July 2012

Northern Wisconsin's Forest Insect & Disease Newsletter

Wisconsin Department of Natural Resources
Division of Forestry

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Forest Health News Across the Northern Third

Probable New Oak Wilt Discoveries in Lincoln, Sawyer, and Vilas Counties

Lincoln County: I'm 99.9% sure we have a newly discovered area with oak wilt just northwest of Tomahawk along the Tomahawk River. One property has an oak that completely wilted in 18 days, starting June 26. There was also discolored streaking in its outer wood. These two symptoms are classic for oak wilt. I'm just awaiting lab confirmation now. Another property about 1/4 mile away has two completely wilted oaks next to a dead oak—sounds like oak wilt.

Figure 1: A Tomahawk-area oak that wilted in 18 days this year.

Sawyer County: Mr. Sokoloski recently reported some classic oak wilt symptoms on Lac Courte Oreilles south of Hayward. We will be sending samples down to the DNR Pathology Lab to confirm this as oak wilt soon.

Vilas County: I'm 99.9% sure there is a very small oak wilt pocket on the NW side of Cranberry Lake, ESE of Eagle River about 3 miles. The currently wilting sapling is next to a large dead oak that died in 2011, which is next to an oak stump that probably wilted between 2008 and 2010. The landowner reports these oaks as dropping all their leaves very quickly (one did this shortly after an arborist climbed up the tree with climbing spikes in the spring).

For now, everyone should assume we have oak wilt in these three counties. In most cases, it would be wise to follow the DNR's Oak Wilt Guide found at http://dnr.wi.gov/topic/ForestHealth/OakWiltGuide.html .

Gypsy Moth in Bayfield County

More than 14,000 acres of aspen and oak forest were defoliated by gypsy moth in northern Bayfield County recently. About half that acreage was heavily defoliated.

On the bright side, several people have reported viral and fungal disease in the gypsy moth population. I suspect this was promoted by the deluge that

occurred in Superior/Duluth area around July 2. Egg mass surveys this fall will predict whether gypsy moth will be an issue in Bayfield Co. for 2013.

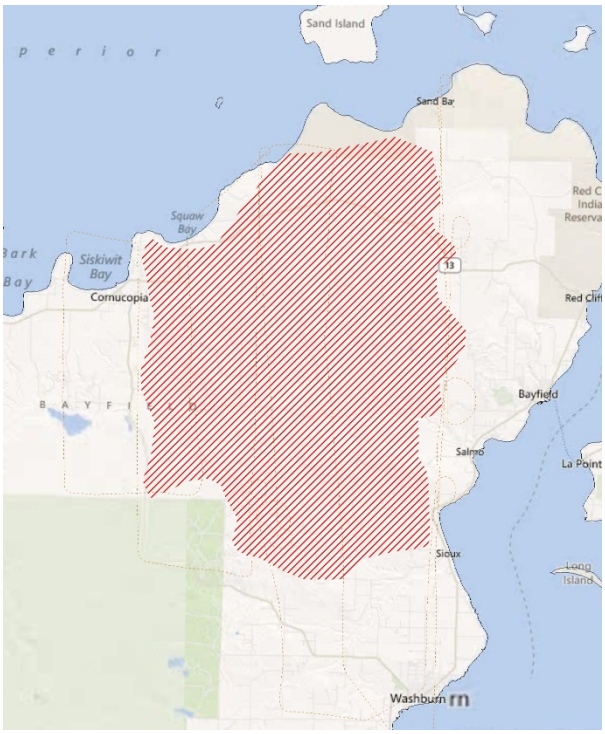
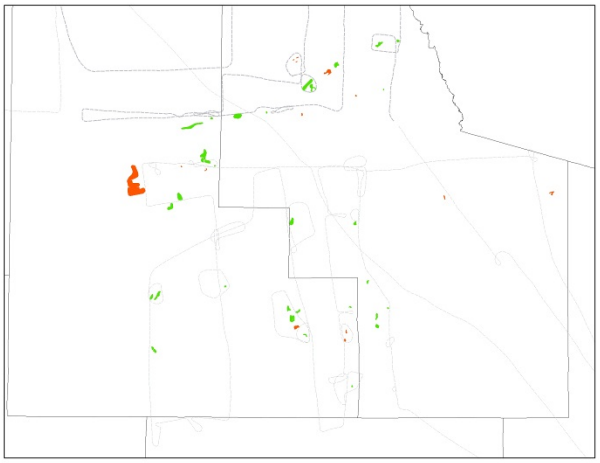
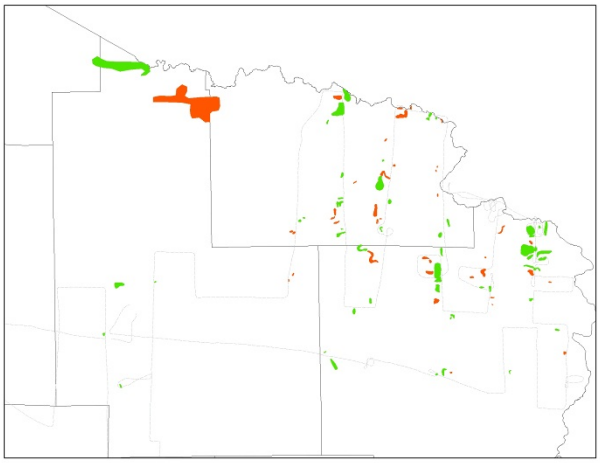


Figure 2: The red hashed blob is the general area where gypsy moth defoliated forests in Bayfield County in 2012. Hashed lines represent survey flight lines.

