SCR & SER Forest Health Update

Wisconsin DNR, Forest Health Protection Unit

June 3, 2009 Vol. 6 No. 3

Topics in this update

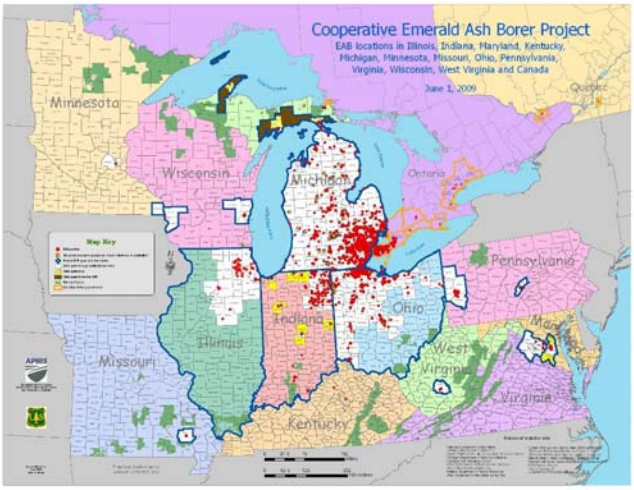
Gypsy Moth Update - Mark Guthmiller

Aerial spray application for the gypsy moth suppression program has been completed in SCR/SER. Suppression treatments continue in portions of west central and northeast Wisconsion. Department of Agriculture continues treatments in western portions of Wisconsin as part of the national “slow the spread” program.

For the Suppression Program as of Thursday, May 28th: Spraying is complete for this year in the following counties: Brown, Columbia, Dane, Fond du Lac, Jefferson, Juneau (including Dells of Wisconsin State Natural Area), Kenosha, Milwaukee, Outagamie, Racine, Rock, Sauk (including Devil’s Lake, Mirror Lake, and Rocky Arbor State Parks), Walworth, Washington, and Winnebago. The following spray blocks are also complete: Spray Block Number 4 in Waushara County and Spray Block Numbers 3, 4, and 5 in Adams County.

For more information about the gypsy moth suppression program, please visit http://www.gypsymoth.wi.gov/.

EAB found in Minnesota and Kentucky



A map of emerald ash borer confirmed sites as of June 1, 2009

Now Kentucky and Minnesota join us. Discovery of the emerald ash borer infestation in Minnesota was announced on May 14, 2009. It was found in St. Paul, MN, just northeast of the intersection of Interstate 94 and Highway 280. Three counties in Minnesota are currently under quarantine.

Furthermore, the emerald ash borer was confirmed in two Kentucky counties, and the announcement was made on May 22, 2009. Several trees in each location were infested, and the trees were showing signs of decline. It is estimated that there are 131 million white ashes, and 92 million green ash trees in Kentucky. A thorough survey, followed by a quarantine is planned as the next step.

Besides the two additional states, in the United States, this insect has been found in Indiana, Illinois, Maryland, Michigan, Missouri, Ohio, Pennsylvania, Virginia, West Virginia and Wisconsin. Although the find in Victory, WI is in close proximity to the state borders to Minnesota and Iowa, no infestations have been confirmed in the vicinity in Minnesota or Iowa at this point.

Eastern Tent Caterpillar tents are visible

Tents created by the Eastern Tent Caterpillar on a completely defoliated cherry tree, seen in Dane County (Photo taken on June 1, 2009)

Many tents created by the eastern tent caterpillar have been observed throughout SCR and SER, especially in Columbia, Dane, and Sauk counties. Caterpillars are already nearing full grown and about 1 1/4 to 1 1/2 inches in length. It is expected that feeding will complete in a week or so, and they will start to pupate.

The eastern tent caterpillar (*Malacosoma americanum*) is native to Wisconsin. Though eastern tent caterpillar tents are found every year, occasionally its population reaches a high level. Infestations are commonly seen on open grown trees and trees on roadsides or along fence rows. The eastern tent caterpillar favors cherry and apple trees though it also feeds on some other deciduous trees, such as oak.

Near full-grown Eastern tent caterpillar, seen in Columbia County. (Photo taken on June 2, 2009)

The caterpillars hatch when the buds begin to open, and construct a silken tent on a fork of branches. They continue to feed for about 6 weeks and pupate. An adult is a reddish-brown moth.

If tents are within reach, tents can be broken up with a stick, and you can hand pick the caterpillars and step on them or put them in soapy water to kill them. Though a bacterial insecticide Btk (*Bacillus thuringiensis* var. *kurstaki*) can be effective to control young caterpillars, due to the size of caterpillars at this point, it will not be very effective. Since Btk has to be consumed by caterpillars, it needs to be applied on to foliage, and more treated foliage needs to be consumed by larger caterpillars to make it work. There are also general use insecticides that are labeled to control eastern tent caterpillars. Be sure to follow manufacture's label directions. For more information about pest management and pesticides, please check with a UW Extension booklet, titled "Woody ornamentals: pest management in Wisconsin (A3597)" at http://learningstore.uwex.edu/pdf%5CA3597.pdf.

