

SCR & SER Forest Health Update

Wisconsin DNR, Forest Health Protection Unit

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Gypsy moth updates – Mark Guthmiller

Gypsy moth population status 2008 and prediction of 2009 for southern Wisconsin

Many parts of southern Wisconsin, in the spring of 2008, were poised for rapid increase of gypsy moth into major outbreak levels. Fortunately (unfortunately for some affected by flooding) the heavy spring rains that caused widespread flooding in southern Wisconsin took a bit of a toll on the gypsy moth population. By mid-July many reports of caterpillar mortality were coming in throughout much of the established range of gypsy moth in this part of the state. The mortality was primarily due to the fungal disease, *Entomophaga maimaiga*, and the associated NPV virus. Although we did see a partial collapse of the population in many areas, other areas had enough survival to have slightly higher populations than last year with some increased spread into new areas. Observations frequently seemed to indicate better caterpillar survival, and subsequent egg laying, in open areas, south face slopes, and exposed bluffs. These areas likely dried out quicker and may not have had as much disease development. Going into 2009 I am optimistic we may continue to see a stable or reduced gypsy moth population but that will depend a lot on the spring weather. The good news is *Entomophaga* seems to be widely established in the gypsy moth infested areas of southern Wisconsin and will continue to moderate outbreaks in the years we have relatively cool wet spring weather.

DNR property fall egg mass surveys

The early fall of 2008 was a busy period for egg mass surveys for many municipalities and state DNR property managers. DNR Forestry, Parks, and Wildlife staff worked together to survey many of our DNR state properties where gypsy moth poses a threat. Thanks to all of you who helped with this survey effort. The properties that were surveyed in southeast and south central regions included (egg mass/acre numbers are for portions of a given property):

Big Foot Beach State Park: ~600 to 900+ egg masses/acre
Dells of Wisconsin State Natural Area: ~1,500+ egg masses/acre
Lake Kegonsa State Park: ~1,700 – 4,500+ egg masses/acre
Mirror Lake State Park: ~1,200+ egg masses/acre
Rocky Arbor State Park: ~1,700+ egg masses/acre
Blue Mounds State Park: 1 egg mass observed (on campground exit sign)
Gibraltar Rock State Natural Area: ~370+ egg masses/acre (bluff area)
Governor Nelson State Park: ~140+ egg masses/acre (Woodland trail near scenic overlook)
Lodi Marsh Wildlife Area: ~300 – 400 egg masses/acre (one isolated area off of Riddle Road)
Natural Bridge State Park: ~380 egg masses/acre
Richard Bond State Recreation Area: 3 egg masses observed (Molinaro Visitor Center)

For residential and high use recreational areas 500 egg masses/acre and for woodland areas 1000 egg masses/acre are the estimated minimum numbers when damage and high nuisance issues become a problem.

Devils Lake State Park egg mass oiling

Due to very high egg mass counts on the east bluff and south beach areas, state park staff organized a work day in November to get out and oil egg masses using a soybean based product to suffocate the eggs. In addition to planned aerial treatments the oiling will hopefully assist in reducing damage caused by early caterpillar instars prior to treatment. Thanks to the park staff for making this extra effort at reducing potential damage to the park trees in these areas!



Devils Lake State Park staff geared up to oil gypsy moth egg masses

Entomophaga distribution in SCR

Entomophaga maimaiga, a fungal pathogen of gypsy moth, causes disease in gypsy moth caterpillars during years that we have cool wet spring and early summer weather. Entomophaga is now well established in the gypsy moth infested portions of southern Wisconsin and will spread naturally. Diseased caterpillars were collected this past season, ground up and mixed with potting soil. Efforts to accelerate establishment into western portions of southern Wisconsin continue. Ground up diseased caterpillars, were dispersed into a number of state parks this month including Blue Mounds, Governor Dodge, Nelson Dewey, New Glarus Woods, Tower Hill, Wyalusing, and Yellowstone State Parks. For more information on Entomophaga see:

