

Plant Health Care Report

Scouting Report of The Morton Arboretum

July 26, 2013

Issue 2013.14

Our report includes up-to-date disease and insect pest reports, as well as color images, for northeastern Illinois. You'll also find a table of accumulated growing degree days throughout Illinois, precipitation, and plant phenology indicators to help predict pest emergence. The report is published bi-weekly on Fridays in April and August, and weekly May-July.

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 from homeowners and professionals.

If you have any comments or concerns regarding the Plant Health Care Report, please send them to Sharon Yiesla at syiesla@mortonarb.org.

This is the last weekly issue of PHCR. We go to bi-weekly in August. The next issue will be August 9.

Quick View

What indicator plant is in bloom at the Arboretum?

Rose of Sharon (*Hibiscus syriacus*) is starting to bloom (Cornell University lists this as being in bloom between 1400 and 1699 growing degree days Base 50)

Accumulated Growing Degree Days (Base 50): 1543 (as of July 25)

Accumulated Growing Degree Days (Base 30): 3789 (as of July 25)

Insects:

- Oak slug sawfly correction

Diseases:

- *Mycosphaerella* leaf spot
- Bull's eye leaf spot
- *Guignardia* on buckeye
- *Nectria* canker

Miscellaneous:

- Slime mold
- Is it really aster yellows?
- Environmental stress



Figure 1 Rose of Sharon (photo credit John Hagstrom)

Degree Days and Weather Information

As of July 25, we are at 1543 base-50 growing degree days (GDD). In 2012, when we were having an abnormally warm season, we had accumulated 2004 GDD base-50 by this date. On average we usually have accumulated 1565 GDD base-50 by this date, so we are still fairly close to average this year. From July 19-25 we have had .36 inches of rain.

Location	B ₅₀ Growing Degree Days Through July 25 , 2013	Precipitation (in) July 19-25 , 2013
Carbondale, IL*	2260	
Champaign, IL*	1945	
Chicago Botanic Garden**	1386 (7/22	1.19" (7/17-22)
Chicago O'Hare*	1672	
Kankakee, IL*	1839	
The Morton Arboretum	1543	.36"
Northbrook, IL**	1570	1.41 (7/18-24)
Quincy, IL*	2006	
Rockford, IL*	1626	
Springfield, IL*	2012	
Waukegan, IL*	1444	

**Thank you to Mike Brouillard, Northbrook Park District and Mike Annes, 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/>

New this year: To make the Plant Health Care Report (PHCR) more effective, each pest/disease article will be marked parenthetically this year 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 included in the PHCR, but 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, are 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. As the season goes on please give me feedback as to whether this system helps you or not. Contact me at syiesla@mortonarb.org.

Pest Updates: Insects

Oak slug sawfly correction

Thanks to Guy Sternberg for noting an error in the Oak slug sawfly article. Our article stated that the larvae would be 12 mm (1 inch) when mature. 12 mm is really ½ inch. Glad to know that someone has a better grasp of the metric than I do.

Pest Updates: Diseases

Mycosphaerella leaf spot (minor)

Purple leaf spots (figure 2) were found on the upper surface of leaves of tuliptree (*Liriodendron tulipifera*). The spots are caused by the fungus *Mycosphaerella nyssaecola*. This disease can cause defoliation in a severe infection. Since this is showing up so late in the season it should pose no real threat.

Management: Rake up and destroy infected leaves in the fall.



Figure 2 Mycosphaerella leaf spot

Bull's eye leaf spot (minor)

Cristulariella leaf spot or bull's-eye leaf spot was found on Bukhara fleece flower (*Fallopia baldschuanica*). This is called bull's eye leaf spot because the grayish-brown leaf spots have alternating light and dark concentric rings that almost look like a target (figure3). The spots have a light center and are up to an inch in diameter. This fungal disease kills plant tissue by creating toxic amounts of oxalic acid. Fluctuating summer temperatures and rainfall usually retard the growth of the fungus. There are many common hosts, including black walnuts, magnolias, maples, sycamores, tree-of-heaven, and tulip trees.



