WISCONSIN HORTICULTURE UPDATE SUMMARY, APRIL 18, 2014

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WI WEATHER REVIEW

For the week ending April 14, 2014

Temperatures began to warm up and fields dried out at the start of the week, only to be followed by a weekend of rain and snow. Topsoil moisture reflects wet conditions; there was a 34% surplus statewide this week compared to 30% last week. The frost was finally exiting the fields in the northern parts of the state, according to reports. Snow cover was mostly gone statewide until much of the state received a fresh coating of snow on Sunday, April 13.

Across the reporting stations, average temperatures last week were 5° to 8° above normal. Average high temperatures ranged from 57° to 63°, while average low temperatures ranged from 33° to 38°. Precipitation totals ranged from 0.20" in Madison to 1.78" in La Crosse. (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 4.0 to 81.0. Following is a list of GDD as of April 18, 2014 for the following cities: Bayfield 4.0, Beloit 81.0, Crandon 6.0, Cumberland 13.0, Dubuque 74.0, Eau Claire 32.0, Fond du Lac 34.0, Green Bay 19.0, La Crosse 55.0, Madison 53.0, Milwaukee 33.0, Wausau 16.0. 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, the 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 233; 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; smokebush, first bloom 501; common ninebark first bloom 507; arrowwood viburnum first bloom 534; **bronze birch borer adult emergence 547;** black locust full bloom 548; **potato leafhopper adult arrival 568; juniper scale egg hatch 571;** common ninebark full bloom 596**;** arrowwood viburnum full bloom 621; multiflora rose full bloom 643; northern catalpa first bloom 675; **black vine weevil first leaf notching due to adult feeding 677;** Washington hawthorn full bloom 731**; calico scale egg hatch 748; greater peach tree borer adult emergence 775;** northern catalpa full bloom 816**; cottony maple scale egg hatch 851;** panicle hydrangea first bloom 856**; fall webworm egg hatch 867;** fuzzy deutzia full bloom 884**; winged euonymus scale egg hatch 892;** chickory full bloom**, squash vine borer adult emergence 900; Japanese beetle first emergence 970;** littleleaf linden full bloom 1117; Rose-of-Sharon first bloom 1347**; pine needle scale egg hatch, 2nd gen. 1923; magnolia scale egg hatch 1938; banded ash clearwing borer adult emergence 2195.**

INTRODUCTION

The host for April 18, 2014 WHU was PDDC Director Brian Hudelson. Hudelson, interim Plant Diagnostic Lab manager P.J. Liesch and wildlife specialist David Drake were special guests. Participants in the discussions were representatives from the following counties: Brown (Vijai Pandian), Columbia (George Koepp), Douglas (Jane Anklam), Eau Claire (Erin La Favre), Marquette (Lyssa Seefeldt), and Pierce (Diana Alfuth).

HORTS' SHORTS

Agents reported the following issues to be of interest this week:

Northern parts of the state are still in winter mode, with twelve inches of snow reported in Douglas Co. and snow-drifts persisting in Pierce Co. However, in central and southern Wisconsin spring is emerging with grass greening and tree buds swelling. Some early spring bulbs are popping up in protected sites near buildings. Horticultural questions are increasing, and include questions on woodpecker activity and winter burn on evergreens.

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) bdh@plantpath.wisc.edu

A year-to-date PDDC report is attached to the end of this summary.

Greenhouse Plants

During the past four months there have been more greenhouse submissions than in the past, on a variety of issues.

Viruses

Tobacco mosaic virus (TMV) was found on petunia samples, not surprisingly, as other states have reported the virus on the species after a large supplier was found to have issues with the pathogen.

Tobacco Rattle Virus (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Tobacco_Rattle.pdf

Root and crown rots

Black root rot, caused by the fungus *Thielaviopsis,* was found on Calibrachoa. This specific root rot seen on greenhouse grown ornaments is very distinctive. The root system of the plants, very darkly discolored, is almost jet black. The distinctive spores of *Thielaviopsis* look like Tootsie Rolls®, making the fungus fairly easy to identify under the microscope.

