

Northeastern Wisconsin Forest Health Update

September 18, 2012

Topics covered this month:

Insects:

Acorn pip galls
Asian needle ant found in WI
Basswood dropping leaves
Birch lace bugs
Emerald ash borer
Gypsy moth
Hedgehog galls
Kermes scale killing oak branch tips
Milkweed bugs
Northern widow spider (cont.)
Pine cone oak gall

Diseases:

Ash dropping leaves
Botryosphaeria canker
Bur oak blight

Other:

Drought stress and a dry fall

Insects

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

Acorn pip galls – in the pest update last month I gave some information about acorn pip galls, caused by a gall wasp, which appear as small fleshy “inserts” just under the cap of the acorn (or small triangular holes after they fall out), and usually render the acorn infertile. Additional reports of high infestation rates (50% or more of the acorns) have come in from Marinette and Oconto Counties.



Holes under cap are where acorn pip galls were present and have fallen out.

Asian Needle Ant found in Wisconsin – from Bill McNee. Wisconsin recently had its first find of another exotic species, the Asian Needle Ant, in a residential neighborhood of Reedsburg (Sauk County). The Midwest’s first detection of this insect was found by a boy participating in the ‘School of Ants’ project (www.schoolofants.org), where volunteers collect ants and send them to a lab for identification. This Japanese insect has been present in the southeast US for decades, but recent surveys by volunteers also found the insect in Wisconsin, New York City, and Washington State. Unlike most other ant species, this species can invade undisturbed forests and tends to take over and displace the other ant species. Unfortunately, this ant also has a sting that commonly produces a

strong allergic reaction. For more information about the Asian Needle Ant, visit: <http://www.schoolofants.org/species/1157>

Basswood dropping leaves – did you notice that some basswood trees suddenly turned pale green and dropped



Extensive window feeding on a leaf that remained on the tree.



Basswood beginning to drop leaves, some dropped 100% of their leaves.

90+% of their leaves starting in late August? I observed this in numerous counties in the northern 1/3 of Wisconsin. So what was the cause of this sudden leaf drop on so many basswoods? Well, quite frankly I'm not entirely sure. All of the dropped leaves have a significant amount of

window feeding, possibly from a casebearer caterpillar feeding on the leaves (I found some casebearer pupae but no other insects). I have never thought that this level of late season window feeding would cause the tree to drop the leaves, but it's the only thing I could find. Steve Katovich (USFS Entomologist) and Brian

Schwingle (DNR forest health) have also found signs of window feeding and not much else, so for now, we'll blame it on the casebearer! Pics above show how the leaves look mottled when they drop but holding them up to the light shows the extensive window feeding.



Basswood leaf from a tree that dropped 75% of its leaves. Same leaf in both pics above showing the extensive window feeding (when held up to the light) probably caused by a casebearer caterpillar.

Birch lace bugs - These small, flattened insects live and feed on the underside of birch, beech, and willow leaves. Damage will show up on the upper surface



Tiny immature lace bugs feeding on the underside of a birch leaf.

of the leaves as pale white and yellow specks wherever they have been feeding. Heavily infested leaves turn brown and fall off. Nymphs and adults reach their highest populations in

August which is when I saw this damage to birch.



Feeding damage viewed from the top of the leaf.

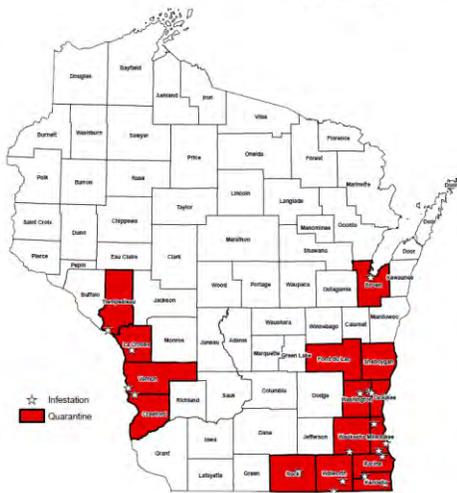
There are two generations per year, and although they look like a very tender bug, winter is spent in the adult stage among leaf litter.