<http://web2.msue.msu.edu/bulletins/Bulletin/PDF/E2604.pdf>

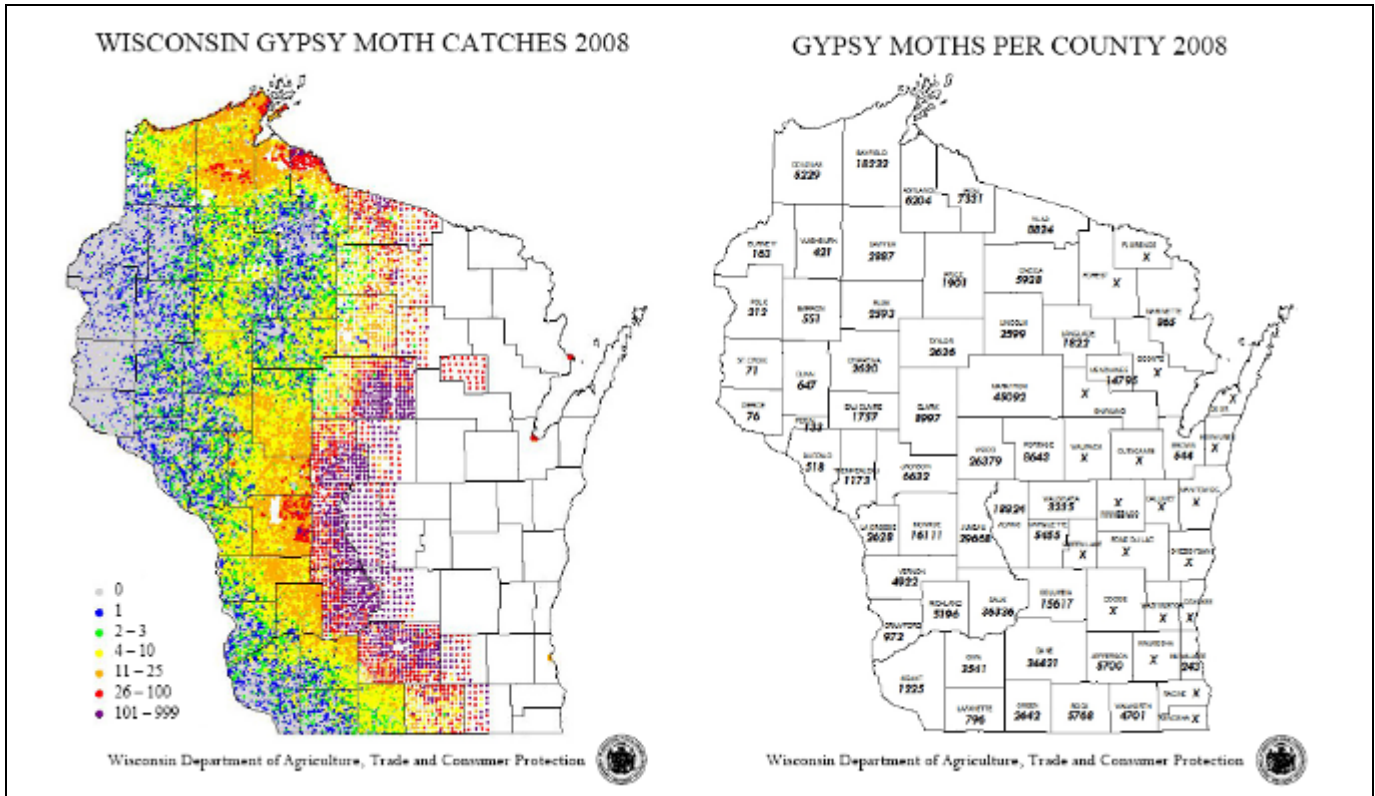


Wisconsin Department of Agricult

Spreading soil mix with ground up diseased caterpillars.

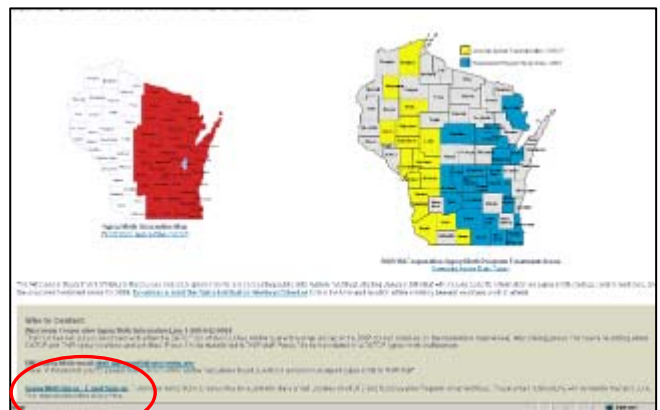
results 2008 (maps compliments of Chris Whitney, DATCP gypsy moth trapping coordinator)

Wisconsin Department of Agriculture continues to trap portions of the western Wisconsin to monitor and plan treatment activities as part of a national “Slow the Spread” (STS) aerial treatment program. Male moth trap catch data seems to indicate an increase in overall population in most portions of western Wisconsin. Most of these areas are still well below levels that would cause widespread damage to trees. In south central Wisconsin, landowners and property managers in Green, Iowa, and Richland counties should be especially alert to rapidly building numbers over the next few years. STS treatment areas are not yet finalized but will be available at <http://gypsymoth.wi.gov> in the near future.