Other root and crown rots caused by typical root rot pathogens were also identified in greenhouse plants.

Black root rot (Penn State): http://extension.psu.edu/pests/plant-diseases/all-fact-sheets/thielaviopsis-or-black-root-rot
Root rots on houseplants (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Root_Rots_on_Houseplants.pdf

Leaf spot

New Guinea impatiens samples were submitted with purpling spots on the foliage, a symptom typical for Pseudomonas bacterial leaf spot.

Bacterial leaf spot (UIUC): http://urbanext.illinois.edu/hortanswers/detailproblem.cfm?PathogenID=152

Foliar nematodes

Samples of nursery ornamentals, stored over winter in northern Illinois, were diagnosed with foliar nematodes. This problem, also seen on Wisconsin based materials, exhibited very discreet angular spots on leaves where the edges of the necrotic areas were basically the veins of the leaves. This is a typical pattern for foliar nematodes.

Foliar nematodes (PSA): http://extension.psu.edu/pests/plant-diseases/all-fact-sheets/copy_of_foliar-nematodes

Evergreens

Needle blight and needle cast were found on Douglas and concolor firs.

Rhizosphaera needlecast, a very common problem, was identified on spruce.

This winter, much winter injury has been seen on evergreens, signified by browning towards the tips of branches.

Conifer disease quick reference (UWEX):
http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Conifer_Disease_Quick_Reference.pdf

Vegetables

A fair amount of vegetable samples were submitted the past few months. Vegetables in storage had issues, notably southern blight on beets from a small fresh market vegetable producer. Southern blight, caused by *Sclerotium rolfsii*, is typically seen on ornamentals, uncommonly found on vegetables. The Osmocote® pellet-sized sclerotia, or resting structures, of the pathogen are very hard to eliminate once established in a garden plot.

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

SPECIALIST REPORT: Insect Diagnostic Lab Update

Presented by P. J. Liesch, Interim Assistant Faculty Associate, UW-Madison Department of Entomology and Interim Manager of the UW-Extension Insect Diagnostic Lab pliesch@wisc.edu

As temperatures rose above freezing during the past two weeks in the southern parts of the state, insects began to emerge and samples started to come in on the following:

Ants

Indoor ants and a few possible outdoor species nesting near an exterior wall are being seen. Pavement ants, swarming citronella ants, and one case of thief ants have been identified.

Ant ID (UW): http://www.entomology.wisc.edu/insectid/ant.php

Pantry insects

Some of the more common kitchen pests have been coming in: warehouse beetles, carpet beetles and Indian meal moths. To control these insects, it is important to find the source of the infestations and do some type of sanitation in the kitchen and pantry.

Kitchen insects (UW): http://www.entomology.wisc.edu/insectid/in_kit.php

Masked hunter bugs

Masked hunter bugs have been making an appearance in homes. A small assassin bug, it has a habit of covering itself with dust, lint or other debris to make itself look menacing, but it is harmless to humans.

Masked hunter bug (UWEX): http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Masked_Hunter_Bug.pdf

Emerald ash borer

With spring on its way, property owners are expressing concerns about emerald ash borer and raising questions about homeowner treatment options

Homeowner guide to emerald ash borer insecticide treatments (UWEX):
http://labs.russell.wisc.edu/pddc/files/Fact_Sheets/FC_PDF/Homeowner_Guide_to_EAB_Insecticide_Treatments.pdf

SPECIAL TOPIC: Wildlife

Presented by David Drake, Associate Professor and Extension Wildlife Specialist, UW-Extension Madison Forest and Wildlife Ecology ddrake2@wisc.edu

Despite lingering signs of winter in many parts of the state, spring is evident. Bird migration, amphibians and reptile emergence, and other animals waking up out of hibernation indicate the long winter is over.