Spruce Budworm Damage from Ashland to Marinette Counties

Spruce Budworm, the Jack Pine Budworm's more secretive cousin, continued to munch away on balsams and white spruces over some of northern Wisconsin in 2012 (they like Balsam best). Balsams and spruces can tolerate some years of light to moderate defoliation, so one key to forest stand management is to monitor defoliation severity and duration and then salvage when/if appropriate. Generally, 4 to 6 years of consecutive spruce budworm defoliation results in mortality. For more information, please read http://www.na.fs.fed.us/spfo/pubs/fidls/sbw/budworm.htm (specifically, the "*Indirect control-*" section).





Figures 3 & 4: Red polygons show areas of heavy spruce budworm defoliation. Green polygons represent areas of lighter spruce budworm defoliation. Survey flight lines are shown as light gray hash lines. Ashland and Iron Counties are on the map on the left and Forest, Florence, and Marinette Counties are on the map on the right. The two largest red blobs are on USFS property. These polygons have not been ground-truthed yet.

Oak Flagging

There are long stretches of road throughout northern and central Wisconsin where the oaks have scattered dead branches. In Vilas Co., the cause is a fungal pathogen. The suspect is *Botryosphaeria*. Salt-stress and freeze damage likely promoted this disease. For ornamental oak owners, a big task with potentially little pay-off would be to prune off (and rake up) infected branchlets and destroy. See http://hyg.ipm.illinois.edu/pastpest/200213b.html for more information.

Figure 5: Flagging on oaks in northern Wisconsin is common. In Vilas Co., the cause is an opportunistic fungal pathogen.

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Heavy Red Pine Shoot Blight in Some Young Plantations

There are a few agents that can cause shoot blight/flagging in young red pine plantations. Two of these bad guys I have witnessed this year are Saratoga Spittlebug and Diplodia. In the NW part of the state, low soil moisture coupled with an insanely warm March probably played a big part in promoting symptoms and disease. In some cases, heavy flagging may be due purely to drought.

For more information on Saratoga Spittlebug go to http://www.na.fs.fed.us/spfo/pubs/fidls/saratoga/saratoga.htm . One control tactic for this critter is to herbicide one of its favorite alternate hosts, sweetfern.

Diplodia infection was severe this year in a couple large frost pockets in Washburn County. One solution would be to avoid planting red pine in frost pockets. The stress from frost and drought likely promoted heavy disease in these pockets.

Figure 6 (right): The results of heavy Saratoga Spittlebug feeding in Oneida County this year. Figure 7 (left): Cambium and wood symptoms of spittlebug feeding below a flagging red pine branch.

Spruce Needle Rust

I've recently received spruce needle rust reports from Spooner and Winter areas (the winter report was from a CO blue spruce). I just casually saw (casually, as in thinking, "oh, looky there, spruce needle rust...cool.") spruce needle rust on black spruce in the Mercer and Rhinelander areas. Spruce needle rust, to my

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knowledge, is not a cause for concern in managed forest stands. For yard trees, copy and past the following to property owners:

1. Mow grass/weeds around spruces if the grass is long. This reduces the microenvironment favorable for disease.
2. Stop overhead watering. If you are using a sprinkler system that throws water on the spruce foliage, you are favoring the disease. Trees should be watered at their driplines with a soaker hose.
3. Halt all fertilizing. Do not fertilize every year, or even every other year. This makes the trees more susceptible to insect/disease infestations/infections.
4. If the disease is severe (>50% of the needles) and it is not practical to get rid of potential alternate hosts (Labrador tea and leather-leaf), look into using a general fungicide in 2013. From MN DNR's website: *"To be effective fungicides would have had to have been applied this spring and early summer at the time the infections were occurring. Fungicides have to be in place on the needle at the time of infection so that when a spore lands on the needle it is killed before it is able to infect the needle. This makes control of many foliage fungal diseases difficult. Multiple applications are necessary to keep the needle coated with the fungicide during rainy periods. And to make matters worse, when conditions become rainy enough to get infections, it is difficult to get dry enough weather conditions to make the fungicide application. Fortunately, control is not necessary in most years."*
5. Three years post planting, start pruning the lower limbs off the trees (Sept. through March). Don't remove over 1/3 of the tree's crown in a single year. Pruning reduces the microenvironment favorable for disease. If you don't do this, your spruces at some point will become infected by other needle fungal diseases (e.g. Rhizosphaera).

Figure 8: A spruce infected by a spruce needle rust pathogen. (MN DNR Archive, Bugwood.org).

