West Central WI Forest Health Report

April 2014

Topics covered this month:

Paul Cigan is New Forest Health Specialist for NW WI

The forest health team is happy to welcome Paul Cigan to our group. Paul will cover northwest Wisconsin (map on last page). He will be based out of the Spooner Ranger Station and will start on April 21st.

Paul grew up in Chippewa Falls and has a B.S. in Forestry from UW-Stevens Point. He recently finished up an M.S. at the University of Alberta in Forest Biology and Management where he studied the cumulative effects of forest ecosystem disturbances, mainly focusing on mountain pine beetle.

Photo 1. Paul Cigan, the new forest health specialist for northwest WI.

Abiotic

Salt Spray and Runoff (By Todd Lanigan)

If you've driven along Interstate 94 in the past week you've undoubtedly noticed lots of pines with varying degrees of orange needles. The use of deicing salts can cause decline and death of conifer species along roadways. The damage can be from salt spray as vehicles go down the roadway and/or salt water runoff as the snow melts. The damage is usually confined to the first couple of rows of trees along the roadway. Where water runoff accumulates, you may have pockets of trees showing needle symptoms. The needles of the affected conifers will turn brown and may eventually fall off. Spruce trees tend to be more tolerant to salt spray and runoff than our native pines.

Photo 2. Salt damage to a roadside pine.

Winter Injury

It's not just salty roadway pines that are turning color. Abiotic damage has also started surfacing as red/brown needles on a variety of conifers over the past few weeks. Drying from frozen ground and wind are often mentioned as the cause but it appears freeze damage may also be a cause (or the cause). Damage varies from light damage on the south (sunny) side of trees to complete defoliation and tree death. Younger conifers may be green below the snowline but have red/brown needles higher up. Damage is typically to last year's needles (2013 needles in this case). Light damage will disappear when new growth starts and even more severely affected trees may recover if no insects or diseases get involved. Keep an eye on affected trees and manage any secondary insect or disease issues as needed. Because the primary cause is abiotic no management is feasible in most cases.



Photos 3, 4. Pines affected by winter injury.

Black Walnut Mortality (By Todd Lanigan)

There is a good possibility that black walnut may be severely impacted by the cold temperatures from this past winter, especially if the walnut is planted in cold air drainages. You may find dieback and outright mortality later this year. If you peel the bark off on affected trees, the cambium layer that is killed will be black, and is usually slimy and wet looking. Depending on when you look, you may have all sorts of insects under the bark as well, borers, maggots, etc. Where the cambium is healthy, it will be a nice white color. You may also see a lot of epicormic branches/shoots coming off the tree where the cambium was not killed. Gary Hardin (DNR Forester, Crawford County) asked me about the potential for this problem with walnut at the statewide meeting. We experienced this problem back in the mid 1990's when we had a cold hard winter. Walnut did take it on the chin at that time, so who knows what this year will bring? I guess time will tell.

Arthropods

Gypsy Moth Hatch

Based on the weather this spring we will likely not see any gypsy moth hatch until at least early May.
Photo 5. A newly hatched gypsy moth caterpillar.

2014 Gypsy Moth Spraying

DATCP recently released its gypsy moth spray plan for 2014. Approximately 187,500 acres in 18 counties (yellow counties on the map) are targeted for treatment. DNR will be spraying one small area in Rock County. For details go to http://datcp.wi.gov/news/?Id=1043.

Landowners looking to have their property sprayed can contact a certified arborist (www.waa-isa.org) or for larger areas a for-hire aerial applicator (www.gypsymoth.wi.gov). Treatments typically start in May so call soon to ensure you do not miss the treatment window. Landowners have a variety of other management options as well. Check out the .gov site above or http://fyi.uwex.edu/gypsymothinwisconsin/ for all your treatment options.

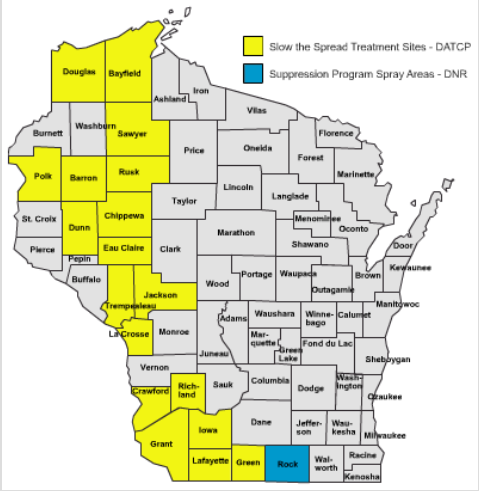


Figure 1. Areas being targeted for gypsy moth treatments in 2014.

