

Walnut Council

Maryland Chapter Newsletter

Fall 2013

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President's Message: Let's Talk About Your Problem

David Robbins

Do you have a deer problem? Trust me, if you live in Maryland, you do.

Whether they're eating your prized hostas, eating your crops, eating your trees, rubbing your trees, running out in front of your car, raising your insurance rates, or starving to death in your backyard; everyone in Maryland has a problem with deer. That is why the Maryland DNR Wildlife and Heritage Service has a deer project, designed to give landowners easy access to a variety of traditional and non-traditional tools to help them manage the deer on their property.

Only 7% of the land in Maryland is publicly owned, and of that, only 2-3% is managed by the Department of Natural Resources. This leaves a whopping 93% of land that is privately owned. This is why it is so important that private landowners manage their deer herd.

The focus of this year's Fall Meeting is on deer management issues in Maryland. George Timko, the Assistant Deer Project Leader for the State of Maryland, will be coming to talk to us about tools, techniques, and tips to help landowners with their deer problem. He has prepared an informative presentation for our group, with ample time built in for questions and interactive discussion.

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We will be meeting at the Holly Hills Country Club on December 4th for our Fall Meeting. Along with the presentation from George Timko, there will be plenty of time for socialization before, during, and after our lovely banquet dinner. I am often told that the best parts of our workshops are the opportunities to interact and learn from each other. There is an incredible wealth of knowledge within our membership. So all you need to come with are questions, and the willingness to share your own experiences.

The enclosed announcement flyer and registration form has all the details for the Fall Workshop. Send in your registration form as soon as possible to reserve your seat, and don't forget to invite a friend, neighbor, or family member so they too can experience the benefits of the Walnut Council.



Millions of North American and European Ash Trees Face Certain Death

Shaneka Lawson

Reprinted from the Hardwood Tree Improvement and Regeneration Center Newsletter

Ash trees are hardy, fast-growing hardwoods historically used in reforestation efforts because of their robust growth, high value wood, and ability to survive in diverse environmental conditions. North American ash trees are found primarily in the mid-west and eastern United States, with a considerable number of ash trees being found in Canada. Internationally, ash trees have a range that includes the majority of countries in England, Europe, and Asia. Increased threats to ash trees have motivated researchers to find methods for promoting its survival

against biotic pest pressure.

In the United States when we hear news regarding ash trees, we tend to zero in on the destruction following in the wake of the Emerald Ash Borer (*Agrilus planipennis* Fairmaire). Emerald Ash Borer (EAB) is a highly destructive exotic beetle first discovered in Detroit, Michigan and Windsor, Ontario (Canada) in 2002. The adult beetles cause minimal damage when feeding on foliage; however, the larvae consume both phloem and cambium, causing an immediate threat to overall tree survival. There are often numerous EAB larvae within a tree and their continuous feeding in random “Serpentine” patterns will girdle and effectively kill the host tree. These exotic pests likely arrived in the United States in the packing materials aboard ships or planes from Asia. Since 2002, the insects were found in Ohio in 2003,

