

Northeastern Wisconsin Forest Health Update

Wisconsin DNR – Division of Forestry

July 31, 2013

Topics covered this month:

Insects:

Cherry scallop shell moth
EAB emergence degree day maps
EAB new county quarantine – Jefferson Co
EAB new locations in counties already quarantined
EAB parasitic wasp releases
Gypsy moth
Oak branch flagging and Kermes scale
Pine sawyer beetles
Woolly alder aphid

Diseases:

Ash anthracnose
Aspen fungal leaf diseases
Oak wilt
Rhizosphaera on spruce

Other:

Heavy seed production in maples
Missing jack pine needles on new growth

Of Historical Interest:

This is a new section! I will be going back through old WI DNR Forest Health Annual Reports and reprinting assorted info that I think you might find interesting or useful. Hope you enjoy this new section!

Insects

Cherry scallop shell moth – significant webbing and damage is showing up in some areas of Marinette, Oconto, and Shawano Counties on wild black cherry. Moths emerge in June to lay eggs. The caterpillars feed in groups and tie leaves together, feeding within the webbed leaves which provide protection from predators, and eventually turn brown. After feeding is done for the season, the larvae drop to the ground to pupate and overwinter. Wild black cherry that has been defoliated by cherry scallop shell moth may be



Cherry scallop shell moth caterpillar. Photo by Lucas Vold.

including larval parasites *Tetrastichus planipennisi* and *Spathius agrili*, and the egg parasite *Oobius agrili*. Releases of *Tetrastichus* and *Oobius*, have begun in southern Wisconsin where EAB is present. These 2 species have previously been released in Ozaukee and Washington Counties, and Vernon County, and are now being released in Kenosha, Milwaukee, Racine, and Walworth Counties. The third species (*Spathius agrili*) will not be released in Wisconsin this year because research has found that this species does not establish well in the colder upper Midwest states. Researchers are testing a different *Spathius* species to determine if it will be more cold hardy than *Spathius agrili*.



Tetrastichus is being introduced using small pieces of ash with parasitized EAB larvae inside. The ash bolts are attached to an ash tree and the adult parasitic wasps are allowed to emerge naturally. Photo by Bill McNee.



Oobius is being introduced in what are referred to as Oobinators, which are these plastic cups with mesh in the bottom and parasitized eggs inside. The adults will emerge from the parasitized eggs and fly out through the mesh. Photo by Bill McNee.

Gypsy moth – a fair amount of mortality of gypsy moth caterpillars has occurred due to Entomophaga (fungus) and NPV (Nucleopolyhedrovirus). Surviving caterpillars have mostly pupated and are emerging or will soon emerge. Adults will mate, lay eggs, and die relatively quickly. A tiny egg parasite (*Ooencyrtus kuvanae*) will parasitize the egg masses after they are laid and adult *Ooencyrtus* will emerge in the fall, leaving behind empty eggshells and tiny pinprick holes in the fuzzy egg masses.

Oak branch flagging and Kermes scale – I've noticed some areas in Marinette County with significant oak twig mortality. Although Botryosphaera canker fruiting bodies are present on some of the flagged branches, the vast majority of the problem seems to be due to 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 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



Old shell of a Kermes scale (spherical white object) and new live Kermes scale (the tan round thing on the branch).

stunted or deformed, natural enemies are usually plentiful and control is not usually necessary.

Pine sawyer beetles – this native beetle is commonly mistaken for Asian Longhorned Beetle (ALB), and seeing pine sawyer beetles often causes people to call in and report it. Pine sawyer beetle populations are fairly high this year, so a lot of calls have been coming in. So why are pine sawyers common this year? Pine sawyers feed on stressed pine (or recently cut pine). Any areas of the state that experienced the drought last year will have stressed pine, so we're seeing more beetles due to the expansive areas that were stressed by the drought.



Asian longhorned beetle adult. Photo by Dennis Haugen, USFS.



Pine sawyer adult.

In the photos above you'll notice that our native beetle appears dusty or pitted, whereas ALB is smooth and shiny. Additionally, the white spots on ALB are usually more clear than on pine sawyer, although pine sawyer will always have a whitish dot at the point where the elytra (wing covers) come together; 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>

Woolly alder aphid – populations of Woolly Alder Aphid (*Paraprociophilus tessellatus*) are high this year. This aphid species requires both alder and maple to complete its life cycle, spending spring/early summer on maple and the remainder of the year on alder. While on alder they are a plump bluish colored aphid covered by white waxy filaments. They will often be found in a group, forming a solid mass of white fluff on the stems. When present on maple they are sometimes referred to as Maple Blight Aphid.



