

Northeastern Wisconsin Forest Health Update

July 16, 2012

Topics covered this month:

Insects:

Ash leafcurl aphid
EAB look-a-likes
Earwigs
Emerald ash borer
Erineum gall on maple
Giant ichneumon wasp
Gypsy moth
Japanese beetles
Spruce budworm
White spotted sawyer

Other:

Drought
Stop invasive species

Diseases:

Dutch elm disease
Oak wilt symptoms showing up



EAB adult feeding on ash leaf.

Insects

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

Ash leafcurl aphid – reports of this aphid have come in from Door and Kewaunee Counties.



Curling and stunted leaves caused by feeding of ash leafcurl aphid.

Ash leaf curl aphid (*Prociphilus fraxinifolli*) is one of our woolly aphids. Woolly aphids have 2 hosts that they feed on at different times of the year although I was unable to find what the other host of ash leaf curl aphid is. Ash leaf curl aphid causes leaves to be small, distorted, bumpy, and lumpy. The aphids usually disappear for the summer (probably feeding on whatever other host they have) and will be back the following spring. The damage is usually minimal but in more severe cases the trees will send out a second set of leaves. Natural enemies, like ladybugs, usually keep the populations under control.

EAB look-a-likes - the New York Invasive Species Clearinghouse has updated its EAB identification website with new high-resolution EAB and native Buprestid beetle images.

<http://www.nyis.info/index.php?action=identification> These pics are impressive!! Just check out



the close up of two lined chestnut borer at left! The two “lines” are actually rows of fine golden hairs! Beautiful!

I often get samples of EAB look-a-likes in the mail, and usually I can easily identify that the critter is not EAB, but the latest sample from Steve Kaufman required a closer look. The beetle (at right) is compared with an EAB (top insect) and when compared clearly looks



different and not as emerald green as it should, but at first glance the beetle Steve found looked greenish and enough like EAB to warrant capturing it and sending it to me! The beetle, I believe, is Bronze Poplar Borer. If you find beetles that you’re unsure if they’re EAB or not please capture them, take photos and/or send them to me so we can double check!

EAB (top), bronze poplar borer or bronze birch borer (bottom), ruler scale is inches with the 2 longest lines indicating 0 and 1/2 inch.

Earwigs - lots of questions about this insect lately. Populations are high this year in many areas of northeast Wisconsin. Earwigs feed on flowers and foliage of herbaceous plant but they are also scavengers, eating decaying plant material. If you have mulched flowerbeds around your house you may be providing good habitat for earwigs. If you don’t want to spray a pesticide to control the earwigs I’ve heard that you can roll up a newspaper and place it in the flowerbeds, the earwigs will climb inside to hide and you simply pick up the newspaper and throw it away. The myth about earwigs crawling in people’s ears then burrowing into their brains to drive them mad is truly just a myth. And although I’m sure you’re not looking for a reason to like earwigs they are an insect that takes very good care of their young, compared to many insects that simply lay the eggs and then leave them to their own defenses. UW Extension has information on control options at <http://www.entomology.wisc.edu/diaglab/3-6-08Updates/earwig.pdf>



Earwings. Photo by Whitney Crenshaw.

Emerald Ash Borer (EAB) – from Bill Mcnee. Since the last pest update there have been numerous confirmations of Emerald Ash Borer in Wisconsin. EAB has now been detected 12 of Wisconsin’s 72 counties. Rock, Walworth and Waukesha Counties had their first EAB detections in the last month. Richard Bong State Recreation Area in western Kenosha County is the first state-owned property to find EAB. As of July 16 infested trees have been found in:

- Brown Co. – infested trees located 3 years after finding an adult EAB on a trap in downtown Green Bay
- Rock Co. – Janesville
- Walworth Co. – Lake Geneva, Fontana, and the Town of Walworth
- Waukesha Co. – an infested tree found in Mukwonago
- Kenosha Co. – Richard Bong State Rec Area, Pleasant Prairie, Twin Lakes, and the Town of Wheatland
- Ozaukee Co. – Port Washington
- Milwaukee Co – north side of Milwaukee

The photo at right shows some of the EAB-infested trees in downtown Green Bay. In late June these trees and about 30 others were cut down and chipped.



EAB-infested trees in downtown Green Bay (trees now removed).

Wisconsin has now accumulated enough growing degree days that EAB adult flight is now at or past peak flight in most of northeast Wisconsin. Suspicious beetles or symptomatic trees should be reported to the EAB hotline, 1-800-462-2803, or emailed to:

DATCPEmeraldAshBorer@wisconsin.gov.

