

Plant Health Care Report

Scouting Report of The Morton Arboretum



THE
CHAMPION
of TREES

July 7, 2023

Issue 2023.8

For comments regarding PHCR, or to subscribe to email alerts regarding posting of new issues, contact me at syiesla@mortonarb.org. Our report includes up-to-date disease and insect pest reports for northeastern Illinois. Contact us via email at plantclinic@mortonarb.org or by phone at 630-719-2424 (Monday thru Friday, 10 am to 4pm). The Plant Clinic is also open to walk-ins, but a [timed entry](#) and payment of entry fee is required for non-members.

Quick View

What indicator plant is in bloom at the Arboretum?

Wild hydrangea (*Hydrangea arborescens*) is in full flower (fig. 1)

Accumulated Growing Degree Days (Base 50) at The Morton Arboretum: 1093 (as of July 6).

Insects/other pests

- Milkweed beetle and milkweed bug
- Head-clipping weevil
- Aphids on native plants
- Viburnum leaf beetle update
- Galls, chapter 2

Miscellaneous

- Herbicide damage



Figure 1 *Hydrangea arborescens*

Soil temperatures around Illinois (from Illinois State Water Survey)

This information will be provided all season. For data from other reporting stations, go to <https://warm.isws.illinois.edu/warm/soil/> (you will need to set up an account to access data.)

Max. Soil temps For 7/6/2023*	St. Charles reporting station (north)	Champaign reporting station (central)	Carbondale reporting station (south)
2-inch, bare soil	85.9	98.5	92.8
4-inch, bare soil	84.2	89.8	87
4-inch, under sod	82.7	88.8	85
8-inch, under sod	78	82.5	81

* This is the maximum soil temperature recorded the day prior to publication of PHCR.

Degree Days (current and compared to past years) and rainfall

As of July 6, we have 1093 base-50 growing degree days (GDD) at The Morton Arboretum. The historical average (1937-2022) for this date is 1086 GDD₅₀. The table below shows a comparison of GDD in different years. We are comparing the GDD₅₀ reported in this issue with the GDD reported in the first issue of 2022, 2017 and 2016. These years were selected since publication dates of the first issue were within a day or two of each other. Glencoe, and Waukegan (60085) were not used in 2017 and 2016, so there is 'no report' from those stations.

Location	GDD as of 7/6/2023	GDD as of 7/7/2022	GDD as of 7/6/2017	GDD as of 7/6/2016
Carbondale, IL*	1814	1943	1988	1934
Champaign, IL*	1494	1586	1649	1591
Chicago Botanic Garden**	No report	1256 (7/6)	No report	1092
Glencoe*	674	885	No report	No report
Chicago O'Hare*	1315	1411	1293	1367
Kankakee, IL*	1303	1379	1416	1384
Lisle, IL*	1338	1437	1336	1395
The Morton Arboretum	1093	1325	1148	1141
Quincy, IL*	1582	1665	1716	1750
Rockford, IL*	1231	1253	1183	1210
Springfield, IL*	1523	1632	1701	1679
Waukegan, IL* (60087)	1102	1187	1036	1154
Waukegan, IL (60085)	1183	1270	No report	No report

**Thank you to 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 <https://gddtracker.msu.edu/>

Seasonal precipitation

Seasonal precipitation (rain and melted snow) in inches.			
	2023	2022	Historical average (1937-2022)
Jan	2.85	1	1.935
Feb	4.88	2.61	1.775
Mar	2.29	3.88	2.536
April	2.23	3.88	3.667
May	.79	6.1	4.206
June	1.23	2.51	4.2
July	3.71 (thru 7/6)	5.7 (whole month)	3.9 (whole month)
Aug			
Sept			
Year to date	17.98 (thru 7/6)	25.68	22.21

How serious is it?

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”. “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

Examples of insects that may emerge soon in northern Illinois (based on growing degree days)			
GDD (base 50)	insect	Life stage present at this GDD	Type of damage
Possibly 1200-1300	Viburnum leaf beetles	Adults emerging	Chewing on leaves
1200-1800	Fall webworm	Caterpillars feeding, but webbing not seen yet	Chewing on leaves
1950	Magnolia scale	Crawlers begin to emerge	Feeding on sap

Milkweed beetle and milkweed bug (minor)

Milkweed has become a popular plant to grow in home gardens as well as native areas. Many people are hoping to attract monarch butterflies. Sometimes uninvited guests show up too. A few of these out there already. I am talking about milkweed bugs and milkweed beetles.

Red milkweed beetles (*Tetraopes tetraphthalmus*) are 1/2 to 3/4 inch-long and rosy red with black spots and long black antennae (fig. 2). Adults feed on milkweed leaves; while in the larval stage, this insect bores into and feeds on milkweed stems and roots.