Ticks

Ticks are out! So remember to protect yourself and do tick checks. Learn to identify Wisconsin's tick species and what diseases they cause at http://labs.russell.wisc.edu/wisconsin-ticks/ or http://www.dhs.wisconsin.gov/communicable/TickBorne/index.htm.

Characteristics of Tickborne Diseases in Wisconsin

WISCONSIN DIVISION OF PUBLIC HEALTH
Revised 08/29/2011

Disease	Etiologic agent	Reservoir	Vector	Incubation range (average)	Clinical Symptoms	Available tests	Treatment (IDSA guidelines)
Anaplasmosis (formerly known as HGE)	*Anaplasma phagocytophilum*	Mammals- (white footed-mouse, deer)	*Ixodes* sp. tick (blacklegged/deer tick)	5-21 days (14days)	Headache, fever, chills, muscle aches, fatigue, nausea, cough, confusion, rash (rare), thrombocytopenia, leukopenia, elevated liver enzymes	IFA IgG/IgM, PCR, smear culture, IHC	Antibiotics (doxycycline) usually 10-14 days
Babesiosis	Typically *Babesia microti* (parasitic)	Small mammals- (white footed-mouse)	*Ixodes* sp. tick (blacklegged/deer tick)	Typically 7-21 days	Fever, chills, sweats, headache, body aches, loss of appetite, involuntary weight loss, nausea, fatigue, anemia, thrombocytopenia	Blood smear, PCR, IFA	Combination of two medications: atovaquone + azithromycin, or clindamycin + quinine (at least 7-10days)
Ehrlichiosis (formerly known as HME)	*Ehrlichia chaffeensis*, novel *Ehrlichia muris*-like (EML)	Mammals- (white footed-mouse, deer)	*Amblyoma, Ixodes sp. tick (E. chaffeensis*- lone star tick)* (EML- blacklegged tick)	1-14 days (7days)	Headache, fever, chills, muscle aches, fatigue, nausea, vomiting, cough, joint pain, confusion, occasional rash, thrombocytopenia, leukopenia, elevated liver enzymes	IFA IgG/IgM, PCR, smear culture, IHC (PCR is the only commercial test available for EML)	Antibiotics (doxycycline) usually 10-14 days
Lyme	*Borrelia burgdorferi*	Mammals- (white footed-mouse, deer)	*Ixodes* sp. tick (blacklegged/deer tick)	Usually within 3-30 days	Expanding erythma migrans (EM) rash, fatigue, chills, fever, headache, muscle and joint aches, arthritis, nervous system (facial palsy, radiculoneuropathy, lymphocytic meningitis), memory problems, irregular heart rhythm (rare)	EIA/IFA and WB**, PCR, culture	Oral antibiotics (doxycycline, amoxicillin, cefuroxime axetil) usually 14days
Powassan	Powassan virus (arbovirus group)	Small mammals- (woodchucks, groundhogs, white-footed mouse, chipmunks, and squirrels)	*Ixodes* sp. tick (blacklegged/deer tick)	8-34 days (21 days)	fever, muscle weakness, headache, nausea, vomiting, stiff neck, blurry vision, confusion, encephalitis, meningitis, seizures, gait unbalance, paralysis, respiratory distress, coma	MAC-ELISA, PRNT (no commercial test, available only at CDC)	None (supportive treatment)
Spotted fever group rickettsia, including Rocky mountain spotted fever (RMSF)	*Rickettsia rickettsii* (reported cases usually associated with travel to an endemic state)	Rodents	*Dermacentor sp.* tick (American dog tick)	2-14 days	Fever, rash, headache, nausea, vomiting, abdominal and muscle pain, lack of appetite, conjuctival injection (red eyes)	IFA, IHC, PCR	Antibiotics (doxycycline) usually 10-14 days

Figure 2. A list of tickborne diseases in WI. Document available at: http://www.dhs.wisconsin.gov/communicable/TickBorne/PDFfiles/Tickborne%20chart_04%2013%202012_final.pdf.