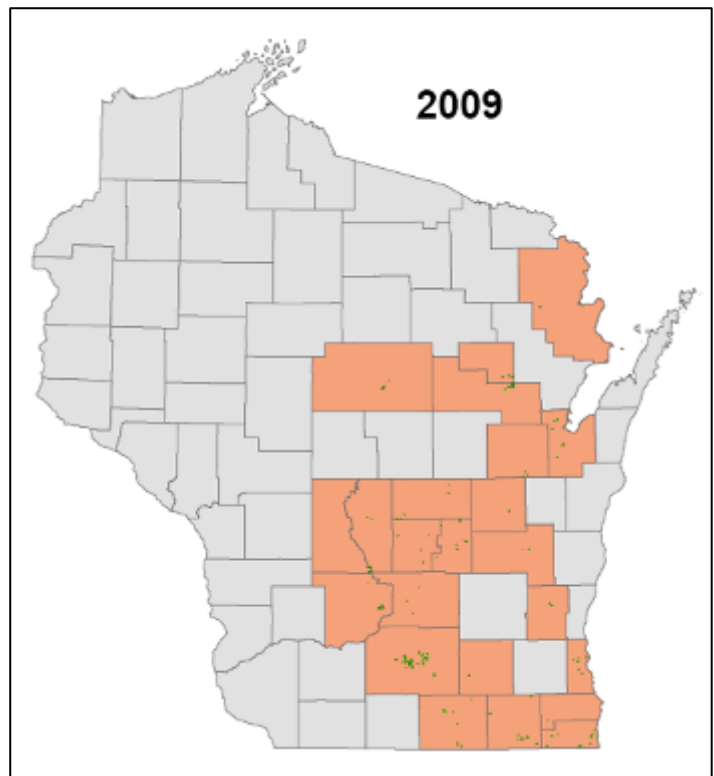
Gypsy Moth email notification of suppression and STS treatment activities

A new service started last year will be available to public who want to monitor aerial treatment activities in the spring. Individuals can subscribe each season to get updates by going to the gypsy moth web portal and putting in their email address. Individuals can unsubscribe at any time by going back to this site. Go to <http://gypsymoth.wi.gov> and follow the link to email notification in the grey box on the home page.



DNR Gypsy moth suppression program proposed treatments 2009

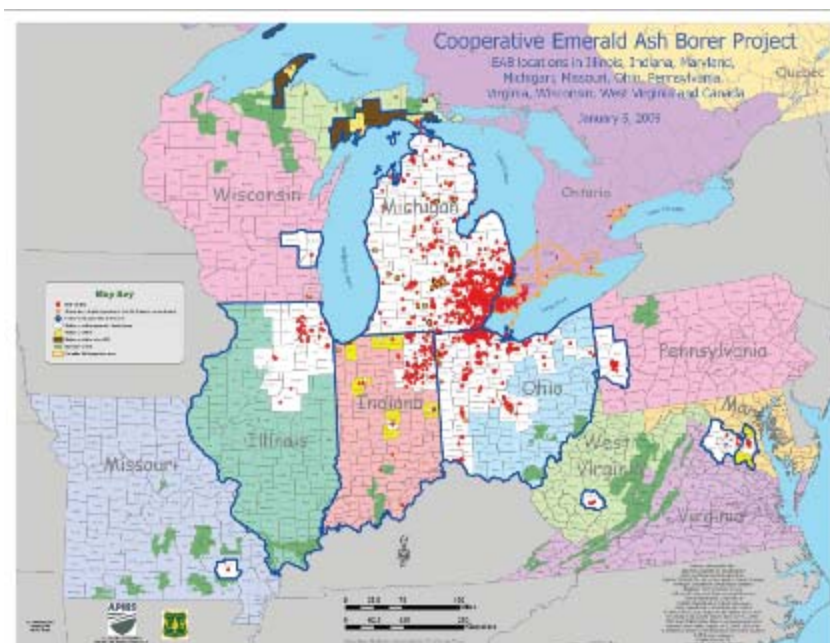
Approximately 10,800 acres are proposed for treatment in 23 counties this coming season. In south central and southeast Wisconsin, participating counties or counties with participating DNR properties include: Adams, Columbia, Dane, Jefferson, Juneau, Kenosha, Milwaukee, Racine, Rock, Sauk, Walworth, and Washington Counties. All proposed treatment block maps for the DNR suppression program are now posted on line at <http://gypsymoth.wi.gov>