Figure 3 Bull's eye leaf spot

Management: Removing and discarding infected leaves will destroy inoculum to prevent secondary infections. Rake up and discard leaves in the fall.

Good websites: <http://www.ppd.l.purdue.edu/PPDL/weeklypics/10-30-02.html>

Guignardia on buckeye (minor)

Guignardia leaf blotch (*Guignardia aesculi*) (figure 4) was found on Ohio buckeye (*Aesculus glabra*). The disease causes reddish brown to brown lesions with a yellow border that blends into the normal green leaf tissue. Upon closer inspection with a hand lens, we have also seen the dark pycnidia (fungal fruiting bodies), which look like black pepper on the lesions on the upper surface of the leaf. The blotches will enlarge, coalesce, and may cover the entire leaf by the end of summer. Premature defoliation may follow on the most susceptible hosts. This disease eventually decreases a tree's ability to photosynthesize, but generally the disease doesn't become severe until the tree's annual growth has slowed or is complete. Therefore it does not do much harm to trees in the landscape, but it does make them unsightly.



Figure 4 *Guignardia* leaf blotch

Management: Removing fallen leaves may help to destroy the overwintering inoculum. Pruning trees to improve air flow may also help, since the spores are spread and germinate under moist to wet conditions.

Good websites: <http://ohioline.osu.edu/hyg-fact/3000/pdf/3044.pdf>

Nectria canker (potentially serious)

Coral spot, caused by a fungus called *Nectria cinnabarina*, was found on Arnold buckeye (*Aesculus arnoldiana*). There are other kinds of *Nectria* fungi that also infect trees. Coral spot causes leaves to wilt and wither. Slightly sunken cankers appear on the branches near wounds. The most easily identifiable characteristic are the pinkish-orange fruiting bodies that appear on the bark (figure 5). Coral spot is a wound parasite that infects trees through twig or stem injuries or branch stubs and then spreads to other parts of the tree. It also attacks trees that have been weakened by a lack of water, especially when they have recently been transplanted. Coral spot has an extremely wide range of hosts, but linden (*Tilia* spp.), buckeyes (*Aesculus* spp.), elm (*Ulmus* spp.), honey-locusts (*Gleditsia triacanthos*), and maples (*Acer* spp.) are especially susceptible.



Figure 5 Fruiting bodies of *Nectria* canker

Management: Prevention is the best control. Keep trees mulched and watered during dry periods, especially if they have recently been transplanted. Prune and destroy infected branches during

dry weather. Disinfect pruning tools between cuts. Avoid wounding the tree because the fungus enters the tree through wounds.

Good websites: <http://apps.rhs.org.uk/advicesearch/profile.aspx?PID=135>

<http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/help-for-the-home-gardener/advice-tips-resources/pests-and-problems/diseases/cankers/nectria-canker-and-dieback.aspx>

Miscellaneous

Slime mold (minor)

Fuligo septica, otherwise known as slime mold, is commonly seen on decaying wood material (mulch, fallen logs) during periods of wet weather. After rain events (or thorough watering), *F. septica* is bright yellow (and sometimes other colors) and slimy in appearance (figure 6). As the mold dries, it becomes off-white and finally becomes a tan-brown crust (figure7). Its pinkish-brown spores are dispersed by air movement when the dried mass is disturbed. The mass may get as large as 8 inches long and wide, but is relatively thin.



Figure 6 Slime mold

Management: This is more a novelty than a pest.

When the slime mold has dried, slide the blade of a shovel under it and put it in the garbage. Don't break it up or you will just disperse the spores.

Good website:

<http://www.extension.iastate.edu/newsrel/2003/mar03/mar0303.html>



Figure 7 Dried slime mold

Is it really aster yellows?

In the last issue of the Plant Health Care Report we reported on aster yellows on purple coneflower. Julia Thompson of the Missouri Department of Agriculture emailed me to say that there is another problem out there causing some similar symptoms on coneflowers. Apparently there is an eriophyid mite that can get into the flower and cause some distortion. Go to <http://bygl.osu.edu/content/distorted-coneflowers-0> for more information on this pest.

