

Plant Health Care Report

Scouting Report of The Morton Arboretum

July 6, 2018

Issue 2018.8

Welcome to the Plant Health Care Report (PHCR). My name is Sharon Yiesla. I am on staff at The Morton Arboretum Plant Clinic, and I will be responsible for compiling the newsletter again this year. Comments or concerns regarding PHCR should be sent to syiesla@mortonarb.org.

Our report includes up-to-date disease and insect pest reports for northeastern Illinois. You'll also find a table of accumulated growing degree days (GDD) throughout Illinois, precipitation, and plant phenology indicators to help predict pest emergence. Arboretum staff and volunteers will be scouting for insects and diseases throughout the season. We will also be including information about other pest and disease problems based on samples brought into The Arboretum's Plant Clinic.

We are continuing to use last year's format: full issues alternating with growing degree day (GDD) issues; focus on more serious pests; minor pests covered in shorter articles; alerts issued for new major pests. Readers who receive our email blasts that announce the newsletter is posted online will continue to receive them this year. To be added to the email list, please contact me at syiesla@mortonarb.org

Quick View

What indicator plant is in bloom at the Arboretum?

Panicked hydrangea (*Hydrangea paniculata*) is in early flower (fig 1)

Accumulated Growing Degree Days (Base 50): 1315.5 (as of July 5)

Accumulated Growing Degree Days (Base 30): 3289.5 (as of July 5)

Insects/other pests

- Foliar nematodes
- American dagger moth
- Galls-part 3
- Head-clipping weevils

Diseases

- *Guignardia* on Boston ivy
- Brown rot of stone fruit
- Oak leaf blister



Figure 1 Panicked hydrangea

Degree Days and Weather Information

We are once again offering Lisle readings right above the Arboretum readings. The spread between these two sites shows that temperatures can vary over a short distance, which means growing degree days can be quite variable as well.

As of July 5, we are at 1315.5 base-50 growing degree days (GDD). The historical average (1937-2016) for this date is 1089 GDD₅₀. Since January 1, we have had 23.79 inches of precipitation. Historical average (1937-2016) for precipitation Jan-June is 18.02 inches (this is a corrected value; it was incorrectly reported in the last issue).

Location	B ₅₀ Growing Degree Days Through July 5, 2018
Carbondale, IL*	1940
Champaign, IL*	1710
Chicago Botanic Garden**	1063
Chicago O'Hare*	1343
Kankakee, IL*	1491
Lisle, IL*	1383
The Morton Arboretum	1315.5
Northbrook, IL**	No report
Quincy, IL*	1858
Rockford, IL*	1289
Springfield, IL*	1819
Waukegan, IL*	1050

**Thank you to Mike Brouillard, Northbrook Park District and Chris Henning, Chicago Botanic Garden, for supplying us with this information.

*We obtain most of our degree day information from the GDD Tracker from Michigan State University web site. For additional locations and daily degree days, go to <http://www.gddtracker.net/>

How serious is it?

This year, articles will continue to be marked to indicate the severity of the problem. Problems that can definitely compromise the health of the plant will be marked “serious”. Problems that have the potential to be serious and which may warrant chemical control measures will be marked “potentially serious”. Problems that are seldom serious enough for pesticide treatment will be marked “minor”. Articles that discuss a problem that is seen now, but would be treated with a pesticide at a later date, will be marked “treat later”. Since we will cover weeds from time to time, we’ll make some categories for them as well. “Aggressive” will be used for weeds that spread quickly and become a problem and “dangerous” for weeds that might pose a risk to humans.

Pest Updates: Insects/other pests

Foliar nematodes (potentially serious)

Nematodes are not pathogens. They are microscopic roundworms, but they do cause disease-like symptoms. We have seen these affecting hostas, Siberian bugloss (*Brunnera*) and anemones this season. On bugloss and anemone, the symptoms are angular dark spots (fig. 2), cut off by the veins. On hosta, the symptoms are elongated areas of yellow or lighter green. These areas run parallel to the veins. Eventually the yellow areas turn brown and may become tattered.



Figure 2 Damage from foliar nematodes on bugloss

Foliar nematodes (*Aphelenchoides* species) move on the plant in a film of water. They can enter through the breathing pores (stomates) of the leaves. The damaged areas are often defined by the veins of the leaves as the nematodes cannot cross the veins.

