June 2012

Northern Region Forest Insect & Disease Report

Wisconsin Department of Natural Resources
Division of Forestry

I wanted to write this newsletter quickly this morning since I won't have another opportunity to report out for quite some time due to workload. Basically, there is nothing big-time happening in the forest insect and disease world in northern Wisconsin, barring potential moderate to heavy defoliation by gypsy moth in the Bayfield Peninsula and Madeline Island. The current and obvious widespread phenomenon is scattered frost damage on aspen and scrub oaks.

–Brian Schwingle

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Winter Desiccation on Firs in Northwestern Wisconsin

I received a couple reports in late May of sapling-sized fir trees suddenly browning up (reports from foresters in Hayward and Gordon). It appears this is winter desiccation. During warm early-spring days when the soil is still frozen conifers start transpiring but they can't pull water from their roots and their needles end up dying for want of water. As long as the buds elongated this spring, this shouldn't be too big of a problem barring any additional stresses.

Figure 1: Probable winter drying on fir. Thanks to Derek Sokoloski for the photograph.

Frost Damage on Aspen (Defoliator Lookalike)

All across northern Wisconsin, there are scattered clumps of thin-crowned aspens. The most severe frost damage appears to be from Fifield up to Copper Falls State Park (did not survey to the northwest of the park) and over to the Mercer area. Without close examination, this damage looks like light to moderate Forest Tent Caterpillar defoliation, but it's not. The extremely warm temperatures in March that caused me to turn off my furnace for two weeks promoted very early leaf production. Subsequent hard frosts were unfriendly to the supple new growth. Take Arbor Vitae (Vilas County) for example. It had 7 (essentially consecutive) days in March where temperatures exceeded 70°F. Those extremes were followed by 13 days where the low temperatures went below 30°C, almost all in April.

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Figures 2 & 3: Stunted aspen leaves with yellow spots and brown curled leaf margins are common in northern Wisconsin and are from freezing damage.

Frost Damage on Scrub Oak and Red Maple

Scrub oaks in various spots in northern Wisconsin were absolutely hammered by late spring frosts. I do wonder if some of them already had two flushes of leaves killed. They look like pathetic bushes. Some of them as of June 7 were *just* starting to re-flush. Red maples near these affected oaks also had damaged leaves (dead margins and interveinal areas), which I guess was also a result of frost damage. The most recent frost in Land O'Lakes (Vilas County) occurred on June 1.

Figure 4: Brown and crispy leaves on scrub oaks are from frost damage. The red leaves on the above oak are newly produced leaves after the frost damage.

Sudden Yellowing on Roadside White Pine

On my Monday morning drive to work (this past June 4th), I noticed several roadside white pines in central and north-central Wisconsin that had suddenly

turned yellow and dropped a bunch of needles. Linda Williams reports the same thing in the Northeast Region. Later this week, their candles started elongating. We made these same observations in these same areas in 2010. It must be a combination of roadside stress and drought. Though the latest Palmer Drought Severity Maps do not indicate the northeastern quarter of Wisconsin is lacking for moisture, I can tell you some areas desperately need rain.

Figure 5: Some stressed white pines in northern Wisconsin suddenly looked like this on June 4th. The same phenomenon happened in early June in 2010.

Forest Tent Caterpillar Population on the Rise from Previous Years

Reports of Forest Tent Caterpillars (FTC) have been common this year from all over northern Wisconsin but most noticeably from Polk County. This is the first year since 2007 (my first year) where these reports and observations have been made. Fortunately, there have been no reports/observations of any sort of *significant* defoliation. In fact, I will tell you that my prediction of light to moderate FTC defoliation for central Iron County was incorrect. There was no significant FTC defoliation that I saw there. I suspect the very early warm temperatures this year followed by many days of freezing temperatures were unkind to many a caterpillar.

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Aspen Leaf Beetle Feeding in Vilas County

Here's a fun one: I've seen the Aspen Leaf Beetle (*Chrysomela crotchi*) noticeably damaging understory trembling and bigtooth aspens in several parts of Vilas County. This damage is not concerning—just interesting.

Figure 6: An Aspen Leaf Beetle munching away on a bigtooth near St. Germain.