Birds

Neotropical migrants, birds that migrate south for winter to the southern US, Central America or South America, have not yet made their northern appearance to Wisconsin for the breeding season nor have most of the warbler species been seen. There have been sightings of phoebe, a type of neotropical flycatcher, bluebirds, eastern meadowlarks and the yellow-rumped warbler. With warmer temperatures expected to come in on southernly winds next week, spring migrations of neotropicals are expected. As migrating birds follow

the tail winds, some may be seen in the northern part of the state soon. Migration is tied to day length as well as warming temperatures, spring rains and insect hatches.

Wisconsin bird nesting calendar (WDNR): http://dnr.wi.gov/topic/endangeredresources/documents/wisbirdnestingcalendar.pdf

Amphibians

Spring peepers and toads are becoming active after coming out of hibernation.

In the western part of Madison, populations of salamanders have been observed migrating from uplands where they spend the winter, to wetlands where they breed. Painted turtles have been seen basking in the sun.

Herps of Wisconsin (WDNR): http://dnr.wi.gov/topic/WildlifeHabitat/herps.asp

Nuisance animals

Chipmunks and ground squirrels

Chipmunks, 13-lined ground squirrels and groundhogs are now up and about, creating holes in the landscape. Holes about 1.5" in diameter that are observed in yards can most often be attributed to chipmunks and 13-lined ground squirrels. To manage the critters, use rat traps baited with peanut butter placed next to the hole. To prevent children from being injured by the traps, and prevent non-targeted animals from taking the bait, cover the baited trap with a Quonset hut shaped dome made of 2" x 2" wire mesh staked to the ground.

Chipmunk and ground squirrel (UWEX): http://wildlifedamage.uwex.edu/pdf/Chipmunk-GroundSquirrel.pdf

Groundhogs

Groundhogs may be managed by trapping in live traps, or they may be euthanized with gas bombs. If burrows are not under houses or other buildings, gas may be used to eliminate the population of groundhogs living in the burrows. To be effective, all of the burrow holes must be sealed, except for one, to prevent escape and also to concentrate the gas in the burrow. Drop the gas bomb into the unsealed burrow hole and then seal the hole.

Woodchuck (UWEX): http://wildlifedamage.uwex.edu/pdf/Woodchuck.pdf

Meadow voles

Meadow voles, active year round, have populations that fluctuate from year to year. Their damage to the landscape is most noticeable when their runway patterns on turf become evident after spring snow melts. The subnivian critters tunnel between the ground and the snow layer causing unsightly turf runways that fortunately will fade away when grass grows in spring. More permanent damage, however, may be found on low-lying branches and trunks of woody plants where girdled vegetation may be killed. If damage is significant and meadow vole control is necessary, mousetraps baited with peanut butter placed in surface runways or where activity is noticed may be somewhat effective.

Meadow voles do not cache food like chipmunks or woodland voles so poison baits, if used, must be concentrated to be effective on them. Anti-coagulant baits do not work on meadow voles because they do not eat enough of the material. Pesticide operators have access to more toxic bait that is placed in bait stations. Homeowners may have access to rodenticides at garden centers or big-box stores that need to be put in bait stations. Bait stations may be simple as a 12" long, 2" diameter PVC pipe with bait placed in the middle of the pipe, keeping bait dry and fresh and excluding non-targeted animals. If toxic bait or rodenticides are used for animal control, it is very important that affected animal carcasses be discarded properly so scavengers like owls, crows, hawks or opossums do not pick up them up. If non-targeted animals eat enough of the poisoned carcasses, the toxins can build up in them. Poisoned carcasses must be disposed of in secure trashcans, be buried or incinerated.

