

Northeast Wisconsin Forest Health Update

December 15, 2011

Topics covered this month:

Insects:

Asian longhorned beetle
Christmas tree pests
Emerald ash borer
Gypsy moth
World's heaviest insect discovered

Diseases:

Annosum found in lower Michigan
Annosum, reporting stands in Wisconsin
Annosum, tree species affected
Bur oak blight

Other:

Amur cork and Japanese wisteria
Cedar bark stripping on northern white cedar

Insects

*information and photos in this document from Linda Williams unless otherwise noted.

Asian Longhorned Beetle – Recent studies have found that Asian longhorned beetle (ALB) had been present in Ohio (near Cincinnati) for at least 7 years before being detected this summer. At present, about 5,000 trees are known to be infested. The already-started eradication effort calls for the removal of 50,000 trees over about 850 acres. ALB has been successfully eradicated several times in Chicago and the New York City area.

Eradication efforts for the infestation in Massachusetts are showing great success as well. ALB was first reported in Massachusetts in 2008. In 2008 and 2009 there were 17,000 infested trees identified in Worcester County. Eradication efforts have been ongoing and in 2011 they found only 1,152 infested trees. Survey and eradication efforts continue with the goal being complete eradication of this destructive pest. The complete USDA-APHIS press release can be found at

http://www.aphis.usda.gov/newsroom/2011/11//alb_mass_efforts.shtml

More information can be found on the Wisconsin DNR website at <http://dnr.wi.gov/forestry/FH/alb.htm> (navigation options will appear on the left side of the screen), or for all sorts of great info go to <http://www.beetlebusters.info/> where the front page shows a really excellent beetle that moves, flutters its wings, chews, and looks at you, just to give you an idea of how big and kinda scary looking these guys really are! They really are huge and impressive! At a meeting recently I saw an adult female that was passed around and it was



UGA5023075

Asian longhorned beetle adult.

quite a bit larger than a Junebug. I'd hate to be on a motorcycle going through an area with ALB and get nailed in the face, ouch!

Christmas tree pests – did you ever haul your Christmas tree into your house and let it warm up only to find that some insect friends came in with it? Often these insects are just resting or overwintering in the tree (like flies and ladybugs). But, there are a few insects, or signs of insects, that you could look for that may be living in/on your tree and feeding on it. If you've bought your tree from a Christmas tree farm that regularly shears their trees all the damage or signs of insects might be sheared off, but it's still fun to look. Here are some things you can check your tree for:

Spruce gall adelgids – look for swollen areas on the twig, they might look like small cones but they're not, they're homes for the small adelgids which live inside the gall and suck plant juices.



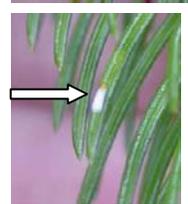
Sawfly pupae – sawfly larvae are the ones that look like caterpillars but don't turn into moths or butterflies, they turn into sawflies. When they pupate they may drop to the ground but some sawflies will attach their pupal case to a needle. Look for something brown that is about twice the size and the same shape as a tic-tac.



Sawfly eggs – sawflies in the "spring sawfly" category lay their eggs in late summer and you might find them inserted into the needles of your tree. Look for small yellow areas (about the size of a poppy seed) where the sawfly adult inserted the egg directly into the needle or you might see the eggs attached directly to the needle. A single needle may have many eggs inserted in a line straight down the needle.



Scale insects – if your tree was sprayed with a dye or paint you might not be able to find these but if you have a natural tree look closely at the needles. Do you see any white? Depending on the species of tree you have you might also see block scales. These insects are only mobile immediately after they emerge from the egg, then they find a good place to insert their mouthpart to start sucking juices and they're stuck there for the rest of their life.



Balsam gall midge – swellings at the base of balsam fir needles are caused by the balsam gall midge. Galled needles drop prematurely so you may not notice many of these, but keep your eyes open for other swellings and galls on the needles.



There are lots of other things that you might find on your Christmas trees so look closely! If you see insect or disease damage feel free to take a photo and send it to me!

