

Plant Health Care Report

Scouting Report of The Morton Arboretum



THE
CHAMPION
of TREES

July 22, 2022

Issue 2022.9

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. This year we resume our on-grounds scouting program. Plant Clinic staff and volunteers are back working on-site this year. Contact us via email at plantclinic@mortonarb.org or by phone at 630-719-2424 (Monday thru Friday, 10 am to 4 pm). The Plant Clinic is also open to walk-ins, but a [timed entry](#) for the Arboretum is required and non-members need to pay the entry fee.

Quick View

What indicator plant is in bloom at the Arboretum?

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

Accumulated Growing Degree Days (Base 50): 1648 (as of July 21)

Insects

- Magnolia scale
- Aphids on native plants
- Fall webworm

Weeds

- Native 'weeds'

Miscellaneous

- Proper watering: soaker hoses and root feeders

Upcoming Education

- Upper Midwest Invasive Species Conference (Oct 25-27, 2022)



Figure 1 Panicked hydrangea

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://www.isws.illinois.edu/warm/soil/> (you will need to set up an account to access data.)

Max. Soil temps For 7/21/2022*	St. Charles reporting station (north)	Champaign reporting station (central)	Carbondale reporting station (south)
2-inch, bare soil	91.7	105.4	103.9
4-inch, bare soil	94.3	98.8	93
4-inch, under sod	82	88.9	89
8-inch, under sod	76.8	83.1	85.4

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

Degree Days (current and compared to past years)

As of July 21, we have 1648 base-50 growing degree days (GDD) at The Morton Arboretum. The historical average (1937-2021) for this date is 1451 GDD₅₀. The table below shows a comparison of GDD in different years. We are comparing the GDD reported in this issue with the GDD reported in 2021, 2015 and 2014. These years were selected since publication dates of the first issue were within a day or two of each other. Glencoe, Lisle and Waukegan (60085) were not used in 2015 and 2014, so there is 'no report' from those stations.

Location	GDD as of 7/21/22	GDD as of 7/22/21	GDD as of 7/23/15	GDD as of 7/24/14
Carbondale, IL*	2355	2147	2345	2194
Champaign, IL*	1937	1833	1654	1883
Chicago Botanic Garden**	1621	1679	1252 (7/22)	1294.5 (7/23)
Glencoe*	1193	1216	No report	No report
Chicago O'Hare*	1749	1757	1633	1672
Kankakee, IL*	1708	1686	1673	1680
Lisle, IL*	1776	1751	No report	No report
The Morton Arboretum	1648	1578.5	1409	1432
Quincy, IL*	2036	1949	2064	1998
Rockford, IL*	1573	1620	1396	1432
Springfield, IL*	2002	1903	2046	1947
Waukegan, IL* (60087)	1496	1557	1329	1433
Waukegan, IL (60085)	1587	1645	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.			
	2022	2021	Historical average (1937-2021)
Jan	1	1.5	1.946
Feb	2.61	1.49	1.765
Mar	3.88	1.24	2.520
April	3.88	1.39	3.665
May	6.10	3.34	4.18
June	2.51	6.57	4.2
July	2.01 (as of 7/21)	2.04 (whole month)	3.87 (whole month)
Aug			
Sept			
Year to date	21.99 as of 7/21	17.57 (Jan thru July)	22.17 (Jan thru July)

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
1200-1800	Fall webworm	Caterpillars feeding, but webbing not seen yet	Chewing on leaves
1950	Magnolia scale	Crawlers begin to emerge	Feeding on sap

Magnolia scale (potentially serious)

Magnolia scale (*Neolecanium cornuparvum*) has been an ongoing problem in northern Illinois for a number of years now and this year is no different. It is worth reviewing this pest as the crawlers are expected out in the near future. The [U.S. National Phenology Network](#) reports that, based on growing degree days, they anticipate the emergence of the crawlers in the Chicago region within the next week or two.

This is an unusual scale insect because they’re so big and easy to see! These insects have sucking mouthparts and extract sap from the host plant’s branches and twigs. As with most

soft scale infestations, plant leaves are often covered with sooty mold, a black fungus that grows on the honeydew excreted by the scales. Sooty mold cuts down on photosynthesis because it blocks sunlight from the leaf.

