

Where is Thousand Cankers?

Since the mid-1990s TCD has produced widespread death of black walnut trees in several western states; since 2010 it has been found in at least three eastern states (PA, TN, VA). TCD survey and detection work is ongoing.

How does TCD kill Walnut Trees?

- The disease is caused by a fungus carried by walnut twig beetles.
- The fungus kills small patches of tissue under the bark where the beetles attacked.
- These dead areas—or cankers—under the bark grow together when lots of walnut twig beetles attack the limb.
- Eventually the cankers restrict the movement of nutrients, weakening the tree.
- Black walnut trees usually die within three years after initial symptoms are observed.



Whitney Cranshaw, Colorado State University

Thousand Cankers Disease & Black Walnuts: a Deadly Combination!



Diane Wanwick, TN Division of Forestry



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Help Stop This Killer!

Don't bring walnut trees or untreated walnut wood into Missouri

TCD spreads when walnut wood containing walnut twig beetles is moved to new locations.

Don't move firewood

Tree-killing insects and diseases can lurk in firewood. Buy only local wood and burn it all.

Be aware of state quarantines

Several states, including Missouri, restrict the movement of walnut wood. Check with your state department of agriculture for more information.

Investigate possible TCD infections

If you believe your walnut tree is infested with TCD, take photographs of the entire tree, a close-up of leaves, and any other symptoms. Email photos to forest.health@mdc.mo.gov or contact your local Missouri Department of Conservation forester.

Gradually shaving bark from the branches reveals the cankers underneath

Please Note

Neither the walnut twig beetle nor the fungus have been detected within nut hulls or meat. Also, the beetle tunneling and the fungal growth and staining are primarily limited to the tissue under the bark and has little effect on the value of the wood.

What is TCD?

Thousand cankers disease (TCD) is fatal to black walnut trees. It is caused by a fungus carried by the walnut twig beetle. The name "thousand cankers" is due to the numerous cankers, or infected tissue, surrounding multiple beetle entry points on branches and main stems.



Donna Brant, MDC

The twig beetle is the size of the letter "I" on a dime.



Tim Phelps, TN Division of Forestry

Do You Have a Black Walnut?

13-23 leaflets, pointy with toothed edges

Walnut bark is rough, and when the surface is lightly scraped it shows a chocolate brown color



Simeon Wright, MDC



Black Walnut trees grow up to 90 feet tall with rounded, open crown

Thousand Cankers Disease Signs & Symptoms

Nuts with green husks turn black as they ripen

For More Information

Log onto:

www.mdc.mo.gov/thousand-cankers

Find out how you can help STOP this killer!



photo: SRS

Early symptoms: mid-summer yellowing and wilting of leaves high in the crown; limbs die back, usually from top downward



photo: Simeon Wright, MDC

As the disease progresses limbs are killed, which may have dead, wilted leaves still attached; new sprouts may grow from roots or trunk



photo: Simeon Wright, MDC

Removing bark from dying limbs 1-2 inches in diameter exposes dark brown cankers around beetle tunnels; cutting too deeply removes cankers