Emerald Ash Borer (EAB) – from Bill McNee. Since the last pest update there are three new EAB finds to report in southeast Wisconsin:

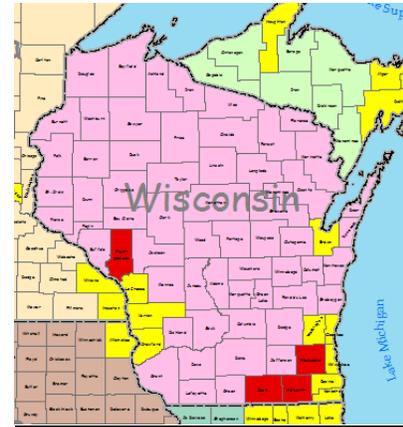
- Village of Brown Deer, Milwaukee County
- Town of Fredonia, Ozaukee County (about 3 miles from earlier finds in the Town)
- Village of Clinton, Rock County

Trempealeau County in western Wisconsin has been added to the Wisconsin EAB quarantine area, following a detection of EAB at Perrot State Park in mid-August. The pest has been found across the Mississippi River in Minnesota, and there appears to be a widespread infestation in the Mississippi River valley of western Wisconsin and adjacent states. EAB flight is now over in Wisconsin and any remaining traps can be taken down for the year.

EAB Quarantines & Known Locations August 2012



Counties currently quarantined for EAB are shown in red.



Counties in red had first EAB detections in 2012. Counties in yellow had first EAB detections in 2011 or earlier.

EAB at Perrot State Park in mid-August. The pest has been found across the Mississippi River in Minnesota, and there appears to be a widespread infestation in the Mississippi River valley of western Wisconsin and adjacent states. EAB flight is now over in Wisconsin and any remaining traps can be taken down for the year.

Sign up for automatic EAB news updates at:

http://datcp.wi.gov/Gov_Delivery/EAB/index.aspx.

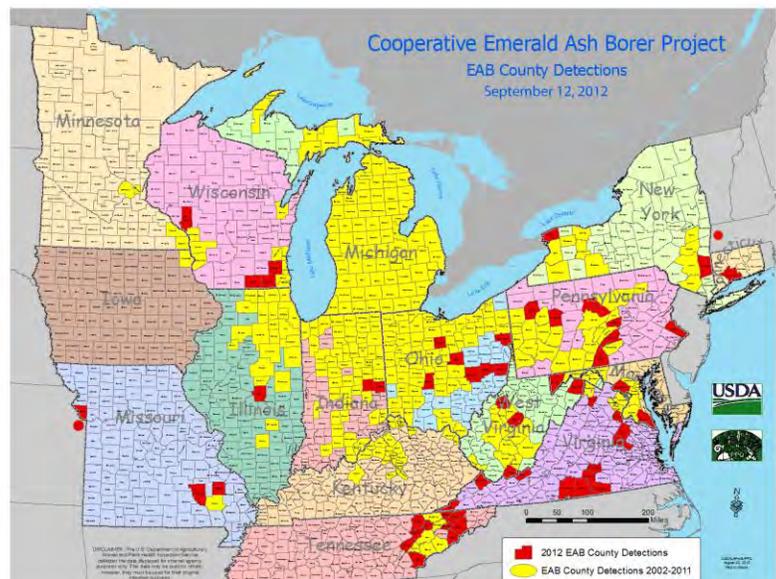
Suspicious beetles or symptomatic trees should be reported to the EAB hotline:

1-800-462-2803, or emailed to:

DATCPEmeraldAshBorer@wisconsin.gov.

EAB has now been found as far away as Kansas and Massachusetts. In late August an infestation was located in Kansas City, Kansas, close to a recent find of EAB near Kansas City, Missouri. Massachusetts' first detection in the town of Dalton was announced on September 12. Kansas is the 17th state and Massachusetts is the 18th state to find EAB. So far in 2012 there have been 58 new county detections nationwide, two counties more than were found in all of 2011.

