

**Notes from the
Thousand Cankers of Black Walnut National Conference
November 3-4, 2009 - St. Louis, Missouri
Doubletree Hotel—St. Louis at Westport**

This is based on notes taken by Julia Thompson and David Johnson (both of the Missouri Department of Agriculture) and typed by J. Thompson (CAUTION: This is not a transcript, but notes. Remarks are often paraphrased and may have been accidentally omitted or misunderstood by the note-takers. It has not been compared with the event recording to check for accuracy.)

Tuesday, November 3, 2009

Key to some abbreviations used:

WTB = walnut twig beetle = *Pityophthorus juglandis*

TCD = thousand cankers disease

Gm = *Geosmithia 'morbida'* ('*morbida*' is proposed species name of this newly discovered species)

BW = black walnut = *Juglans nigra*

Steve Seybold (U.S. Forest Service) - An Overview of the Walnut Twig Beetle and Thousand Cankers Disease in California

- Background
 - Invasives insects big issue, exponential increase in borers, 11 in last year in CA of which 5 are tree killers
- Whole pallet besides TCD
- Hard times for hardwoods: chestnut blight, Dutch elm disease (vectored), oak wilt (vectored), butternut canker, sudden oak death, TCD (vectored)
- Is WTB native in CA?
 - Occasionally collected between 1928 and 1982 so has been in CA long time
 - Collected and identified Gm in 2008 and 2009
 - Abundance of natural enemies suggests WTB has been in CA for some time
 - Über vector with OCD tasting habits in bark
- TCD in CA
 - Wild *Juglans* species in CA are riparian species
 - *J. hindsii* in northern CA and *J. californica* in southern CA
 - Native *Juglans* are often used as rootstock for *J. regia* in nut production orchards
 - Dying black walnut had WTB and *Geosmithia*
 - ◆ Ambrosia beetles resemble WTB
 - Sutter Co.: *J. nigra* X *hindsii* hybrid also getting whacked
 - ◆ In orchard English walnut and BW rootstock both had canker
 - Butte Co. one English walnut and 25 BW hybrids removed
 - Davis: walnut is a street tree, mortality of *J. hindsii*, mistletoe also on these trees and there may be an interaction
 - Davis: *Juglans* collection: *J. californica*—TCD and 'Paradox' rootstock maybe infested, too
 - Solano CA. Putah Creek—*J. hindsii* mortality
 - ◆ Germplasm collection—many species attacked by beetle RE: *Geosmithia* not looked at all well yet
 - *J. regia*—first time found affected 2008, this year one more

- Contra Costa Co.: *J hindsii*—beetles but no disease (but was wrong time of year for survey so needs better survey)
 - San Louis Obispo: highly isolated stand 50 mi from closest walnut, but beetle and pathogen were there
 - Ventura Co. remote but beetle and fungus there
 - Pathogen and insect well integrated all over CA and in many Juglans species.
- Are there patterns in colonization?
 - In *J. californicus* seems to prefer branches 1.5 cm and larger diameter, prefers the rough areas
 - ◆ Males colonize first (preliminary data)
 - ◆ (In CA) fly around dusk (6-9 PM)
 - ◆ Male more attractive than females, but male and female still more attractive than males alone
 - Working with chemists to ID compound to attract beetle
 - Summary: he thinks the beetles and pathogen have been in CA a long time
 - High native CA walnut infection and widespread mortality
 - Infection in English walnuts is lower (0-10%)
 - Males and female WTB produce aggregation pheromones
 - Hopes to have plant pest bulletin out in Dec. 2009 (USDA, USFS and UC Davis)

Question: Why do we only see TCD now if insect/pathogen has been in CA a long time? Answer: Doesn't know. Host shift? Never looked? Maybe seeing decline in last 10 yrs. Further North in CA less TCD

Question: Could woodpeckers and sapsuckers be moving disease? Answer: We have not connected this with TCD

Question: Movement of beetles: walnut vs. people Answer: wind can move beetles miles. People move too.