

# Northeast Wisconsin Forest Pest Update

June 16, 2010

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## Insects

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

**Ash flowergall mite damage** – have you ever noticed those lumpy-bumpy growths in ash trees? Those are the galls of the ash flowergall mite. These small mites attack the male ash flowers early in the spring. The ash flowers become deformed (right), giving the mites a home that protects them. As the



Photo by Eric Roers

season progresses these galls (deformed flowers) don't fall off the tree like a normal flower or seed would, instead they turn brown (left) and remain on the tree, often



Photo by Eric Roers

throughout the winter and into spring. This mite and its damage are of cosmetic on the tree so no control is necessary.

**Ash midrib gall** – this gall, sometimes called Ash Pod Gall, is caused by a midge (*Contarinia canadensis*). If you open one of the galls you will find at least one maggot inside, usually there are a couple. According to my books "little is known about the biology and habits of this insect or how it overwinters", but it also says that they're not very common. With that in mind I doubt they cause much significant damage to the tree, otherwise I suspect that there would be more information on them.



Photo by Ryan Severson.

**Bagworm** – this insect was recently found in Waupaca County on a



Bagworm, red arrow indicates the caterpillar's head as it feeds, blue arrow indicates the body surrounded by foliage.

young red pine (right). The caterpillar uses silk to tie together bits of foliage to create a protective house for itself. When disturbed the caterpillar withdraws its head into the bag and holds tight to the branch. Mike Schuessler (who found this one) said that he had to squeeze it to get



Photo by Mike Schuessler

the caterpillar to pop its head out for this photo op, thanks Mike! This report from Waupaca County is the furthest north that I personally have seen this insect, more typically I have seen it in Illinois, Iowa, and further south. Additionally, I typically see this insect on northern white cedar (left) but many conifers are listed as possible hosts for this insect. More information including

photos of the adult can be found at <http://web.extension.illinois.edu/regions/hort/fs/pest/Bagworms.pdf>

**Beech Scale found in Oconto and Manitowoc Counties** – as part of our continuing efforts to



Positive sample from Oconto County, the tiny white fluffly spot (arrow) is the scale, notice the mosquito for size comparison.

survey for the exotic beech scale (*Cryptococcus fagisuga*) which is part of the insect/disease complex that causes Beech Bark Disease, forest health staff have been sending samples to Phil Pelitteri at UW Madison for identification. Samples from both Oconto and Manitowoc Counties have recently come back positive for beech scale. These samples indicate that beech scale is present although it is at very low populations currently in these areas. It will take some years yet for the scale populations to build up significantly (right) and for the fungus associated with Beech Bark Disease to move in before we start seeing tree mortality in these areas.

There are no quarantines

associated with beech scale or beech bark disease,



Small white fluffies are the exotic beech scale, the ruler indicates mm and cm, so these are small critters, even when covered in fluff!

although hardwood firewood quarantines for EAB and gypsy moth still apply. For most of its life the scale insect is permanently attached to the tree. But for a brief time after emerging from the egg it is mobile and can be blown off beech materials that are transported during that time. With this in mind try to avoid moving beech materials from July 15 to November 15 to minimize the spread of beech scale as eggs are hatching. More information and guidelines for Wisconsin will be forthcoming.

**Emerald Ash Borer (EAB)** – from Bill McNee. EAB was confirmed in the city of West Bend on Wednesday, June 9. Larvae and adult beetles were found in a tree located downtown, after city workers noticed signs of infestation while removing the tree. Four trees are known to be infested as of June 14. Washington County is already under quarantine for EAB. The press release can be read at: [http://datcp.state.wi.us/press\\_release/result.jsp?prid=2509](http://datcp.state.wi.us/press_release/result.jsp?prid=2509).

Adult EAB beetles have begun flying in much of Wisconsin. Traps placed in infested trees in Newburg and Victory trapped adults as early as June 3. Degree-day data predicts that adults should already be flying in most of NER, with the exception of the lakeshore counties.

Other recent EAB detections of note: Cut Rock State Park near Rockford, Illinois (only about 10 miles from Beloit, WI), and Allamakee County, Iowa (Iowa's first confirmed EAB detection, across the river from the Wisconsin infestation at Victory).

An EAB training session will be held in De Soto (Crawford/Vernon Counties) on July 22. The session will cover the biology and management of EAB, and will have field visits to look at infested trees as well as the management of lowland and upland forest stands. For more information, contact Greg Edge, DNR La Crosse Area Forestry Leader (608-785-9011, [gregory.edge@wisconsin.gov](mailto:gregory.edge@wisconsin.gov)).