Diseases

Oak Wilt

Although the snow is barely gone in many areas the recent turn to spring means many insects will start emerging. With temps in the 50s and 60s this week the sap beetles that spread oak wilt will be out soon. Oak wilt restrictions will be appropriate for the majority of western and central WI by the end of the week (April 11).

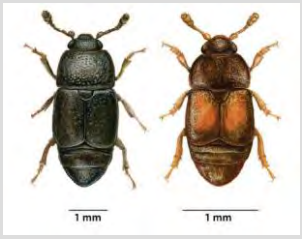


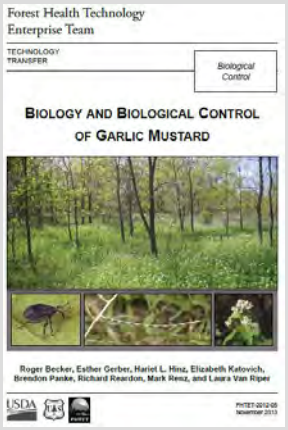
Photo 6. Two species of sap beetles that move oak wilt spores. Photo by USDA forest service.

Plants

Plant Identification Resources (By Mark Guthmiller)

There are numerous resources available to assist with identification of plants. Here are some sites to get folks started. Take some time looking at these sites and the wealth of information available:

- Wisconsin DNR Invasives website: http://dnr.wi.gov/topic/Invasives/
- UW Steven's Point, Robert W. Freckmann Herbarium: http://wisplants.uwsp.edu/WisPlants.html
- UW Madison, Wisconsin State Herbarium: http://botany.wisc.edu/herbarium/
- UW Madison, Weed Identification and Management: http://weedid.wisc.edu/weedid.php
- Invasive Plants Association of WI (IPAW): http://ipaw.org/ (Click "The Problem" tab)
- Mistaken Identity (mid Atlantic): http://www.nybg.org/files/scientists/rnaczi/Mistaken_Identity_Final.pdf



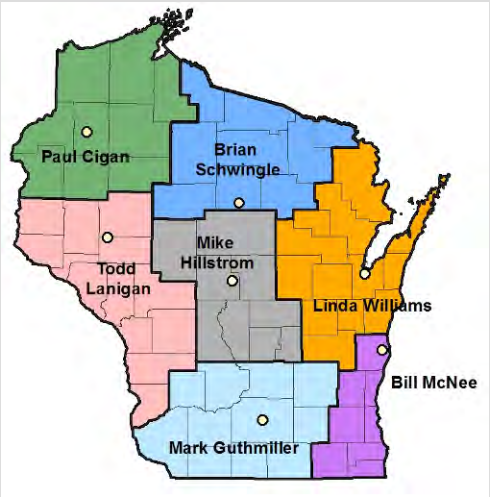
New Garlic Mustard Publication

A new garlic mustard publication covering basic biology, impacts and management is available from the Forest Service http://www.fs.fed.us/foresthealth/technology/pdfs/GarlicMustardBiocontrol_FHTET-2012-05.pdf.

Forestry Pesticide Training

Live forestry pesticide training will be offered April 30th in Steven's Point. For more info see https://patstore.wisc.edu/secure/browse_cat.asp?category_id=9.

For general forest health and municipal level urban forest health issues contact:



http://dnr.wi.gov/topic/ForestHealth/staff.html

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Statewide reporting systems:

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://gypsymoth.wi.gov/

For additional information visit the Forest Health web site: http://dnr.wi.gov/topic/ForestHealth/
Note: This report covers forest health issues occurring in the West Central District of Wisconsin. The purpose is to provide up-to-date information on forest health issues to foresters, forest landowners, and anyone else interested. We welcome your comments/suggestions on this newsletter as well as reports on forest health problems in your area. If you would like to subscribe to this newsletter, please contact Mike Hillstrom at Michael.hillstrom@wisconsin.gov. Previous issues of this update and regional forest health updates from NER, NOR and SOR, are available from the WI DNR Forestry website at http://dnr.wi.gov/topic/ForestHealth/Publications.html. Articles written by Mike Hillstrom unless otherwise noted.

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.