Management: Since the nematodes move in water, it is important to avoid overhead watering. Soaker hoses should be used. Remove infested plants. Clean-up of plant debris is also important since the nematodes reproduce in plant tissues (leaves and buds, but not roots). It is also thought that they may survive in soil. There are no chemical controls at this time.

American dagger moth (minor)

American dagger moth (*Acrionicta americana*) caterpillars were found on the Arboretum grounds. The larvae feed on a range of hosts, including apple, basswood, maple, redbud, elderberry, and willow. This two-inch long caterpillar has long hair with five black tufts of hair, two pairs emerging mid body and one emerging from its posterior. The hairs on the body of the caterpillar can be either white or yellow (fig. 3). These hairs can cause irritation to skin, so the caterpillars should be handled carefully. The caterpillars have black heads. The insect overwinters as a pupa.



Figure 3 American dagger moth caterpillar

Management: None required since this insect rarely occurs in damaging numbers.

Galls - Chapter 3 (minor)

As we enter midseason, we continue to see galls. Again, all these are harmless, but it is good to be able to identify them. Only one new gall to report this week, although I am sure there are lots more we just haven't seen. Oak spangles are in the early stage of development. They are caused by a tiny wasp, and when the gall is fully developed, it looks like a little disk stuck on the lower side of the leaf (fig. 4).



Figure 4 Oak spangles

Management: None needed.

Head-clipping weevils (minor)

We are seeing head-clipping weevils (*Haplorhynchites aeneus*) cutting the flower heads off of coneflower (*Echinacea*) and *Helianthus*. The adult is a dark-colored weevil (a beetle with a snout). The insect is about $\frac{1}{4}$ inch long, and the snout is long and curved. The female uses her mouthparts, located at the end of the snout, to cut the flower stalk about 1 inch to 1 $\frac{1}{2}$ inches below the flower head. The flower stalk is not cut all the way through, so the flower head dangles on a thin piece of stem tissue (fig. 5). The dangling flower head is used by the adults for mating and egg-laying.



Figure 5 Damage from the head-clipping weevil

Once the flower head finally breaks off and falls to the ground, the larvae hatch and use the flower head for food. Mature larvae will move into the soil to overwinter, with pupation occurring in late spring.

Management: Good sanitation is the key in managing this pest. Timely removal of hanging flower heads and recently fallen flower heads will reduce the population for next year

Good websites: <https://bygl.osu.edu/node/1087>

<http://entomology.k-state.edu/extension/insect-information/crop-pests/sunflowers/sunflower-headclipping-weevil.html>

Pest Updates: Diseases

Guignardia on Boston ivy (minor)

Boston ivy (*Parthenocissus tricuspidata*) are showing up, infected with a leaf spot caused by *Guignardia bidwellii*. The spot is relatively round with a dark margin (fig. 6). The dark fruiting bodies can also be found in this leaf spot. This disease also affects Virginia creeper (*Parthenocissus quinquefolia*). While this disease is fairly minor on ornamental plants, it also causes black rot of grapes, which is more serious.



Figure 6 *Guignardia* on Boston ivy

Management: Removing fallen leaves may help to destroy the overwintering inoculum. On Boston ivy and Virginia creeper, removing badly infected leaves may help. Improving air flow may also help, since the spores are spread and germinate under moist to wet conditions.

Good website: <http://hort.uwex.edu/articles/guignardia-leaf-spot>

Brown rot of stone fruit (serious)

The Plant Clinic at The Morton Arboretum has received a few reports of brown rot on cherries. Brown rot is caused by the fungus *Monilinia fructicola* which can infect peaches, plums, cherries, apricots, and other *Prunus* species. The disease is sometimes seen as blossom blight – the browning and sudden collapse of blossoms. The infection can spread into shoots and twigs during the next several weeks resulting in shoot and twig blight. Cankers, which may be accompanied by a gummy ooze at their margins, form on twigs often causing twig dieback. Infections of fruit start as brown spots that rapidly infect the entire fruit, completely covering it with spores (fig. 7) and giving it a fuzzy look (we are seeing this symptom now). Infected fruits decay and shrivel; some will stay attached to the tree throughout winter while others will fall to the ground. These ‘mummies’ provide inoculum for the following spring.