Emerald ash borer updates - Mark Guthmiller and compliments of Bill Mcnee **(NER newsletter, February 16th)**

National EAB detection map

It has been very hard to keep up with all the continued reports of states detecting emerald ash borer over the last year. As detections occur and survey crews hit the woods, additional detections are commonly found. Here is the most recent national map showing where EAB has currently been detected. To print a copy go to: http://www.emeraldashborer.info/files/MultiState_EABpos.pdf



WI DNR lands surveys

Wisconsin DNR forestry and forest health staff conducted visual surveys of a number of our DNR properties in the four county EAB quarantine. The areas surveyed included high risk areas of the Northern Unit of the Kettle Moraine State Forest, Pike Lake Unit of the Kettle Moraine State Forest, Harrington Beach State Park, and Kohler Andrea State Park. The goal of the survey was to detect any infestations that may have been present for a number of years. A few additional lower risk areas will be completed in the next few weeks. To date, no EAB infestations were detected on these DNR properties. Thanks to those of you who assisted with this effort!



EAB Pesticide fact sheet for professionals and homeowners

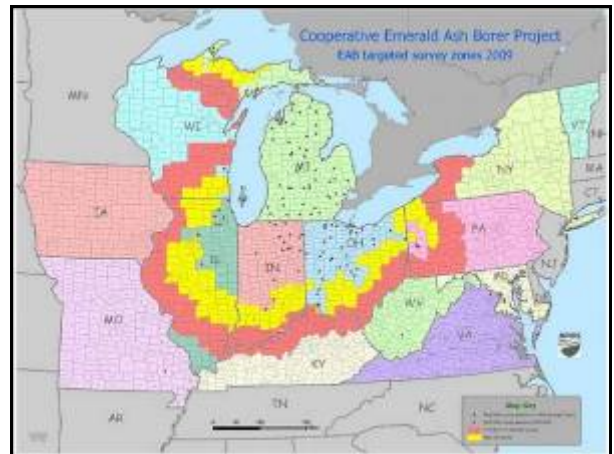
UW Extension has updated its fact sheet for professionals on insecticide treatments for EAB, available at:

<http://www.entomology.wisc.edu/emeraldashborer/EAB%20Professional%20Fact%20Sheet.pdf>

Homeowner pesticide fact sheet is also available at:

<http://www.entomology.wisc.edu/emeraldashborer/EAB%20Homeowner%20Insecticide%20Guide%20Final%202008.pdf>

EAB Surveys Nationwide – from Bill McNee. This year's EAB surveys will be different from 2008, as the Federal government is no longer funding detection tree surveys. The current proposal calls for approximately 9,500 purple traps to be placed in Wisconsin as part of a national survey plan. The national plan aims to survey outside the infested areas to better define the leading edge of the pest's distribution (red and yellow counties on the map), as well as surveying at other high risk sites statewide (Michigan counties shaded in green on the map as well as the Wisconsin counties where EAB has been detected - Ozaukee, Washington and Kenosha Counties).



EAB Surveys in WI – from Bill McNee. Visual surveys continue in the vicinity of Newburg, where Wisconsin's first known emerald ash borer infestation was discovered last summer. Recently, these surveys located additional infested trees a little over 2 miles north of Newburg. The infestation seems to be distributed along the Milwaukee River channel, which is a natural dispersal corridor for the adult beetles. The survey is expected to be completed in March. The most recent situation report (# 8) from the Newburg area can be found at <http://emeraldashborer.wi.gov/pdf/EABICSSitRep8.pdf>.

