

Northeast Wisconsin Forest Pest Update

March 16, 2010

Topics covered this month:

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Asian longhorned beetle helps fight crime
Boxelder bugs and cluster flies
EAB
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Longhorned beetle

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Insects

Asian longhorned beetle helps fight crime – awareness of Asian longhorned beetle (right) helps stop drug shipment. Read the story: <http://www.montrealgazette.com/news/Smuggling+plot+small/2582350/story.html>.



Photo from Pennsylvania DCNR.

Boxelder bugs & cluster flies – with the recent warm weather the boxelder bugs (below) and cluster flies have become active again. If they were spending the winter in your house then you've probably noticed them flying around and buzzing in the windows. If they were spending the winter under the siding then you might notice them clustering on the outside of the siding as they soak up the warmth from the sun. They will make every attempt to leave your house as spring arrives but they're not the brightest bugs in the insect world so you may have to help them (or kill them).



Emerald Ash Borer (EAB) – from Bill McNee. The newly revised Wisconsin EAB silvicultural recommendations titled “Emerald Ash Borer and Forest Management” (right) are now available online at <http://dnr.wi.gov/forestry/fh/PDF/EABWIMManagementGuidelines.pdf> These guidelines were updated to provide management advice in the vicinity of known EAB infestations.

EAB was found in Minneapolis, Minnesota in late

Emerald Ash Borer and Forest Management

Revised February 2010

The emerald ash borer (EAB), *Agrilus planipennis*, is an exotic insect that was first identified in southeast Michigan in 2002. EAB infests and kills all true ash species (*Fraxinus* spp.) that are native to Wisconsin. Even healthy ash trees decline and die within several years.

EAB has been detected in Wisconsin. In August 2008, EAB was detected in northwest Ozaukee County and northeast Washington County. Since then, EAB has been found in several areas around the state (Figure 1).

EAB has also been found in numerous states and Canadian provinces. A current distribution map is available at www.emeraldashborer.wi.gov.

Regulatory Considerations:
Generally, state and/or federal quarantines follow a



Figure 1. EAB detections in Wisconsin as of February 15, 2010.

February. Four infested trees were found in the Tower Hill Park area, which is southeast of the University of Minnesota's main campus and less than a mile from the first detection in St. Paul. For more information and a local map, visit <http://www.startribune.com/local/85422707.html>. A multistate map of EAB detections is available at http://www.emeraldashborer.info/files/MultiState_EABpos.pdf.

The proposed 2010 national EAB trapping project will focus on counties surrounding quarantined counties, as well as along the Mississippi River.

Wisconsin is anticipated to have 8,700 purple panel traps on a 1.5 square mile trapping grid (yellow counties on the map).

Additional traps will be placed around the previous EAB detections. Some of the state parks may test a new 'double-decker' design which uses 2 of the purple panel traps placed on a pole. Traps will be in use between May and September.

'Helping communities prepare for and live with EAB' is the next webinar from EAB University, to be held on Thursday, March 18.

Online pre-registration is required. The webinar site is at www.emeraldashborer.info. The webinars are also recorded and can be watched later.

Another webinar will be held on Wednesday, March 24. The Urban Natural Resources Institute will host 'Emerald Ash Borer Host Mapping Project in Milwaukee: An Applied Model.' This study used hyperspectral imaging technology to map urban ash with a classification accuracy of 84% and up to 93% accuracy for larger ash trees. For more information on the webinar, visit <http://www.unri.org/webcasts/>.

Last month's pest update advertised a landowner field day in Ozaukee County. An event summary and photos are available at <http://dnr.wi.gov/forestry/UF/resources/Insider/20100312.htm#item11>.

A collaboration of government agencies and universities has been awarded \$2.2 million from the American Recovery and Reinvestment Act of 2009 (commonly known as 'stimulus funds') to operate the Slow Ash Mortality (SLAM) project in Michigan's Upper Peninsula. This project aims to develop strategies that slow the population buildup and spread of EAB. For more information, visit http://anrcom.msu.edu/press/020110/021910_eabfeds.htm.

The winter issue of the Wisconsin Emerald Ash Borer Program newsletter is now online at <http://www.emeraldashborer.wi.gov/articleassets/EABNewsletterFebruary2010.pdf>.