Figure 2 Milkweed beetle

Milkweed bugs also attack milkweed. There are two species of milkweed bug, the large milkweed bug (*Oncopeltus fasciatus*) and the small milkweed bug (*Lygaeus kalmia*). These two insects look very much alike, both sporting bright orange-red and black colors (fig. 3). Young bugs (nymphs) also have these colors, but lack fully developed wings. Both the adults and the nymphs will feed on the milkweed seeds, and it is not uncommon to see groups of them huddled together on the milkweed fruits. These insects are often mistaken for boxelder bugs which are similar in color.



Figure 3 Milkweed bug adults and nymphs

Management: None usually needed as relatively little damage is done.

Good websites: <http://bugguide.net/node/view/504>
<http://bugguide.net/node/view/460>
<https://bugguide.net/node/view/2966>

Head-clipping weevils (minor)

While you are out in your favorite native area, look for head-clipping weevils (*Haplorhynchites aeneus*) to be out soon. They are often found cutting the flower heads off of *Silphium* species (cup plant, rosinweed, compass plant and prairie dock). But this pest is not limited to species of *Silphium*. In past years, we have seen them on other members of the Aster family, including *Echinacea* (coneflowers) and *Helianthus* (sunflowers). Last year our scouts captured an adult insect! So now we have a decent picture of this pest (fig. 4). The adult is a dark-colored weevil, a beetle with a snout. The insect is about ¼ 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 ½ inches below the flower head. The flower stalk is



Figure 4 Adult head-clipping weevil

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.

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. While the insect does not do much long-term damage to the plant, it will spoil your enjoyment of the flowers.



Figure 5 Flower clipped by the head-clipping weevil

Good websites: <https://bygl.osu.edu/node/1087>
<http://entomology.k-state.edu/extension/insect-information/crop-pests/sunflowers/sunflower-headclipping-weevil.html>

Aphids on native plants (minor)

This growing season, we have seen aphids on everything from trees to perennials. We have seen many species (green ones, black ones, pink ones, even woolly ones). Most of the populations we have seen this year have been unusually large. Now as we get into mid-summer, we are starting to see large populations of aphids on some of our native plants like common milkweed (*Asclepias syriaca*) and cup plant (*Silphium perfoliatum*). The species we are seeing on our native plants are the yellow and red species. The yellow ones (*Aphis nerii*) are called oleander aphids or milkweed aphids (fig. 6). The red ones (fig. 7) are most likely a species of *Uroleucon*, which feed on members of the Aster family (to which many of our late season natives belong). They are all tear-drop shaped and have two cornicles on the back end (looks like twin tail-pipes). Aphids are small, about 1/16”.



Figure 6 Yellow aphids on milkweed stem

These insects suck out sap from the leaves, and in many cases, stems. The feeding can lead to curled or distorted leaves (but it does not do so in every case). Aphids also produce honeydew, which is a sticky substance. Sticky leaves are often noticed before the insects themselves. Aphid damage is generally fairly minor, but they can be vectors for viruses.

Management: Aphids are relatively easy to manage. They tend to feed in groups. Clipping off parts of the plant that are heavily infested can get rid of the whole population quickly. Spraying the plant with a strong stream of water from the garden hose may also dislodge much of the population. I did this recently with a heavy population of the red aphids on my cup plant and found it to be a very effective and satisfying process. There are also natural predators, like lady bugs, that will feed on aphids, so avoid insecticides and let the good insects do their job. The Plant Clinic at the Morton Arboretum has received several photos lately of ladybugs in the pupal stage, ready to become adults. So, help is on the way!



Figure 7 Red aphids

Good websites:

<http://www.mortonarb.org/trees-plants/tree-and-plant-advice/help-pests/aphids>

Viburnum leaf beetle update (serious)

We expect viburnum leaf beetle adults to emerge soon (if they are not out already). The beetles are small (1/3 inch) and brown to golden brown (fig. 8). They are not easily noticed, but their feeding is. They will pick up where the larvae left off.



Figure 8 Adult viburnum leaf beetle

Management: Adults can be treated with a variety of insecticides. Insecticidal soap worked on the larvae, but it is **not** effective on the adults. They have hard bodies and insecticidal soap works primarily on soft bodied insects. Do not spray for the adults until they are present. Insecticides applied at this time are not preventative.

In fall, look for egg-laying sites. The actual eggs are not visible. The eggs are laid in small holes on the ends of twigs, and then the holes are capped. The caps stand out against the bark of the twig, making them easy to see. Cut out the twig tips that have the eggs in them, and get them out of the garden completely. This will greatly reduce the number of insects you have next year. If you have a number of shrubs, remember that you have all fall and winter to remove these twigs. Getting them in the egg stage greatly reduces the need to spray next year. We can't stress enough the importance of this technique. This is the most effective management approach and the least toxic to beneficial insects.



