November 2011

Northern Region Forest Insect & Disease Report

Wisconsin Department of Natural Resources
Division of Forestry

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Forest Insect & Disease Contact for Northern Wisconsin

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Forest Health News Across NOR

New Forest Health Coverage for the DNR's Northern Region

For all non-federal forestland in NW Wisconsin, we have decided at this time to have one DNR Forest Health contact - that is me (Brian Schwingle, 715-365-8908). I will coordinate on-site visit requests, etc., with my Eau Claire counterpart Todd Lanigan, and other Forest Health team members, when necessary. For simplicities sake, we've decided on one contact. If you've worked with Lanigan in the past and want to contact him directly, that works too.

Please remember that just because we currently don't have the Forest Health position in Spooner filled the forest health issues in NW Wisconsin are no less important. In fact, forest health concerns in NW Wisconsin seem more immediate than elsewhere in the state:

1. Oak Wilt appears to be bolting towards Bayfield Co. on the Northwest Sands Plain.
2. Gypsy Moth seems aimed at outbreak in Bayfield Co. (not in 2012 yet though)
3. EAB is knocking on the door from Minneapolis/St. Paul.
4. The 2011 Blowdown served up a bark beetle and wood borer buffet.

Do not hesitate to contact me about problems in northern Wisconsin. Remember we want to know where forests are being damaged.

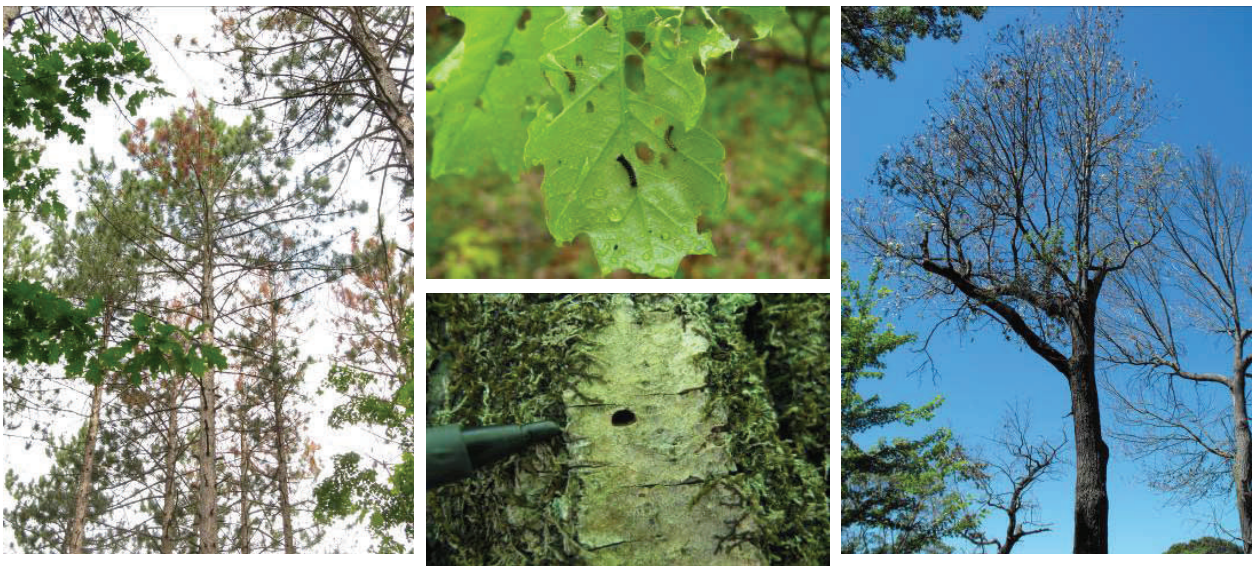

Figure 1. A smorgasbord of problems will be seen in N.W. Wisconsin over the next several years as a result of the blowdown and the natural cycle of things. Left: Pine Engraver infestation; middle-top: gypsy moth defoliation; middle-bottom: two-lined chestnut borer infestation; right: expanded range of oak wilt.