Emerald Ash Borer – from Bill McNee. Recent contacts with EAB trap and lure suppliers have confirmed that communities will be able to purchase EAB traps for their own use in 2012. The cost in 2012 will be ~ \$28 for a standard sticky panel trap and lure, plus shipping costs. DNR and the Wisconsin Dept. of Agriculture, Trade and Consumer Protection (DATCP) will be producing a supplier list and methodology guidance for communities that are interested in doing their own trapping.



Green funnel trap can be used for EAB detection. Photo by Synergy Semiochemical.

The size and locations of the state trapping effort have yet to be determined, and we have heard that some communities are waiting for this information prior to making a decision on ordering their own traps. Branch peeling surveys can also be conducted to look for EAB

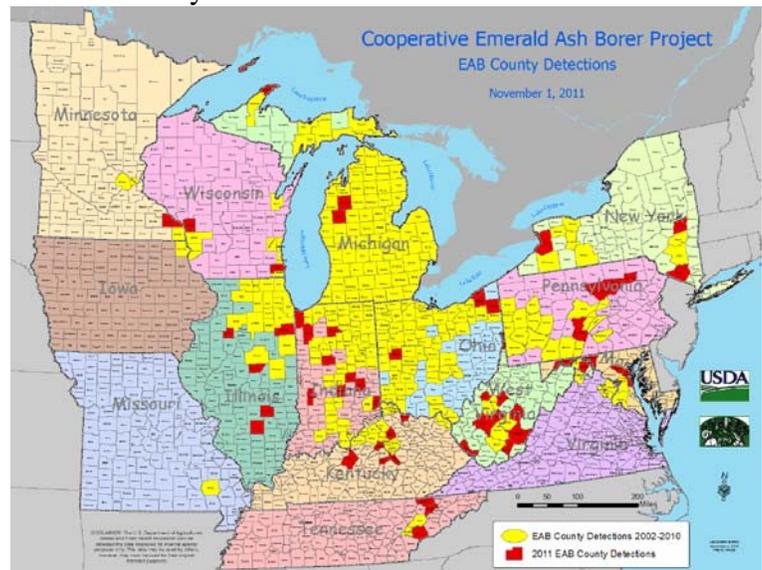
(http://www.oakville.ca/Media_Files/forestry/EABbranches_amplifyingRyall2010.pdf).

A new trap design will be available for the 2012 trapping season, in addition to the sticky panel traps. The funnel traps shown below can be ordered in purple or green (the same colors as the sticky panel traps). Insects are collected from the cup and do not need to be cleaned prior to identification. The traps are reusable for many years.

A recent Canadian study has identified a compound produced by unmated adult female EAB that boosts trap catches of male EAB by 45-100%. The study found increased trap catches on green traps baited with ‘green leaf volatiles’ and hung high in the canopy. It is hoped that enhanced trap lures will enter operational use within the next few years.

At right is the current map of counties with first EAB detections in 2011 (in red). To date, 56 counties have had first EAB detections in 2011. A majority of these detections have come from high-risk trapping and most of the rest have been through the reporting of symptomatic trees. The total number of counties with an EAB detection grew by about 25% this year. EAB was first found in Wisconsin in 2008. The current quarantine map for Wisconsin is shown above.

Wisconsin EAB Quarantines & Locations August 2011



Counties in red had first EAB detections in 2011.

Gypsy Moth – from Bill McNee. The 2012 DNR gypsy moth suppression program will be the smallest in program history. The only treatment will spray 190 acres at Gov. Thompson State Park in Marinette County.

To help reduce next year's population levels, scrape off egg masses within reach and drown them in soapy water between now and next April. Once temperatures are above 40° and there is no immediate danger of freezing, one of several egg mass oil products can be applied to suffocate the eggs as an alternative to scraping.



Scrape gypsy moth egg masses into soapy water.

World's heaviest insect discovered – from Bill McNee. A retired park ranger recently discovered the world's heaviest insect on an island in New Zealand. The giant weta, a cricket-like insect, weighs about 1/6 of a pound. The species is an example of 'island gigantism,' a phenomenon in which island species are often larger than their mainland relatives due to reduced pressure from predation and competition.

For impressive pictures, visit:

<http://www.dailymail.co.uk/sciencetech/article-2068547/Weta-insect-Heaviest-world-weighs-3-times-mouse.html>.