Federal EAB quarantine rules have been simplified as of July 1, but Wisconsin will continue to have a state quarantine that restricts the importation of ash materials and hardwood firewood from areas outside Wisconsin where EAB is known to exist. The federal changes will have no significant effect on Wisconsin residents. For more information, read the DATCP news release at:

<http://datcp.wi.gov/news/?Id=585>.

Please contact the EAB hotline (1-800-462-2803) if you see any purple EAB traps lying on the ground.



EAB adult on a penny. Photo from www.forestryimages.org



Counties with first EAB detections in 2012 are shown in red. Yellow counties had first EAB detections in 2011 or earlier.

Erineum gall on maple – I’ve been seeing a fair amount of this on maple this summer. Erineum gall (the pink/red/white felt-like stuff on the leaf) is caused by Eriophyid mites, sometimes called felt mites. The feeding of the mites causes the plant to produce short hairs which create the pink or reddish felt-like covering. A few other mite species cause similar galls on other trees, either the tops or bottoms of the leaves. This kind of damage is rarely severe enough to make the tree drop the leaves.



Giant ichneumon wasps - several reports of these large wasps have come in from the public, mostly by people panicking that something so large and scary was going to attack their kids. These parasitic wasps use their long thread-like ovipositors, sometimes up to 3 inches long, to lay eggs deep in the wood of trees where woodborers are feeding. The wasp egg hatches, bores into the woodborer larvae, and eventually will kill its host. Although they may look like a large dangerous wasp they are just interested in parasitizing other insects.



Giant ichneumon wasp.

Gypsy Moth – from Bill McNee. So far this summer, DNR forest health staff have only received a few scattered reports of gypsy moth caterpillars in northeast Wisconsin. Larval survival was very good and populations are likely to be higher in 2013. Moderate or heavy defoliation has only been reported from the Bayfield peninsula in far northern Wisconsin.



Gypsy moth caterpillar showing characteristic blue and red dots.

Adult male moth flight is now underway in the southern half of Wisconsin.



Male gypsy moth adult (left) and female adult (right)

Female gypsy moths are white and do not fly. Female moths and pupae should be crushed with a stick. If you touch the female moth and pick up her pheromone scent, you will find that brown (male) moths are suddenly attracted to you.

Japanese beetles - These exotic invasive insects are showing up in higher numbers this summer throughout the region and throughout the state. Japanese beetle adults feed on the flowers and leaves of over 300 species of plants including trees, shrubs, and herbaceous plants. They can do significant defoliation. The larval stage of Japanese beetle is a white grub that lives in the soil and feeds on plant roots. University of Wisconsin Extension has more info at <http://hort.uwex.edu/articles/japanese-beetle>



Japanese beetles.

including information on the damage caused by the adults, the damage caused by the white grubs, and what control measures are useful. These insects are occasionally mistaken for EAB because they have some metallic green coloring near their heads. More commonly people will refer to the Multicolored Asian Ladybeetles as Japanese beetles, but there is clearly a difference there!

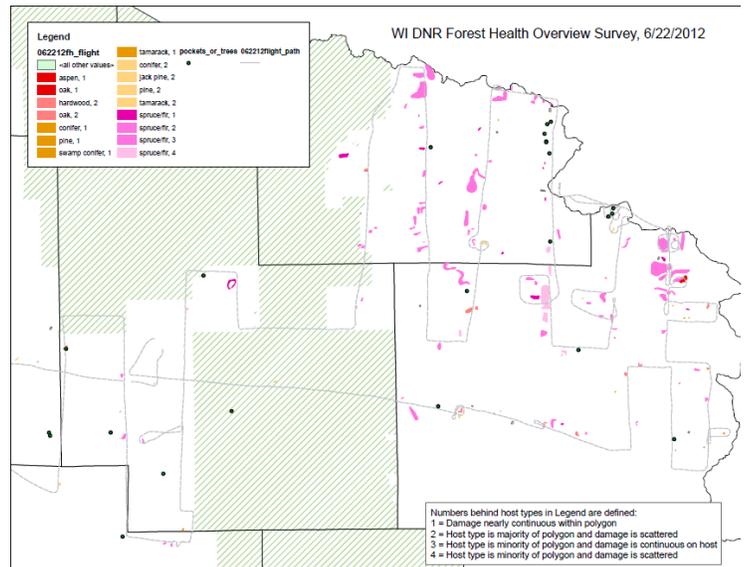
Spruce budworm – defoliation from spruce budworm on spruce and balsam fir has shown up in Marinette County, portions of northern Oconto County, as well as some additional counties in the north. The map at right is a rough draft aerial survey map compiled by Brian Schwingle (thanks Brian!!) on June 22, with polygons showing defoliation visible from the air.

