Wisconsin Horticulture Update Summary April 19, 2013

Table of Contents

WI WEATHER REVIEW

For the week ending April 15, 2013: A series of storms brought heavy rain across southern Wisconsin and snow, sleet and freezing rain to the north. Water was reportedly standing in fields where soils are highly saturated or still frozen. Rivers and streams were reportedly at or near flood stage in some areas. Topsoil moisture was 32%

surplus statewide. Temperatures remained below average and growing degrees were well below normal at all reporting stations.

Across the reporting stations, average temperatures last week were 3° to 7° below normal. Average high temperatures ranged from 39° to 44°, while average low temperatures ranged from 29° to 35°. Precipitation totals ranged from 0.84" in Eau Claire to 3.91" in Milwaukee. (WI Crop Report)

Growing degree days (GDD)

Growing degree days is an accumulation of maximum and minimum temperature averages as related directly to plant and insect development. This week, the GDD_{mod50} in Wisconsin ranged from 0 to 40.8. Following is a list of GDD. As of April 19, 2013 for the following cities: Bayfield 0.0, Crandon 0.0, Cumberland 0.0, Dubuque 38.9, Eau Claire 0.0, Fond du Lac 7.6, Green Bay 4.2, La Crosse 5.2, Madison 19.8, Milwaukee 13.1, Wausau 0.0. To determine the GDD of any location in Wisconsin, use the degree day calculator at the UW Extension Ag Weather webpage http://www.soils.wisc.edu/uwex_agwx/thermal_models/degree_days

To put it in perspective, following is an abbreviated list of plant and insect phenological stages in relation to GDD accumulations at which the events occur. Common lilac first bloom 207; common flowering quince full bloom 208; Sargent crabapple first bloom 213; wafaring tree viburnum first bloom 227; **elm leafminer adult emergence 228**; Koreanspice viburnum full bloom 33; eastern redbud full bloom 254; common horsechestnut first bloom 260; **pine needle scale egg hatch 1st generation 277**; Sargent crab full bloom 282; **eastern spruce aldegid egg hatch 283**; wayfaringtree viburnum full bloom 287; blackhaw viburnum first bloom 301; redosier dogwood first bloom 311; common lilac full bloom 323; **lilac borer adult emergence 324**; Vanhoutte spirea first bloom 329; common horsechestnut full bloom 344; **lesser peach tree borer adult emergence 362**; **oystershell scale egg hatch 363**; blackhaw viburnum full bloom 370 pagoda dogwood first bloom 376; redosier dogwood full bloom 408; Vanhoutte spirea full bloom 429; black locust first bloom 455; pagoda dogwood full bloom 486; common ninebark first bloom 507; **bronze birch borer adult emergence 550**.

INTRODUCTION

The host for today's WHU was Brian Hudelson. Participants in today's discussions were Diana Alfuth (Pierce, St. Croix), Jane Anklem (Douglas), David Drake (wildlife specialist), Brian Hudelson (PDDC), Erin LaFavre (Eau Claire), Barb Larsen (Kenosha), Kim Miller (Winnebago), Sharon Morrissey (Milwaukee), Lynette Paul (Brown), Phil Pellitteri (insect specialist), Scott Reuss (Marinette), and Chrissy Wen (Walworth).

HORTS' SHORTS

Agents report the following issues to be of interest this week: Cold and wet conditions persist throughout the state; temperatures have not risen much past freezing this Spring in many parts of Wisconsin, delaying any garden activity. Precipitation has ramped up in the past few weeks, putting an end to the drought conditions in much of the state, leaving standing water in fields and gardens, and in some places, a foot of snow. Soil is still frozen in some northern areas, but thawed soils are too wet to work. Only minor bulbs and some early daffodils planted in warm microclimates near buildings have dared to bloom. Tree buds are delayed; in southern counties only hardy lilacs seem to be showing signs of swelling, and there is a report of a brave hedge cotoneaster beginning to unfurl its leaves.

As snow melts, signs of winter wildlife damage, especially from vole and rabbit, have become evident. Increased woodpecker activity on trees has caught the attention of southern counties' homeowners, who have been expressing concern it signals emerald ash borer infestation.

