

Northeastern Wisconsin Forest Health Update

Wisconsin DNR – Division of Forestry

April 15, 2013

Topics covered this month:

Insects:

Asian longhorned beetle
Eastern larch beetle
Eastern tent caterpillar
Gypsy moth
Monarch populations low
Ticks

Diseases:

Annosum guide finalized
Oak wilt restrictions

Other:

Drought, historical maps
Firewood on WI DNR properties
Forest Health staffing changes
Squirrels, and other rodent damage
WI DNR herbicide webpage

Insects

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

Asian Longhorned Beetle – this large invasive beetle is one that can actually be eradicated, and has been several times in the North America! It has been eradicated from the Chicago area, and the latest places to report eradication are 2 counties in New Jersey, which were declared eradicated on March 14, 2013 after 3 years of negative surveys, and Ontario, Canada, which reports eradication after 5 years of negative surveys.

For those of you following ALB online at beetlebusters.info, there is a new website www.AsianLonghornedBeetle.com that you will be



Asian longhorned beetle exit holes are larger than the diameter of a pencil, and tunneling goes deeply into the wood. Photo by Dennis Haugen, USDA FS.

directed to with all the pertinent info about ALB. And, did you know that ALB has a Facebook page?! www.facebook.com/asianlonghornbeetle

Eastern Larch Beetle – Wisconsin continues to see tamarack mortality due to Eastern larch beetle. Minnesota's Annual Forest Health report from 2010 summarized some of the issues that we've been seeing (and continue to see) in the Lake States. The following excerpt is from the report:

An outbreak of larch beetle has been occurring in Minnesota since 2000. During this same time period we have also experienced an unusual outbreak of larch casebearer and it has been suggested that the larch casebearer defoliation has been stressing the tamarack leading to attack and mortality from eastern larch beetles. However, this does not appear to be the case in Minnesota. Less than 5 percent of the acres with larch beetle mortality have also been defoliated by larch casebearer.

A number of stress factors are likely contributing to the current mortality.

Droughts and resulting fluctuating water levels in 2002-2003 and 2006-2009 are likely involved. Warmer winter temperatures may also be involved. Since the larch beetles overwinter in the above ground parts of the tree warmer winter temperatures appear to allow more to survive the winter building up larger populations resulting in more tree mortality.

Over the past 40 years, winters have become less severe. Venette and Walter found that the low temperatures in Isle, MN have



Tamarack killed by eastern larch beetle.

increased by approximately 0.25C per year from 1964 - 2004. Since eastern larch beetle larvae are extremely cold-tolerant the warming winter temperatures have had very little impact on their overwintering success. However, warming has had a substantial impact on adult overwintering success. They predicted that on average, adult survival has increased by 0.7% per year from 1964-2004. So adult overwintering success in the early 2000's, was predicted to be about 25 to 30% higher than in the mid-sixties. Larger overwintering populations of adult larch beetles could produce larger populations of offspring the following summer that may be able to overwhelm the defenses of tamarack trees and kill them.

While the causes of the eastern larch beetle outbreak in Minnesota are not fully understood, combinations of drought, stand, and site conditions likely contribute to the resulting mortality in individual stands. Warmer winters resulting in greater overwintering success by eastern larch beetle adults may also play a role.

Researchers from Minnesota continue to examine this problem. They are doing additional research on the biology of the beetle, as well as work to determine if a prolonged drought has impacted the trees enough to allow for the continuing outbreak that we're seeing. More info here <http://www.dnr.state.mn.us/fid/nov2012/entomologists.html> or check out a great powerpoint presentation

on eastern larch beetle at

http://sfec.cfans.umn.edu/prod/groups/cfans/@pub/@cfans/@sfec/documents/article/cfans_article_380548.pdf

Eastern Tent Caterpillar - small webs created by Eastern Tent Caterpillar typically begin to appear at the end of April or first of May. In 2010 we had an early warm spring and the first webs appeared in mid-April. Last year with our very early spring, I saw the first webs appearing by mid-March! This year is looking a bit more typical though and I expect webs to appear by the end of the month.

The caterpillars are capable of completely defoliating the tree that their web nest is located in. They will feed outside the web nest and return to the nest to rest. Cherry is a favored species and you'll often see Eastern Tent Caterpillar webs in small cherries along roadsides during the spring. Cherry generally handles this defoliation well, sending out a second set of leaves later in the season. Homeowners should avoid using fire to remove nests from trees, as this is a good way to start a wildfire. And there is no need to prune out the branches with webs on them, if you prune out the branches you actually do more long-term damage to the tree than the insects do even if they eat all the leaves off. Instead, homeowners can use a rake to pull the web out of the tree and dump it into a bucket of soapy water to kill any caterpillars inside. People may mistake eastern tent caterpillar for gypsy moth but gypsy moth does not create webs like Eastern Tent Caterpillar does.