Spruce budworm is a native insect that periodically has outbreaks that can cause extensive tree dieback and mortality. Regional budworm outbreaks occur every 30-50 years and can last 10-15 years. I am unsure if the current outbreak is functioning on its own or is part of the larger outbreak that started to build in the UP in about 2001 and really exploded in 2010.

Balsam fir is the species most heavily damaged by spruce budworm and repeated defoliation can cause top dieback and mortality. More information on spruce budworm can be found here <http://www.na.fs.fed.us/spfo/pubs/fidls/sbw/budworm.htm> and the following is from this pub:

Budworm outbreaks develop and gain momentum in the Northeastern United States only when there is a large proportion of mature and overmature balsam fir in the forest. Management practices including a greater use of balsam fir, regulating age classes to prevent the occurrence of over-mature balsam fir over large areas, and favoring or planting less susceptible species such as spruce make conditions generally unfavorable to the budworm and may materially reduce the risk of an outbreak.

In the Lake States, young balsam fir trees (1.5- to 4.6-m tall) growing next to mature balsam fir or white spruce stands often support heavy overwintering populations of the budworm. Vegetative buds, mined by spruce budworm



Defoliation from spruce budworm will be most severe at the tops of trees.

larvae previously blown in or dropped from the overstory balsam fir, provide suitable hibernation sites for the next generation. Larvae are able to survive the winter and continue the infestation on these young trees the following year. One way to prevent infestations in young trees growing under a mature balsam fir and white spruce overstory is to remove the overstory trees and replant the stand with non-susceptible species such as white pine. Insecticides can be applied to adjoining mature stands to protect the young stands nearby.

White spotted sawyer – this native longhorn beetle is often mistaken for Asian Longhorned Beetle (ALB), but white spotted sawyer, sometimes called pine sawyer, is a native insect. I've been seeing a lot of adults lately so you may get reports from people who assume it's the exotic ALB. The key to telling the difference? First of all size, ALB is a big burly insect, while our native sawyer beetle looks slim in comparison, second, ALB has a very smooth shiny appearance with clear white spots on black wing covers, where our native sawyer beetle will appear pitted or dusty, and the white spots may be less clear or absent, and finally, our native beetle will have a nice white dot "between its shoulders" where the wing covers meet, and ALB does not have this.



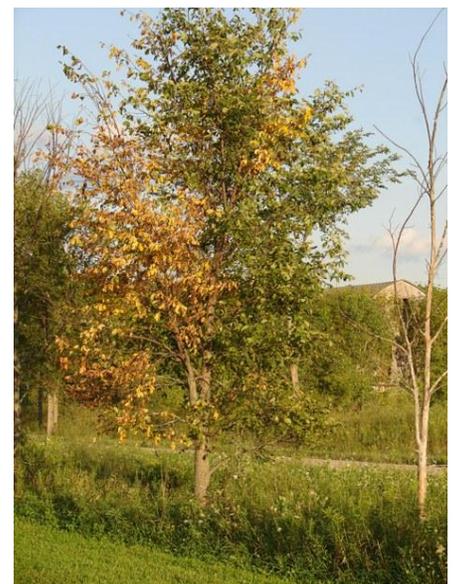
White spotted sawyer adult.

Pine sawyer larvae develop in weakened or recently dead (or harvested) conifers. Larvae first feed in the phloem layer then progress to inner wood. They will pupate within the tree and chew their way out leaving large round exit holes. Adults feed on needles and the bark of twigs.

Diseases

Dutch Elm Disease - symptoms, including whole tree yellowing and wilting are showing up. This exotic fungal disease is spread by the elm bark beetle and can spread underground through root grafts as well. Since bark beetles are generally not attracted to smaller trees (sapling to small pole size) people often get their hopes up that their small elms have "escaped" and will survive and grow to maturity. Unfortunately, as soon as the trees are large enough for the bark beetles to be attracted to them the trees may become infected with dutch elm disease. The first symptom you will see is usually a single branch on which the leaves turn yellow and die. The rest of the tree will die shortly. Elm trees attempt to fight the fungus by walling off the portion of the tree where the fungus is located but this can lead the tree to self-induced water deprivation and death.