EAB adults easily fit on a penny.

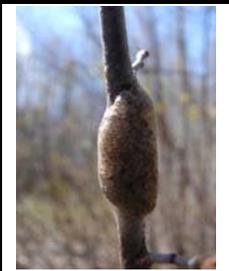
**Euonymus caterpillar** – These caterpillars, first reported in Wisconsin in 1989, feed as a group, completely webbing the bush/trees that they're feeding on and eating all the leaves (right). They're a naked caterpillar, yellow with pairs of black dots down their back. They feed on euonymus species (eastern wahoo, burning bush, etc) and have been reported on buckthorn, although I have never seen them on buckthorn. Control is relatively easy with any general insecticide or caterpillar-specific insecticide such as Bt. You can also wash them out of the tree by spraying a strong stream of water on them. This year a report of these caterpillars came in from Green Bay. More info can be found at <http://learningstore.uwex.edu/assets/pdfs/A3633.pdf>



Photo by Vijai Pandian.

## Forest tent caterpillar in Waupaca County – local outbreaks of Forest Tent Caterpillar

(*Malacosoma disstria*) are starting to show up in areas of central Wisconsin, including southwestern Waupaca County. This native caterpillar (right) prefers aspen and oak but can also feed on quite a number of other hardwood species, including ash. The last outbreak of forest tent caterpillar occurred in the northern region beginning in 1999 and collapsing about 2003. Outbreaks typically occur every 10-12 years, although the literature says 6-16 years, but either way it seems that if this is the beginning of our next outbreak that it's right on schedule.



Forest tent caterpillar eggmass on small twig.

Control options are varied, depending on the extent of the defoliated area. Homeowners can spray trees with the caterpillar-specific insecticide Bt (this is usually done in mid-May), or later in the summer eggmasses can be pruned out of trees and disposed of. Landowners with a significant amount of land that are concerned about defoliation can conduct an aerial spray for this insect, again treatment is usually done in mid-May. It's important to remember that our native trees have evolved with this native insect and not all forests or trees will need insecticide treatments. For information how to conduct a private aerial spray please go to <http://dnr.wi.gov/forestry/Fh/spray/> for step by step instructions.

**Gypsy Moth** – from Bill McNee. Gypsy moth caterpillars will be peaking this week and next in most of the northeast region. At this point, use physical controls (such as burlap bands and crushing caterpillars), insecticidal soap and insecticides to control the caterpillars. Treatment of large trees with insecticide will require the services of a tree service or pest control company. Defoliated hardwood trees usually produce new leaves within a few weeks as long as they are not already weakened by other factors such as drought or disease. Crush pupae and adult female moths with a stick once they are present in late June and July.



Photo by Bill McNee.

Many reports of nuisance caterpillars and defoliation have come into the DNR and local governments so far this season. Most are from areas north of Green Bay, as there seems to be little gypsy moth activity in southern NER counties this year. Areas in NER generating the greatest number of calls to the DNR gypsy moth program are:

- Green Bay
- Town of Wescott, Shawano County
- Legend Lake area, Menominee County
- Oconto County
- Town of Stephenson, Marinette County

Very little caterpillar mortality from the fungus, *Entomophaga maimaiga*, and the virus, NPV, has been seen in NER so far this season. It's possible that the recent rains will help these agents. Southern Wisconsin is seeing much more mortality from these agents due to the wetter spring down there. Entomophaga-killed caterpillars hang straight down, whereas those killed by NPV hang in an inverted 'V' orientation.

The Wisconsin Dept. of Agriculture, Trade and Consumer Protection is tentatively scheduled to begin mating disruption treatments in western Wisconsin counties on June 21 as part of the slow-the-spread program. For more information on the slow-the-spread program and to view maps of the treatment areas, visit <http://gypsymoth.wi.gov>. Treatments saturate the area with the moth's pheromone to prevent male moths from finding female moths. This technique is only effective at very low populations and is not used in the DNR Suppression Program because populations are far too high in the areas where the DNR sprays.



Oak defoliation at Legend Lake, June, 2010. Photo by Bill McNee.

**June beetles** – as reported in the pest update last month I've seen a fair number of adult June beetles. These beetles are also called June Bugs, or May Beetles. Adult June beetles defoliate trees, preferring oak in this area but will also feed on other species. Since they only feed during the night the defoliation seems to appear magically overnight, with no forewarnings. Control is difficult since defoliation is often complete before you even know that you should be spraying. Turning off exterior lighting can help by not attracting the adults to your yard.