A single adult woolly alder aphid on a fingertip. Photo by Kimberly Miller.

They spend the winter in bark crevices of silver maple. They don't

usually do any significant damage but can be quite noticeable at times because of the large patches of fluff, or, as with this summer, the high populations on maple can create enough honeydew (aphid excretions) to create a sticky layer on anything parked or placed below the maples that they're



Winged adults, upper left and lower left. The stringy looking blob in the lower right is an immature aphid with its waxy covering.

feeding on. Shawano, Oconto, Marinette, and Winnebago Counties all have high populations this year.

Diseases

Ash anthracnose – leaves dropping off ash trees in the spring of the year is often caused by early infections of anthracnose. When ash leaves are infected early with anthracnose the tree drops those leaves. If they drop enough leaves, the trees will send out an additional set of leaves to replace them. The first reports this year came in to me on May 29 and have been continuing. I've had reports of this from Brown, Marinette, Oconto, Outagamie, and Winnebago Counties so far this year.

Confounding these diagnoses is the presence of frost damage on some of the ash leaves as well.

Frost damage will typically show up as blackened tips or edges of the leaves, whereas anthracnose will cause dead patches/blotches that will cause the leaves to be distorted.



Anthracnose infected leaves that dropped this spring.

Aspen fungal leaf diseases – have you noticed the occasional aspen with a crown that looks thinner than its neighbors? Or maybe a small group of aspen with thinner crowns than other aspen in the area? I've been noticing this around the region and so far have only found leaf diseases to be the culprit.



Crowns appear thin from a distance (above). Closer examination of the leaves finds spots, blotches, and chlorotic splotches (left).

Oak wilt – oak trees infected with the oak wilt fungus are currently wilting. At one site I visited recently a slight breeze caused many of the wilting leaves to drop from the trees as if it were fall. The leaves that fall will often have browning on the outer portion of the leaf and a watersoaked green color near the petiole. You can also cut a wilting branch, to check for the vascular staining, to help you determine if oak wilt is causing the leaves to drop.

For control options (trenching) or info on the biology and spread of oak wilt, check out the document Lake States Woodlands Oak Wilt Management <http://learningstore.uwex.edu/assets/pdfs/G3590.pdf> or if you or a landowner are interested in trying to use herbicides to control oak wilt we do have some protocols that we can suggest, although this method of oak wilt control has not yet had the vigorous testing and trials that trenching has and is still considered experimental.



Above, tree currently wilting from oak wilt. Left, leaves of tree dying from oak wilt showing typical pattern of browning tip with watersoaked green base.

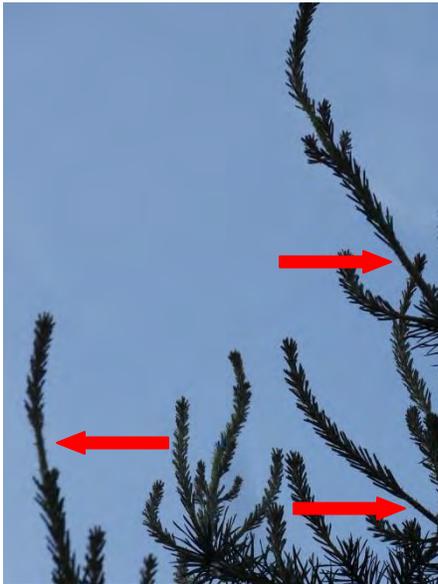
Rhizosphaera on spruce – spruce trees continue to be reported as declining and dying. Examination of these trees sometimes reveals the fruiting bodies of *Rhizosphaera* needlecast, sometimes I see *Stigmina*, occasionally I'll find extreme populations of spruce gall adelgid, and sometimes I find nothing at all. The drought of last year is still having its way with some tree species and I suspect some of these declining and dying spruce are finally succumbing to the stress of last year. But, having said that, I am seeing an increase in *Rhizosphaera* this month, probably due to the wet spring that we had.

Other/Misc.

Heavy seed production on maple – last month I mentioned that I was noticing extremely heavy seed production on some maples, to the exclusion of leaves. At right is a photo taken recently of some trees that I’d noted as having very heavy seed crops. Clearly the tops are still thin and I’m not sure if they’ll recover much more this year. The over abundance of seed on maples often follows a stressful year, like the drought of last year.