There are some disease resistant cultivars (those crossed with other elm species) and some disease "tolerant" cultivars



Tree affected by Dutch elm disease.

available, which tolerate the disease without killing themselves (if I understood what the researcher explained to me). A listing of some of these cultivars can be found on the MN website <http://www.extension.umn.edu/yardandgarden/ygbriefs/p425dutchelm-resistant.html>

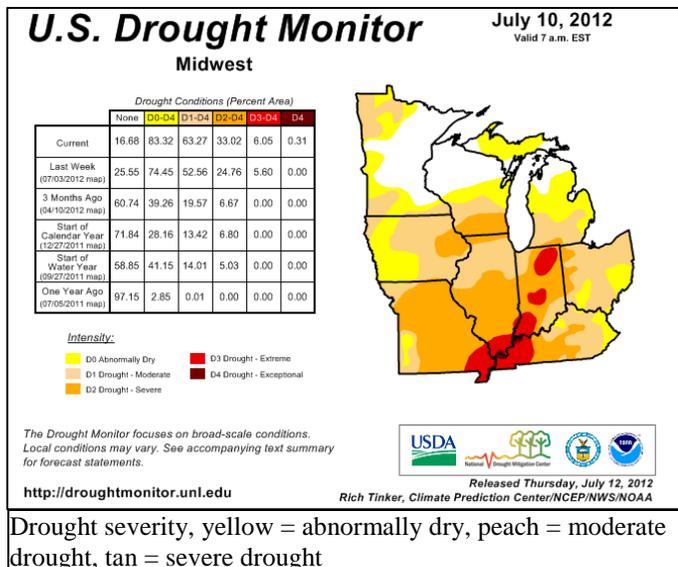
Oak Wilt symptoms showing up – if you have active oak wilt pockets you’ve probably noticed that wilting trees are beginning to show up. Oak wilt is a non-curable fungal disease specific to oaks. Trees in the red oak family will die quickly and completely from this disease while trees in the white oak family will die more slowly with a branch or portion of the crown becoming infected. Trees that were infected with the oak wilt fungus this year are currently turning off-color, dropping their leaves, and will soon be dead. Leaves that drop to the ground will be partially green. Once a tree is infected with oak wilt the fungus will begin to spread outward from the roots of the infected tree through root grafts and into the roots of neighboring trees. In this way, over several years, a pocket of dead oaks will be created and the disease will continue to spread through the roots unless something is done to break the root grafts, or, it will stop when the disease runs out of oaks in that area. A good brochure about oak wilt, including the biology of the disease and how it is spread, can be found at <http://learningstore.uwex.edu/assets/pdfs/G3590.pdf> or check out the oak wilt info on the DNR website at <http://dnr.wi.gov/topic/ForestHealth/OakWilt.html> which includes the online guide for determining oak wilt risk rating related to harvesting oak stands, where you answer some questions about when you want to harvest and what your stand is like and you can print out the recommendations.



Leaves dropped by tree that had oak wilt, note the green base of the leaves with other portions appearing water-soaked and browning.

Other/Misc.

Drought – the further south in Wisconsin you go the worse the drought is. Drought effects on trees can range from wilting leaves, early leaf drop, twig or branch mortality, fine root mortality, and whole tree mortality. Additionally, drought can make trees more susceptible to insects and diseases that take advantage of stressed trees, although the effects of these insects and diseases may not become apparent for 1-2 years after the drought. For trees in a forested stand there is little you can do to immediately



Drought severity, yellow = abnormally dry, peach = moderate drought, tan = severe drought

mitigate the effects of drought. But there is something you can do for trees in your yard ... water! If your tree was planted or transplanted in the last 3 years it is extremely important that you water during dry times. During moderate to severe droughts even large established trees can benefit from water. Be sure to water enough that the water gets below the root zone of the grass surrounding the tree, by either letting a hose trickle for a period of time, or buying a soaker hose, or a soaker bag (sometimes called Tregators or Gator bags), that allow water to slowly percolate deeper into the soil where the tree roots can take advantage of it.

Stop invasive species – Minnesota has recently launched a new campaign and website related to stopping the spread of terrestrial invasive species. You can check out their webpage at www.playcleango.org “play clean go: stop invasive species in your tracks” is their slogan. Wisconsin also has a website geared towards minimizing the movement of terrestrial invasive species <http://dnr.wi.gov/topic/Invasives/prevention.html> along with the slogan “slow the spread by boat and tread”.

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/>

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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.