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Wisconsin Storm Damage Summary for 2011

Table 1. Storms that damaged significant and contiguous forested areas in 2011 in Wisconsin.

Date	Storm Type	Approximate Area Damaged	Damage Length (miles)	Severity Rating	Acres Encompassed by Storm	Approximate Forested Acres Damaged
4/10/11	Tornado	Merrill to Russell twnshp, Lincoln Co.	14	EF3	5700	3900
4/10/11	Tornado	Towns of Summit and Parrish, Langlade Co.	5.5	EF1	1700	1700
4/10/11	Tornado	Argonne (Forest Co.) through Fence twnshp (Florence Co.)	22	EF2	6300	900
4/10/11	Tornado	Armstrong Creek, Forest Co.	5	EF1	720	190
4/10/11	Tornado and hail	Juneau, Adams, and Waushara Co.	17	EF2	5,600	3,900
5/22/11	Tornado and hail	Juneau, Wood, and Portage Co.	37	EF2	28,000	16,800
7/1/11	Extreme wind event	Polk Co. to Douglas, Bayfield, and Ashland Counties	n/a	n/a	130,776 (119,000 ac. in Burnett and Douglas Co.)	n/a
8/23/11	Tornado	Clark Co.	7	EF2	1,200	250

Table 2. Wind event locations and dates that generated many reports of scattered tree damage.

Date	Storm Type	Location	Comments
5/22/2011	Wind	Sawyer Co. northeast into southern Iron Co.	
5/22/2011	Tornado	Western Taylor through Price Co.	Rated EF0
5/22/2011	Tornado	La Crosse area	Rated EF2
6/8/2011	Wind	Grant Co. northeast to Manitowoc Co.	Included an EF1 tornado in Dane Co.
7/17/2011	Wind	Bayfield Co. southeast to Door Co.	
7/18/2011	Wind	La Crosse east to Green Bay	
7/19/2011	Wind	Bayfield Co. southeast to Washington Co.	
7/23/2011	Wind	Eau Claire area to Monroe Co.	
7/30/2011	Wind	Northeast quarter of state	
8/6/2011	Wind	Lincoln Co. and Langlade Co. southeast to Shawano Co.	
8/19/2011	Tornado	Marinette Co.	Rated EF1
9/2/2011	Wind	Southern third of Wisconsin	

Oak Wilt Mimic—Cylindrosporium Leaf Spot

A panicky property owner calls you one mid-August day. They say they have a lakeshore oak that is dropping leaves like crazy. You ask, “Are the falling leaves green and maybe some have bronzed edges?.”

Figure 2. Cylindrosporium leaf spot caused sudden leaf loss on an isolated oak near Pelican Lake in mid-August. Leaf loss stopped suddenly a week after symptoms started.

They say, "Yes exactly!"

You think, "Oh crap, another newly infested area with oak wilt. I better check it out."

They go on and tell you most of the leaves are falling from the top of the crown.

"Oh no. That's oak wilt.."

You check out the oak and everything the property owner told you was true. In mid-August, it had quickly lost about 25% of its leaves. You decide to revisit a couple weeks later to confirm your suspicions the tree has oak wilt. In a couple weeks, the tree should be almost bare. One very odd thing about this case was there were small, 1/8 inch wide, spots all over the leaves and the petioles. You just figure it also has a leaf disease and it's coincidental.

The story goes on. There were epic battles fought and munch angst, but in the end, we learned the oak (and another on the same lakeshore), suffered from Cylindrosporium leaf spot disease. The most distinguishing characteristic of this disease from oak wilt was leaf loss suddenly stopped a week after it began (plus the leaf spots). Bizarre, eh?

Figure 3. Cylindrosporium leaf spot symptoms on the front and back side of leaves. Some leaves developed lesions on petioles.

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I noticed these spots on many oak leaves all over north-central Wisconsin this fall, but none to the degree this Pelican Lake oak had. It seems there is a strong genetic component to susceptibility since the neighboring oaks remained uninfected at the Pelican Lake spot.