Missing jack pine needles on new growth – earlier this spring it was noted that some new growth on jack pine had “gaps” in the growth of new needles. I was lucky to find an example of just what was happening on this new growth ... pollen cones! This was reported from a number of counties around the state, so, if you’re still noticing a strange gap in the needles along a twig, this is probably the explanation.

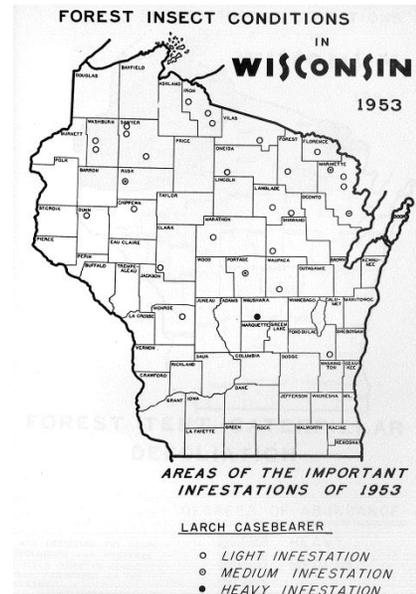


Gaps in needle development (arrows) along the twig occur wherever pollen cones were present along the twig (photo at right) earlier this spring.

Of Historical Interest

60 years ago, in 1953 –

- Larch Casebearer (*Coleophora laricella*) – This pest is present over the range of its host. There was a very noticeable decrease in the northeast quarter of the state and a lesser decrease in other parts of the state (survey map at right). Very few parasites were found; finches were numerous.
- White Pine Weevil (*Pissodes strobi*) – High populations were found in many counties in open grown white pine and Norway spruce and poorly stocked stands of jack pine.



25 years ago, in 1988 –

- Grasshoppers – *Melanopus* sp. – An eighty acre plantation of balsam fir, white spruce, and Scotch pine in Marinette County was attacked by heavy numbers of grasshoppers which were eating the needles and wounding the tender new shoots in early July. The plantation was sprayed with carbaryl.
- Sugar Maple Mortality – Drought – Mortality of six- to nine-inch dbh sugar maple was scattered throughout eastern Menominee County where forest tent caterpillar defoliation occurred. The affected trees were weakened by defoliation by the forest tent caterpillar in 1987 and died in 1988 from drought stress and *Armillaria* root rot.

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>

Report EAB:

by phone 1-800-462-2803

by email

DATCPEmeraldAshBorer@wisconsin.gov

visit the website

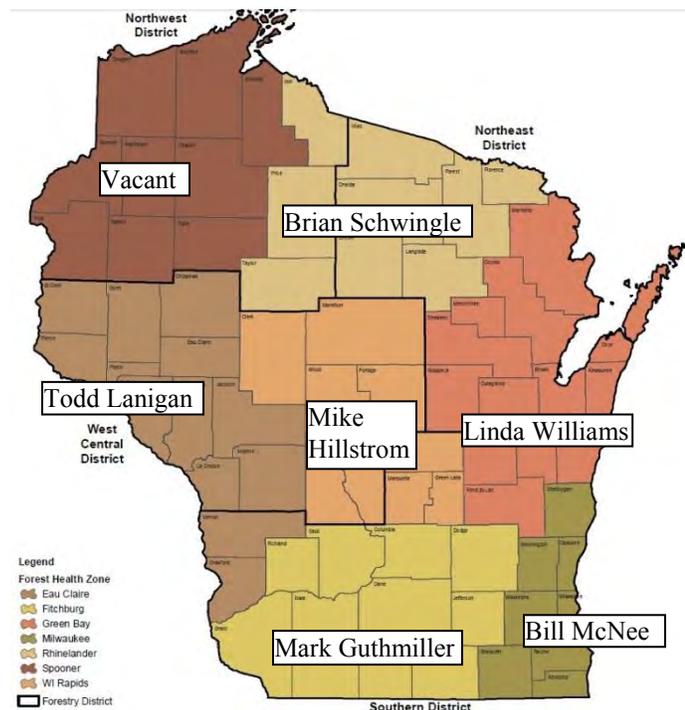
<http://emeraldashborer.wi.gov/>

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/topic/ForestHealth/>

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.