EAB costume – the photo at right shows a very creative costume of an EAB caught on a purple panel trap. The picture was posted on a costume contest website with the following description: The Emerald Ash Borer Bug is an insect that has been infesting Ash Trees in, and around the Twin Cities. To gauge the level of infestation the city hung PURPLE TRAPS in the Ash Trees. Traps are similar to Fly Paper. 7 months old Brooks is a Borer Bug caught on the side of the Trap hanging in a very nice Ash Tree.



Photo from website www.costume-works.com/2009-halloween-costume-contest.html

Gypsy Moth – from Bill McNee. Gypsy moth eggs will start hatching a little over a month from now. Homeowners who are interested in reducing gypsy moth populations should consider oiling or removing egg masses well before then. Horticultural oils that suffocate the eggs are available at many garden centers and large retailers. In general, these are applied when temperatures are above 40o and freezing is not imminent. If removing egg masses (right), scrape them into a bucket of soapy water and then let them soak for a few days before discarding in the trash. Additional management options for homeowners and woodlot owners are available at www.gypsymoth.wi.gov.



Homeowners considering insecticide treatments this spring should contact an arborist or tree service soon. The Wisconsin Arborist Association has a list of certified arborists available at www.waa-isa.org. Additional businesses offering insecticide treatments may be found in the phone book under ‘Tree Service.’ Homeowners can also purchase insecticides (some applied as a soil drench) at garden centers and large retailers.

The 2010 list of for-hire aerial applicators is now available on the state’s gypsy moth website, www.gypsymoth.wi.gov. Callers interested in aerial spraying for gypsy moth or other defoliating insects can be referred to this website for the list and a guide to organizing private spraying. There are currently only two applicators licensed for aerial spraying in residential areas (defined as more than one residence per five acres being sprayed). It’s too late to add any treatment areas to the DNR Suppression Program for spraying this spring. Applicators should be contacted as soon as possible because gypsy moth spraying will be occurring only 10-12 weeks from now. Northern Oconto and central Marinette Counties continue to generate emails and calls about organizing private spraying. Last year there was only about 700 acres of light defoliation in these areas, but the signs are pointing to another major gypsy moth outbreak in this area.

The proposed Slow-The-Spread gypsy moth treatments in western Wisconsin have been announced. This year, the Dept. of Agriculture, Trade and Consumer Protection is proposing to aeri ally treat nearly 230,000 acres in 20 counties (yellow on the map) using a bacterial insecticide, viral insecticide or mating disruption treatment. This program treats isolated, low-level populations to slow the westward spread of the gypsy moth. Where populations are higher and trees are threatened with defoliation, the DNR Suppression Program is offered (blue counties on the map are participating this year). To see where the STS treatments will be, visit http://www.datcp.state.wi.us/arm/environment/insects/gypsy-moth/map_index.jsp. Click on a county to see the treatments within that county.



Longhorned beetle – the beetle at right was found emerging from firewood. This beetle is *Sarosesthes fulminans*, sorry, no common name that I’m aware of, although one researcher at Purdue once emailed me that he refers to this beetle as the Thunderbolt Beetle, because of its markings, but he didn’t think anyone else had a common name for it. Larvae feed primarily on oak, they usually attack freshly dead trees, boring under the



Photo by R.J. Wickham.

bark and into the wood. They take 1-2 years to complete development (literature varies).

Diseases

Annosum has new species name – Scientists have given Annosum root rot a new species name. It is now called *Heterobasidion irregulare*. It was formerly referred to as *Heterobasidion annosum* or *Fomes annosus* depending on when you first learned about the disease. It's still the same disease, it just has a new scientific name.

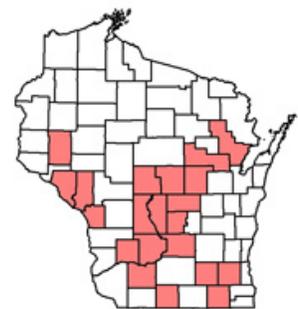
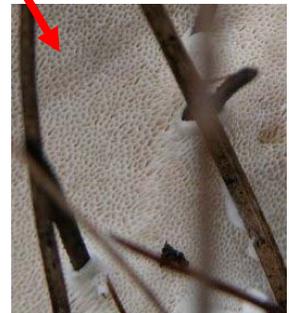
The fruiting bodies of Annosum grow near the ground and may even be below the duff layer. They often incorporate duff into the fruiting structure (right). The underside of the fruiting body is white or buff colored with many small pits. Although pine seems to be the favored host here in Wisconsin all conifers can be infected and we have found Annosum killing some hardwood species as well.