Home gardeners and community gardeners remain indoors, awaiting Spring's arrival, planning their gardens and watching box elder bugs wake from their winter sleep to invade home interiors.

A very positive report, in light of the dreary spring, was made from Marinette Co., that maple syrup production this year could be the best on record.

SPECIALIST REPORT: Insect Diagnostic Lab Update

Presented by Phil Pellitteri, Distinguished Faculty Associate, UW-Madison Department of Entomology and Director, UW-Extension Insect Diagnostic Lab pellitte@entomology.wisc.edu

Wake Up Call

Surprisingly, despite the vast difference in weather conditions from last year, the sample load coming into the Insect Diagnostic Lab is the same as it was last year. Box elder bugs and three to four species of ants have become active, especially the ones that have been nesting indoors and are now waking up.

2013 Predictions

It will be a very dynamically different year for insects due to the early moisture received this year. Concerns over tree borers becoming an issue, due to last year's drought stress, may turn around quickly with this season's rain. The early wet weather pattern may also encourage the natural release of *Entomophaga maimaiga*, a host-specific fungus, to infect and kill gypsy moth larvae, reducing the population of that pest.

2012 was exceptional because southern migrant insects were blown in early; the weather conditions this year do not look like they will replicate that phenomenon.

EAB Spread

It is expected that DATCP will announce more new finds of emerald ash borer (EAB) within counties already reported to have that pest. No new counties have been added.

Q. *Could you tell us about the potentially beneficial insect that Oak Creek will be releasing to combat EAB?*
A. The effectiveness of parasitoids against EAB is still unknown as research trials continue. It will take one to two years to determine if they will have a positive impact. Currently, it is not even known if the wasps can overwinter in Wisconsin. In Michigan trials, they have seen some benefits using parasitoids, but not enough to stop EAB.

In Wisconsin, research projects at UW-Madison, under Drs. Ken Raffa and Chris Williamson, are being carried out, and the WDNR has made some releases of parasitoids in La Crosse.

In my opinion, with limited numbers of parasitoids available to researchers, and little information available, it seems to be poor science, as well as a bit premature, to release a number of the wasps in an area to battle EAB without the ability to measure success with scientific controls.

I have had a number of inquiries about the potential for the wasps to sting people. Since they are tiny wasps that should not be a concern.

Q. *Do the WDNR and DATCP want continued reports of secondary findings of EAB in counties already reported with EAB?*
A. In a recent email from WDNR, that point was brought up. For many people, the secondary reports are not important, but city managers and foresters would be interested in new finds in their jurisdictions. For now, the reports will continue, but the protocol may change in the future.

Emerald Ash Borer multinational website: http://www.emeraldashborer.info

Spotted Wing Drosophila

Q. Is there anything new on spotted wing Drosophila (SWD); will the late spring hamper them?
A. It is encouraging that no SWD specimens have been seen in the insect diagnostic clinic the last two and half months. Christelle Guédot (UW fruit entomology) and some of her graduate students are trying to monitor for overwintering success, but it is too early to tell. After temperatures warm up for two to three weeks, fly activity can be expected in sheltered, high tunnel sites, helping to determine whether SWD overwintered in those conditions. Even if SWD does not overwinter in Wisconsin, evidence has shown *Drosophila* can be re-introduced or blown in from the south. In 2012, a very dynamic year with southerly airflows, blow-ins were possibly the cause of many insect problems.

Q. Would you recommend that strawberry growers put out fruit fly traps to monitor SWD as soon as it warms up?
A. First, contact Christelle about her trapping network. She is working on a statewide monitoring system to produce quick results for growers. Growers have indicated they are interested in participating, but have not yet organized. DATCP may do some SWD trapping, but possibly not as aggressively this year, because the staff person in charge is on leave.

Growers interested in setting up their own SWD traps should look into what trapping entails. It may be difficult to identify and distinguish the flies, especially the SWD females; the SWD female is the pest responsible for damaging fresh fruit.