EAB tree peeling used effectively – from Bill McNee. An interesting memo regarding EAB detections in Homewood, Illinois has been circulating throughout Forest Health and Urban Forestry networks. To summarize, Homewood's city forester has found that that upper canopy branches of 1-5" diameter from infested and "heavily" infested trees do not have many, if any, larva (or "D"-shaped holes). Branches measuring 6 inches and larger in diameter have produced larvae consistently so peeling efforts could be focused on these sized branches. Researchers in Michigan have come to similar conclusions, you can read their recommendations in the document titled Using Girdled Trap Trees Effectively For EAB Delimitation And Survey at <http://www.emeraldashborer.info/files/handoutforpdf.pdf>

EAB Workshops in the works – from Bill McNee. Wisconsin will be receiving federal grant funds from USDA Forest Service to support some EAB activities in the quarantine area in 2009. Emphasis will be on workshops that demonstrate tree removal, transport and utilization options, sustainable forest management, EAB detection and identification, pesticide options, etc. More details to follow in future Pest Updates.

EAB – Who to Report it to – if you suspect that you have found EAB please call the hotline at 1-800-462-2803. Reports and/or digital photos of suspicious insects/trees can also be emailed to eab@datcp.state.wi.us. DATCP and/or DNR staff will visit symptomatic sites. For more information on EAB, visit the state's website, www.emeraldashborer.wi.gov. For compliance agreements and quarantine issues you can contact Bob Dahl at Robert.Dahl@wi.gov.

Remember to check back often to the EAB web portal for updated information!
<http://emeraldashborer.wi.gov>

Link to the January 2009 issue of the Wisconsin Emerald Ash Borer Program Newsletter:
<http://emeraldashborer.wi.gov/pdf/EABNewsJanuary2009.pdf>

Northern white-cedar mortality-Mark Guthmiller

In my travels around southern Wisconsin I have noticed an occasional white cedar tree dead or in a state of decline. Most of the trees observed have been in low lying areas and I am assuming declined due to stress of flooding. One particular site in Rock County had a number of dead and dying white cedar. Both bark beetle and root rot decay were present on a couple samples looked at and presumed secondary pests coming in on flood damaged trees. If others are observing white cedar mortality, especially in areas not prone to flooding, please contact myself or Kyoko Scanlon.

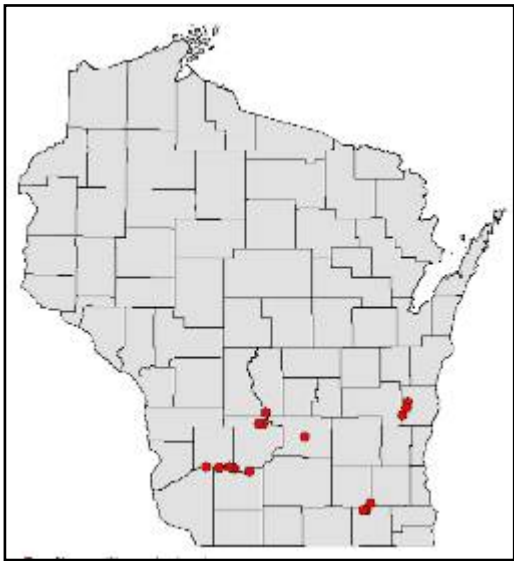


Northern white cedar mortality at Rock County Royce Dallman Park



Flood line evident by debris on the fence behind cedar trees

Surveys for the European woodwasp *Sirex noctilio* (Hymenoptera: Siricidae) in SCR and SER are now complete - Renee Pinski, Forest Health Specialist



2008 Surveys for the European woodwasp (Hymenoptera: Siricidae) in SCR and SER are now complete, and the good news is that the European woodwasp (*Sirex noctilio*) wasn't detected in Wisconsin. Sixteen detection sites were selected to survey for the European woodwasp across SCR and SER (marked in red on map). Site selection criteria included a preference for mature red pine stands and the presence of some level of stress due to insect, disease, invasive plant competition and/or overstocking.