If tents are too far to reach, that's OK. Feeding by the eastern tent caterpillar is nearing completion after all. Since there is only one generation per year, once the caterpillars pupate, you will not see the caterpillars and their feeding until next spring, though you will still see tents remaining for a while until the sun, rain, and wind eventually break them down. Heavily defoliated trees will produce a second set of leaves once feeding is over. These trees should look better with more leaves later in the season. Though the production of a second set of leaves is a tree's excellent defense mechanism, the process will further stress the trees. In a yard tree setting, it is a good idea to take measures to maintain the overall health of the trees by watering during dry periods, properly mulching, and minimizing injuries on trees trunks, etc.

There is a nice UW Extension fact sheet about the eastern tent caterpillar at http://learningstore.uwex.edu/pdf/A2933.pdf to hand out to the public.

Eastern tent or Forest tent caterpillar?

Forest tent caterpillar

Yes, the eastern tent caterpillar has been spotted throughout the southern WI. But a sibling of the eastern tent caterpillar, called the forest tent caterpillar was also reported in Waunakee this spring. The eastern tent caterpillar (*Malacosoma americanum*) and the forest tent caterpillar (*Malacosoma disstria*) belong to the same genus, and their life cycles are very similar. One major difference is that only one of them creates tents. Though it produces silken threads, the forest tent caterpillar does not create a large tent, whereas its sibling - the eastern tent caterpillar does. The two caterpillars look a little different. The eastern tent caterpillar has a long white line on the back and the forest tent caterpillar has white foot-print shape dots on the back. The population of the forest tent caterpillar periodically explodes to a large-scale outbreak in northern Wisconsin. The last outbreak in northern Wisconsin was in 1999 to 2003. A large-scale outbreak by this caterpillar has not been reported in southern Wisconsin.

Anthracnose and more on broadleaf trees

Black blotches on maple leaves
(Photo taken on June 1, 2008)

Due to cool temperatures and recent rainfall, we started to see tan, brown, and black blotches on broadleaf trees, such as maple, oak and ash throughout SCR/SER. Severe infection on silver maple has been noted in some areas including Monroe (Green Co.), Beloit (Rock Co.), Verona (Dane Co.), and Brooklyn (Dane & Green). Damage on oaks also has been reported from the Wisconsin Dells. Leaves may look water soaked, light brown to dark brown, or black. As infection continues, blotches expand and individual blotches become coalesced.

What is causing this problem? Cool and wet conditions in the spring create a great environment for the spore production and spread of various foliar fungi. Anthracnose is a disease that causes leaf spots or blotches by a group of closely related fungi. Dr. Brian Hudelson of the University of Wisconsin Extension, Plant Disease Diagnostics Clinic recently examined some symptomatic samples that came in to his Clinic. He said that he found sporulation of the anthracnose fungi as well as “what appears to be *Fusicladosporium humile*, the asexual stage of *Venturia acerina*, the fungus that causes Venturia leaf blotch of maple”.

Whichever fungus may be affecting the leaves, as Dr. Hudelson says “The bottom line on all of these diseases is not to panic”. Once leaves mature, temperatures increase, and spring shower season ends, the problem usually subsides. In most cases, these diseases don’t seriously affect the health of the trees and control is not necessary, except for general maintenance of tree vigor. Since fungal spores are released from infected fallen leaves, removing and discarding them in the fall could reduce the level of infection in the following spring.

There are UW Extension factsheets about anthracnose that are nice to hand out to concerned homeowners. They are available through UW Extension website at
http://wihort.uwex.edu/gardenfacts/XHT1001b.pdf (with a photo of infected oak leaves)
http://wihort.uwex.edu/gardenfacts/XHT1001a.pdf (with a photo of infected maple leaves)
http://wihort.uwex.edu/gardenfacts/X1001C.pdf (with a photo of infected ash leaves).

These factsheets contain information about chemical control of anthracnose. However fungicide applications are not recommended at this time of the year, as it is too late to be effective.

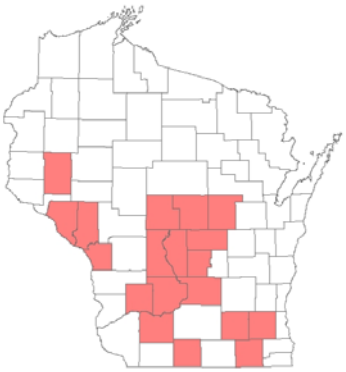
A big thank you to Dr. Hudelson for sharing his diagnosis and advice with us.