Eastern tent caterpillar, 1st instar caterpillar (just hatched from the egg), on their web nest.

Gypsy Moth – last year we had a very early spring, and at this time last year we had gypsy moth hatching already! Not quite the same story this year though. The BioSim program, which helps predict when gypsy moth hatch will occur, is currently predicting that hatch will be 5-10 days behind the 30-year average, with hatch beginning in the very southern part of the state during the first week of May. This is of course assuming that we have “normal or average” temps for April and May, so we'll see how that plays out.

The list of aerial applicators, that can be hired to do aerial spraying for gypsy moth or other forest pests, can be found at: <http://gypsymoth.wi.gov/documents/AerialApplicators.pdf> There is still some time to oil or remove egg masses if landowners want to. Horticultural oils that suffocate the eggs are available at many garden centers and large retailers. In general, these are applied when temperatures are above 40° and freezing is not imminent. If removing egg masses, scrape them into a can of soapy water and then let them soak for a few days before discarding in the trash. Additional



Gypsy moth caterpillars, newly emerged and resting on the egg mass before venturing up into the canopy.

management options for homeowners and woodlot owners are available at www.gypsymoth.wi.gov.

Property owners looking to hire a business to do insecticide treatments this spring should contact them soon. The Wisconsin Arborist Association has a list of certified arborists available at www.waa-isa.org. Additional businesses offering insecticide treatments may be found in the phone book under 'Tree Service.' Homeowners can also purchase insecticides (some applied as a soil drench) at garden centers and large retailers. For larger areas, a guide to organizing aerial spraying and a list of for-hire aerial applicators is available on the state's gypsy moth website, www.gypsymoth.wi.gov

Monarch populations low – the New York Times printed an article about low populations of Monarch butterflies overwintering in Mexico. http://www.nytimes.com/2013/03/14/science/earth/monarch-migration-plunges-to-lowest-level-in-decades.html?ref=science&_r=0 The article indicates that the early warm spring of 2012, and the following drought, had quite an impact on the butterflies during their annual migration. The article also mentions another reason why populations may be down ... that farmers planting Roundup Ready crops are able to eliminate weeds, thus eliminating the milkweeds that might have grown in the fields with the crops. I grew up on a farm where my dad planted about 300 acres each year, and we ALWAYS had milkweeds in our fields! One spring (I think I was about 10), my dad offered me a nickel for every milkweed that I pulled from the fields. I was thrilled at this money-making opportunity, until I actually started pulling them ... I think I made about a dollar before I just gave up ... monarchs had it good on the farm I grew up on. ☺



Monarch butterfly.

Ticks– although there is still snow in the northern parts of the state (and mother nature continues to drop snow on many areas of the state), there are some areas in Wisconsin that are finally free of snow. With snowmelt will come the emergence of ticks. If you need Tick ID Cards, you can order them (from 50 – 5,000+ cards) from Gunderson Lutheran at <http://www.gundluth.org/?id=3933&sid=1> If you need just a couple let me know and I'll send them to you. The tick ID card has changed from past years (click on link above to see the card) but still shows the size and photos of deer ticks and wood ticks.

Diseases

Annosum guide finalized – on April 5, 2013, Paul DeLong, WI DNR Chief State Forester, sent out an email regarding the finalization and implementation of the annosum guide. This guide is to be used to determine if treating stumps to prevent annosum root rot is required on a particular state property.

Beginning May 1, 2013, the annosum root rot guide will apply to any state land timber sales that are released for bid. The guide establishes when fungicide treatment is required for annosum root rot, unless written justification is provided for deviating from the guide.

The guide requires treatment if all of the following conditions are met:

- The stand is on state owned property (use on other lands is at the discretion of the landowner)
- The stand is within 25 miles from a known stand of annosum root rot, and
- The stand is more than 50% pines (red, white, jack) (for intermediate thinning) or the future desired stand is more than 50% pine (for final rotation harvest if the site will not be mechanically site prepped within one year of harvest), and
- The stand will be thinned/harvested between April 1 and November 30.

This risk-based guide is designed to help landowners/property managers determine whether the fungicide treatment should be considered to reduce the risk of the introduction of annosum root rot. The guide can also be used by foresters and loggers to help communicate with landowners/property managers about the fungicide treatment option. The guide was developed with input from DNR staff, external partners, as well as the public, and reflects recommendations from the Council on Forestry.

The current winter exemptions will remain in effect with the implementation of the guide. The DNR webpage will be updated soon to reflect the recent decision.

