April 2010

Northern Region Forest Insect & Disease Report

Wisconsin Department of Natural Resources
Division of Forestry

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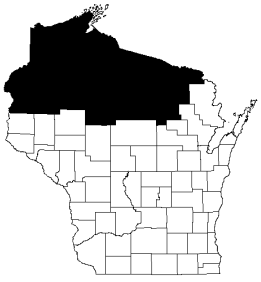

Across the Northern Region

Implications of Warm Weather on Oak Wilt Activity

Oak wilt spreads over land when insect vectors pick up oak wilt spores from fungal mats on infected oaks and transport them to freshly cut living oak wood. The fungal mats are usually produced under the bark of infected oak trees in the spring. In general, fungal mats are not produced in Wisconsin until sometime in early April. However, warm weather can promote earlier-than-normal fungal mat production and vector activity. With this warm weather we've been experiencing, forest managers should assume the fungal mats and vectors are active. Specifically, we recommend that if daytime temperatures reach 50°F, even in mid-March, then logging activity in stands with oaks (and pruning of oaks) should stop at least through July in counties with oak wilt or in stands that are within 6 miles of an oak wilt infestation.

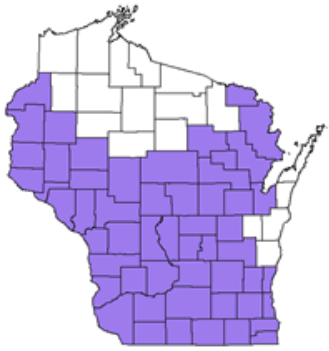

Figure 1. Shaded counties are known to have oak wilt.

If you are pondering management activity in oak stands, please visit the following excellent tool to analyze the risk of oak wilt: http://dnr.wi.gov/forestry/fh/oakWilt/guidelinesform.asp .

Annosum Survey Summary

I asked you to report pockets of dying red pines in the June 2009 issue of this newsletter for purposes of surveying annosum root rot (By the way, there is a new species name for *Heterobasidion annosum*. Please read about it in Linda Williams' recent newsletter on page 4).

Figure 2. An annosum conk found growing out of the base of a red pine in September. Annosum root rot was not detected in NOR in 2009.

Bob Murphy visited the sites you reported, and he happily reported recently that he found no sites that have annosum root rot in them (wood samples were collected and sent to Fitchburg where Kyoko Scanlon and Kristin Peterson attempted to isolate annosum from the samples in the lab). Nineteen pine mortality pockets were examined. *Ips* bark beetle damage was ubiquitous at these sites, and pitch tubes from boring red turpentine beetles (*Dendroctonus valens*) were found at the base of some pines. The root fungal pathogen *Leptographium* was present at every site. *Armillaria* was not tallied in these surveys.

Reminder of PSC 113 – Oak Tree Cutting and Pruning Service Rules for Electrical Utilities

The Public Service Commission has rules governing all public electrical utility companies (both privately and municipally owned and operated). Some of those rules deal with oak wilt prevention. Familiarize yourself with these rules at http://www.renewwisconsin.org/wind/Toolbox-Applications%20and%20forms/WI%20Electrical%20Codes/PSC113UtilityServiceRules.PDF . You'll find that PSC 113.0511 deals with cutting and pruning of oaks, starting on page 75.

Pests in Eastern NOR

Gypsy Moth Defoliation Likely in Southeastern Langlade County

Egg mass surveys in fall 2009 revealed high numbers of gypsy moth egg masses in some oak stands in southeastern Langlade County. Directly east of those stands, Bill McNee received reports of high egg mass numbers on private property around Boulder Lake. No other areas of the nine eastern NOR counties yielded gypsy moth egg mass reports. The area on the Oneida County / Lincoln County line that was defoliated a couple years ago had no new egg masses. Remember, intermediate stand treatments are best done two years before or after gypsy moth defoliation!

Figure 3. A gypsy moth egg mass from a previous year. This egg mass will yield no caterpillars. Note its ragged appearance in contrast to the current year's egg mass in Figure 4.

Figure 4. A current year's gypsy moth egg mass. Note how it is more intact than the old egg mass in Figure 3.

No Forest Tent Caterpillar Eggs Found this Winter

Numerous surveys this winter for forest tent caterpillar eggs in western Oneida, northern Vilas, and eastern Iron counties yielded no eggs. I recently received an email inquiry requesting identification of a defoliating caterpillar last year that a landowner photographed eating her bigtooth aspen leaves near Mercer. The photo was a bit blurry, kind of like the classic Sasquatch video, but I'm quite positive it was a picture showing several forest tent caterpillars. Sooner or later, we will see an outbreak in northern Wisconsin; just not yet.

Figure 5. Egg mass of an eastern tent caterpillar. Egg masses of forest tent caterpillars look similar to these.

Odds & Ends

Updated EAB Silviculture Guidelines

The Silviculture Team recently updated the EAB silviculture guidelines. They can be found at http://dnr.wi.gov/forestry/fh/PDF/EABWIManagementGuidelines.pdf . Notable changes include an improved symptoms/signs section (page 2) and a new section called Silvicultural Guidelines for Quarantined Counties (pages 6-7).

Fungus Proven to Cause Canker Disease on Bitternut Hickories

Researchers from the USFS demonstrated that a species of the fungal genus *Ceratocystis* causes cankers on bitternut hickories. These cankers are commonly seen on bitternuts that are dying throughout Wisconsin, Minnesota, and Iowa. The research is reported at http://www.nrs.fs.fed.us/pubs/jrnl/2010/nrs_2010_park_001.pdf . The same researchers have also shown that nearly all of these cankers are associated with damage from hickory bark beetles (*Scolytus quadrispinosus*), and these bark beetles carry the *Ceratocystis* fungus. Part of this research was done in Bloomer and Hatley, Wisconsin.