Once established in a stand, Annosum root rot spreads from tree to tree via root grafts and forms pockets of dead/dying trees, but initially Annosum needs a fresh wound or a fresh stump to get its start in a stand. A spore lands on a fresh wound/stump and starts to grow, initiating a new infection site. Once a stump is infected the fungus then moves down into the roots and out through root grafts to neighboring trees where it causes decline and death of those trees, eventually creating a pocket of mortality that increases in size each year. This is not a super-speedy process but spreads at approximately the same speed as pocket decline (3-6 feet per year).

Prevention is the best tool we have for managing Annosum. In counties where Annosum is known to occur (shaded in pink on the map), and in neighboring counties, it is important to use a preventative stump treatment immediately following a conifer harvest (within 24 hours of a tree being cut) to prevent any new infections. Some loggers have put spray attachments on their equipment that will allow treatment as the tree is cut, or application can be done using backpack applicators. There are no curative treatments to eliminate Annosum after it is established in your stand so prevention is important. More info on management can be found at <http://dnr.wi.gov/forestry/Fh/annosum/> which also includes information on Red Pine Pocket Mortality which is a separate issue affecting red pine.

If you write forest management plans and need a document on Annosum to include in your plans check out http://dnr.wi.gov/forestry/fh/annosum/pdf/Annosum_Factsheet.pdf

The most common question I get regarding Annosum is: is it safe to cut pine in the winter and not treat the stumps. The answer is: it is a lesser risk, but it is not risk free to cut during the winter. Spores of Annosum can germinate and grow any time that the temperatures



are above freezing, and unfortunately here in Wisconsin we get days throughout the winter that are above freezing. So, although the risk is less during the winter, the risk will still be there if temperatures get above freezing.

Bacterial Leaf Scorch – from Kyoko Scanlon. Bacterial leaf scorch (BLS) is caused by the bacterium *Xylella fastidiosa*. Hosts include oak, maple, elm, ash, and other deciduous trees. The pathogen lives in the xylem vessels of host plants. Infected leaves exhibit scorch symptoms with irregular margins. The pathogen is transmitted by xylem-feeding insects, such as leafhoppers and treehoppers. The disease has been found throughout the east, southeast, and some mid-west states.

In 2009, Wisconsin participated in the survey supported by the U.S. Forest Service to investigate the geographic distribution and host range of BLS in north central states. This project was initiated in 2008, and continued to 2009. In 2008, BLS was confirmed on the bur oak samples collected from a woodland stand in Dane County. This was the first confirmed case of BLS in Wisconsin.

This summer, leaf and twig samples were collected from symptomatic trees throughout Wisconsin and sent to a lab in Michigan State University to perform a genetic test. Out of the 33 samples submitted, 2 samples were found to be positive. These samples came from the same trees that had been confirmed positive in 2008. In 2009, no tree or a stand was additionally confirmed with BLS in Wisconsin. To date, the confirmed site in Dane County, WI is the northern edge of BLS distribution in the Midwest.

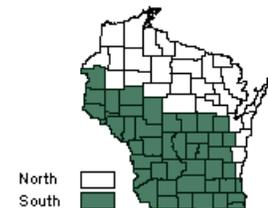
The results of 2009 BLS surveys in other states are available in the USDA Forest Service Central States Forest Health Watch (Feb 24, 2010 issue) at <http://www.na.fs.fed.us/fhp/fhw/csfhw/10/jan10.pdf> (p.6).

Oak wilt recommendations - it's that time of year again! Time to think about oak wilt if you are pruning, wounding, or harvesting oak trees. Oak wilt is a fungal disease specific to oaks that is fatal for oaks in the red oak family. It is spread in 2 ways, overland by beetles, and underground through grafted root systems. The beetles that can spread this disease are attracted to fresh wounds where they feed on the sap and may accidentally leave some oak wilt spores as they feed. The pruning recommendations are aimed at limiting this overland spread of the disease by minimizing the number of fresh wounds that attract the beetles.

The time period that is considered the highest risk for overland spread of the disease, during which you should try to avoid pruning, wounding, or harvesting oaks, is April 1 – July 15 for the southern portions of the state and April 15 – July 15 in the northern areas of the state (see map at right). During this high risk time period you should try not to prune, wound, or harvest oaks. If you are located within a city please check with your municipality to verify the restriction period since some cities and towns have extended their restriction period to include most of the growing season. For more information about oak wilt check out the DNR Forest Health Website <http://dnr.wi.gov/forestry/Fh/oakWilt/>



Counties with confirmed oak wilt are shaded.