Initially, maturing magnolia scale are shiny, flesh-colored to pinkish brown, and smooth, but they become covered with a white mealy wax over time. This wax is lost at the time crawlers emerge. Adult females give birth to live young, called crawlers, in late August or early September. This year it is more likely they will be out by early to mid-August. Some universities report that the beginning of emergence should start around 1900 to 1950

GDD. We already have **???? GDD** due to several recent bouts of extreme heat. The crawlers are tiny, flattened, and vary in color from yellow to reddish-brown (fig. 2). The crawlers settle on one- to two-year-old twigs to feed and remain there through the winter.

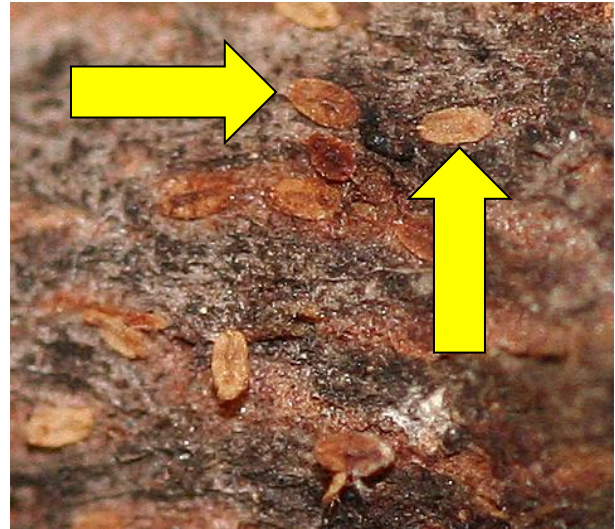


Figure 2 Magnolia scale crawlers (arrows)

Management: Late summer into fall is a good time to tackle this pest as the crawlers are very vulnerable to insecticide treatments (such as insecticidal soap and summer oils). These products will kill the crawlers, but they must come in contact with them to destroy them. Once crawlers begin to emerge it may be wise to wait a few days for a larger number of them to emerge, so that the spray will kill as many as possible. Because they will not all emerge at once, it would be wise to continue to check for live crawlers a little later in the season, and be prepared to do additional treatments when more of the population is out. Product labels will give timing on repeat applications. Remember that we are targeting the crawlers, not the adults. The adults will die on their own, from old age. It should be noted that adult scale will remain in place even when dead. Don't spray with the intention of killing the adults.

Good web site: <https://mortonarb.org/plant-and-protect/tree-plant-care/plant-care-resources/magnolia-scale-neolecanium-cornuparvum/>

Aphids on native plants (minor)

During this growing season we have had scattered reports about aphids on a variety of plants. Now as we get into late summer, we are getting a few reports of aphids on some of our native plants like common milkweed (*Asclepias syriaca*) and cup plant (*Silphium perfoliatum*). There are a number of different species of aphids that vary in color: yellow, green, pink, black. At this time of year, it is fairly common to see the yellow and red species. The yellow ones (*Aphis nerii*)

are called oleander aphids or milkweed aphids (fig. 3). The red ones (fig. 4) 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”.

These insects suck out sap from the leaves. The feeding often leads to curled or distorted leaves. Uncurling the leaves exposes the insects. In many cases, these pests of our native plants are found boldly standing out in the open, lined up along main stems.

Aphids produce honeydew, which is a sticky substance. Sticky leaves may be 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. Some species do not stay with a particular plant for the whole season. By the time the damage is noticed, the insects may have moved on. Aphids sometimes feed in groups at the ends of branches. Clipping off those branch ends can get rid of the whole population quickly. If they are found in other locations, spraying the plant with a strong stream of water from the garden hose may also dislodge much of the population. There are also natural predators, like lady bugs, that will feed on aphids, so avoid insecticides and let the good insects do their job.

