



USDA Forest Service
State and Private Forestry
Forest Health Protection

August 2010



THOUSAND CANKERS DISEASE (TCD) of EASTERN BLACK WALNUT

Background:

- TCD was first observed in New Mexico in the 1990's. It has since spread throughout the west causing dieback and mortality in eastern black walnuts.
- Mortality first noticed in Colorado Springs, CO on black walnut (*Juglans nigra*) in 2003.
- Declining walnut trees were associated with the walnut twig beetle (*Pityophthorus juglandis*) an insect native to southwestern US that typically breeds in dead and dying twigs and branches.
- A newly described fungus, *Geosmithia morbida* was identified as the cause of the cankers and has now been confirmed in nine states: AZ, CA, CO, ID, NM, OR, TN, UT, and WA.
- The first report east of the Mississippi of TCD was recently confirmed in Knoxville, TN on JUL 26, 2010 on urban street trees. TCD has most likely been present for 8-10 years.
- It is not known how the beetle/fungus 'complex' will act and what the impact of TCD will be in native eastern black walnut ecosystems.

Concerns:

- Movement of infested walnut (wood, lumber, or firewood) may pose further risk to the natural range of black walnut in the eastern United States. There is concern of damage to eastern black walnut which is a highly valuable tree prized for its quality lumber.
- APHIS considers TCD a non-reportable/non-actionable item at US ports of entry since the beetle is native to North America (NPAG 2008). They have since worked with FS to publish a Pathway Assessment (2009), and are currently working on an internal decision exercise in light of the recent find in TN.
- Sanitation and pruning diseased branches are recommended. Few treatment options are known given that chemical treatments may not be effective for this disease.

Forest Service Response:

- FS has taken the lead on this issue and is developing a 'National Framework for Thousand Canker Disease'. A framework working group meeting was held April 2010 in Kansas City with final document due out soon. The framework will outline roles & responsibilities and possible management options.
- FY 2010, \$200K allocated to fund TCD detection monitoring, surveys, and trainings.
- May 2010 the Northeastern Area issued a Pest Alert for TCD. This diagnostic tool had a direct impact on locating the TN find. A revision is currently in the works.
- Preliminary studies on population genetics are being supported with FS resources for both beetle and fungus to determine their origins.
- Confirmation in TN and the extent of outbreak will be delimited and efforts to locate other infestations across the eastern range of black walnut will be conducted cooperatively with FS stakeholders.
- FS management recommendations to mitigate TCD are being developed.

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