Meadowmouse control (UWEX): http://learningstore.uwex.edu/assets/pdfs/A2148.pdf

Moles

Because the ground is still frozen in many areas of the state, mole activity has not yet been reported. Once they become active, tunnels in the grass that collapse under foot will be noticed. If moles are a problem, the most effective control measure is the use of the Victor harpoon kill trap. When the explicit instructions are met, the trap should be successful in eliminating moles. Moles tend to live alone, except during breeding season, and a single

mole may be responsible for all the tunnels on one acre of land as it looks for earthworms, insects and other food sources.

Where can harpoon traps be purchased? They are not uncommon products, and can be found in garden centers, big box hardware/ garden stores and online, priced around $20.

Mole (UWEX): http://wildlifedamage.uwex.edu/pdf/Mole.pdf

Wildlife management website

The UW-Extension wildlife damage website contains species-specific factsheets on some of the more common wildlife problems such as moles, rabbits, turkeys and bats. More factsheets are being added on a regular basis; two upcoming topics will be on coyotes and deer. A general wildlife damage management factsheet, and one on the common laws and regulations applying to wildlife damage management' are also available. Spread the news that this new Wisconsin Wildlife Ecology & Management website is available at http://wildlifedamage.uwex.edu

Wildlife ecology and damage management (UWEX): http://wildlifedamage.uwex.edu

White nose syndrome in bats

White nose syndrome (WNS), an emerging fungal disease of hibernating bats causing high mortality in bat populations, was first detected in 2006 in bats hibernating in a cave near Albany NY. The disease often killing up to 100% of the bats hibernating in an affected cave, has very quickly spread westward. Wisconsin has been extremely vigilant in checking caves and mines the last few years for the fungus, and has been very proactive working with spelunkers to make certain that they are not tracking material from one cave to another. In March, 2014, WNS was found in a cave in Grant Co., in southwestern Wisconsin and it is likely the disease will spread throughout the state. There are four resident bat species hibernating in Wisconsin: the big brown bat, the little brown bat, the northern long-eared bat, and the eastern pipistrelle. If the bats become active and are able to leave hibernation, they are good for the season, but when they go back into the cave to hibernate over winter, they become susceptible to the disease.

When homeowners call requesting information on removing bats from their home, encourage them to ask the DNR or an experienced pest control operator to check the bats to see if they are infected with WNS. The fungus looks as if the bat nose was dipped in powdered sugar. If WNS is found on the roosting bats, contact the DNR. They will help the homeowner deal with the situation. It is very important to be vigilant on checking bats to prevent further spread of the disease.

White nose syndrome http://www.whitenosesyndrome.org
Deadly bat disease (WDNR) http://dnr.wi.gov/news/BreakingNews_Lookup.asp?id=3169

A client called with a problem of possible animals in the walls behind the insulation. They have been making a chirping sound, not like mouse chatter. What might they be?
If the sound is more of a chirping and scratching noise, it is possible they are bats. To prevent bats from coming into a building, it is important to seal any gaps on the outside of the house, from the foundation to the roof. Bats can enter holes ½" or larger; if their heads and shoulders can get in, the rest of the body will squeeze through the small hole. Chimneys must be capped and vents should have ¼" mesh hardware cloth sealed onto the pipe so gases can vent out but animals cannot enter. To manage bats already in the house, leave one gap open in the area the animals can be heard. Install a one-way exclusion device in the last hole. As the bats go out to feed at night, they can push the device to leave, but cannot re-enter. After one week, if the sounds are gone, remove the exclusion device and seal the hole.

Other options to determine how to identify the critters in the wall are to open the drywall where the sound is heard, or alternatively, if there is access to the wall cavity through the attic, send down a drop-down camera (available at many rental stores) into the wall. If the insulation has been destroyed or damaged, as mice or squirrels may do when nesting, the insulation may have to be refilled.

For bat exclusion, it is important to act now because it is illegal to exclude bats from June 1 through August 15 in Wisconsin. During that period, bats are nesting and their pups are being raised. If parents cannot return to their young, they will die. Dead bats in the attic during the heat of summer can create a very unwelcome odor. Bats are a struggling population in Wisconsin, and their reproduction is encouraged.

