

Walnut Council

Maryland Chapter Newsletter

Fall/Winter 2014

Volume 21, Issue 1

President's Message: They're Heeeeere...

David Robbins

In the fall of 2012, the Maryland Chapter took a bus tour to Virginia to look at the recently discovered (at that time) Thousand Cankers Disease outbreak. On that tour we learned, from Norm Dart of the Virginia Department of Agriculture and Consumer Services, that TCD had most likely been in Virginia for 10-15 years, eluding detection for most of that time. Around the same time in 2011 when Thousand Cankers Disease was discovered in Virginia, it was also found in Bucks County, Pennsylvania.

So at that time, we had TCD outbreaks to the north and south of us, and not too far from the Maryland border. And it seemed that these outbreaks had been there much longer than we originally thought. With these two facts in mind, it was easy to make the intuitive leap that TCD was already here in Maryland, just waiting to be discovered. Well, as it turns out, we were probably correct.

In October of this year, the presence of Thousand Cankers Disease was confirmed in Cecil County, at the Fair Hill Natural Resources Management area. While this came as no surprise to

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anyone, it was still very unfortunate news. If TCD was not a concern to us before, here in Maryland, it certainly is now.

What is perhaps most alarming is the location of this outbreak. Until now, Thousand Cankers Disease had only been found in street and landscape trees. These trees live a very hard life, and are under constant stress. The hope was that TCD only kills trees that are already under significant stress. But the effected trees at the Fair Hill Natural Resource Management Area are located in a natural setting, far away from the stresses of the urban environment. However, this does not mean that they are not under other stresses, such as poor soil chemistry or drainage, etc.

Chapter President's Message (Continued on page 3)

A Brief History of Walnut Twig Beetle and Thousand Cankers Disease in Maryland

Robert Tatman

Program Manager

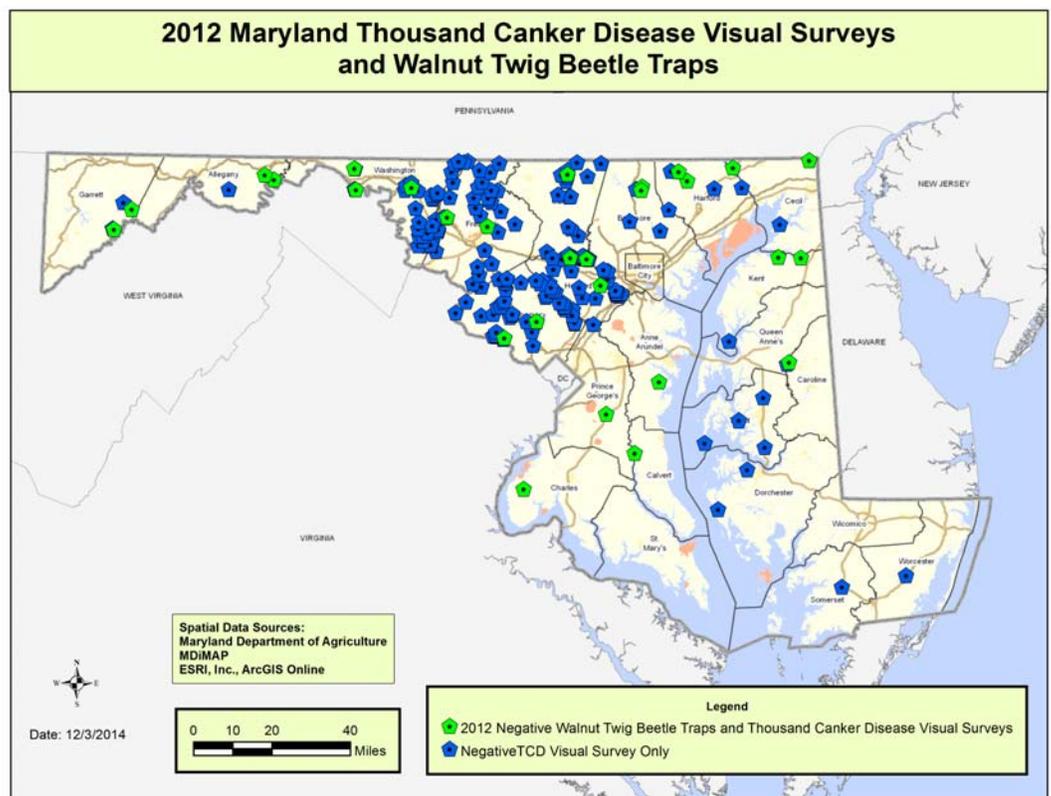
Maryland Department of Agriculture -
Forest Pest Management