A few months ago we reported that a group of dogs were being trained to sniff out EAB infestations. They recently completed their training and have now been tested at a wood yard in Winona, Minnesota. The dogs successfully found samples of EAB-



Counties in red had first EAB detections in 2012. Counties in yellow had first EAB detections in 2011 or earlier. Map is modified from a map by USDA APHIS.

infested wood hidden in wood and brush piles. Watch the dogs in action at: <http://kaaltv.com/article/stories/S2756313.shtml?cat=10217>. According to media reports, the federal funding used to train the dogs has run out and it will take additional funding sources to put the dogs into active service.

Gypsy Moth – from Bill McNee. As of mid-September, the flight of male gypsy moths is finished in all of Wisconsin. Trappers from the Dept. of Agriculture, Trade and Consumer Protection (DATCP) are currently taking down traps. So far, Ashland and Bayfield Counties in the far north are catching far more moths than any other counties, and have caught about 40% of all moths trapped in Wisconsin this year (~160,000 from all counties). Western Wisconsin counties that are not quarantined continue to have low trap catches.

Egg laying is now complete, and egg mass surveys can begin in order to predict gypsy moth populations in 2013. For more information on how to do egg mass surveys, visit www.gypsymoth.wi.gov. Information on oiling or removing egg masses is also available at this website.

Applications to the 2012-13 DNR gypsy moth suppression program are due by Friday, December 7 of this year, and the application form will soon be available. A list of county and municipal gypsy moth contacts is available at www.gypsymoth.wi.gov. If you decide to participate in the suppression program to spray in 2013, please let Bill McNee know in advance of the December deadline (bill.mcnee@wisconsin.gov).

If an area is thinking of participating in the DNR suppression program to spray in 2013, oil the masses or wait until this December to remove them so that surveyors can determine if an area should be sprayed.



Gypsy moth egg masses. Photo by Bill McNee.

Hedgehog galls – these fuzzy galls on oak leaves don't cause much damage to the tree but can draw your attention. If you split them open you would find a small cynipid wasp larvae developing inside. Since they don't do damage to the tree there is no need to control them, consider it nature's attempt at decoration.



Hedgehog galls on oak. Photo by Scott Fischer.

Kermes scale killing oak branch tips – some areas of the state, especially the central parts, have some areas with significant oak twig mortality. Two things are causing this, *Botryosphaeria* Canker (more info on that below), and Kermes scale. Oak twigs with Kermes scale present will often be killed from the point where the scale feeds to the branch tip. Female Kermes scales are fairly large, light brown and round. They are immobile, tend to



Kermes scales on oak.

cluster near buds of a twig or branch, and are often tended and protected by ants. These scales feed on sap causing a loss of plant vigor and growth, as well as twig dieback. While a heavy infestation may cause young trees to be stunted or deformed, natural enemies are usually plentiful and control is not usually necessary.

Milkweed bugs - these insects are often mistaken for box elder bugs. As a general rule, box elder bugs will not be found on milkweeds, so if you see these kinds of bugs on milkweed it is probably milkweed bug. Additionally, milkweed bugs are a little more orange, whereas box elder bugs are a little more reddish, and they have a different pattern of black on them, but it can be hard to distinguish the two unless you have both together for comparison. Milkweed bugs suck the sap of milkweed, while box elder bugs suck the sap from box elder seeds and twigs, and probably the more important difference is that box elder bugs will congregate on houses and buildings, while milkweed bugs will not.



Milkweed bugs, adults and immatures. Photo by Ellen Barth.

Northern widow spider – in the pest update last month I mentioned that we have northern widow spiders (*Latrodectus variolus*) here in Wisconsin. After the report in the pest update, Kathleen Harris, naturalist at Peninsula State Park, reported that two northern widows have been brought to the nature center at Peninsula State Park and there are reports from some UW researchers of more northern widows at "table rock" in Kondanko Field. She also reported that a local fellow who stopped to see the northern widow on display later reported that he found several northern widows paralyzed inside a wasp nest.



Northern widow spider (white "donut" is reflection from flash). Photo by Todd Lanigan taken at Perrot State Park, WI.

Northern widows are not commonly seen. For more info check out Michigan State University's page on northern widows including photos

<http://www.pestid.msu.edu/InsectsArthropods/NorthernBlackWidowSpiderLatrodectusvariolus/tabid/263/Default.aspx>

Pine cone oak gall - this oak gall was found on a swamp white oak in Brown County. Pine cone oak gall is a large multi-part gall that falls apart as it matures. Each piece, which resembles a woody nut or kernel, will have a single gall wasp larvae in it. The gall does not grow into the stem, thus no real damage is done to the tree that I'm aware of.