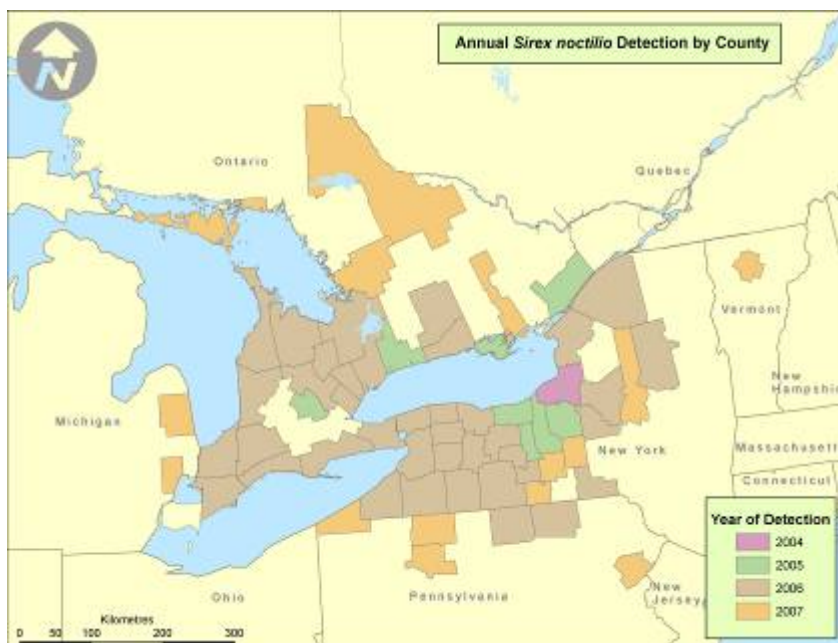
Six sites were located along the Lower Wisconsin River Way, four in the WI Dells area, and three each in the Kettle Moraine State Forest Northern and Southern Units. One intercept panel and one Lindgren funnel trap were deployed at each site. Traps were spaced 100m apart and equipped with a synthetic lure (70% α -pinene + 30% β -

pinene). Traps were deployed late June and taken down late October.

A total of 70 woodwasps were collected throughout the survey season. None of the woodwasps were identified as the European woodwasp. In all, five woodwasp species were collected and all are native to Wisconsin. The five species collected, with the number of each collected in parenthesis, include: *Urocerus albicornis* (1), *Urocerus cressoni* (47), *Tremex columba* (6), *Sirex edwardsii* (10) and *Sirex nigricornis* (6). At least one species of woodwasp was collected from all survey sites. Our native Wisconsin woodwasps typically attack trees that are already distressed (some examples include drought, pathogens or other insect pests).



Adult female *Sirex noctilio*. Photo by David R. Lance, USDA APHIS PPQ, Bugwood.org



In addition to our trapping effort, a visual assessment of general stand health was made at each survey site. Symptoms associated with a European woodwasp infestation include needle droop in the crown, needles changing in color from green to red to brown throughout the growing season, dead crowns and numerous resin beads on the midbole. None of these symptoms were observed in our study sites.

A more detailed report of this survey is available in the recently published [Forest Health Highlights of Wisconsin 2008](#) (see page 12). Also, for

additional information about the European woodwasp please see the [Sirex noctilio pest alert](#) published by the Forest Service.

Bacterial Leaf Scorch detected in Dane Co. through a genetic test

This summer, 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. Leaf and twig samples were collected from symptomatic trees throughout southern and central Wisconsin and sent to a lab in Michigan State University to perform a genetic test. Out of 13 samples in 11 sites, 2 out of the 3 bur oak samples collected from the same site in Dane County tested positive for BLS. This is the first confirmed case of bacterial leaf scorch in Wisconsin. The tests were repeated twice in the same lab, and the positive samples will be tested in a separate lab for confirmation. The Wisconsin DNR plans to collect more samples with similar leaf symptoms to evaluate the extent of this disease in 2009.

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.

Please watch out for future articles that will solicit your help on collecting more samples for the summer of 2009.

The 2008 Wisconsin Forest Health Highlights are now on the web

Check out the 2008 Wisconsin Forest Health Highlights at <http://dnr.wi.gov/forestry/publications/index.htm#fhp>. This document describes highlights of forest health conditions of Wisconsin in 2008. It includes status of major forest pest problems, both native and exotic, and a variety of forest health-related surveys, studies, and projects that were conducted in Wisconsin last year.

New Garlic mustard and Phragmites Videos Available on-line

These two new videos summarize the biology, identification, and management of the two invasive plant species very nicely.

The garlic mustard video at <http://www.in-sitevideo.com/wff/garlicmustard.html>

The Phragmites video at <http://peaine.org/environment/phragmites/video/>

Phragmites (pronounced as frag-my-teez) is also called as common reed, common reed grass, or giant reed grass. This tall perennial wetland grass is widely distributed and locally abundant throughout Wisconsin. To see the photos of Phragmites, visit DNR Invasive species website at <http://dnr.wi.gov/invasives/photos/index.asp?mode=detail&Code=Phraus>.

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@wisconsin.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://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.