The first discovery of Walnut Twig Beetle (WTB)/Thousand Cankers Disease of Walnut (TCD), *Pitophthorus juglandis/Geosmithia morbida*, within the natural black walnut range was in 2010 in Tennessee. In 2011, the Maryland Department of Agriculture (MDA) – Forest Pest Management Section (FPM) visually surveyed for TCD. No visual signs of TCD were observed. In 2012, the visual inspection continued, plus 28 pheromone baited traps were deployed throughout Maryland. No visual signs of TCD were observed and no WTB were collected.

In the summer of 2013, MDA-FPM visually surveyed 248 areas for TCD. No visual signs of TCD were observed. At the same time, 29 pheromone traps were deployed throughout Maryland (see pg. 4). All traps were negative

except one in Cecil County. This trap was in the Fair Hill Natural Resource Management Area (NRMA). All four collections from this trap were positive for WTB. The identification of WTB was confirmed on January 6, 2014 by Joel Floyd, Domestic Diagnostic Coordinator, Animal and Plant Health Inspection Service. There were a total of 30 WTBs collected. Visual evidence of TCD was not evident. Branch samples were collected on December 19, 2013. These branch samples were analyzed and TCD was not detected. Several times during the winter of 2013/2014 branch samples were taken and TCD was not detected.

A meeting on January 27, 2014 with MDA-FPM, MDA-Plant Protection Section (PPS), Maryland Department of Natural Resources (DNR), and University of Maryland Extension (UME) was held to discuss what should be done. It was decided not to create a quarantine, but to attempt to determine TCD in MD (Continued on page 4)



Chapter President's Message (Continued from page 1)

The presence of TCD in Walnut trees outside of the urban landscape could have serious and potentially devastating implications. This means that our natural walnuts and our plantations could be a greater risk than previously thought. Many things are still unknown about this disease, so we still may not need to panic yet. But we definitely need continued research on this pathogen; and perhaps just as important, empirical observations as to its habit and nature.

So what do we do now?

As members of the Walnut Council, we have a particular interest in Walnut trees, along with the special attentiveness that accompanies such an interest. We should be the first line of defense in the early detection of this disease. It is our responsibility to keep an eye out for the early signs of TCD, so that we can track its movement across the State and try to stay ahead with our containment efforts.

The first clue that a Walnut tree has TCD is bronzing and wilting of the leaves in the upper canopy. This is followed by slow dieback of the branch tips in the upper canopy. However, many things cause branch tip dieback in trees, so this symptom is fairly common. But the leaf bronzing is not nearly as common, and should be the first sign that we look for. If you see Walnut trees with bronzing foliage on the smaller branches in the upper canopy, and it is not late August or September, this should be cause for concern and a closer examination of the tree. Report trees with these symptoms to the Maryland Department of Agriculture—Forest Pest Management Section.

As Walnut Council members, it is also our responsibility to be informed about TCD-related

regulations and quarantines. At this time, there is no quarantine on the movement of Walnut trees and wood. However, this is likely to change. If and when a quarantine is imposed, it is not only our responsibility to obey the quarantine, but also to help inform the public about it.

