

Plant Health Care Report

Scouting Report of The Morton Arboretum

June 28, 2013

Issue 2013.11

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.

The Plant Health Care Report will not be published on July 5th due to the holiday.

Quick View

What indicator plant is in bloom at the Arboretum?

Japanese tree lilac (*Syringa reticulata*) is in late bloom

Elderberry (*Sambucus canadensis*) is in full bloom (figure 1)

Accumulated Growing Degree Days (Base 50): 874.5 (as of June 27)

Accumulated Growing Degree Days (Base 30): 2560.5 (as of June 27)

Insects:

- Two-marked tree hoppers
- Even more galls

Diseases:

- *Guignardia*
- Frogeye leaf spot

Miscellaneous

- ...and now for the weather



Figure 1 Elderberry (photo credit: John Hagstrom)

Degree Days and Weather Information

As of June 27, we are at 874.5 base-50 growing degree days (GDD). In 2012, when we were having an abnormally warm season, we had accumulated 1177.5 GDD base-50 by this date. On average we usually have accumulated 896.5 GDD base-50 by this date. So we are still fairly close to average this year. From June 21 through 27 we have had 2.16 inches of rain.

Location	B ₅₀ Growing Degree Days Through June 27 , 2013	Precipitation (in) June 21-27 , 2013
Carbondale, IL*	1496	
Champaign, IL*	1246	
Chicago Botanic Garden**	765	3.68" (6/21-26)
Chicago O'Hare*	968	
Kankakee, IL*	1153	
The Morton Arboretum	874.5	2.16
Northbrook, IL**	869.5	5.12" (6/20-26)
Quincy, IL*	1253	
Rockford, IL*	962	
Springfield, IL*	1276	
Waukegan, IL*	796	

**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

Two-marked tree hoppers (minor)

Two-marked treehopper (*Enchenopa binotata*) nymphs were found on black walnut (*Juglans nigra*) shoots. They're about 1/8 inch long, dark gray to brown, and have spines sticking out of their abdomens (figure 2). The nymphs look quite different from the adults. Adults (figure 3) are dusky brown with two yellow spots on their backs (thus the name), have high, curved horns that point forward coming out of their thorax, and are less than 1/2 inch long. Both stages can, as you may imagine by their name, jump! Everyone should see two-marked treehoppers at least once in their lives, because they're so amusing the way they march along on twigs.



Figure 2 Two-marked tree hopper nymphs

Nymphs and adults suck plant juices, but don't do much damage. The damage appears as pale yellow stippling on the leaves. Treehoppers do, however, produce honeydew which encourages sooty mold. Female adults can injure twigs by laying eggs in slits made in the bark. Black locust, bittersweet, wafer-ash, redbud, and viburnum are also hosts for this insect.



Figure 3 Two-marked tree hopper adults

Management: Control is not necessary.

Good website:

http://www.na.fs.fed.us/spfo/pubs/howtos/ht_walnut/treehop2.htm

Even more galls (minor)

The steady parade of galls continues this week. Remember that most galls do little harm, and they are presented here so you can recognize them. Treatment is not needed. Oak trees are common hosts for galls, and this week our scouts reported two galls showing up on oak trees. The oak bullet gall (figure 4) is made by a tiny wasp called a cynipid. The wasp is 1/12th to 1/8th of an inch long, winged and is brown or black in color. The wasps are rarely seen, but the galls are fairly obvious on the stems of the oaks. The other gall



Figure 4 Oak bullet gall

showing up on oaks is called spangles and is also caused by a cynipid wasp. These galls show up as little discs on the lower side of the leaf (figure 5) and may be mistaken for scale insects. Spangles often get noticed in late summer when they pop off the leaf and fall to the ground in large numbers.

The oaks aren't the only plants sporting galls this week. Linden spindle gall is showing up on American linden (*Tilia americana*). These galls are thin and elongated and stand up from the surface of the leaf (figure 6).

A gall caused by a mite is showing up on fragrant sumac (*Rhus aromatica* 'Gro-low'). This gall presents as numerous small bumps in the leaves (figure 7).