Bacterial Leaf Scorch Survey Results from Wisconsin

Several samples from NOR were submitted for a bacterial leaf scorch (BLS) survey in 2009. What follows is a write-up *by Kyoko Scanlon* on leaf scorch and the survey results:

Figure 6. A red oak leaf infected with bacterial leaf scorch. There is a halo of yellow between the dead and living tissue, which is a symptom of BLS (photo courtesy of A. B. Gould).

BLS is caused by the bacterium *Xylella fastidiosa*. Hosts include oak, maple, elm, ash, and other deciduous trees. The pathogen lives in the xylem vessels of host plants. Infected leaves exhibit scorch symptoms with irregular margins. The pathogen is transmitted by xylem-feeding insects, such as leafhoppers and treehoppers. The disease has been found throughout the east, southeast, and some mid-west states.

In 2009, Wisconsin participated in the survey supported by the U.S. Forest Service to investigate the geographic distribution and host range of Bacterial Leaf Scorch (BLS) in north central states. This project was initiated in 2008, and continued to 2009. In 2008, BLS was confirmed on the bur oak samples collected from a woodland stand in Dane County. This was the first confirmed case of BLS in Wisconsin.

This summer (2009), leaf and twig samples were collected from symptomatic trees throughout Wisconsin and sent to a lab in Michigan State University to perform a genetic test. Out of the 33 samples submitted, 2 samples were found to be positive. These samples came from the same trees that had been confirmed positive in 2008. In 2009, no tree or a stand was additionally confirmed with BLS in Wisconsin. To date, the confirmed site in Dane County, WI is the northern edge of BLS distribution in the Midwest.

The results of 2009 BLS surveys in other states are available in the USDA Forest Service Central States Forest Health Watch (Feb 24, 2010 issue) at http://www.na.fs.fed.us/fhp/fhw/csfhw/10/jan10.pdf (p.6).

Updated DNR Annosum Webpage – *by Kyoko Scanlon*

Please check out the updated DNR Annosum webpage at http://dnr.wi.gov/forestry/Fh/annosum/. Highlights of the changes include

- A new county distribution map that includes Oconto County
- Expanded "prevention page" (click on "prevention page" at the middle part of the front page)
- Updated publications (access from the "Publications" section at the front page)
- Economic analysis report is included in the "Publications" section

Special thanks to DNR Forestry Web specialist, Lori Compas, for making all the changes. We are also working on adding some fungicide application videos to our website. So, stay tuned!

Hardcopies of the two recently revised brochures, "Annosum Root Rot and Red Pine Pocket Mortality" and "Annosum Root Rot: Biology, Symptoms, and Prevention" are also available upon request. If you'd like a hardcopy, please let me (Kyoko) know.

Upcoming Forestry Pesticide Applicator Certificate Training – Schofield

UW-Extension is offering a Forestry Pesticide Applicator Certificate Training in Schofield on April 9, 2010. Please go to https://www.patstore.wisc.edu/secure/browse_cat.asp?category_id=4 to learn more. It may be too late to apply, officially, but it might be worth the effort if you really need the training.

Forest Health in Other Parts of the State

- Banded Elm Beetle find – Waukesha County
- Half Wing Moths flying – Fitchburg
- Boxelder Bugs and Cluster Flies active – Northeast Region
- New EAB finds – Sault Ste. Marie. & Brimley, MI; Tower Hill Park, Minneapolis, MN
- Annosum Root Rot find – Oconto County
- See more forest health reports at http://dnr.wi.gov/forestry/FH/intheNews/ .

Interesting Forest Health Reads

- The new species name for *Heterobasidion annosum* is *H. irregulare* - http://dnr.wi.gov/forestry/FH/intheNews/2010/NER_03_16_10.pdf
- Winter issue of the Wisconsin Emerald Ash Borer Program newsletter - http://www.emeraldashborer.wi.gov/articleassets/EABNewsletterFebruary2010.pdf
- Hilarious video about the hemlock woolly adelgid - http://www.iconservepa.org/barkleavies.html
- Amphibious caterpillars that eat snails and decorate their cocoons with bird feathers - http://www.latimes.com/news/nationworld/nation/la-sci-caterpillar23-2010mar23,0,893554.story
- Bothering bark beetles with their own voices - http://www.azcentral.com/news/articles/2010/02/09/20100209env-beetles0209.html
- WI DNR 2009 Forest Health Annual Report - http://dnr.wi.gov/forestry/publications/index.htm#fhp
- Paintballs Do Damage Trees! - http://dnr.wi.gov/forestry/FH/intheNews/2010/NER_03_16_10.pdf

Valuable Forest Health Websites & 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/
- Other Forest Health Issues: http://dnr.wi.gov/forestry/Fh/
- Sick Tree Diagnostic Keys:
  http://www.extension.umn.edu/gardeninfo/diagnostics/index.html
  http://greenindustry.uwex.edu/diagnostics/index.cfm
  http://imfc.cfl.scf.rncan.gc.ca/accueil-home-eng.html
- Forest Insect and Disease Handouts for Landowners:
  http://council.wisconsinforestry.org/invasives/pdf/Appendix-G.pdf

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Thanks to Colleen Robinson-Klug, Bill McNee, and Jane Cummings Carlson for supplying links in the Interesting Forest Health Reads section.

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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. We welcome your comments/suggestions on this newsletter and your reports on forest health problems you observed 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 from http://dnr.wi.gov/forestry/FH/intheNews/.