Top Kill & Thin Crowns of Red Maples

I received a slew of phone calls in 2011 concerning dieback and top kill of red maples. The areas of concern concentrated in western Oneida Co., but such stands were present from Iron Co. to Langlade Co. I conferred with Shane Weber about this occurring in northwestern WI too, and his thought was that when the canopy is opened by harvesting, the shallow roots of red maples fry, especially during drought, and this is manifested by dieback in the upper canopy. I think this sounds like an excellent hypothesis. The best advice to small woodlot owners is to leave the forest alone (i.e. no need to salvage—that would make things worse). With sufficient moisture, such red maples should make a full recovery if they have less than 33% dieback (the most recent relevant information I have to use is sugar maples can make a canopy recovery with less than 33% dieback (I have read up to 40% dieback). At this time, I recommend using one of those thresholds for red maples too).

Figure 4. Red maples with dieback are a common site in north-central Wisconsin, particularly those that are residuals from recent harvests.

In a separate issue, many red maples in north-central Wisconsin (I suspect all of northern Wisconsin), displayed extremely thin crowns in 2011. This was probably from the intense red maple seed crop of 2009 (and possibly 2010 and 2011). See the June 2009 newsletter for a reminder on that topic.

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Figure 5. Left: A red maple in June 2009 producing enormous numbers of seeds. Right: The same maple in July 2011 with sparse foliage, presumably because of recent seed production.

Review of Maple "Decline" in Wisconsin and the U.P.

Here's the deal with maple "decline:" Sugar maple trees show dieback and unusually high rates of mortality in spotty locations every now and then throughout eastern N. America. These "declines" are usually started by one or more things like drought, defoliation, untimely freezes, etc. Right now, sugar maples in the western U.P. are reported to be in decline. The following stressors have induced maple declines in the past:

- Drought-stressed stands with low basal areas that were recently defoliated and then attacked by Armillaria
- Drought and/or thinning after recent defoliations
- Minimal snow cover and consequent root freezing
- Midsummer defoliation followed by frost damage of second flush leaves

On a local note, there was a lot of dieback and sapling mortality recently in Forest and Florence counties. Besides the many drought-years over the last decade, there was a scale and aphid outbreak on sugar maples from approximately 2008– 2010. These events and critters cause lots of dieback and some mortality.

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So, declining maples are not unusual. In WI and the U.P., they were noted in the late 50s/early 60s, late 70s, late 80s, and around 2010. A maple with less than 33% dieback should be able to make a full recovery with adequate moisture. We'll continue to see maples declining every now and then into the future. The best way to deal with declining maples is to delay any scheduled harvest activities in northern hardwood stands for 2—3 years after a defoliation or drought.

Some Intense Defoliation in Small Areas Predicted in Bayfield Co.

Foresters on the Bayfield Co. forest have noted some areas in stands plastered with gypsy moth egg masses. Their surveys indicate that some areas in individual stands in T. 51N R. 5W will be denuded by gypsy moth, but egg masses are highly concentrated in small areas, so hopefully this concentration will spare most of the stands' trees. I imagine that there are pockets to the northeast (Russell township) that also have high gypsy moth egg mass numbers. Shane Weber surveyed several sections in eastern Bayview township (north of Washburn), and no gypsy moth defoliation was predicted in those sections.

Odds & Ends

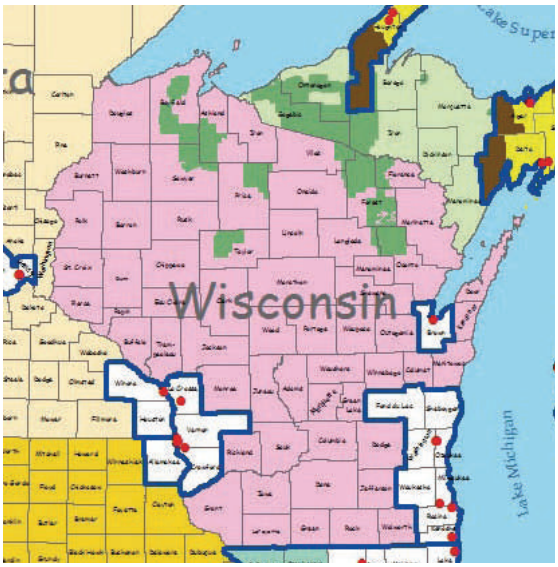

Figure 6. Red dots are initial locations of EAB infestations or EABs found on purple panel traps for a given county (Coop. EAB Project, Oct. 4, 2011).