On several evenings last year I collected June beetles from oak seedlings in my yard and drowned them in a bucket of soapy water (quite satisfying actually!). I did this once again this year when I noticed large populations once again feeding on my young oaks (photo taken ~9:30pm). This year I got to watch the Memorial Day fireworks show while picking June beetles, a definitely plus!

**Larch casebearer** – in my travels I've noticed some spotty defoliation by larch casebearer (photo) in Marinette County. Larch casebearer (*Celeophora laricella*) is a small caterpillar originating from Europe and introduced to the US in 1886. It mines out the interior of larch/tamarack needles, giving the tree a yellowish or tannish cast. The larvae live inside a mined out needle, carrying it around as a makeshift home, and giving them their name "casebearer". The caterpillar stage is present for 11 months, and is the overwintering stage. In cases of severe defoliation the tree will appear to have no green needles. Repeated defoliation can weaken the tree making it susceptible to attack by Eastern Larch Beetle. More info on larch casebearer can be found at <http://www.na.fs.fed.us/spfo/pubs/fidls/larch/larch.htm>



**Pine spittlebug** – populations of this insect on white pine trees are very high in some areas around the region with frothy spittle masses on nearly every branch (right). I've noticed it in areas of Marinette and Oconto Counties so far but expect additional reports to come in. These insects suck the sap of the white pine tree and live inside the frothy mass until they complete their development and turn into adults, at which time they can leave the frothy mass.

Generally the damage from feeding is minimal although some branch tip dieback may be noticed if populations are particularly high like I've been seeing lately. This damage doesn't typically kill the tree, although if you compound high populations with long term drought conditions this will put additional stress on the trees. If you stand under these heavily infested trees you will feel it "raining" on you, as the insects continue to excrete their frothy home and the honeydew drips onto you. You can spray these insects if you are concerned about the populations on yard trees, check out this link for some recommendations on what pesticides would work best <http://www.entomology.umn.edu/cues/Web/199Spittlebugs.pdf>



Arrows indicating pine spittlebug spittle masses (and this was only one branch!).

**Woolly alder aphid** – in the later summer and early fall of each year I invariably get reports of little white fuzzy things that fly through the air. Those fluff-covered insects are the winged version of the woolly alder aphid (*Paraprociophilus tessellatus*) which move from alder to silver maple and back again throughout the year. While on alder they are a plump bluish colored aphid covered by waxy filaments (right), which I spotted in Marinette County recently. When present on maple they are sometimes referred to as Maple Blight Aphid. They usually overwinter 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.



## Diseases

**Ash anthracnose** – on May 21 I sent out a one-page document about ash anthracnose causing significant ash leaf drop (right) around the region. After I sent out that document numerous additional reports came in from Suamico south to Greendale, and west to Wisconsin Rapids. Ash that dropped their leaves due to ash anthracnose (or in some cases a late frost) have since refoliated.



Photo by Chad Hoerth.

**Oak anthracnose** - this year some trees have been severely affected by the fungal leaf disease oak anthracnose. Anthracnose causes portions of the leaf to die and can cause the leaf growth to be severely distorted in some cases (right). Usually these brown dead areas of the leaf are not a threat to the health of the tree and will merely make it a little unsightly. Anthracnose that occurs early in the spring, as we've seen this year, will prompt the tree to send out an additional set of leaves which often escape anthracnose infection.



**Pest alert on Tip Blight on Eastern Hemlocks** - a new USFS Pest Alert arrived on my desk recently about a tip blight on eastern hemlock caused by *Sirococcus tsugae* [http://na.fs.fed.us/pubs/palerts/tip\\_blight/tip\\_blight\\_hi\\_res.pdf](http://na.fs.fed.us/pubs/palerts/tip_blight/tip_blight_hi_res.pdf) The alert indicates that so far this disease has only been found in Maine but please keep your eyes open for similar tip blight symptoms (photos available at the above link) and report them if you see them.

