Northeastern Wisconsin Forest Health Update

Wisconsin DNR – Division of Forestry

May 16, 2014

Topics covered this month:

Insects:
Asian longhorned beetle
Collembola/springtails/snowfleas
EAB info
EAB new finds in WI
Eastern tent caterpillar hatching
Gypsy moth

Diseases:
Ash yellows
Nectria on basswood
Rhizosphaera needlecast or winter damage?
White pine blister rust

Other:
Brian Schwingle is leaving Wisconsin
Girdling of forest trees

Of Historical Interest:
60 years ago - 1954 –

- Larch casebearer
- Yellow-headed Spruce Sawfly

25 years ago - 1989 –

- Pine engraver

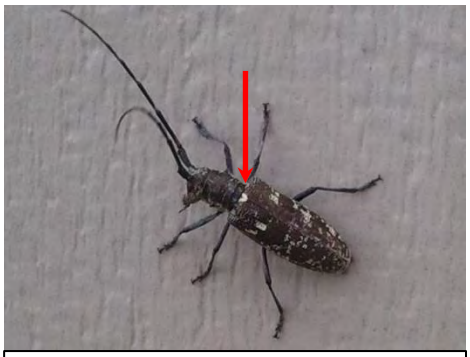

Camouflage.

Insects

Asian longhorned beetle – we have not identified Asian longhorned beetle (*Anoplophora glabripennis*) in Wisconsin, and that's a good thing. Not only does it attack maples and a variety of other valuable hardwoods, but eradication and monitoring of infestations in other areas of the US entails lots of time and money, and a lot of tree removal. But, amazingly, they do continue to eradicate it from some areas. ALB was detected in Chicago, IL, in 1998 and was declared eradicated in 2008. The first infestation of ALB in the US was in Brooklyn, NY, and although that infestation has not been eradicated yet, the infestation in Islip, NY, was declared eradicated in 2011. And just this week, May 12, 2014, ALB was declared eradicated from Boston, Massachusetts, where it was identified in 2010. Quarantines for infestations remain in place in

Ohio (61 sq. mi. in one county), Massachusetts (110 sq. mi. in one county), and New York (109 sq. mi. in 3 counties).

In Wisconsin the pine sawyer beetle is commonly mistaken for Asian longhorned beetle. Our native pine sawyer beetle, sometimes called white spotted sawyer, appears dusty or pitted, whereas ALB is smooth and shiny. Additionally, the white spots on ALB are usually more clear than on pine sawyer, but pine sawyer will always have a whitish dot at the point where the elytra (wing covers) come together (red arrow); ALB does not have this dot. The link below will take you to a website with more pics of other insects commonly mistaken for ALB. You might chuckle when you see some of the "look a likes" thinking that they don't look anything like ALB, but these are all insects that get submitted as potential ALB on a regular basis http://www.uvm.edu/albeetle/identification/index.html



Pine sawyer beetle.

Cottonwood borer (native) top. Bottom two are Asian longhorned beetle, female top, male bottom. Photo by Gerald J. Lenhard, Louisiana St Univ, Bugwood.org

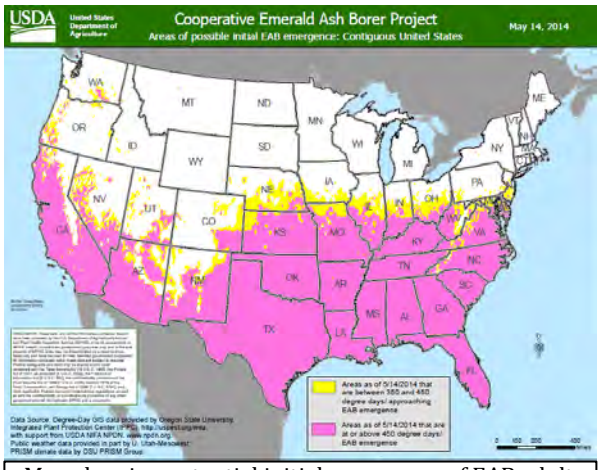
Collembola/springtails/snowfleas – for such a tiny unassuming critter it's amazing that it goes by so many names. During the winter these little critters may congregate on the snow, looking like someone sprinkled pepper on the snow (moving pepper). But during the rest of the year what happens to them? They're there, they're just much harder to see. Collembola are decomposers, living in leaf litter or rotting logs. Often the only way I notice them is when they're in a large group, and by "large" I mean a group the diameter of a pea or a dime. They're harmless at all times of year.

Collembola (black specks) on the top of a mossy maze polypore fungus.