If you want to see the world's largest insects and other arthropods, visit:

<http://www.buzzfeed.com/mjs538/the-16-largest-insects-in-the-world>.

Diseases

Annosum found in northern lower MI – from MI Forest Health News August 2011. A fungus considered among the most important and destructive diseases affecting conifers in North America was recently detected for the first time in Michigan's northern Lower Peninsula. The fungus, *Heterobasidion irregulare* (formerly *Fomes annosus* or Annosum root rot), was confirmed in a red pine stand on the Manistee National Forest, in Wexford County.

http://www.michigan.gov/documents/dnr/ForestHealthNewsletter_361000_7.pdf

Annosum, reporting stands in Wisconsin – if you suspect you have found annosum root disease in a stand please let your forest health specialist know. We would like to know where each location is so that we can monitor how quickly it seems to be spreading (or is being discovered) and how localized or wide spread it is. If you are in a pocket of pine mortality and suspect that you've found the fruiting bodies of annosum but are unsure, please take some photos and email them to your forest health specialist, or collect some samples, place them in a Ziploc bag and send to your forest health specialist and we can help you determine if it is indeed annosum. Biology, photos, and management guidelines for annosum, can be found at <http://dnr.wi.gov/forestry/Fh/annosum/>



Annosum fruiting body on old stump (with snow on top).

Annosum, tree species affected – annosum is a root rot disease that can affect 100s of species of trees, both conifers and hardwoods, with the most common and most severely affected in Wisconsin seeming to be the conifers. Recently Wisconsin DNR forest health staff visually confirmed, for the first time in Wisconsin, annosum fruiting bodies on a young spruce tree. The “type” of annosum (*Herterobasidium irregulare*) that we have here in Wisconsin is a bit more of a “pine type” but can infect many species, but until now we had not found it on spruce. Currently, annosum infection has been confirmed in Wisconsin on the following tree species:

- On overstory trees: red pine, white pine
- On understory trees: red pine, white pine, jack pine, balsam fir, white spruce, eastern red cedar, oaks (both red and white), black cherry, buckthorn

Not all trees species seem to be killed by annosum infection. In some trees species infection by annosum may just significantly slow the growth rate of the tree, and it could predispose them to attack by other insect/disease issues. Of the tree species listed above, annosum has caused mortality in: red pine, white pine, jack pine, balsam fir, eastern red cedar.

Bur Oak Blight – from Kyoko Scanlon. Since the 1990s, bur oak blight (BOB) has been reported in Midwestern States including Iowa, Kansas, Minnesota, Nebraska, and Wisconsin. The disease is believed to be caused by a new species of *Tubakia* fungus. *Tubakia dryina* has been known to be the causal agent of Tubakia leaf spot. However, BOB is considered a blight disease, not a leaf disease. In a severe case, all the leaves on a tree will die late in the season. Upon further investigation by Dr. Harrington of Iowa State University, *T. dryina* is now considered a species complex, and one species of *Tubakia*, currently called "BOB *Tubakia*" or "*Tubakia* sp. BOB" is associated with the disease.

Bur oak blight has been confirmed in Dane, Green, Iowa, Kenosha, Rock, Sauk, Walworth, and Waukesha Cos. on bur oak. In 2011, leaf and twig samples were sent from Wisconsin to Iowa State University for the identification of “*Tubakia* sp. BOB”. The samples were collected mainly from bur oak trees that were experiencing late season leaf necrosis. Laboratory analysis is in progress.

Bur oak blight symptoms usually start appearing in late July into early August. Infected leaves develop purple-brown lesions along the midvein and major lateral veins on the underside

of leaves. Later, chlorosis and necrosis expand on leaves and affected leaves wilt and die. Severely affected trees may die after many years of infection together with other pest issues. Severe symptoms of BOB have been observed only on *Quercus macrocarpa* var. *oliviformis*, a variety of bur oak that produces smaller acorns.