Figure 9 Egg-laying sites

Galls, chapter 2 (minor)

We feature galls from time to time, just so people get to know what these odd structures are. They are caused by a variety of tiny insects and mites. The feeding of these little critters, stimulates the host plant to grow tissue around them. Thus, the gall is formed. Galls look weird, but the overwhelming majority of them do no long-term harm to the host.

Every year, the oaks have more than their fair share of galls and this year is no different. We have three oak galls to feature in this issue. Jumping oak gall is very prevalent this year. Jumping oak gall is caused by the gall wasp *Neuroterus saltatorius*. They start out looking like small beads (fig. 10) on the back of oak leaves. Later, the galls will pop off and fall to the ground. The activity of the larvae inside will cause the galls to jump around. This is free entertainment from the insect world. A small brown spot remains on the leaf where the gall was once attached. Since no evidence of the gall remains, people assume that the tree has a fungus.

Oak spangles are another favorite showing up this year. You have to love a name like spangles. They are also caused by a tiny gall wasp (*Neuroterus* species), and when the gall is fully developed, it looks like a little disk (fig. 11) stuck on the lower side of the leaf (like spangles on a costume).

Oaks are also showing off a gall that we don't always see as often, the wool sower gall (fig. 12). This one is eye-catching because it is creamy white (with some small, pink or tan colored areas) and fairly large (often around an inch or so in diameter). It often looks a bit like a cotton ball. This one is caused by another tiny, non-stinging wasp (*Callirhytis seminator*). The gall is really a group of small galls together, each one with a developing wasp inside, like a wasp apartment house.

Good website: <https://ohioline.osu.edu/factsheet/ENT-60>



Figure 10 Jumping oak galls



Figure 11 Oak spangles



Figure 12 Wool sower gall

Miscellaneous

Herbicide damage

We have seen a number of plants this year with symptoms that could be attributed to herbicide (weed killer) damage. I use the term 'could be attributed to' because herbicide damage is difficult to prove. Some labs will test for herbicide residue, but testing can be expensive, unless you can narrow down which chemical you suspect. Other causes like cold damage and viruses can sometimes cause similar symptoms.

Herbicides, like 2, 4-D and dicamba are commonly found in a number of products, especially those for broadleaf weed control in lawns. These herbicides are growth regulators, and damage from them often shows up as distorted growth. These chemicals have the potential to volatilize into the air and be carried on the wind to off-target species. This spring and early summer provided us with many windy days where this type of drift could occur. Also, very hot temperatures can increase volatilization. We have experienced some very hot days this spring and summer. Herbicide labels often say to avoid using the product when the temperature exceeds a certain level to reduce damage to off-target plants. Luckily, most landscape plants will outgrow the damage from herbicide drift as long as they were not sprayed directly.

The bottom line is to read the label directions and follow them carefully. Not only can dicamba do damage if it volatilizes and drifts, it can also enter the root systems of trees and shrubs if the product is applied in the root zone. Products that contain dicamba have a special warning on the label regarding use around trees and shrubs. If you are using any herbicide, read the label carefully to see what active ingredient is in the product. When hiring landscapers and lawn care companies to treat lawns, ask what product they use and ask also which active ingredient(s) it contains.

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The Plant Health Care Report is prepared by Sharon Yiesla, M.S., Plant Knowledge Specialist and edited by Stephanie Adams, Ph.D., Plant Health Care Leader; Fredric Miller, Ph.D., Research Entomologist at The Morton Arboretum; and Carol Belshaw, 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 all the staff and volunteers that report disease and pest problems when they find them. Your hard work is appreciated. Our volunteer scouts for 2023 are Deb Link, Maureen Livingston, Loraine Miranda, and Molly Neustadt.

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.](#)

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

This report is available as a PDF at The Morton Arboretum website at <https://mortonarb.org/about-arboretum/plant-health-care-report/>

For pest and disease questions, please contact the Plant Clinic. You can contact the Plant Clinic via email at plantclinic@mortonarb.org. Emails will be answered during business hours Monday through Friday. You can call the Plant Clinic by phone (630-719-2424) or visit in person, Monday thru Friday 10 am to 4 pm. On weekends and national holidays, Arboretum members need [a timed entry ticket](#) to enter the Arboretum and visit Plant Clinic in person. Non-members need [a timed ticket](#) every day and must pay the entry fee.

Inquiries or comments about the PHCR should be directed to Sharon Yiesla at syiesla@mortonarb.org.

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2023 Plant Health Care Report Index



Following is an index of the various subjects in this year’s report. The number after each subject is the report number. For example, using the chart below, Cicadas..... 1 means that it was discussed in the PHCR 2023.01 or the newsletter dated April 7, 2023. The index is updated with the publication of each full issue and is included at the end of each full issue.

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