Oak wilt restrictions – plan to stop pruning, wounding, or cutting oaks to minimize the risk of overland transmission of oak wilt by the beetles that move the fungus. The current oak wilt guidelines for Wisconsin state that if you want to minimize the risk of introducing oak wilt into your stand you should avoid pruning, wounding, or harvesting during the high risk time periods of the year.



Counties in blue have had oak wilt confirmed within the county.

The high risk time period is:
Northern counties - April 15 - July 15
Southern counties - April 1 - July 15



In the urban setting, WI DNR's message is "Don't prune oaks April through July" (some municipalities have an oak wilt ordinance with different dates).

More info on oak wilt can be found on the Forest Health website at

<http://dnr.wi.gov/topic/ForestHealth/OakWilt.html>

Other/Misc.

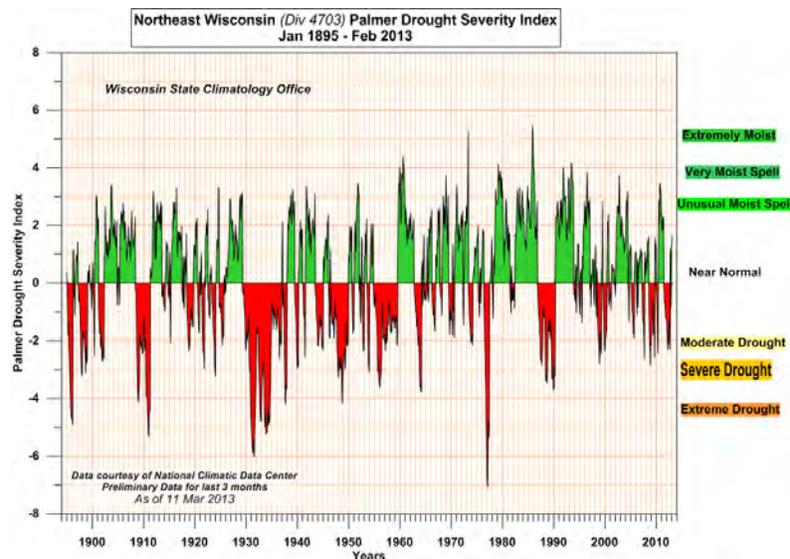
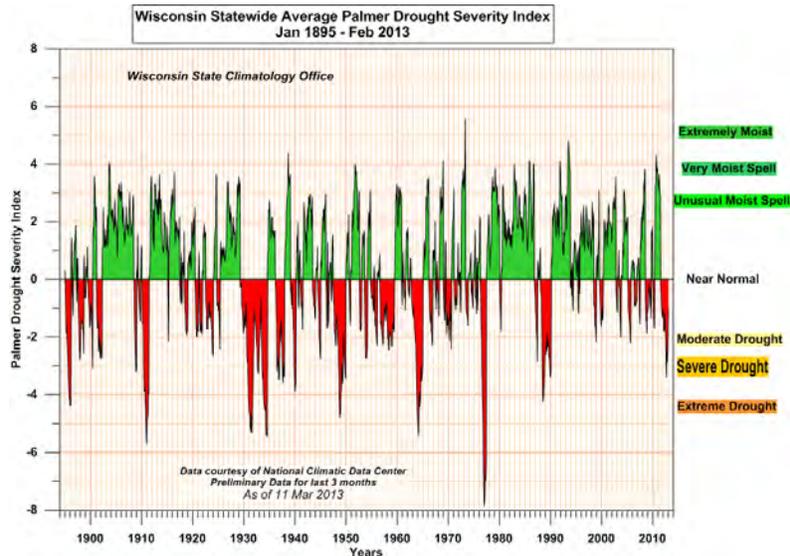
Drought, historical maps – check out this website with historical drought maps for the US!
http://www.nytimes.com/interactive/2012/07/20/us/drought-footprint.html?ref=earth&_r=0

thought these maps were really excellent in telling the story of the extent of the drought last year. I also enjoyed looking back through past droughty times, like the 30's, and the late 80's.

For those of you who were significantly affected by the drought, your trees (if they survived last year) may not have had much opportunity to store any food reserves for this year. Because of this, when buds break this spring, the leaves may be small or take longer to reach full size. Trees also may not have the energy to put out as many leaves as they typically would, and may start the season with a minimal number of leaves, adding more later in the spring or summer if conditions are good.

Conifers severely affected by the drought may put on limited shoot growth this spring as they attempt to recover from the drought stress of last year.

I've had a number of folks ask about the drought graphic that I start almost all of my presentations with. It is the Palmer Drought Severity Index graphic with data from 1895 to the present. Up-to-date graphics can be found here <http://www.aos.wisc.edu/~sco/clim-watch/water.html> It is important to always check the graphic for your particular area of the state, and not automatically go for the Statewide average data. For instance, the graphic at top-right is the Statewide average graphic as of March 11, 2013, but if you look at just the Northeastern counties (graphic bottom-right) you'll see that although the 2012 drought was still significant, there is a spike of moisture (green) most recently, which is not present when you look at the statewide averages graphic.