What can we do if a tree is infected with BOB? Dr. Tom Harrington says “Don’t panic. BOB is not as bad as it looks”. Trees may be able to sustain repeated defoliation because it starts late in the season, though secondary pests may kill trees that are stressed by repeated infection with BOB. Practices to improve overall vigor of infected trees may help reduce the risk of attacks by secondary pests. The use of fungicides has been investigated as a management tool of high-value bur oak trees. In preliminary studies, injections of the fungicide propiconazole in the spring reduced symptom development in late summer/fall and the following year. Further fungicide studies are in progress.

For more information about BOB, a pest alert was recently developed by the USDA Forest Service and is viewed at http://na.fs.fed.us/pubs/palerts/bur_oak_blight/bob_print.pdf.

Other/Misc.

Amur cork tree and Japanese wisteria – from Tom Boos. In the past two field seasons, local foresters in Adams and Juneau County have reported populations of two species that were not reported in Wisconsin prior: Amur cork tree (*Phellodendron amurense*) and Japanese wisteria (*Wisteria floribunda*). If you happen to find either of these plants or any other that you cannot identify, please email the Invasive Species Team, invasive.species@wisconsin.gov, with location details and pictures if available.

Here is a little more information about each species:

Amur cork tree (*Phellodendron amurense*) has been widely planted as an ornamental and street tree throughout much of Wisconsin and the nation due to its’ unique, corky bark and its’ ability to withstand pollution. In the fall, the opposite, pinnately compound leaves turn bright yellow, while the clusters of drupes on female trees are black. One very unique characteristic that separates it from any look-alike species is presence of very bright yellow innerbark that is revealed after removing the outer layer of bark. This is especially useful on younger trees that have not yet developed the thick corky bark. For more detailed information and some pictures, take a look at the PCA Alien Plant Working Group fact sheet:

<http://www.nps.gov/plants/alien/fact/pham1.htm> and visit Invasive.org for lots of pictures:

<http://www.invasive.org/browse/subinfo.cfm?sub=11569>.

Japanese wisteria (*Wisteria floribunda*) is a woody vine that is a very popular ornamental in the Southern United States, with long drooping, fragrant clusters of flowers and vigorous growth. It is not nearly as common as its close relative, Chinese wisteria (*Wisteria sinensis*) due to the long period of time it takes for Japanese wisteria to start producing flowers (~5 years). At the site in Juneau County, vegetative growth is the primary means of spreading. It moves across the ground and also up trees,



girdling them with time. Two distinguishing characteristic of Japanese wisteria are the number of leaflets being 13-19, most commonly 15-17, and the clockwise (considered counter-clockwise by some) twining of the vine as it climbs upwards. Chinese wisteria, native American wisteria, and our native trumpet creeper climb the opposite direction.

PCA Alien Plant Working Group fact sheet: <http://www.nps.gov/plants/alien/fact/wifl1.htm>

University of Connecticut Horticulture: <http://www.hort.uconn.edu/plants/w/wisflo/wisflo1.html>

Cedar bark stripping on northern white cedar

– there have been some recent discussions amongst forest health professionals in the upper lakes states regarding bark stripping on northern white cedar. Possible reasons for this phenomenon are varied, from mechanical damage, or bear damage, to abiotic stressors like drought, temperature extremes, or fire. If you have been seeing similar symptoms (in the last 10 years or so) in northern white cedar, could you let me know? If you have photos of this, or could get photos that would be very useful as well. We just want to document this issue, even though we are currently unsure of the exact cause or even whether it is an “old” problem or a current issue. If you have stands with this kind of damage could please send me the following information:

1. LOCATION (legal or lat./long. is fine):
2. PERCENT OF CEDARS AFFECTED IN STAND (rough visual estimate is fine):
3. OLD (i.e. tree is trying to grow over wound) OR NEW DAMAGE:



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/>

Northeast Region Pest Update produced by:

Linda Williams

Forest Health Specialist

Wisconsin Department of Natural Resources - Northeast Region

Linda.Williams@wi.gov

<http://dnr.wi.gov/forestry/fh/>

For more information contact:

Bill McNee

NER Gypsy Moth Suppression Coordinator

920-662-5430

Bill.McNee@wi.gov

Linda Williams

NER Forest Health Specialist

920-662-5172

Linda.Williams@wi.gov

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.