Is there a list of professionals to contact for bat removal from residential buildings?
The Wisconsin Bat Program has information on dealing with bats. The Wisconsin Wildlife Control Operators Association is a group trying to provide their members with better education on the ethical treatment of wildlife; members take a certification test and are listed by location of service. If looking for pest control operators in the Yellow Pages or internet, request references and experience information. (see "Off the Air" at the end of this summary for further discussion on this topic from the WDNR).

WI bat program http://wiatri.net/inventory/bats/
WI wildlife control operators association http://www.wwcoa.net

Winter severity index

The DNR has been monitoring wildlife populations throughout the state this past winter because of the sustained cold temperatures and heavy snow cover. If animals were not hibernating but active, they needed to burn energy to stay warm and required more food to compensate for energy used. Food sources were minimized because of the snow cover. The WDNR determined the winter severity index for white-tailed deer to be very severe and are monitoring the deer population. If sick, emaciated or dead deer are noticed, report to the WDNR. They are interested in knowing how non-migratory or non-hibernating wildlife, like deer and turkey, have fared this year.

Winter severity index (WDNR) http://dnr.wi.gov/topic/wildlifehabitat/documents/wsi.pdf
2013-2014 winter severity index (WDNR) http://dnr.wi.gov/topic/wildlifehabitat/documents/wsi2.pdf

DNR Keep Wildlife Wild campaign

A large marketing campaign, Keep Wildlife Wild, is being released by the WDNR. Through programming, public service announcements and a website, the public is encouraged to leave wildlife alone. Baby birds, rabbit nests, young mammals seemingly abandoned, are most often being cared for by their parents, although the parents may temporarily be out to find food. Instead of taking the young wildlife into homes or rehab centers, the public should be encouraged to visit the Keep Wildlife Wild website first and leave the animals alone.

Baby birds often fall out of nests. If baby birds are found, they may be returned to the nest, but rubber gloves should be used when picking up the bird. Human scent is not a deterrent for the adult birds, who have a poor sense of smell, but rather human scent is an attractant for predators such as fox, opossum or skunk. Alternatively, the baby bird may be left on the ground to be a food source for other animals of nature.

Keep wildlife wild (WDNR) http://dnr.wi.gov/topic/wildlifehabitat/documents/wsi2.pdf

Questions

Badgers

Badgers will be out and about soon. Do we know how territorial they are?
Little is known about the nocturnal, secretive badger that lives underground. Currently the WDNR is studying a group of them outfitted with radio collars to determine their home range and the size of the their populations. Our sense is they are relatively common, but the population is not large enough to saturate the state. Often seen as road kill on highways, farmers will see them actively working in friable, tilled fields. Badger dens may be found on south-facing slopes or earthen berms. They are a protected species in the state and may not be killed. If a badger is problematic in a residential situation, contact the local DNR biologist for assistance; they are not easily trapped

Digging up dirt about badgers (WDNR) http://dnr.wi.gov/wnrmag/2010/10/badger.htm

ANNOUNCEMENTS

Hort Team Meeting

All Hort Team members are highly encouraged to come to the meeting Friday, April 26 at the Dane Co. Extension office. There are only two meetings of the group each year, so it is important for as many members as possible to attend the discussion on steering the team's direction. Funding for lodging and mileage may be available. Contact Diana Alfuth with questions.

Responding to Horticultural Inquiries

The 2014 Responding to Horticulture Inquiries will feature update sessions, an "Answering Horticultural Inquiries in County Offices" session and more. These will be open to UW-Extension agents, educators, office staff and plant health advisors. RSVP to Brian Hudelson.

