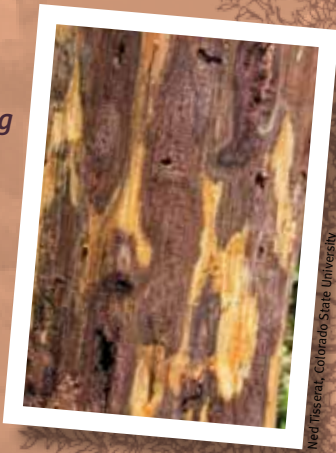


Where is Thousand Cankers?

Since mid-1990's, TCD has produced widespread death of black walnut trees in eight western states and in Tennessee.

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.



Neil Tisserat, Colorado State University

Thousand Cankers Disease & Black Walnuts: a Deadly Combination!



Diane Warwick, TN Department of Forestry



Whitney Cranshaw, Colorado State University



In partnership with the Missouri Department of Conservation and the Missouri Society of American Foresters

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. E-mail 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 Brandt, MDC



Rob Lawrence, MDC

Do You Have a Black Walnut?

13-23 leaflets, piny 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

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!



Thousand Cankers Disease Signs & Symptoms



Shawnee

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



Shawnee

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



Shawnee

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