North
South

Thousand Cankers Disease of Walnut – this new disease of walnut has shown up in the southwestern US. With products constantly moving across the US it is possible that this disease could have been transported to the east, or even to Wisconsin, although it has not been confirmed in any states in the east. Thousand Cankers disease is a combination of a bark beetle (believed to be native) and a fungus (*Geosmithia* sp.). The bark beetle attacks the trees, introducing the fungus, which causes a small canker. Eventually multiple cankers on the main stem and branches coalesce (photo), causing girdling and mortality of branches or the whole tree. A pest alert with photos of the beetle, fungus, and symptoms can be found at http://www.ext.colostate.edu/pubs/insect/0812_alert.pdf There is also a good article in the US Forest Service Central States Forest Health Watch newsletter <http://www.na.fs.fed.us/fhp/fhw/csfeh/10/jan10.pdf> starting on page 7.



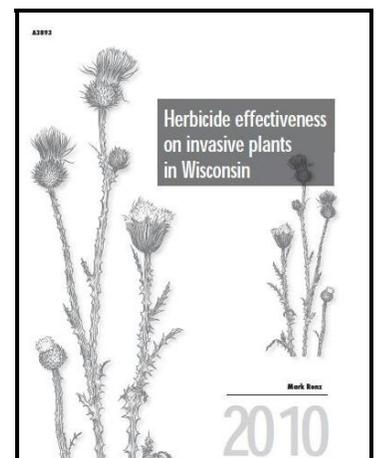
Photo by Ned Tisserat, Colorado State University.

Other/Misc.

Don't Move Firewood website –the Don't Move Firewood website has some great educational (and amusing) EAB videos that they have created showing how easy it is to spread EAB on firewood. The newest video is about moving firewood long distances. It's a short video so check it out <http://www.dontmovefirewood.org/videos/list>

Forest Health Publications - The Division of Forestry has an online inventory of forest health publications, including gypsy moth, EAB, oak wilt and other issues. The real-time inventory of paper copies can be accessed at <http://intranet.dnr.state.wi.us/int/land/forestry/Publications/> (DNR staff only). Many of the publications can be downloaded as a PDF from this website. For non-DNR staff, many are available in online versions at <http://dnr.wi.gov/forestry/publications/>. Paper copies of publications can be obtained by emailing DNRFRPublications@wisconsin.gov (available numbers will vary).

Herbicide effectiveness document – there is a new publication from University of Wisconsin-Extension, Herbicide Effectiveness on Invasive Plants in Wisconsin (A3893). Based on research and field observations, this new publication highlights the effectiveness of 32 herbicides on 32 different invasive plants commonly found in fields enrolled in the Conservation Reserve Program (CRP) in Wisconsin, all in a sturdy fold-out poster form for easy reference. Check it out at <http://learningstore.uwex.edu/Assets/pdfs/A3893.pdf>



Paintball damage to trees – I recently visited a site where paintball is played throughout the woods. Although some trees seemed immune to the paintballs (other than sporting some spiffy new colors) there were others that were damaged by the paintballs. It was unclear to me whether the damage was from the impact (if you've ever been hit with a paintball you know that they do hit with some force), or if the damage was from the type of paint used. Although I suspect the damage occurred due to the

force of the impact it also seemed that the extent of damage varied by paint color, but this could have also been due to the type of gun shooting the balls or the distance from the tree when they were shot. I'm not a paintball pro so I won't pretend to know exactly what is occurring, I just looked at the trees. The photos below show some of the damage that I was finding at this site.



Report EAB:

by phone 1-800-462-2803

by email DATCPEmeraldAshBorer@wisconsin.gov

visit the website <http://emeraldashborer.wi.gov/>

Report Gypsy Moth:

by phone at 1-800-642-6684

by email dnrfrgypsymoth@wisconsin.gov

visit the website <http://www.gypsymoth.wi.gov/>

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Note: This pest update covers forest health issues occurring in Northeastern Wisconsin. This informal newsletter is created to provide up-to-date information to foresters, landowners, and others on forest health issues. If you have insect or disease issues to report in areas other than northeastern Wisconsin please report them to your local extension agent, state entomologist or pathologist, or area forest pest specialist.

Pesticide use: Pesticide recommendations contained in this newsletter are provided only as a guide. You, the applicator, are responsible for using pesticides according to the manufacturer's current label directions. Read and follow label directions and be aware of any state or local laws regarding pesticide use.