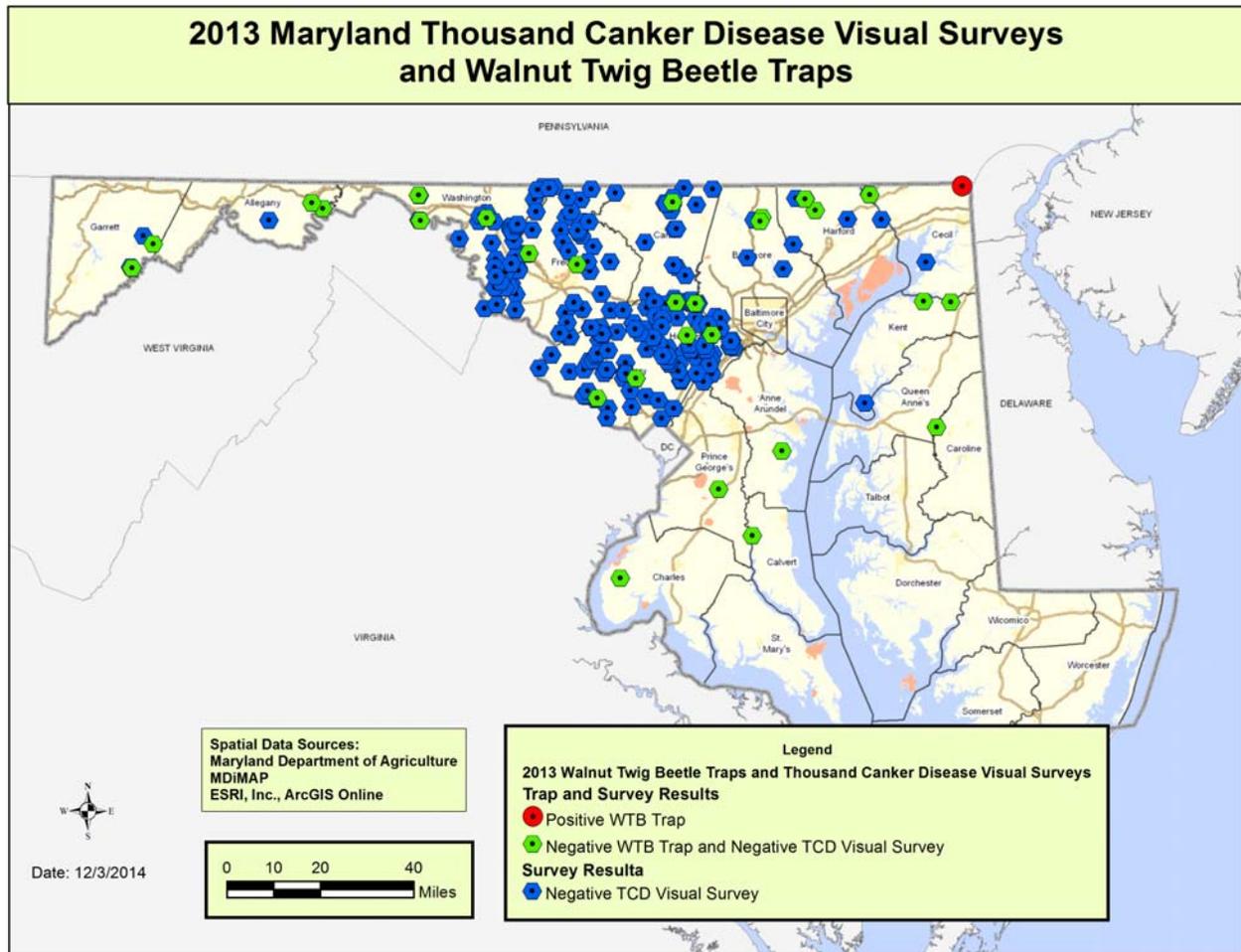


Figure 2: Leaf bronzing and branch tip dieback in a tree infected with Thousand Cankers Disease.

The one thing we have on our side in the fight against Thousand Cankers Disease is the fact that it is a very slow-moving disease. Imposing and obeying quarantines will help further slow the spread of the disease. Quarantines will not stop the spread of the disease, but they may buy us some time for the science to catch up. Combine this with the naturally slow progression of the disease, and we have some time to work.

There is still much we do not know about this disease. As of right now, there is no treatment that has shown any promise of working on any significant scale. But given time, this will change.

Chapter President's Message (Continued on page 5)



TCD in MD (Continued from page 2)

the extent of the infestation and to continue trying to detect TCD. The Manager of the Fair Hill NRMA, Rachel Temby agreed to discontinue the firewood cutting program.