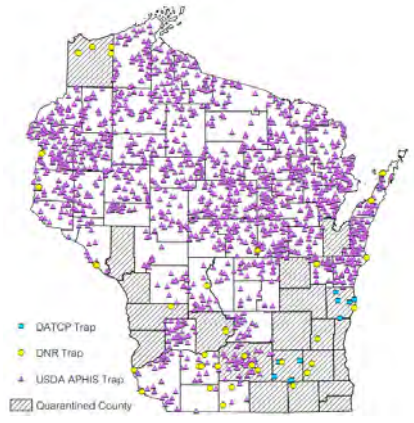
EAB info – May 18-24 is emerald ash borer awareness week in the US! I know you're super excited to do your part! Here are some things that you could do to celebrate EAB Awareness Week:

- Watch an EAB YouTube video http://www.youtube.com/watch?v=9G-0eG632OI
- Take a walk and go check an ash tree for signs of EAB
- Cut out an EAB mask and wear it around the office http://www.dontmovefirewood.org/resources/emerald-ash-borer-mask
- read about firewood movement on the Wisconsin DNR page http://dnr.wi.gov/topic/invasives/firewood.html

EAB emergence will begin soon. The map at right shows areas of possible EAB emergence as of May 14, based on degree days. Adults will continue to emerge, mate and lay eggs throughout the summer. Some EAB trapping will be done once again this year. USDA Aphis and DATCP will be hanging the purple triangle traps in trees while the DNR will be using double decker traps at some of the state parks around the state. In quarantine areas, or areas where folks want to start treating their ash trees to prevent EAB attack, the UW Extension insecticide documents have been updated and include a list of chemicals that can be used. There is one for homeowners http://hort.uwex.edu/articles/homeowner-guide-emerald-ash-borer-insecticide-treatments and one for professionals http://hort.uwex.edu/articles/professional-guide-emerald-ash-borer-insecticide-treatments



Map showing potential initial emergence of EAB adults.



EAB trap locations, 2014.

EAB new finds in WI - In the past month emerald ash borer has been identified in the following areas around the state:

New County Quarantines:
None

New finds in Counties already Quarantined:

- Jefferson County – Town of Cold Springs*
- Vernon County - Town of Bergen
- Washington County - Town of Jackson

*This was the first actual finding of EAB in Jefferson County, but the county was previously quarantined due to adjacent county EAB detections.

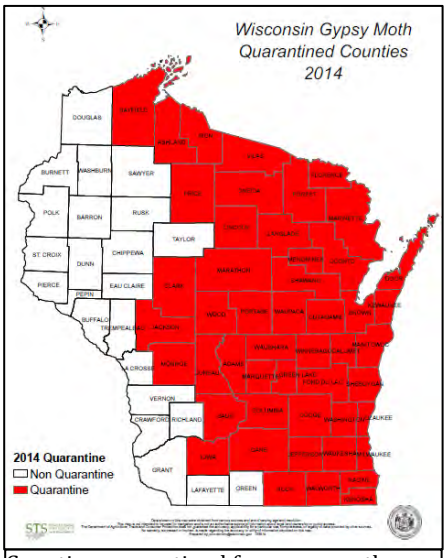
Eastern tent caterpillars hatching – small webs created by newly hatched Eastern tent caterpillars are just starting to appear in trees. Due to the cool temperatures this spring the hatch is a bit slow.

Many folks want to get the nests out of their trees and often will prune out the entire branch that the web is on. Pruning the web nest out of the tree actually does more damage to the tree than the caterpillars would do by eating all the leaves off (since the leaves will grow back faster than the branch will). Squishing the caterpillars while they're in the nest is much more tree-friendly. When the webs are larger you can pull the webs out of the tree with a rake, or a stick, and dump them into a bucket of soapy water to


Eastern tent caterpillars recently hatched from eggs, just starting web nest.

kill the caterpillars. Don't use fire to burn the webs out of trees, wildfires have been started this way and although you do kill the caterpillars there are definitely negative side effects if you burn down the woods or your garage or your neighbor's barn.