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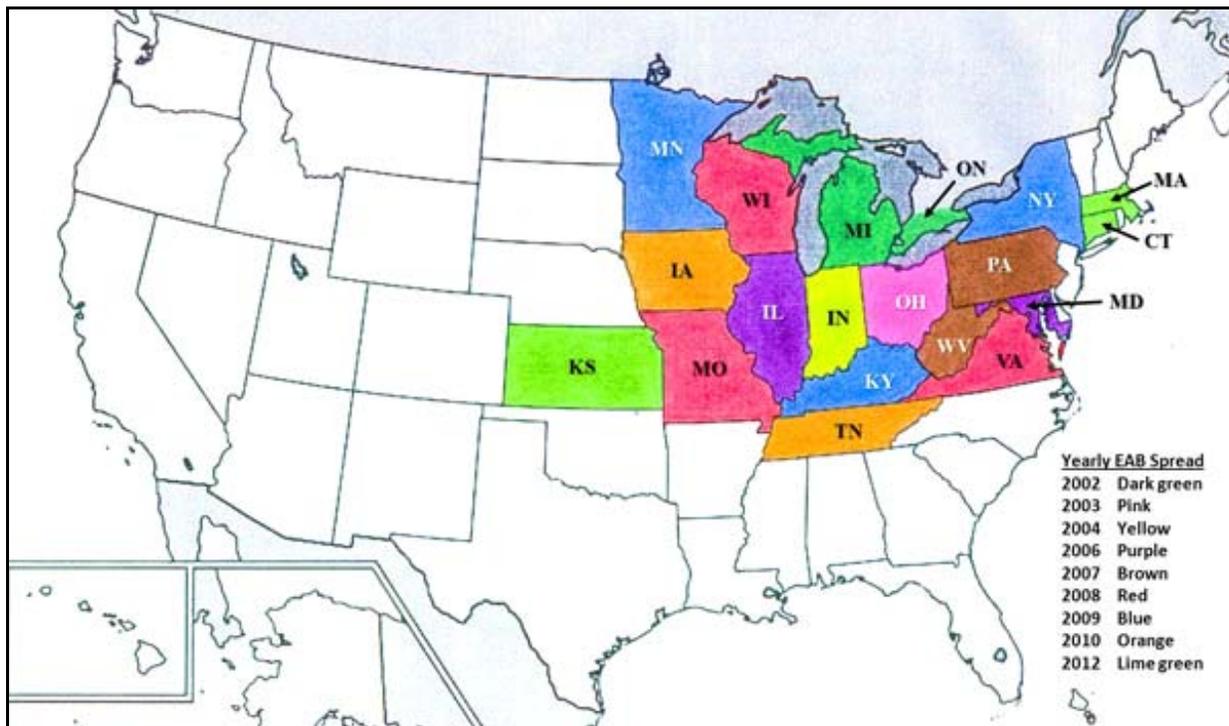


Figure 1: General schematic of the spread of EAB in the United States and Canada from the epicenter in Detroit, MI.

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northern Indiana in 2004 and both northern Illinois and Maryland in 2006. In 2007, the beetle continued its spread across the Midwest and Eastern United States and was discovered in western Pennsylvania and West Virginia. The spread appeared to accelerate as the borer was found in Missouri, Virginia, and Wisconsin in summer of 2008 and in Kentucky, Minnesota, and New York in the spring of 2009. Early in 2010 the bug was found in Iowa before being found in Tennessee in late summer. By 2012, Connecticut, Kansas and Massachusetts were added to the list (Figure 1). Despite our best efforts at quarantine and the imposition of fines for moving potentially infested firewood, the spread of EAB has continued. EAB has been responsible for the destruction of tens of millions of ash trees in Michigan in addition to the tens of millions lost in Canada, the Midwest, and a several states along the Eastern part of the country.

While the focus in the United States and Canada has centered squarely on the elimination of EAB, many colleagues in Europe have had another focus. Within the last decade an emerging infectious pathogen *Hymenoscyphus pseudoalbidus* has rapidly infected and killed millions of European ash trees. The initial symptoms of infection are small necrotic spots on stems and branches that enlarge to form perennial cankers, wilting, and crown death (Figure 2).

Prior to identification of the fungus, trees in Poland were reported to be dying in large numbers in the early 1990s, followed by vast numbers of ash trees in Estonia, Latvia, and Lithuania. This disease was first described in 2003 in Denmark, but it was not until 2006 that identification of the asexual stage, *Chalara fraxinea* was designated. Two years later, in 2008, scientists confirmed that the disease

was caused by a fungus, and in 2010 *Hymenoscyphus pseudoalbidus*, the sexual stage, was identified and coupled with the asexual stage. This breakthrough occurred after the infection had spread throughout Austria, the Czech Republic, Germany, Scandinavia, Slovenia, and Switzerland. At last count, Belgium, France Great Britain, Hungary, Ireland, Italy, the Netherlands, Romania and Russia (Figure 3) were all infected.