Spotted Wing Drosophila in Wisconsin: http://labs.russell.wisc.edu/swd/
Will Spotted Wing Drosophila Be Here Next Year?: http://labs.russell.wisc.edu/gratton/2013/02/08/will-spotted-wing-drosophila-be-here-next-year/
Spotted Wing Drosophila website (MSU): http://www.ipm.msu.edu/invasive_species/spotted_wing_drosophila

SPECIALIST REPORT: Plant Diagnostic Disease Clinic

Presented by Brian Hudelson, Sr. Outreach Specialist, UW-Plant Pathology, and Director of the UW-Extension Plant Disease Diagnostics Clinic (PDDC) bdg@plantpath.wisc.edu

The PDDC update is attached to the end of this summary. Archives of the Wisconsin Disease Almanac can be found at http://labs.russell.wisc.edu/pddc/wisconsin-disease-almanac/

Impatiens Downy Mildew

The biggest news from the PDDC is that two samples from two different counties, Monroe and Jackson, tested positive for downy mildew on *Impatiens*. This disease caused much destruction in the floral production industry last year. Now it has arrived in Wisconsin and the risk of having severe problems with this disease continues.

A powerpoint presentation (in pdf format) and a newsletter article on *Impatiens* downy mildew will be found on the WHU website. The presentation in a ppt format is available; email Brian at the address above.

Controlling Downy Mildew on *Impatiens walleriana* (American Floral Endowment); http://www.endowment.org/afe-news/press-releases/221-controlling-downy-mildew-on-impatiens.html
Impatiens Downy Mildew: Guidelines for Growers (Ball Horticultural):
http://www.endowment.org/images/stories/impatiensdownymildew-growerguidelines-jan2013v9.pdf

Edema

Indoor grown tomato samples were submitted with severe edema. Edema is a physiological problem arising when there is an imbalance between water uptake in the soil and a release of excess moisture through transpiration. The plants tend to grow plant cells out onto the surface of the leaf to accommodate the extra water that is around. It is a cosmetic problem, but greenhouse producers may be concerned and submit samples. It may present on upper or lower leaf surfaces with a crusty material, anywhere from almost crystalline clear, to light green, to crusty brown when it is old.

Edema (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Edema.pdf

Rhizospaera Needle Cast

No surprise, conifer samples again have been submitted with *Rhizosphaera*. This pathogen is commonly seen every year.

Rhizosphaera Needle Cast (UWEX):
http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Rhizosphaera_Needle_Cast.pdf

Oak Wilt

A trunk sample from a Dane Co. oak was tested positive; the tree was a re-submit from last year. The fungus, found in the trunk tissue, was not growing as rapidly or as extensively as normally seen. It has been a long time

since a positive oak wilt sample came into the clinic. No oak wilt was confirmed last year, possibly because of the seasonally high temperatures.

Oak Wilt (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Oak_Wilt.pdf

SPECIAL TOPIC: Wisconsin Wildlife

Presented by David Drake, Associate Professor in forest and wildlife ecology and Extension wildlife specialist
ddrake2@wisc.edu

What a Difference a Year Makes

Last year at this time bird migration was complete and this year much of it is yet to come due to vastly different weather systems. Since early February there have been a few early migrants such as bluebirds, robins and cedar waxwings. Waterbirds such as egrets are starting to come in. With the standing water in farm fields, there is an unusual opportunity to view widgeons, gadwall, shovelers, and mallards. Slowly there are accounts of more and more birds from the phenology list being reported, and we are waiting for more warblers to show. Last week in Florida, there was an abundance of bird migrants staging to come up north, just waiting for strong southerly winds.

Spring peepers and chorus frogs are waking up and starting to call now in Dane Co. Tiger salamanders are beginning to move about. In the northern part of the state it may take awhile to experience these events.

Q. When do you expect oriole to arrive?
A. They should be coming up pretty soon. Last year everything was ahead by three weeks, this year, it is behind by three weeks. It is not the cold temperatures keeping everyone away, but the fronts coming through here are from the north. All the southern migrants are trying to come north but they are not going to fly against a headwind; it is too energetically expensive. They need southerly winds to push them up north.

Damage from Wildlife

Chipmunks

Chipmunks were observed for the first time in Dane Co. this week. They will start digging holes, chewing up bulbs and going after seeds. Their populations can be managed using a Sherman live trap baited with peanut butter, or with a snap trap baited with peanut butter. Set the traps next to the holes in the ground and they should appear in the trap within 24 hours.