The program will be offered the following locations:

- **Dane Co. Olbrich Botanical Gardens** May 1, 2014, 8:30 AM – 4:30 PM
- **Brown Co., Brown Co. Extension Office, Green Bay** May 22, 2014, 8:45 AM – 4:55 PM
- **Eau Claire Co., Expo Center** May 28, 2014, 8:45 AM – 4:45 PM

Master Composting Instructors Workshop

May 3 in Superior, WI. Contact Jane Anklam for further information http://douglas.uwex.edu/2014/04/09/master-composting-instructor-workshop-2014/

Commercial Food Service Waste Recovery Roundtable

May 2. Contact Jane Anklam (see above) for more information.

FINAL NOTES

The full audio podcast of today's and archived WHU conferences can be found at http://fyi.uwex.edu/wihortupdate/

Next week's host will be Erin La Favre. The special guest will be Laura Jull, addressing new and exciting woody plants.

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 https://fyi.uwex.edu/weedsci/

UW-Extension Learning Store http://learningstore.uwex.edu

UW- Extension Wildlife Ecology and Damage Management http://wildlifedamage.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 Updates

Vegetable crop update newsletters 1 and 2 are now available on Dept. of Vegetable Pathology website http://www.plantpath.wisc.edu/wivegdis/contents_pages/veg_crop_updates.html

Topics covered in the newsletters include:

- Information on upcoming cover crop webinars.

- Early disease considerations for potato.
- Information on nitrogen decision making.
- Early season disease concerns in vegetable crops.
- Introduction to some of the disease forecasting tools offered through UWEX vegetable pathology.

Bat Specialists

This is a response from Heather Kaarakka, conservation biologist at the WDNR, regarding a request for a list of bat exclusion professionals following today's WHU wildlife discussion on bats:

Unfortunately because we are a state agency, we cannot recommend one company over another as it shows endorsement and favoritism. What we do offer is information on how to conduct exclusion yourself through our exclusion packet: http://wiatri.net/Inventory/Bats/Resources/BatExclusion.pdf. What we do when asked about who to hire is we try to compile a short list of companies in their area. We suggest they find a company that deals exclusively with bats, but there's only a couple companies in Wisconsin that do it. We also suggest they get a guarantee from the company that if bats are still getting into their house a year or two later that the company will return and continue the work for free. Exclusion is not a one-time deal, it often takes a couple years to completely seal them out.
We also highly encourage those looking to do exclusion to install a bat house or two because it acts as mitigation for removing bat habitat, and it also helps the exclusion process since they'll go into the bat house instead of finding their way back into the building. Here's our bat house info:
http://wiatri.net/Inventory/Bats/Resources/BuildingBatHouses.pdf
The national wildlife control operators associate is in the process of creating a training for exclusion and we may in the future be able to post a list of pest control operators in the state who have taken the training, similar to what BCI used to post; however I don't have a time frame for when we might be able to do that.
Finally, we're always looking for more roost sites, so if you could post a request for reporting known colony locations, we would be grateful. Attached is the Bats Wanted poster we use to solicit info. [*See end of summary*]
I'm sorry I can't help more about suggested companies.

PDDC UPDATE

UW-Extension/Madison Plant Disease Diagnostic Clinic (PDDC) Update

Brian Hudelson, Ann Joy, Erin DeWinter and Joyce Wu, Plant Disease Diagnostics Clinic

The PDDC receives samples of many plant and soil samples from around the state. The following diseases/disorders have been identified at the PDDC from January 1, 2014 through April 18, 2014.