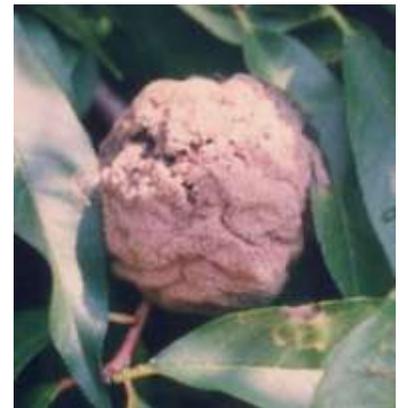


Figure 7 Peach infected with brown rot (photo S. Yiesla)

Management: Sanitation is crucial to control of brown rot. Prune out active infections immediately during dry weather. Don't forget to disinfect pruning tools. Rake and clean up debris under the tree during the summer to remove fallen leaves and fruit. Prune to promote good air circulation through the tree canopy. Wild or neglected stone fruit trees (e.g., wild plum and cherry) in the area are likely to have the disease and be sources of inoculum that should be

removed. Later in the year remove rotted fruit ‘mummies’ that are persistent, and prune out cankers and infected twigs. If damage is severe, fungicides need to be applied when blossoms first open in early spring.

Good websites: http://ohioline.osu.edu/hyg-fact/3000/pdf/HYG_3009_08.pdf

<http://www.ag.uiuc.edu/~vista/abstracts/a804.html>

Oak leaf blister (minor)

Oak leaf blister, caused by the fungus *Taphrina caerulescens*, has been found on bur oak.

Leaves develop wrinkled, raised, pale whitish-yellow blisters on their upper surface (fig. 8) and corresponding gray depressions on the lower leaf surface in spring and early summer. Blisters range from 1/10 of an inch to an inch in diameter. As they age and merge, the blisters become thickened and puckered and the leaf may become distorted. Red oak (*Quercus rubra*) is the most susceptible species. Oak leaf blister, like other *Taphrina* diseases, usually develops only during cool, wet springs, such as we had this year. Oak leaf blister mostly a cosmetic problem. Infected leaves become distorted and may prematurely drop. The disease usually slows during the summer.



Figure 8 Oak leaf blister

Management: The fungus survives the winter on twigs and bud scales. On oak, leaf blister is more unsightly than harmful, so control is not a high priority.

Good web site: <http://www.ag.uiuc.edu/~vista/abstracts/a663.html>



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The Plant Health Care Report is prepared by Sharon Yiesla, M.S., Plant Knowledge Specialist and edited by Fredric Miller, Ph.D., Research Entomologist at The Morton Arboretum and Professor at Joliet Junior College and Carol Belshaw, Arboretum Volunteer. Frank Balestri M.S., Plant Health Care Technician/Research Assistant is responsible for coordinating the scouts. The information presented is

believed to be accurate, but the authors provide no guarantee and will not be held liable for consequences of actions taken based on the information.

Thank you...I would like to thank the volunteers who will be scouting for us this season. They find most of the insects and diseases reported here. The Scouting Volunteers include: Maggie Burnitz, LeeAnn Cospier, Ingrid Giles, Pat Miller, Loraine Miranda, and Mary Noe . Your hard work is appreciated. Thanks also to Donna Danielson who shares her scouting findings.

Literature/website recommendations:

Indicator plants are chosen because of work done by Donald A. Orton, which is published in the book Coincide, The Orton System of Pest and Disease Management. This book may be purchased through the publisher at: <http://www.laborofloveconservatory.com/>

Additional information on growing degree days can be found at:

http://www.ipm.msu.edu/agriculture/christmas_trees/gdd_of_landscape_insects
http://extension.unh.edu/resources/files/Resource000986_Rep2328.pdf

The Commercial Landscape & Turfgrass Pest Management Handbook (CPM), for commercial applicators, and Pest Management for the Home Landscape (HYG) for homeowners from the University of Illinois, are available by calling (800-345-6087).

This report is available as a PDF at The Morton Arboretum website at

<http://www.mortonarb.org/visit-explore/news-events/arboretum-news?tid=259>

For pest and disease questions, please contact the Plant Clinic at (630) 719-2424 between 10:00 and 4:00 Mondays through Saturdays or email plantclinic@mortonarb.org . Inquiries or comments about the PHCR should be directed to Sharon Yiesla at syiesla@mortonarb.org .

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