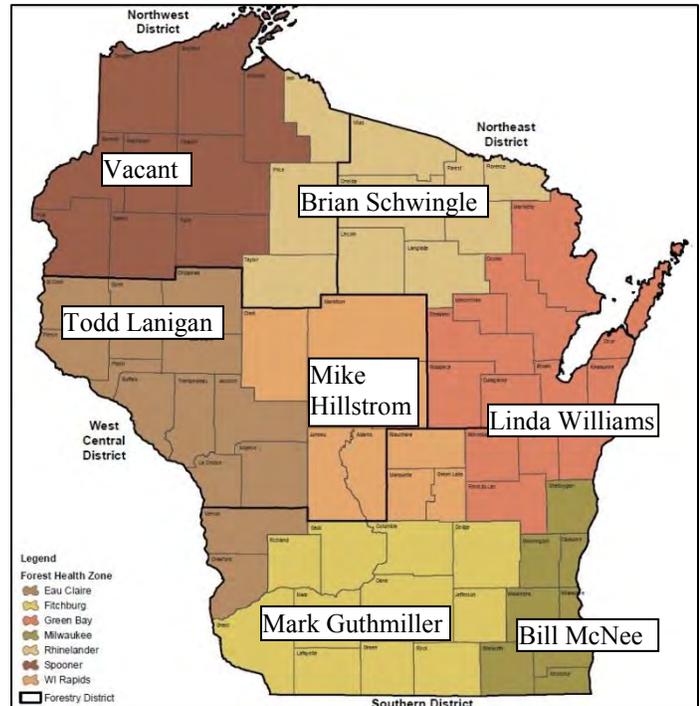
Firewood on WI DNR properties - DNR Secretary Cathy Stepp has directed the agency to make the following change: DNR-managed properties that offer firewood for sale to visitors must get that firewood from the property itself or from a Wisconsin certified firewood dealer. The only exception to this is temporary, and applies to properties that already have contracts with non-certified firewood dealers that have not yet expired. As soon as contracts with non-certified

dealers expire, properties must obtain the firewood sold on-site from the property itself or from a Wisconsin certified firewood dealer. Non-certified wood is not allowed to be sold to visitors on the property, even if it comes from within 25 miles of the property. NOTE: this new directive does not change the firewood rules regarding wood that visitors bring with them to the property.

Forest Health Staffing Changes –

Please note that DNR Forest Health staff did not re-district with the rest of the WI DNR forestry division. Our areas of coverage are shown on the map at right. Many of us now straddle District or Area lines.

Additionally, we no longer have gypsy moth specialist positions so each Forest Health staff will cover all forest health issues in the counties that they cover.



Squirrels, and other rodent damage – I continue to see some significant damage from squirrels and porcupines, which chew the bark off branches in the crown of trees. This damage is easy to spot right now, just look for pale branches where the bark has been removed, they'll look almost white up in the crowns of the trees. Additionally, as the snow melts, I'm starting to see the damage from both rabbits and voles, which chew the bark at the base of the tree (or as high as the snow was, which in some cases was several feet off the ground). UW Extension has a very nice document on squirrels <http://learningstore.uwex.edu/assets/pdfs/G3522.pdf> including a Control section!



Lest you think that rabbits and voles only girdle small trees, this photo shows otherwise. Self-portrait by Laurel Braatz (DNR drinking water specialist in Sturgeon Bay) with a large girdled tree.

WI DNR herbicide webpage – do you know about the WI DNR's webpage on herbicides for forest management?

<http://dnr.wi.gov/topic/ForestHealth/herbicides.html> The page includes links to the herbicide tables (what works and what doesn't on a particular species), a link to the FSC Highly Hazardous Pesticides list of chemicals that are prohibited on FSC certified lands, and info on pesticides to use in plantations.

Contact Us

Report EAB:

by phone 1-800-462-2803

by email DATCPEmeraldAshBorer@wisconsin.gov

visit the website <http://emeraldashborer.wi.gov/>

Report Gypsy Moth:

by phone at 1-800-642-6684

by email dnrfrgypsymoth@wisconsin.gov

visit the website <http://www.gypsymoth.wi.gov/>

Northeast Region Pest Update produced by:

Linda Williams

Forest Health Specialist – Northeastern Wisconsin

Wisconsin Department of Natural Resources

920-662-5172

Linda.Williams@wi.gov

<http://dnr.wi.gov/topic/ForestHealth/>

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.