Pending Gyspy Moth Defoliation in the Bayfield Area

My FTC defoliation predictions may have been wrong (How many times does a weather reporter cover their incorrect forecasts?), but it looks like the defoliation prediction for the Bayfield Peninsula is going to hold true. I also suspect Madeline Island will see some defoliation by the Gypsy Moth. Foresters in Bayfield County are reporting seeing many 2/3 inch long gypsy moth caterpillars defoliating understory plants. The next 3 weeks will tell if defoliation of forests will occur. I do plan on surveying the area within the next month.

Jack Pine Budworm Population on the Rise in Vilas County—Not Concerning Yet

Surveys this week revealed more jack pine budworm caterpillars than in the previous 3 to 4 years in jack pine country in Vilas County. Populations are still not significantly damaging though. Ditto for jack pine country in Oneida Co.

Jack Pine Budworm in Northwestern Wisconsin—Surveys Planned

Todd Lanigan is completing Jack Pine Budworm surveys in his region. After those are complete, he plans on moving up Wisconsin's western coast to continue budworm surveys.

I have been communicating with a graduate student doing a project on Jack Pine Budworm. She reports there are many budworms in the Bayfield Peninsula (off County Trunk C, northwest of Washburn). Shane Weber's last prediction on

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the budworm was to watch closely for defoliation in this exact area in 2012 (see August 2011's newsletter: http://dnr.wi.gov/topic/ForestHealth/Publications.html)

Elm Sawfly—What an Awesome Looking Insect

I suspect we might see more Elm Sawflies in northern Wisconsin this year than previously. I'm basing this on 1 radio show I listened to, 1 report, 1 observation I made, and 1 email (not a large sample size—this is such a cool insect though). From Linda Williams' 2011 article:

> "…This large sawfly is the largest sawfly found in North America and has the disturbing habit of falling out of trees when you walk under the tree. Larvae grow 1 ½ - 2 inches long and are a bright yellow color with a black strip down their back, although occasionally the pink form is found. Adults are a large dark brown sawfly. Usually defoliation is localized to a single tree or group of trees, with willow being a favored host, but they will also feed on elm, birch, maple, and poplar. Spraying a general insecticide or soapy water should kill these sawflies if you think control is warranted but these late season defoliators rarely do serious damage to the trees that they defoliate. "

Figures 7 & 8: Larva and adult of the Elm Sawfly (photos courtesy of Herbert A. 'Joe' Pase III, Texas Forest Service, Bugwood.org).

Mystery Solved—Red Pine Needle Tip Death from 2009 and 2010

After a little observational persistence, I realized this year that the red pine needle 'disease' I reported last year (June and August newsletters:

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http://dnr.wi.gov/topic/ForestHealth/Publications.html) was from some environmental cause, and that cause I'm guessing must be late spring frosts. The reason it can't be a needle fungal disease is because absolutely no 2011 needles are impacted, and nearly all 2010 needles are (2009 needle also had burned tips, but they are long gone now). Also, there are still no fungal fruiting bodies. Red pine lower canopies show burned needle tips on their 2010 needles in many parts of the Northwoods, notably the Sayner, Merrill, and Crandon areas. White pines in low-lying areas also show the symptoms on their 2010 needles.

Figure 9: Needle tip death on 2010 needles on red pine (photos taken April 2012). This is a widespread phenomenon, likely due to a widespread weather phenomenon.

Mile Long Stretch of a Very Spiffy Problem on Aspens

The only serious hardwood defoliation I'm aware of in northern Wisconsin is in a mile long stretch of bigtooth aspens in southeastern Lincoln County. It appears a sucking insect (aphids are abundant) is a player and possibly an associated virus. These aphids and the associated leaf-distortion are also present on some trembling aspens, but not to the degree as on bigtooths. I don't expect any long-term consequences. Please tell me if you see something like this, as it is very spiffy and I would like to learn more about it (see next page for photos).

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Figure 10: Defoliated bigtooth aspens, apparently due to a sucking insect possibly vectoring a virus.

Figure 11 (left): This is what moderately impacted bigtooth aspen leaves look like in the area described in the above article. Note the abundant aphids. Figure 12 (right): This is what heavily impacted trembling aspen leaves look like.

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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://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 .