White pine blister rust update

Production of blisters on stems/branches of infected white pine was reported in the last newsletter. Ray Amiel, DNR forester in Green County shared his observations on this disease since then. He said that he has noted higher than normal blister rust in Dane and Green counties this spring. Infection of white pine blister rust on white pine starts at needles and it takes 2-3 years to produce blisters (aecia) on stems/branches after initial infection. It is possible that there was a particular environmental condition that favored infection 2-3 falls ago in these areas. Environmental conditions that are conducive to infection on white pine needles by basidiospores (tiny spores that are released from the infected leaves of *Ribes* sp.) are 100% relative humidity and a temperature of less than 68F for the period of minimum of 60 hours in late summer to early fall.

To view the previous article about the white pine blister rust, visit at http://dnr.wi.gov/forestry/FH/intheNews/2009/SCR_SER_May_09.pdf.

Annosum root rot update



Annosum root rot was recently found in a red pine plantation in southwestern Waupaca County. This is the first find of Annosum in Waupaca County. This will bring the number of Annosum confirmed counties to be 19 in Wisconsin. Annosum root rot, caused by the fungus, *Heterobasidion annosum* was first identified in Wisconsin in 1993 and is considered among the most important and destructive diseases affecting conifers in the north temperate regions of the world.

Two products are currently available in Wisconsin to prevent Annosum root rot. Sporax (sodium tetraborate decahydrate) is granular and can be applied using a salt-shaker style container or a special dispensing unit made of a PVC pipe and a plastic nozzle. Cellu-Treat (disodium octaborate tetrahydrate) is a water-soluble powder and can be applied using a backpack sprayer or an attachment to a harvester.

Recently a label direction for Cellu-Treat was revised. A major change is a rate of a fungicide that should be applied to fresh cut stumps (1 gallon per 200 sq feet surface area, instead of 400). The change was made based on some efficacy data available. Make sure to apply the liquid to the point of wetness. The new label is available at their website at http://www.cellu-treat.com/.

Annosum fungicide spray attachment update

Last month, I had an opportunity to visit a pine harvesting site on the Lower Wisconsin State Riverway with two DNR foresters, Brad Hutnik and Steve Williamson. In the stand, a logger was applying a fungicide using a home-made pesticide spray device mounted on his harvester as he harvested. He would first buck a tree, and then move the cutting head back to a stump to spray a fungicide. Spray system is air-pressured, and liquid is released when he presses a small button next to the break with his foot. It would take only additional 3-5 seconds per stump.

Liquid chemical is sprayed from a spout (in a red circle) that is mounted on a cutting head

Brad took a nice video of the application. Unfortunately, I couldn't attach it due to the size of the file (6MB). If you are interested in watching the video, please let me know.

Recently two loggers in the NER purchased a spray attachment to their processors in order to be able to apply a fungicide to fresh cut stumps while harvesting. This is another great news! This type of the mechanical application is becoming more practical and readily available in Wisconsin, thanks to all the forestry professionals who work with a can-do attitude to protect Wisconsin's forests.
Thanks, Brad and Steve, for taking me to the site to watch this operation.

The blue dye that is mixed in the liquid chemical enables to inspect application coverage on the stumps

Please report to us

We appreciate reports of forest health problems in your areas. Currently, there is no regional forest health specialist assigned in SCR or SER. At this point, please contact the following staff for regional forest health problems/questions. Thank you.

For general forest health issues

Jane Cummings-Carlson (northern part of SER)	608-275-3273
Kyoko Scanlon (southern part of SER, and SCR)	608-275-3275

For gypsy moth

Andrea Diss (Statewide issues)	608-264-9247
Mark Guthmiller (SCR/SER)	608-275-3223

Emerald ash borer hotline	1-800-462-2803
Emerald ash borer e-mail	DATCPEmeraldAshBorer@wi.gov
Gypsy moth hotline	1-800-642-MOTH

Forest Health web site: http://www.dnr.state.wi.us/org/land/forestry/FH/
Gypsy Moth web site: http://www.gypsymoth.wi.gov
Emerald ash borer web site: http://www.emeraldashborer.wi.gov/

About the newsletter

"SCR & SER Forest Health Update" is an informal newsletter created by the Wisconsin DNR, Forest Health Protection Unit. The purpose of this newsletter is to provide foresters in the South Central Region and Southeastern Region with regional up-to-date forest health information. This newsletter will be issued monthly during the growing season and on an irregular basis during winter as topics come up. 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 Kyoko Scanlon at Kyoko.Scanlon@wisconsin.gov.

Previous issues of this update and regional forest health updates from NER, NOR and WCR, are available from the WI DNR Forestry website at http://dnr.wi.gov/forestry/FH/intheNews/.
Articles were written by Kyoko Scanlon, unless otherwise noted.