**Proceedings for the Sudden Oak Death Fourth Science Symposium are now available** - the Symposium provided a forum for current *P. ramorum* research. Ninety submissions describing papers or posters on the following sudden oak death/*P. ramorum* topics are included in the Proceedings: biology, genetics, nursery and wildland management, monitoring, ecology, and diagnostics. Check it out at [http://www.fs.fed.us/psw/publications/documents/psw\\_gtr229/](http://www.fs.fed.us/psw/publications/documents/psw_gtr229/)

**Rhizosphaera needlecast on fir** – this needle disease of fir, found in Waupaca County, causes chlorosis in the needles which eventually drop off, giving the tree a thin appearance. This disease is related to the Rhizosphaera needlecast of spruce which you may be more familiar with. Literature indicates that it is most common on



fir trees in shaded damp areas, or on trees that are under stress from other issues. You will see small black fruiting bodies (left) on the undersides of the needles, although what really stands out is the thin foliage or off-color needles (right)



compared to other unaffected trees. More information can be found in the Christmas Tree Pest Manual on page 67 of the document <http://www.na.fs.fed.us/spfo/pubs/misc/xmastree/XmasTreePestManual.pdf>

## Other/Misc.

**Black ash decline study from MN** – a poster titled Evaluating Black Ash Decline in Minnesota at the Stand Level is available at [http://www.fs.fed.us/foresthealth/fhm/posters/posters09/evaluating\\_black\\_ash\\_decline\\_mn.pdf](http://www.fs.fed.us/foresthealth/fhm/posters/posters09/evaluating_black_ash_decline_mn.pdf) from researchers from the US Forest Service and the University of Minnesota. There are several results outlined and a summary section with great information. A few examples include:

declining stands had significantly greater depths to a mineral layer, black ash regeneration was generally low and unrelated to amount of decline in understory, and decline of overstory trees in susceptible stands appears unrelated to tree age. This is just a sampling of the results and summary with lots more information available so check it out for yourself!

**Firewood** – from Bill McNee. The '25 mile firewood rule' for state parks and forests is now in effect. The new rule states that firewood being brought into a state park or forest must:

- originate from within 25 miles of the campground on that state park or forest, or from within 25 miles of the state park or forest if there is no campground
- be from within Wisconsin
- not be from a quarantine area that does not already cover the park or forest

Maps showing the 25 mile radius around each state park or forest are now available at:

<http://dnr.wi.gov/invasives/firewood/firewood-maps.htm>.

Dimensional lumber (such as 2-by-4s) and firewood certified by the Wisconsin Dept. of Agriculture, Trade and Consumer Protection are exempt from this regulation. Campers with new or existing reservations are being notified of the change.

**Frost damage** – in early May, after buds had already broken and leaves were beginning to expand, we had a snowstorm with temperatures below freezing. This event caused some frost/freeze damage to newly expanding tissues on some trees. I have noticed this damage most commonly on oak and spruce (right). Most of these trees have put on new foliage and appear relatively unfazed by the late frost.



**Ordering DNR Publications (DNR staff)** - Orders for publications can be emailed to this address: [DNRFRPublications@wisconsin.gov](mailto:DNRFRPublications@wisconsin.gov).

- In your message requesting publications, include
- name and publication ID code (ex Gypsy Moth postcard, FR-294)
- number of copies you need
- address where the order should be sent
- needed delivery date
- your contact information

For those of outside DNR, requests will continue to be made through a DNR staff person unless special arrangements have already been made.

**White pine needle loss** – in Oconto and Marinette Counties I've been noticing mature white pine with extremely thin crowns. Just a few weeks ago these trees had off-color foliage that rapidly turned a nice shade of tan (right), at which point those needles dropped, leaving the trees with very sparse foliage resembling the damage caused by pine false webworm. But closer examination of these trees found no insect or disease issues. The symptoms can occur anywhere, or everywhere, in the crown of the tree, being no more common in the lower crown than the upper crown. Symptoms may appear to be worse on certain branches (below), giving the crown a patchy appearance or the crown may be evenly



affected. A thin tree may be growing immediately next to a tree that has a full crown. The symptoms appear primarily on mature white pine in low areas, although this not a requirement.

I believe that the primary factor in this needle loss is long term moisture deficit, compounded by winter desiccation of needles on trees that are already under moisture stress. In many areas of the north the drought situation has been ongoing for several years, with deep soil moisture still depleted and water table levels still lowered. I suspect that these large mature trees, growing in low areas, have not been able to respond well to this sudden and prolonged change in moisture availability. Other forest health staff are seeing similar things, particularly in the northern



counties. Current year growth appears unaffected even in very thin crowns (left).

I spoke with other forest health staff and they recall seeing similar symptoms on white pine in other droughty time periods of the past (for example, the late 80's drought). If you're seeing similar things please let me know, especially if you are seeing this further away from roads, or in young white pine.

Report EAB:

by phone 1-800-462-2803

by email [DATCPEmeraldAshBorer@wisconsin.gov](mailto: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](mailto: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.