A gall midge is causing galls on common hackberry. Go to <http://bugguide.net/node/view/323266> to see photos of this hackberry gall midge.



Figure 5 Spangles on oak leaf



Figure 6 Spindle gall on linden



Figure 7 Galls on fragrant sumac

Pest Updates: Diseases

***Guignardia* (minor)**

Last week, our scouts found a leafspot (figure 8) on Boston Ivy (*Parthenocissus tricuspidata*). This spot is caused by *Guignardia bidwellii*. The spot is relatively round with a dark margin. 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, there is a closely related pathogen that causes black rot of grapes which is more serious.

Management: Removing fallen leaves may help to destroy the overwintering inoculum. On Boston ivy and Virginia creeper, removing badly infected leaves



Figure 8 *Guignardia* on Boston ivy

may help. Pruning trees to improve air flow may also help, since the spores are spread and germinate under moist to wet conditions.

Good websites: <http://extension.psu.edu/pests/plant-diseases/all-fact-sheets/boston-ivy-leaf-spot>

Frogeye leaf spot (potentially serious)

Crabapples are showing symptoms of frogeye leaf spot (figure 9). Frogeye is caused by the fungus *Botryosphaeria obtusa*, which also infects the fruit and bark. Right now, the disease appears as round, purple leaf spots with tan centers. The spots turn gray-brown as they age and can develop concentric circles, hence the name frogeye.



Figure 9 Frogeye leaf spot

Early frogeye is sometimes mistaken for apple scab, and the two may occur together, but the symptoms are quite different. Frogeye spots also contain pepper-like fruiting structures (pycnidia) that are visible with a hand lens in mature lesions. The frogeye disease level varies from year to year and is worse after very cold winters.

Management: Remove dead or diseased branches and prune susceptible trees to open dense crowns. This will increase air flow and keep the leaves drier. The fungus needs periods of cool and wet condition in order to infect the leaves; increasing airflow will prevent these favorable conditions. Fruits that become spotted or dried (mummified) are another overwintering inoculum source that should be removed if possible. Choose resistant cultivars whenever possible for future plantings.

Good website: http://www.ca.uky.edu/agcollege/plantpathology/ext_files/ppfshtml/ppfs-fr-t-3.pdf
<http://extension.umass.edu/landscape/fact-sheets/frogeye-sphaeropsis-leaf-spot>

Miscellaneous

...and now for the weather

The weather is a constant topic of conversation. In 2012, we were dealing with a prolonged drought. This year, we can't seem to turn the tap off. This changing weather pattern has pros and cons to it. During the drought we tried to keep up with watering our plants, but we know that despite our best efforts, the drought did damage to some of them. On the up side, the low rainfall led to fewer disease problems for 2012.

This year's extremes in rainfall have led to flooding in some areas. In April, many of the western suburbs experienced unbelievable rains. Even the Arboretum had to close for four days. This week, some of the northern counties have been inundated with huge rains. While this helps recharge the water supply in soil, it can lead to additional stress on plants. The drought could have damaged roots last year making it more difficult for trees to take up enough water. Having a good supply of water in the soil can ease that burden, but trees that have been standing in flood waters may experience additional root damage. That

damage can vary greatly depending on the duration of the flooding, the age of the tree (very old and very young trees often suffer more) and the health of the tree before the flooding. So while the rains may have aided some trees, they may have added an extra stress for others. Time will tell. We may be seeing stress symptoms showing up on woody plants for the next few years.

Looking forward into summer, we need to keep watching the weather. If the rains do stop and the heat comes on again, we may need to consider watering plants. It is hard to think about that now while there is so much water around, but things could change drastically as the summer progresses. If the weather suddenly turns hot and dry, we could see our water surplus turn into a deficit. We need to base our watering needs on the current water supply, not the amount of water that fell a month or two ago. Northern Illinois is a big region and rainfall has varied quite a bit across that region.

To read more on how flooding can affect trees, visit the U.S. Forest Service's "Flooding and Its Effects on Trees" website http://www.na.fs.fed.us/spfo/pubs/n_resource/flood/table.htm

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, Arnis Krusow, 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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