In 2014, the positive trap was reset on April 1st. It was checked every two weeks from spring into the late fall. This trap was taken down December 2, 2014. Eighteen WTBT have been collected. In order to try to determine the extent of the WTBT infestation 12 pheromone baited traps were deployed near the initial positive trap. Thirteen traps in total were deployed in the Fair Hill NRMA. Only the original positive trap is positive for WTBT. At this same site, bait logs were deployed in 2014.

These logs were black walnut branches approx. 1.5 inches in diameter, approx. 12 inches in length and baited with WTBT pheromone. On October 6, 2014 Jennifer Juzwik, pathologist for USDA-FS and University of Minnesota, confirmed the presence of *Geosmithia morbida*, the pathogen that causes TCD, from one of the logs. A meeting on November 13, 2014 with MDA-FPM, MDA-PPS, DNR and UME was held to discuss what should be done since TCD has been confirmed. A quarantine may be issued by MDA in order to minimize the risk of moving infested material out of the limited detection area, and to provide confidence in Maryland walnut products moving into neighboring states.

TCD in MD (Continued on page 6)

Chapter President's Message (Continued from page 3)

One thing we do know is that the reason it takes so long for TCD to kill a tree is because it takes years to build a deadly population of Walnut Twig Beetles. Unlike many fungi and other pathogens, the *Geosmithia morbida* fungus does not spread very far in the cambium of the tree. It remains in one spot, causing small cankers. The tree does not die until the main stems and branches are covered with thousands of these cankers; hence the name.

To get enough cankers to kill a tree, it must be host to tens– and even hundreds-of-thousands of Walnut Twig Beetles. This takes time and the right conditions. As such, it is my personal opinion that the key to controlling Thousand Cankers Disease

Chapter President's Message (Continued on page 7)



Figure 4: More leaf bronzing, wilting, and branch tip dieback in a tree infected with Thousand Cankers Disease.

New Planting and Direct Seeding Guidance for Fine Hardwoods is Now Available

by: Lenny Farlee—Extension Specialist

Landowners and natural resource managers have new reference sources available for planting fine hardwood trees using seedlings or direct seeding, as a result of the publication of the Seventh Black Walnut Research Symposium by the US Forest Service Northern Research Station. The Walnut Council, a partner organization of the HTIRC, periodically holds research symposiums as part of their annual meeting to provide research-based information to landowners and managers interested in growing and managing black walnut and other fine hardwoods. The USDA Forest Service Northern Research Station has partnered with the Walnut Council to review and publish the symposium proceedings.

Three papers contributed by HTIRC scientists and staff may be helpful to you for planning and establishing fine hardwood tree plantations. These publications provide guidance based on research and practical lessons learned over more than a decade of tree planting.

Herbicide Practices in Fine Hardwood Plantings:

<http://www.nrs.fs.fed.us/pubs/gtr/gtr-p-115papers/08beheler-p-115.pdf> by Brian Beheler and Charles Michler provides guidance for site preparation and post-planting weed control, including equipment options, calibration, and herbicide options and rates.

Planting Guidance (Continued on page 6)

Planting Guidance (Continued from page 5)

Designing and Establishing a Fine Hardwood Timber Plantation:

<http://www.nrs.fs.fed.us/pubs/gtr/gtr-p-115papers/07mckenna-p-115.pdf> by Jim McKenna and Lenny Farlee details how to plan and execute a successful fine hardwood planting through site evaluation and preparation, plantation design and layout, species selection, spacing and arrangement, use of genetically improved planting stock, and planning for thinnings and final crop tree spacing.

Direct Seeding of Fine Hardwood Tree Species:

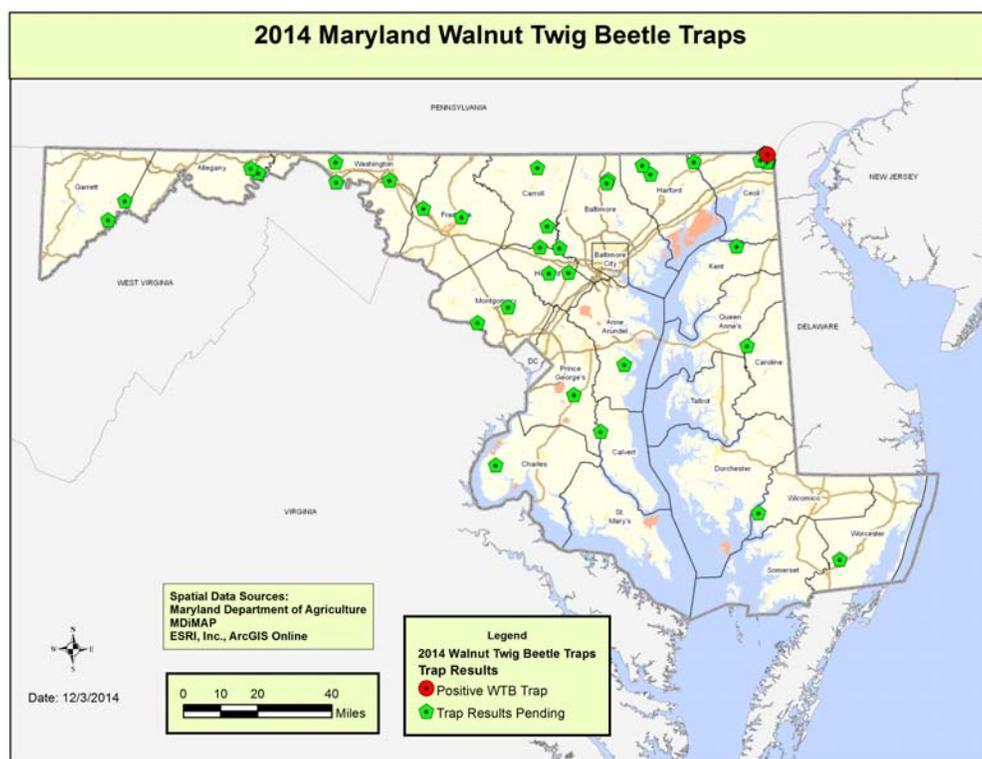
<http://www.nrs.fs.fed.us/pubs/gtr/gtr-p-115papers/06farlee-p-115.pdf> by Lenny Farlee summarizes research and experience related to planting the seeds of black walnut, butternut, chestnut, and black cherry for reforestation purposes to help landowners and managers recognize the barriers to success and practices that improve performance of direct seeded plantings.

If you would like to see the entire proceedings, it can be found at <http://www.nrs.fs.fed.us/pubs/43788>



TCD in MD (Continued from page 4)

Statewide, a total of 43 pheromone baited traps were deployed in 2014. This includes twelve traps in Fair Hill to determine the extent of infestation, twenty nine traps across the state, and the original positive trap. All of these traps were negative for WTB except the original positive trap.



Chapter President's Message (Continued from page 5)

will not be in eradicating the Walnut Twig Beetle, but in finding ways to limit the population growth. Without a massive population of Walnut Twig Beetles on a single tree, TCD may not be particularly damaging to trees.

For now, we must remain informed, attentive, and outgoing. We must work together to spread the word about this disease and monitor its progress. There is still much we need to learn about this disease, but time is on our side. Now is not the time for rash decisions, but rather, a time to observe, document, and apply what we learn in the most consistent and effective way possible.

The Walnut Council will continue to send its members information on Thousand Cankers Disease, as it becomes available. Please read and retain this information, so that you can help us fight this thing!



ATTENTION MEMBERS:

Don't forget to renew your dues for 2015!

Upcoming Events:

Private Pest Applicator Certification Training

January 13, 2015

Location: Gambrills, MD

Contact: R. David Myers, 410-222-3906
myersrd@umd.edu

Beyond the Lawn: Landscaping with Nature

January 17, 2015

Location: Carroll County Extension Office,
Westminster, MD

Contact: Steve Allgeier or Carolyn Puckett
410-386-2760
ccforestryboard@gmail.com

The Woods in Your Backyard

March 24, 2015

Location: Somerset County Extension Office,
Princess Anne, MD

Contact: Lyle Almond
410-827-8056 x125
lalmond@umd.edu

Got E-mail?

Occasionally we have timely information to share with you. If you have an e-mail account, but have not received any e-mails from us this year, that means we don't have your current address. If you would like to be included in the e-mail news list, please send an e-mail to David Robbins at: david.robbins1@maryland.gov.

We promise not to clutter your inbox!

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