Ground Squirrels: Their Ecology and Control (UWEX): http://learningstore.uwex.edu/Assets/pdfs/G3238.pdf

Voles

There have been many calls regarding vole damage that occurred this winter. Surface runways in grass are cosmetic and should not be a concern because the grass will grow into them. More serious is the girdling damage to trees and shrubs. At the UW Arboretum, voles girdled yews and other woody vegetation. Most of the damage is caused by meadow voles which are active all year round, but most destructive in winter. To prevent damage in the future, start trapping in fall; if numbers are high, consider knocking the population down before winter when snow limits trapping efforts and damage is not noticed.

For most situations a mousetrap baited with peanut butter or a mixture of peanut butter, oats and sunflower seed will be effective. Set the trigger of the trap in the surface runway where vole damage is evident. For larger properties or nurseries where damage is extensive, bait stations may be used. Make a station using 2-inch diameter PVC pipes, placing bait in the middle of the pipe to keep the bait dry and fresh, and to prevent non-target species from eating the bait. For registered pesticide operators, bait with zinc phosphide; for homeowners, bait with a fast-acting rodenticide, not the blood-thinning type. Blood thinning toxins are not very effective on meadow voles because they do not cache or store food like other rodents do.

Q. The vole damage in our area seems to be unusually high this winter. Is there a reason for that?
A. Voles are rodents and small mammals; they serve as the base of the food pyramid for everything else above them that eat them. There will be eruptive years where all the conditions line up perfectly supporting an explosion

of their population; other years there is just something missing and the population decreases. It is nature at work, some years they just have good resources in terms of food, shelter and lack of predators.

Meadow Mouse Control (UWEX): http://learningstore.uwex.edu/Assets/pdfs/A2148.pdf

Bats

During some of the warm December days, calls were coming in from homeowners saying that bats were starting to wake up and were in the house. It has been quiet since then, but as temperatures start warming up, so will bats and they may be found in houses.

There are four Wisconsin resident bat species hibernating here in the winter and waking in the spring: Big Brown, most commonly found in people's dwellings; Little Brown; Eastern Pipistrelle; and Northern Long Ear. All four species are susceptible to white nose syndrome (WNS), a very deadly fungal disease affecting cave dwelling or hibernating bats. Although WNS has not yet been found in our state, the WDNR has reclassified all four resident species as state threatened, and protected, species. If bats are found in a residence, however, up to five bats may be killed; carcasses should be submitted to the county health department for rabies testing. If more than five bats need to be killed, the DNR should be contacted; they will determine whether there is a roost and help to mitigate the issue.

Bats: Information for Wisconsin Homeowners (UWEX):
http://learningstore.uwex.edu/assets/pdfs/g3096.pdf

Woodpeckers

Recently there have been calls regarding woodpeckers pecking on aluminum-sided homes and gutters. Typically they will not cause much damage to aluminum. On wood-sides houses they can cause damage. This time of year they are not pecking holes for nesting areas; they are drumming to attract a mate, defend their territory and possibly look for food. Remove any attractants such as bird feeders or suet feeders. If woodpeckers are a continual problem, homeowners should have an exterminating company check for insect infestation where the damage is occurring. Sometimes the outer siding may look healthy but the inner part, the house wrap, may be rotting and harboring insects that are attracting the woodpeckers. Once the insects are removed, the birds' food source is gone and they should stop their pecking.

If woodpeckers continue to peck a building and insects have been ruled out, they are probably pecking for territorial or mating reasons. Two effective ways of managing that problem are by exclusion and harassment. If they are pecking one area, staple plastic sheeting over the affected area; the sheeting prevents the birds from gripping the house siding and tapping. To deter them from an area, hang mylar ribbon from the house eves every 6" along the length of the affected area. Leave the sheeting or tape up for three weeks or until the woodpecker is driven away. Make sure the bird has not moved to another area of the building, in which case, put up more sheeting or mylar ribbon.

