first case of the disease in Bucks County.



## Identifying a black walnut tree

Black walnut trees have compound leaves—two sets of leaves on one stem.

The walnuts begin as a green fruit on the tree. As the nuts ripen they become darker. Outer layers can easily stain your hands and clothing when you handle them.

Since black walnut trees need plenty of light, they are usually found on the outer edges of forested areas near streams. They are also planted near homes for shade and nuts. Black walnut trees can reach up to 90 feet in height.

## The black walnut tree

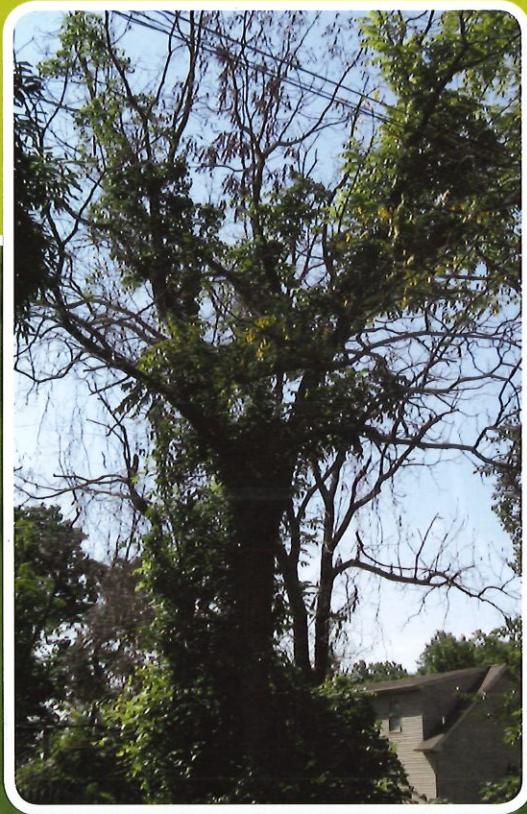
Black walnut trees account for nearly 1 percent of Pennsylvania's forest trees. Its wood is used for furniture, cabinets, flooring, and veneer. The wood's unique color makes it more valuable than woods like maple or oak, and the trees' unique shapes help artisans create prized handmade tables, bowls, and other crafts.

Black walnuts make a tasty snack or addition to a variety of recipes. Their hulls are ground and used for a variety of products, including abrasives for cleaning and shining jewelry. Dyes made from the hulls have been used for fabrics or textiles for millennia.

## What does it look like?

Early symptoms of the disease are yellowing of leaves and foliage-thinning of the upper crown of the tree. As the disease progresses, larger limbs are killed followed by the trunk.

Adult walnut twig beetles are extremely difficult to detect as they are dark brown and similar in size to the letter “I” in the word LIBERTY on a dime.



## Signs and symptoms of TCD

Diagnosing Thousand Cankers Disease may be difficult. If you suspect a tree has the disease, contact your local County Extension Agent for assistance.

## Stop the spread. Don't pack a pest.

Thousand Cankers Disease spreads like most unwanted pests—most often with infested walnut wood.

Firewood carries pests and diseases that can prove fatal to Pennsylvania's trees, harming the ecosystem and the state's nation-leading hardwoods industry.

Even lumber destined for construction, woodworking, or other crafts can harbor



## Flagging

Flagging or yellowing of the leaves in the upper portions of the black walnut tree may be evident in the middle of the summer. This is very evident during years where there is less rainfall.



## Cankers

Cankers form each time an infected walnut tree beetle pierces the tree. These cankers develop just under the bark. The cankers are caused by a fungus, *Geosmithia morbida*. Once many cankers form around the tree, the tree can no longer take up the nutrients and water it needs to survive. Hence the name “Thousand Cankers Disease.” To see the cankers, you must peel away the bark slowly and with shallow cuts.

pests. That's why some states like Pennsylvania have quarantines in place that may come with stiff fines.

Don't move firewood more than 50 miles from where it is harvested. Check regulations before you purchase and move wood. Know the law, especially when buying over the Internet, where retailers may not know the regulations for different states.

Walnut Twig Beetle,  
*Pityophthorus juglandis*,  
magnified for easier viewing

Photo credit: Donna Brandt,  
Missouri Department  
of Conservation



## Walnut Twig Beetle

These insects are very tiny. They live just under the bark of the black walnut tree.



Don't move black walnut from a quarantine area. Check if your county is within the quarantine area for Thousand Cankers Disease.

No information currently suggests that black walnut meat or hulls carry Thousand Cankers Disease, so nuts, processed lumber, and finished wood products without bark are exempt from the quarantine.

For more information go to: <http://pda.state.pa.us/ThousandCankersDisease>.