Often a chronic infection, older trees can survive initial attacks before eventually dying, but younger trees are killed within a single growing season. The rapid spread of the fungus over the last decade has discouraged many plantation owners and foresters from planting ash trees, and the remaining trees are being quickly harvested before the lumber quality and lumber prices decline. Thus far, few ash trees have shown any resistance to the fungus. Researchers at the University of Copenhagen have proposed that fewer than 5% of trees demonstrate resistance at levels high enough to survive fungal attack (McKinney et al. 2011); an attribute that may

Ash Trees (Continued on page 4)



ATTENTION MEMBERS:

Don't forget to renew your dues for 2014!

Ash Trees (Continued from page 3)

be due to a genetically-linked defense response (McKinney et al. 2012). Early estimates state that 90%–99% of the 80 million ash trees in Denmark will likely die. Researchers in Lithuania have identified 50 disease-resistant trees for use in breeding populations. Knowledge of heritable variations in susceptibility may be beneficial for eventual repopulation efforts but are unlikely to be helpful in the short-term.

Comparative analysis between our efforts to eradicate the EAB are mirrored in efforts of the European cohort with *Hymenoscyphus pseudoalbidus*, as both groups have found that banning of importation and movement of ash wood (Ireland), removal of infected trees (Great Britain), and destruction of all trees within a certain area have all failed to slow the spread (Denmark). Innovative methods such as the creation of a phone application called “Ashtag” to track disease sightings have been employed to improve information

flow. Furthermore, studies of Manchurian ash (*Fraxinus mandschurica*) trees have indicated, as with EAB, that trees in Asia appear immune to the fungus while European ash (*Fraxinus excelsior*) and Narrow-leaved ash (*Fraxinus angustifolia*) are highly susceptible. Manna ash (*Fraxinus ornus*), another European species, can also host the fungus but is less susceptible than many other European species. Evaluations of North American species have indicated that Black ash (*Fraxinus nigra*), and to a lesser extent Green ash (*Fraxinus pennsylvanica*), are susceptible while White ash (*Fraxinus americana*) trees appear highly resistant.

Efforts are being made in labs across Europe to identify resistant populations, but the future of many European and North American ash trees is bleak. With strict regulatory procedures in place to prevent the generation and dispersal of transgenics (trees engineered to express foreign or modified

Ash Trees (Continued on page 5)



Figure 2: Symptoms of *Hymenoscyphus pseudoalbidus* infection are small necrotic spots on stems



Figure 3: *Hymenoscyphus pseudoalbidus* has spread across the majority of European countries within the last decade.

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DNA sequences) that may be resistant to the fungus or EAB, researchers are forced to consider more creative methods of retaliation. Use of biological controls such as parasitic wasps, natural predators (woodpeckers), and pathogenic fungi have been used in the United States with limited success against the EAB. These new findings highlight the urgent need for early screening and selection for fungus-, disease-, and EAB-resistant native populations for use in breeding studies. Removal of all ash trees within an area may eliminate trees with innate resistance as well as the infected. Continued ash breeding efforts may result in increased resistance to either the *Hymenoscyphus pseudoalbidus* fungus or EAB; however, a long-term commitment must be made if we are to make progress toward saving one of our most valued hardwoods.

Cited References:

- McKinney LV, Nielson LR, Hansen JK, Kjøer ED. (2011) Presence of natural genetic resistance in *Fraxinus excelsior* (Oleraceae) to *Chalara fraxinea* (Ascomycota): an emerging infectious disease. *Heredity* 106(5): 788–797. doi: 10.1038/hdy.2010.119
- McKinney LV, Thomsen IM, Kjøer ED, and Nielsen LR (2012) Genetic resistance to *Hymenoscyphus pseudoalbidus* limits fungal growth and symptom occurrence in *Fraxinus excelsior*. *Forest Pathology* 42 69–74. doi: 10.1111/j.1439-0329.2011.00725.x



Personal Reflections on the 2013 National Walnut Council Meeting

Barbara Luchsinger

Behind the printed program and its execution, it involves a huge amount of organization over many months to plan a national meeting. Just ask Phil Pannill, who ran the national meeting in Hagerstown in 2002. By the way, those who attended that MD meeting—and not just the MD members—still speak of it as having been the best ever organization.