Woodpecker Ecology and Damage Management (UWEX): http://wildlifedamage.uwex.edu/pdf/Woodpecker.pdf

Rabbits

The easiest way to manage problematic rabbits is to exclude them. Install a two-foot fence and stake the bottom of the fence to the ground. Although they are not strong diggers, rabbits will move loose soil to get at food.

Rabbit Ecology and Damage Management (UWEX): http://wildlifedamage.uwex.edu/pdf/Rabbit.pdf

Squirrel

Q. A client was concerned about small branches and spruce tips on the ground, with the branches cut at an angle. Is that the work of squirrels?
A. That is typical of squirrel damage. Fortunately the slight pruning should not damage the overall health of the tree. Because squirrel are so common and ubiquitous, there is very little that can be done about them other than trapping and relocation; but as soon as one squirrel is removed there is another to take its place. Squirrel is not a protected species, so if a problem is being caused by only one or two troublesome individuals, they may be killed.

If the problem is occurring on the homeowner's land and it is legal for the homeowner to discharge a firearm, they may shoot the squirrel, therefore reducing the problem and putting dinner on the table at the same time. If that option is not chosen, people should be encouraged to tolerate the problem.

Q. We received an email from a client residing in the city of Kenosha, on a tree-filled property, concerned that there were no squirrels. Is there a reason for their absence?
A. There is no disease or epidemic occurring in squirrel populations of which I am aware. It may be possible they are active when the homeowner is not around or the population may have moved to another area in the neighborhood where food sources are more available. There are a variety of reasons they may be somewhere else, and perhaps he should be relieved he does not have to deal with them at this time.

Q. In far northeast Wisconsin, the squirrel population is very low, significantly lower that it has been in the past ten to fifteen years. It seems to be part of a cycle.
A. Cyclic populations, or population cycles, have been discussed in Wisconsin, especially with rough grouse having ten-year highs and ten-year lows. There is some debate from people reanalyzing data questioning true cycles; some do not believe in cycles at all, and some believe in them only for certain species. Whether squirrel have cycles is not certain. As rodents, squirrel populations can increase one year and decrease another by the nature of their reproduction or a variety of other reasons.

Woodchuck

Q. My neighbor mentioned she has a woodchuck living under her shed; should I be concerned for damage to my property?
A. It is quite probable that a woodchuck, or groundhog, is living under her shed. It can be verified by finding a one- to two-foot hole in the ground; all burrowing animals have multiple entrances and exits to their burrows. If one is found, there are probably more. If not active already in the southern part of the state, they will be soon. Being diurnal, woodchuck are active during the day and sleep at night, another identifying characteristic.

To manage woodchuck, one technique is to gas the burrow chamber with a smoke bomb. The smoke bomb is lit in similar way to a safety flare, posing a potential fire hazard, and is not recommended for use under any structure like a shed or outbuilding. Another management option to a medium-sized live Tomahawk trap, placing it next to the burrow opening that has a mound of soil next to it (one used frequently by the animal). Bait the trap with quartered apples or plum tomatoes. For the best success, cover the trap with an old blanket or tarp, encasing it in darkness, simulating the burrow; the animals feel more secure in a darkened enclosure than an open cage. Keep the trap open only during the day and shut it at sunset to prevent trapping skunks, raccoons, opossum or other night critters.

Once the animal is caught, set the trap again for a few days to make sure all of the burrow residents are out. This time of year, there may be a litter in the burrow. If the litter are too young to survive on their own, they may perish without their mother to care for them. Once the residents have been removed, backfill the hole and place some type of exclusion material around the bottom of the shed to prevent other animals from accessing the area in the future.

Q. My neighbor loves her wildlife, once harboring fourteen raccoon. If she will not try to remove the woodchuck from her shed, is there anything I can do to prevent its damage to my yard?
A. Groundhog will move around in a 200-foot radius from the burrow opening. Since the burrow system may be pretty extensive and already in your yard, inspect for large holes and set traps at those; if not, try setting traps along the property line.