Gypsy moth – gypsy moth hatch has begun, although not in the northern parts of the state yet. Spraying for gypsy moth will begin in the southern part of the state soon. There is one suppression spray block to be treated in Rock County and a number of Slow The Spread (STS) blocks in western portions of Wisconsin. More information on the spray sites is available at http://gypsymoth.wi.gov/ Homeowners who are interested in reducing gypsy moth populations now that hatching has begun should consider scraping and drowning unhatched masses or putting up sticky bands. Burlap collection bands should be prepared in mid-June. More information about management options for homeowners and woodlot owners is available at www.gypsymoth.wi.gov



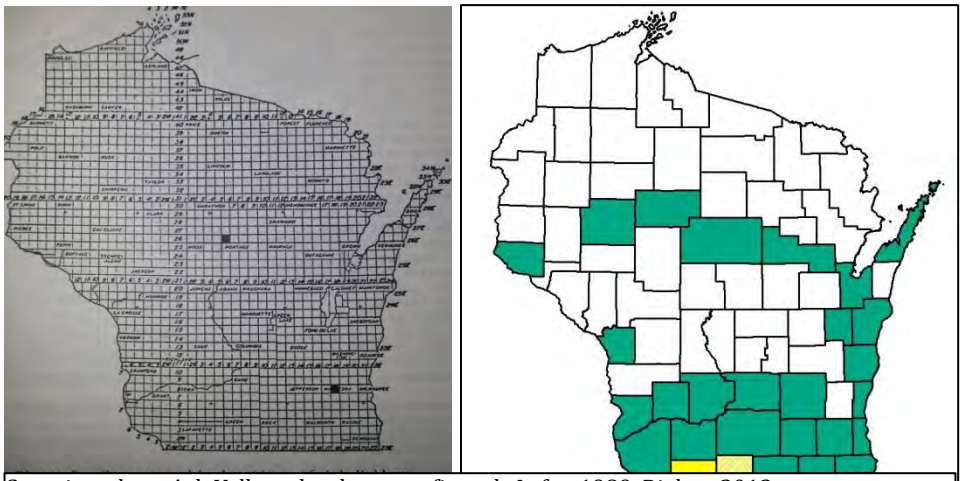
Counties quarantined for gypsy moth shaded in red.

Homeowners thinking about insecticide treatments this spring should contact an arborist or tree service very 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.


Sticky barrier band keeps crawling caterpillars out of the tree.

Diseases

Ash yellows – in the April pest update I mentioned ash yellows in the historical section. Afterwards I got a question about how much ash yellows has spread since then. Below are the two maps for comparison. Ash yellows has indeed continued to spread and we've now detected it in 26 counties around the state.


Counties where Ash Yellows has been confirmed. Left – 1989, Right – 2013.

Nectria on basswood – most of you know nectria as the target canker because of the shape and look of the face of the canker, resembling a target. But on basswood the cankers can appear very different at first glance. On basswood the trees may look like there were small "explosions" that occurred under the bark. The bark may be popped out a bit, may have odd-shaped outward growths, and it may or may not be clear that it's hollow underneath the bark. When you peel away this outer bark and all the gnarly growths, you do end up with a typical nectria canker face, but on basswood you often have to dig to get to it. Pics below show the "bark explosion" appearance that you might notice, as well as what it looks like when you peel the bark back.

Rhizosphaera needlecast or winter damage – what's going on with the spruce? Why are so many of them getting brown needles? I've been seeing some miserable looking spruce lately. They're in all sorts of areas, including yards, along roads, deep in the woods, and both overstory and understory trees are affected. Some trees have browning needles at the tips of the branches, on other trees the older needles are the ones browning, and on some just the tips of needles anywhere on the branch are browning. So what is it?

A mix of browning needles on this tree, some needles completely brown, some partially brown. Primary cause? Probably winter damage.

On trees where older needles are suddenly browning, Rhizosphaera appears to be the main culprit, with some help from winter. The cool wet spring that we had last year would have been the start of the problem, which is when the fungus would have first infected the needles. Those infected needles normally would have begun to turn brown and drop off the tree later this spring and through the summer and fall. But … we had such a long dry winter, and those damaged needles would have dried out more this winter, and the combination of some fungal damage plus some winter drying may be the cause of the extreme sudden browning so early this spring.

Needles near the tips of the branches also turned brown on this tree. Primary cause? Probably winter damage.

Older needles have all turned brown on this understory sapling. Primary cause? Probably Rhizosphaera, needle death accelerated by winter damage. Photo by Ryan Brown.

Not all trees are affected equally by Rhizosphaera. Some spruce trees are slightly resistant to this needlecast (white spruce is listed as having "intermediate" resistance), some trees have slightly better airflow around them which dries out the needles faster so that the fungus cannot grow into the needles, which is why the tops of trees will be less affected than the lower branches. And, some trees are genetically resistant to Rhizosphaera. If you have a plantation with just a few trees that are severely affected by Rhizosphaera you might consider removing just those trees as they will probably be affected by Rhizosphaera for much of their life. But this year, the combination of the wet spring last year, and the long dry winter seem to have combined to have a greater impact on the trees.

All older needles have turned brown on these branches. Rhizosphaera would be the primary culprit, needle death accelerated by winter damage.