Owing to West Virginia not having its own chapter with resident members to assist, quite a few organizations filled that void. According to WC Exec Director, Liz Jackson, all these volunteers were especially generous: the Burnhams hosted us at their farm and Mrs. Burnham provided centerpieces on the lunch tables, Maryland chapter's own Bill and Elsie Slagle had us at their place to see the operating sawmill, Southwest PA Landowners As-

sociation members were on hand all day, U.S. Forest Service handled a large chunk, the West Virginia University Forestry department pitched in, and MD Chapter members did our part to provide local information and lend a hand.

Particularly memorable for me was Dan Harris' veneer selection demonstration at the Slagles' place. Members hung around after the allotted time

to quiz Dan on details of the entire process from the time he gets a call from a seller to final selection and related economics. For a homegrown operation, Bill Slagle's sawmill is fascinating and enviable in its size and processing.

My husband, Peter, was impressed with WVU's crop tree release demonstration areas; commenting how practical the demonstration was to everyone.

Impressive was the dogged determination of all attendees to weather the weather – cold foggy



Attendees at the 2013 Walnut Council National Meeting, in Morgantown, WV, learn about plantation management at the home of Harold & Gay Thistle.

mornings and rain during some field visits. ATVs were supplied for those in need during some field visits. Registration information correctly warned that events would be held rain or shine and to be prepared...good advice. We all wore rain gear, and it was definitely needed one day, part of the time outside. Those without rain gear improvised with

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huge garbage bags with a hole for the head—very effective.

The Morgantown Ramada was OK (not more) in my opinion, some ups and some downs. Rooms OK and roomy, food service could have been improved in some spots; apparently affordable for everyone. Not a whole lot of choice in Morgantown.

[A side note: Peter and I looked at the nearby Waterfront Place Hotel (waterfrontplacehotel.com), which was deemed too expensive and too fancy for the dirty shoes Walnut Council would surely bring in after a day of tramping in muddy fields. It is very attractive, located directly on the Monongahela River, in case you find yourself in need of accommodations or a meal in this area.]

Vividly standing out in my memory, on a warm sunny afternoon, was the spectacular Coopers Rock overlook. All of us piled onto the huge fenced rock projection, to gaze far, far away.....

In contrast to the beautiful mountainous terrain of Morgantown, it is onto Kansas for next year's meeting in Manhattan, a couple hours west of Kansas City, earlier than usual, June 8—11.



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 summer, 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: drobbins@dnr.state.md.us.

We promise not to clutter your inbox!

Upcoming Events:

Trees Matter Symposium: Trees and the Built Environment

November 20, 2013

Location: Silver Spring Civic Building,
Silver Spring, MD

Info: Montgomery County Parks Dept.
www.montgomeryparks.org

Maryland Chapter Fall Workshop

December 4, 2013

Location: Holly Hills Country Club, Ijamsville, MD

Contact: Dave Robbins, drobbins@dnr.state.md.us

Learning How to Heat with Wood & Pellets... Save Money & Be Warm!

December 9, 2013

Location: Univ. of MD Calvert County Extension Ofc.,
Prince Frederick, MD

Contact: Jonathan Kays, jkays@umd.edu

2013 Pest Management Conference

December 12, 2013

Location: Carroll Community College,
Westminster, MD

Info: <http://extension.umd.edu/ipm/conferences>

Advanced Landscape Plant Integrated Pest Management & Plant Health Care Short Course

January 21-24, 2014

Location: University of Maryland, College Park, MD

Contact: Avis Koeiman, 301-405-3913
akoeiman@umd.edu

Eastern Shore Pest Management Conference

February 5, 2014

Location: The Fountains, Salisbury, MD

Contact: Ginny Rosenkranz, 410-749-6141

2014 Chesapeake Green: a Horticulture Symposium

February 20-21, 2014

Location: Maritime Institute, Linthicum Heights, MD

Info: www.chesapeakegreen.org

Walnut Council National Meeting

June 8-11, 2014

Location: Manhattan, KS

Info: www.walnutcouncil.org

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