Woodchuck Ecology and Damage Management (UWEX): http://wildlifedamage.uwex.edu/pdf/Woodchuck.pdf

Wildlife Damage Website

A new collaborative website among us, the WDNR and the U.S, Dept. of Agriculture Wildlife Services is now up and running. It has a number of species-specific fact sheets relating to wildlife damage, a wildlife management primer, and factsheets on laws and regulations governing wildlife damage management. New factsheets will be added every six months or so. Currently there are factsheets on woodchuck, woodpecker, rabbit, mole, and sandhill crane. The website is wildlifedamage.uwex.edu

UWEX Wildlife Ecology and Damage Management: http://wildlifedamage.uwex.edu
The Handbook: Prevention and Control of Wildlife Damage http://digitalcommons.unl.edu/icwdmhandbook
Wisconsin Wildlife Phenology Calendar 2013: http://clean-water.uwex.edu/pubs/pdf/phenologycalendar13.pdf

ANNOUNCEMENTS

WHU Summary

A very generous complement was made to the editor of this summary and was much appreciated.

Responding to Horticultural Inquiries

The 2013 Responding to Horticulture Inquiries will feature update sessions with Brian Hudelson, Phil Pellitteri and Mark Renz, an "Answering Horticultural Inquiries in County Offices" session and a hands-on plant ID, insect ID, and disease ID session. These will be open to plant health advisors and county office staff. Program schedule: http://fyi.uwex.edu/wihortupdate/2013/04/15/responding-to-horticulture-inquiries-2013/
The program will be offered the following locations:

- **Racine County** May 8, 2013 9 AM – 5 PM, Town of Norway Town Hall, 6410 Heg Park Rd., Wind Lake, WI 53185
- **Iowa County** May 23, 2013 9 AM – 5 PM, Iowa County UW-Extension, 303 W. Chapel, Dodgeville, WI 53533
- **Marathon County** May 30, 2013 9 AM – 5 PM, Marathon County UW-Extension, 212 River Dr., Wausau, WI 54403

Please contact Brian Hudelson (608-262-2863 or bdh@plantpath.wisc.edu) by May 1, 2013 to reserve a spot or if there are questions.

FINAL NOTES

The full audio podcast of today's and archived WHU conferences can be found, along with archives of the written summaries, at http://fyi.uwex.edu/wihortupdate/

UW links

Wisconsin Horticulture webpage http://hort.uwex.edu
UW Plant Disease Diagnostics webpage http://labs.russell.wisc.edu/pddc/
UW Insect Diagnostic Lab http://www.entomology.wisc.edu/diaglab/
UW Turfgrass Science http://turf.wisc.edu/
UW Vegetable Pathology Webpage http://www.plantpath.wisc.edu/wivegdis/
UW Vegetable Entomology Webpage http://www.entomology.wisc.edu/vegento/people/groves.html#
UW-Extension Weed Science http://turf.wisc.edu/
UW-Extension Learning Store http://learningstore.uwex.edu
UW Garden Facts http://labs.russell.wisc.edu/pddc/fact-sheet-listing/

WHU "OFF THE AIR"

During this past week specialists have commented on these issues off the air:

Vegetable Crop Update

Topics addressed in the April 20 newsletter are:

- Potato early season disease considerations: *Rhizoctonia*, *Fusarium*, silver scurf
- Late blight in 2013?

Newsletters #1 and #2 may be found at the Vegetable Pathology website http://www.plantpath.wisc.edu/wivegdis/

PDDC Update

UW-Extension/Madison Plant Disease Diagnostic Clinic (PDDC) Update
Brian Hudelson, Ann Joy, and Andrew Pape, Plant Disease Diagnostics Clinic

The PDDC receives samples of many plant samples from around the state. The following diseases/disorders have been identified at the PDDC from April 13 through April 19, 2013:

PLANT/SAMPLE TYPE	DISEASE/DISORDER	PATHOGEN	COUNTY
NEEDLED WOODY ORNAMENTALS			
Spruce	Rhizosphaera Needle Cast	*Rhizosphara kalkhoffii*	Price
HERBACEOUS ORNAMENTALS			
Impatiens	Downy Mildew	*Plasmopara obducens*	Jackson
VEGETABLES			
Tomato	Edema	None	Dane

For additional information on plant diseases and their control, visit the PDDC website at pddc.wisc.edu.