It is worth a closer look to see which problem your coneflower really has. If it aster yellows, you may to dig up the plant and destroy it. If you can find the mites in the flower, then cutting the plant down to the ground in the fall and getting rid of the debris may be all that is needed.

If that is not enough trouble for your coneflowers, Julia also tells us that another pest is being found in some areas. This is the head-clipping weevil, an insect that will actually clip off the whole flower head! Dave Shetlar reports the following in the P.E.S.T Newsletter:

“It is chewing holes into the center of the flower cone where it will insert an egg. The larva feeds on the dried flower remains. After clipping a flower and laying an egg, the weevil moves to another flower. This is done during the night, so you won’t see the actual clipping unless you go out at night with a flash light! “

“The weevil selects flowers that are in full bloom. It will move down the flower stem about three to six inches. It then uses its beak to make a series of holes around the hollow stem. Eventually, enough holes are made that the flower breaks off, but the felled flower usually hangs on by a few threads. The weevil then moves into the flower to lay her egg. As the clipped flower dries, the wind breaks the threads and the flower head drops to the ground where the larva finishes its development.

I have controlled this weevil to tolerable levels in the Chadwick Arboretum by simply removing the recently clipped flowers as they hang on the flower stems. I cup my hand over the flower as I remove it and most of the time the little weevil is still inside the flower! “

This pest has not been reported in northern Illinois yet, but we should be watchful.

Environmental stress

Last year we talked about stress quite a bit because of the 2012 drought. Stress has also been a topic of conversation this year due to flooding that occurred in the spring and early summer. Some of those concerns are now becoming visible. As predicted, we are seeing an increase in borers and scale. A variety of cankers, wood rots and root rots are showing up on stressed plants. In some cases, it seems that the drought may have accelerated decline in ash trees infested with emerald ash borer.



Figure 8 Stem dieback due to stress

Now the Plant Clinic is receiving reports of trees, shrubs and even perennials that seem to be declining in general (figure 8 and 9). Our pathologist has examined a number of lilacs that are showing twig die back. Many have stems that have no leaves, but are still alive. She has not found any pathogen on these plants, so we feel that the decline we are seeing may be due, at least in part, to environmental stress.

Why are we seeing these symptoms now? For some plants, last week’s heat wave may have been the stress that pushed them over the edge. Many plants flowered and fruited heavily this season. That

activity takes a lot of stored food, and some plants may have been over-extended by the heavy flower and fruit production. Other plants may have already been weak from other problems, and the stresses finally piled up to a critical level.

What can we do at this time? If there are stems that are truly dead, remove them as they can attract additional problems. For perennials that look bad, the first instinct may be to cut them down now instead of waiting until fall. While that gets rid of a plant that looks bad, it may lead to re-growth now at a stressful time (the heat of summer). Consider cutting perennials back in fall as usual. Water when needed. While we have had a very wet year this year, rain is becoming more sporadic and there may be some areas where supplemental watering is needed.



Figure 9 Thinning of tree crown due to stress

The Plant Health Care Report is prepared by Sharon Yiesla, M.S., Plant Clinic Assistant and edited by Stephanie Adams, M.S. Research Specialist in Plant Health Care; Fredric Miller, Ph.D., Research Entomologist at The Morton Arboretum and Professor at Joliet Junior College; Doris Taylor, Plant Information Specialist, and Carol Belshaw, an Arboretum Volunteer. 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 that are in this report. The Scouting Volunteers include: LeeAnn Cosper, Deborah Finch-Murphy, Anne Finn, Ann Klingele, Jack Leider, Loraine Miranda, Bill Sheahan and Kathy Stephens. Your hard work is appreciated.

Literature recommendation:

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/>

The Commercial Landscape & Turfgrass Pest Management Handbook (CPM), for commercial applicators, and the Home, Yard & Garden Pest Guide (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/tree-plant-advice.html>

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 PHC reports should be directed to Sharon Yiesla at syiesla@mortonarb.org .

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