Pine cone oak gall pieces, each will have a gall wasp larvae within it. Photo by Don Melichar.



Pine cone oak gall on swamp white oak branch. Photo by Don Melichar.

Diseases

Ash dropping leaves – ash trees are some of the first trees to drop their leaves in the fall. This year as some ash trees started to turn fall colors there were others whose leaves simply turned brown and crispy and dropped. These two things occurred



Tree in center affected by leaf disease, other ash not affected.

together so the public probably didn't notice it or report it much. I'm not sure exactly what leaf disease is causing this problem but it was significant on some trees while others are turning fall color normally.



Leaf symptoms above and below.



Botryosphaeria canker – some areas of the state, especially the central parts, have areas with significant oak twig mortality. Two things are causing this, Kermes scale (detailed above) and Botryosphaeria canker (*Botryosphaeria quercuum*). Botryosphaeria is a fungal disease that usually just kills the outer 4-8 inches of the tips of twigs but some trees may have more severe damage. Black fruiting bodies will erupt through the bark of killed twigs. This disease will also attack oak seedlings, killing the entire top of the tree. Several years of infection can cause the tree to look stunted and tufted as the terminal buds and branches are killed by the disease. This disease is often cyclical and will cause problems for a year or two and then disappear for a while. Dead twigs can be pruned off if desired although usually little or no control is required or practical.



Black dots are the fruiting bodies of botryosphaeria canker erupting from the bark of an oak branch

Bur Oak Blight – this relatively new disease has not been confirmed in northeastern Wisconsin yet, but it doesn't hurt to keep your eyes open. Since the 1990s, bur oak blight (BOB) has been reported in Midwestern States including Iowa, Kansas, Minnesota, Nebraska, and Wisconsin. The disease is caused by the fungus *Tubakia iowensis* sp. nov and if you're really interested in this new species you can read about it (complete with pics of crustose and erumpent pycnothyria and all sorts of other cool fungal stuff!) at <http://www.public.iastate.edu/~tcharrin/BOB.pdf> Other *Tubakia* species cause leaf spot diseases. 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.

Look for bur oak trees that exhibit the symptoms of BOB starting late July or August, through September. BOB symptoms include;

- Purple-brown lesions along the veins on the underside of leaves
- Dark veins on the upper leaf surface and large wedge-shaped lesions on leaves
- Chlorosis and necrosis expands on leaves; affected leaves wilt and die
- Symptoms usually start in the lower branches and progress up the tree

Severely affected trees may die after many years of infection together with other pest issues. 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 and seems to work for 2 years before retreatment should be repeated, read more at <http://www.ipm.iastate.edu/ipm/hortnews/2012/9-12/buroakblight.html>

For more information about BOB check out the forest service pest alert at http://na.fs.fed.us/pubs/palerts/bur_oak_blight/bob_print.pdf



Wisconsin counties confirmed to have Bur Oak Blight (BOB).

Other/Misc.

Drought stress and a dry fall – drought stress will probably be a topic that shows up in my pest updates for quite a few more months as the effects of the 2012 drought continue to show up and secondary pests continue attacking drought stressed trees. So, what to talk about this month? How about the effects of a dry fall? The summer was dry, we all know that, especially those of you in the southern parts of the state, but what about the effects of a dry fall? If our fall remains dry, then that means that our trees will remain dry throughout the winter, prolonging the drought for them at least until next spring. When spring comes and they begin to grow they will start the

process of recovering from the drought (provided the spring isn't dry as well) but this means that insects and disease have more time to attack these trees.

Trees that are dry going into winter will be further desiccated throughout the winter, especially our conifers. Additionally, trees that are dry going into winter tend to be less cold tolerant and may suffer additional damage, such as twig dieback, bud mortality, or needle mortality, due to cold winter temps. Occasionally whole tree mortality will occur, especially in younger trees, when they enter a winter dry, and suffer further winter 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 dnrfgypsymoth@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.