PLANT/SAMPLE TYPE	DISEASE/DISORDER	PATHOGEN	COUNTY
BROAD-LEAVED WOODY ORNAMENTALS			
Oak (Red)	Phomopsis Canker	*Phomopsis* sp.	Florence
Poplar	Root Rot	*Pythium* sp.	Dane
Rose	Rose Rosette	*Rose rosette virus*	Dane
FRUIT CROPS			
Plum	Plum Pockets	*Taphrina communis*	Walworth
HERBACEOUS ORNAMENTALS			
Begonia	Gray Mold/Botrytis Blight Root/Crown Rot	*Botrytis cinerea* *Fusarium* sp.	Brown Brown
Calibrachoa	Black Root Rot Gray Mold/Botrytis Blight	*Thielaviopsis basicola* *Botrytis cinerea*	Waushara Waushara
Coral Bells (*Heuchera* sp.)	Foliar nematode	*Aphelenchoides* sp.	McHenry (IL)
Geranium	Gray Mold/Botrytis Blight	*Botrytis cinerea*	Jefferson
Geranium (Ivy)	Edema Heat Stress	None None	Ozaukee Ozaukee
Impatiens (New Guinea)	Pseudomonas Leaf Spot	*Pseudomonas syringae*	Kewaunee
Lily	Root/Crown Rot	*Pythium* sp., *Rhizoctonia* sp.	Marathon
Moss	Pythium rot	*Pythium* sp.	Waukesha
Petunia	Tobacco mosaic	Tobacco mosaic virus	Monroe
Speedwell (*Veronica* sp.)	Foliar nematode	*Aphelenchoides* sp.	McHenry (IL)
HOUSEPLANTS			
Ficus	Root Rot	*Fusarium* sp.	Dane
Natal Mahogany	Anthracnose	*Colletotrichum* sp.	Washington
Orchid (*Vanda* sp.)	Cymbidium Mosaic	*Cymbidium mosaic virus*	Dane

NEEDLED WOODY ORNAMENTALS			
Douglas-Fir	Swiss Needle Cast Winter Injury	*Phaeocryptopus gaeumannii* None	Jefferson Jefferson
Fir (Concolor)	Phyllosticta Needle Blight	*Phyllosticta* sp.	Waukesha
Pine (Austrian)	Diplodia Shoot Blight and Canker	*Diplodia pinea*	Dane
Pine (Scots)	Root Rot	*Pythium* sp., *Fusarium* sp., *Cylindrocarpon* sp.	Walworth
Spruce (Black Hills)	Rhizosphaera Needle Cast	*Rhizosphaera kalkhoffii*	Ozaukee
Spruce (Blue)	Phomopsis Canker Rhizosphaera Needle Cast Spruce Needle Drop Winter Injury	*Phomopsis* sp. *Rhizosphaera kalkhoffii* *Setomelanomma holmii* None	Ozaukee Florence, Ozaukee Ozaukee Florence
Spruce (Unidentified)	Cytospora Canker Rhizosphaera Needle Cast Winter Injury	*Leucocytospora kunzei* *Rhizosphaera kalkhoffii* None	Dane Dane Waukesha
Yew	Winter Injury	None	Waukesha
VEGETABLES			
Basil	Root Rot	*Pythium* sp.	Columbia
Beet	Southern Sclerotium Root Rot	*Sclerotium rolfsii*	Vernon
Carrot	Black Rot	*Alternaria radacina*	Dane
Garlic	Fusarium Clove Rot	*Fusarium* spp.	Dane
Potato	Pink Eye Potato Virus S Powdery mildew	Unknown *Potato virus S* *Oidium* sp.	Barron Barron Dane

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

WANTED

A STUDY OF THE BATS OF WISCONSIN IS BEING CONDUCTED. INFORMATION IS NEEDED ON THE LOCATION AND SIZE OF BAT COLONIES.

WHITE-NOSE SYNDROME IS A FUNGAL DISEASE THAT IS LETHAL TO BATS... THIS UNPRECEDENTED DISEASE IS CURRENTLY SPREADING TOWARD WISCONSIN AND SEVERELY THREATENS OUR CAVE-BAT POPULATIONS

BATS OF WISCONSIN

IF YOU KNOW OF LARGE NUMBERS OF BATS IN CAVES, MINES, BARNS, BRIDGES, CHURCHES, SCHOOLS, OR OTHER BUILDINGS

Contact
Wisconsin Bat Program
DNRbats@wisconsin.gov
(608) 266-5216
http://wiatri.net/inventory/bats

WISCONSIN DEPT OF NATURAL RESOURCES