Fall Webworm on Alders, Cherries, and More

Have you noticed insect nests at the ends of branches on some trees? Those are from the Fall Webworm. They are not concerning. If a vigilant citizen calls you now saying gypsy moths or tent caterpillars are going nuts, think "fall webworm" and try to convince them they are not a big deal; not warranting a large-scale spray project. I've seen Fall Webworm nests on alders, cherries, birches, and oaks. Go to the following website for additional information: http://www.entomology.umn.edu/cues/Web/133FallWebworm.pdf .

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Figures 9 & 10: The fall webworm (left) and its nest (right).

Perennial Problems? Aspen Leaf Mining, Brown Alder Leaves, and Broadleaf Stippling

This is the 3rd or 4th year in a row where aspen leaves are looking brown and alder leaves are being eaten in numerous northern WI locations. Alder Flea Beetles are feeding on alders. Aspen Blotchminer is feeding in aspen leaves. I noted some heavy stippling on serviceberries and understory basswoods caused by lacebugs in Marathon Co. Weber reported this kind of aesthetic altering on oaks by lacebugs almost every year since 2007, so I suspect they are sucking on oak leaves in NW Wisconsin this year too. Go to this newsletter for pictures: http://dnr.wi.gov/topic/ForestHealth/documents/2010/NOR_08_10_10.pdf .

There should be no worries about these aesthetic leaf alterations.

The Rot Room

Upon popular demand (i.e. 2 people), I'm unveiling the stench of a new section in the newsletter—The Rot Room. Come here to keep your white rots, browns rots, and canker rots straight. What's that you say? You have butt rot (in your trees)*? Well, don't worry, you won't be judged here. Butt rot is everywhere.*

Figure 11: This is Sulfur Shelf. It causes brown rot. It's very common on oaks. Brown rot is less structural stable than white rot. Beware standing trees with brown rot! They are unpredictable.

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The Positive Corner

Sick of reading negative agency newsletters? Roll out on the wrong side of bed? Confused by a reorg.? Here's a place to come when you need cheering. Revel in the overwhelming positiveness of The Positive Corner.

Spiny Elm Caterpillars were reported feeding very well on a few trees in Forest and Vilas counties. These lovely caterpillars told me to tell you how grateful they are for growing aspens that provide them with such lush nourishment. If they haven't already, these lovely caterpillars will transform into their adult versions, the gorgeous Mourning Cloak Butterflies. Go to http://tidcf.nrcan.gc.ca/insects/factsheet/10771 for more information.

Figure 11: A Mourning Cloak butterfly. This is positive, right (Cranshaw, CO State U., Bugwood.org)?

Odds & Ends

Wisconsin Emerald Ash Borer Update

This year the following counties were found for the first time to have Emerald Ash Borer: Rock, Walworth, Waukesha. Infested trees were finally found this year in Green Bay after an EAB adult was trapped in a previous year. Why was there a delay between insect find and infested ash detection? It takes several years for an EAB-infested tree to start showing obvious symptoms/signs. Once EAB is found in northern Wisconsin, it will be extremely difficult to find infested black ash stands, because many (most?) of them right now look as if they were already infested by EAB (due to environmental factors and native pests). Go to the following website to see where in Wisconsin we know EAB lives: http://datcpservices.wisconsin.gov/eab/article.jsp?topicid=25

Forest Health Links

- EAB / Buprestid Images: http://www.nyis.info/index.php?action=identification

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Forest Health Websites and Phone Numbers

- EAB Reporting:
  (1) 1-800-462-2803
  (2) email DATCPEmeraldAshBorer@wisconsin.gov
  (3) online at http://emeraldashborer.wi.gov (click on **Report EAB** on the top menu)
- EAB Information: http://emeraldashborer.wi.gov
- Gypsy Moth Reporting:
  (1) 1-800-642-MOTH
  (2) email DNRFRGypsymoth@wisconsin.gov
- Gypsy Moth Information: http://gypsymoth.wi.gov/
- Forest Health Issues: http://dnr.wi.gov/topic/ForestHealth/
- Sick Tree Diagnostic Keys:
  http://www.extension.umn.edu/gardeninfo/diagnostics/index.html (**GREAT!**)
  http://tidcf.nrcan.gc.ca/trees (click on a tree species to see insects/diseases)
  http://greenindustry.uwex.edu/diagnostics/index.cfm
- Forest Insect and Disease Handouts for Landowners:
  http://council.wisconsinforestry.org/invasives/pdf/Appendix-G.pdf
- Oak Wilt: http://dnr.wi.gov/topic/ForestHealth/OakWilt.html
- Annosum Root Rot: http://dnr.wi.gov/topic/ForestHealth/AnnosumRootRot.html

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Note: This pest report is an informal newsletter and covers forest health issues in the northern 18 counties of Wisconsin. The purpose of this newsletter is to provide forest owners and managers in the Northern Region with regional up-to-date forest health information. I welcome your comments/suggestions on this newsletter *and your reports on forest health problems you observe in your area*. If you would like to subscribe to this newsletter, please contact Brian Schwingle at brian.schwingle@wisconsin.gov. Previous issues of this newsletter and regional forest health updates from other Wisconsin regions are available at http://dnr.wi.gov/topic/ForestHealth/Publications.html .