White Pine Blister Rust - blister rust causes a canker on white pine which can girdle the branches and the main stem. Blister rust cankers are just starting to sporulate, producing the orange pustules which produce the spores of this fungus. This disease is specific to white pine but the disease cannot be transmitted directly from one tree to another. Spores that are produced on white pine can only infect *Ribes* (gooseberry) plants which will then produce spores later in the summer, those spores from the *Ribes* plants will then be able to infect a white pine tree, completing the life cycle.

If you have just a few blister rust cankers on branches of young trees you should prune off those infected branches. These branches can be spotted from a distance because they will be off-color (below, red arrow) or the foliage will have turned a rusty red color. Prune infected branches at the main stem. By doing so you've just saved your tree (at least from that particular canker). If the canker is located close to the main stem the fungus may have already grown into the main stem, in which case a canker will eventually form on the main stem. Cankers on the main stem will eventually girdle the tree, although in healthy trees with good growth rates this may take many years.

Off-color branch (red arrow) is easy to spot. Upon closer inspection a sunken canker from blister rust was found on the branch (green arrow).

Blister rust spores must first infect a needle, and then grow into the branch. Since white pine seedlings and saplings often have needles attached directly to the main stem this can allow the fungus an entry point directly into the main stem of the tree. Damage from a girdling canker may not be severe enough to cause tree decline and mortality for several to many years.

Other/Misc.

Brian Schwingle is leaving Wisconsin – I'm very disappointed to have to report that Brian Schwingle, Forest Health Specialist for north central Wisconsin located out of Merrill is leaving us! Brian will be taking a forest health job with Minnesota DNR. So the good news is that he'll still be with the Forest Health community, and he'll still be doing a job that he enjoys and is very good at, and while I'm happy for Brian and his family, the WI DNR Forest Health Team will take a big hit with this loss. Brian's last day with the Department will be May 29.
While Brian's position is vacant, the counties in his territory will be covered by:

- Iron County - Paul Cigan (Spooner)
- Price and Taylor Counties - Todd Lanigan (Eau Claire)
- Lincoln and Langlade Counties - Mike Hillstrom (Wisconsin Rapids)
- Oneida, Vilas, Florence and Forest Counties – Linda Williams (Green Bay)

Girdling of forest trees – girdling of trees by ropes, chains, or wire doesn't just happen in campgrounds and urban areas, although admittedly it's much more common in those areas than in the forest. Sometimes trees manage to grow over/around whatever it is, but in some cases they are just simply girdled and killed. Below are some examples I've found recently.

Of Historical Interest

60 years ago, in 1954 –

- **Larch casebearer** – Coleophora laricella (Hbn.) Present over the entire range of tamarack in the state. Severest defoliation occurred in the northeast and central areas.
- **Yellow-headed Spruce Sawfly** – *Pikonema alaskensis* (Roh.) Scattered colonies were found on white spruce in Price, Ashland, Oconto and the heaviest in Sheboygan County.

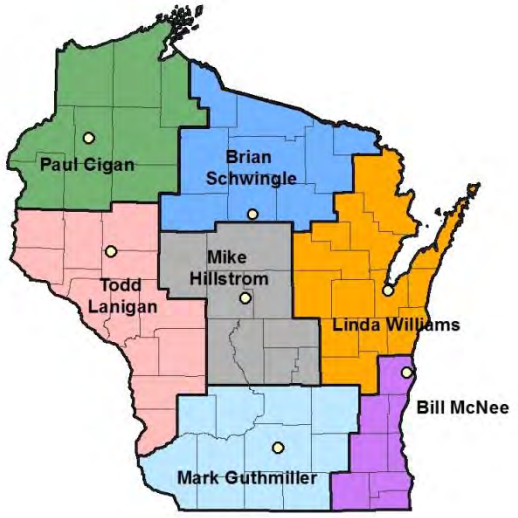
25 years ago, in 1989 –

- **Pine Engraver -** Ips pini (Say) Red and jack pine mortality was greatly reduced from last years extremely high levels. Significant mortality continued in the northwestern counties where mortality was heaviest last year. Significant red pine mortality continued in northern Dane, Iowa and Grant counties where pole sized plantations are weakened from two years of drought.
    - Phenological Notes:
    - May 10 – Females laying eggs in cut pine tops in Iowa and Grant counties
    - May 24 – Females laying eggs in Dunn and Eau Claire counties
    - June 7 – Callow adults present in Iowa and Eau Claire counties

Contact Us

Forest Health Staff - contact info for each Forest Health Specialist can be found our webpage at http://dnr.wi.gov/topic/ForestHealth/staff.html

Forest Health Protection Regional Staff



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.