New EAB Finds

—by Bill McNee on 10/17/11

In August it was reported that Emerald Ash Borer (EAB) had been detected in La Crosse Co. and across the river in Minnesota. Since then, Minnesota has found infested trees and adult beetles at several sites. Infested trees have not been found in La Crosse Co., although they are likely present.

La Crosse Co. has been quarantined to restrict interstate movement of ash articles. A state quarantine went into effect when the federal quarantine was enacted. An updated map of EAB-quarantined counties has been produced, and is available at: http://datcpservices.wisconsin.gov/eab/articleassets/WI_EAB_Quarantines_and_Locations.pdf .

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The Wisconsin Emerald Ash Borer Program has released a revision of the state's EAB strategic plan. It can be read at this link: http://datcpservices.wisconsin.gov/eab/articleassets/WI_EAB_Strategic_Plan.pdf.

Armillaria's Search Methods

—by Linda Williams

The following is an excerpt from the 9/15/2011 issue of the Northeast Wisconsin Forest Health Update. Kudos to Linda Williams for providing us with this very interesting info:

> "The most common question I get regarding armillaria is "how does the fungus know that the tree is under stress so that it can attack?".Here's the answer: when trees are under stress they use up the stored starches in their roots and have to resort to making glucose. This is a change that the fungus can detect. Additionally, the amino acid asparagine increases within the tree during times of stress and this can be detected by the fungus. There are other physiological changes that occur in a tree when it is under stress but research seems to show that it is the presence of glucose and asparagine in the roots that stimulates armillaria to grow and invade the roots. Probably a more in-depth answer than you were looking for, but now you know!"

Pesticide Applicator Training Reminder

—by Mike Hillstrom

Here's a reminder to check out the 2012 schedule for Pesticide Applicator Training. Information about registration, how to get the training manual, etc. can be found at http://ipcm.wisc.edu/pat. Unsure if you need to be certified? Anyone applying pesticides "for hire" (including applying fungicides for annosum prevention) must take this training and become certified.

Forest Health Links

- Poplar clones behaving differently

Forest Health in Other Parts of Wisconsin

- Severe spruce needle loss—southern 2/3 of Wisconsin (see Northeast Region Forest Health 10/17//2011 update for discussion (pg. 5))

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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/forestry/Fh/
- Sick Tree Diagnostic Keys:
  http://www.extension.umn.edu/gardeninfo/diagnostics/index.html (**FINISHED!**)
  http://greenindustry.uwex.edu/diagnostics/index.cfm
  http://imfc.cfl.scf.rncan.gc.ca/accueil-home-eng.html (this is very useful!)
- Forest Insect and Disease Handouts for Landowners:
  http://council.wisconsinforestry.org/invasives/pdf/Appendix-G.pdf
- Oak Wilt: http://dnr.wi.gov/forestry/Fh/oakWilt/
- Annosum Root Rot: http://dnr.wi.gov/forestry/Fh/annosum/

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FOREST INSECT & DISEASE CONTACT

Brian Schwingle
Forest Health Specialist
107 Sutliff Ave
Rhinelander, WI 54501
715-365-8908
brian.schwingle@wisconsin.gov

Counties Covered: Ashland, Barron, Bayfield, Burnett, Douglas, Florence, Forest, Langlade, Lincoln, Iron, Oneida, Polk, Price, Rusk, Sawyer, Taylor, Vilas, & Washburn Counties

Northern Region Forest Insect & Disease Report produced by

Brian Schwingle
Forest Health Specialist
Wisconsin Department of Natural Resources
715-365-8908
brian.schwingle@wisconsin.gov

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. We 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/forestry/FH/intheNews/.