Good websites: <https://mortonarb.org/plant-and-protect/tree-plant-care/plant-care-resources/aphids/>

Fall webworm (minor)

It's about time to be seeing fall webworm (*Hyphantria cunea*). We don't have any reports of this pest yet, but they are often overlooked when they are small. So, it is time to be looking. Despite the name, this insect shows up more in mid to late summer. Caterpillars start to come out around GDD 1200, but the webbing typically is not produced until closer to GDD 1800, so the caterpillars may be eating for a few days before the telltale webbing shows up. This caterpillar is known to feed on more than 100 species of deciduous trees. Preferred hosts include hickory, ash, birch, black walnut, crabapple, elm, maple, oak, and pecan. The caterpillars are pale green to yellow and covered with long hairs. There are two races, black-headed and red-headed. The black-headed webworms are supposed to appear about a month earlier than the red-headed race. Full-grown caterpillars reach about one inch in length.

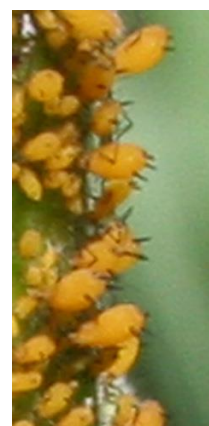


Figure 3 Yellow aphids on milkweed



Figure 4 Red aphids

Fall webworms overwinter in the pupal stage in the ground, under loose bark, and in leaf litter. Adult moths appear from early to mid-summer, and females deposit eggs in masses on the underside of host leaves. In about one week, eggs hatch into caterpillars that begin to feed and then to spin a messy web (fig. 5) over the foliage on which they feed. The webs increase in size as caterpillars continue to feed. In about six weeks caterpillars will drop to the ground and pupate. Damage is cosmetic since this pest eats leaves late in the season after the leaves have finished their job of making food for the plant.



Figure 5 Web of fall webworm

Some people confuse fall webworm and eastern tent caterpillar. How can you tell the difference? Eastern tent caterpillars are spring caterpillars and form thick, neat tents in the angles of branches. Fall webworm caterpillars are active much later in the season and make a messy web at the ends of the branches. Eastern tent caterpillars go outside the tent to feed and return to the tent at night. Fall webworm caterpillars feed in the nest and expand the nest to enclose more leaves to feed on.

Management: Insecticides are not warranted. The unsightly webs can be pruned out of small trees. Since these caterpillars stay in the web while feeding, pruning the webs at any time of day will eliminate the caterpillars. Webworms also have many natural enemies including birds, predaceous bugs, and parasitic wasps.

Good website:

<https://mortonarb.org/plant-and-protect/tree-plant-care/plant-care-resources/tent-or-web-making-caterpillars/>

Pest Updates: Weeds

Weeds, or not?

In issue 6, we reported on a couple of native plants, butterweed and golden ragwort, that have been busy enough for some people to consider them as weed. So, let's look at a couple of other natives that are showing up in home gardens all over the region, as well as on the Arboretum grounds.

Our first contender is [stickseed](#) (*Hackelia virginiana*). We have been aware of this weed for many years. This one is tricky. Early in its growth, it resembles purple coneflower (fig. 6). So, most people assume that their coneflower made seedlings and they stop thinking about it. Then, before they know it, this plant has flowered and made seed pods. The seed pods are small and covered with little hooks like a bur. Once they are on your gardening gloves, they are almost impossible to remove. Get this one before it goes to seed.



Figure 6 Stickseed

Our second weed is [black snakeroot](#) (*Sanicula odorata*). It is native to most of Illinois, but we don't generally get inquiries about it. This year, it has been showing up in our gardens at the Arboretum. There are other species of *Sanicula* out there, but we feel we have mostly been seeing *Sanicula odorata*. It has yellow-green flowers (fig. 7), while the other species have greenish-white flowers. If this plant is happy in your yard, it may form colonies, especially in shady sites. Some people consider that naturalizing, some think of it as weedy. Your call.



Figure 7 Black snakeroot

Are these plants weeds or wildflowers? This is a decision each person has to make. They are native plants, but every native is not desirable (poison ivy is native, too). Weigh the pros (benefits to pollinators) and cons (potential to colonize too much) of each plant. I wanted to present these here since they are showing up so much in our area. Hopefully, this article at least answers the question "What plant is that?" for you.

Miscellaneous

Proper watering: Soaker hoses and root feeders

In our last full issue, we started a series of articles about watering. We do want to water our plants, but water is a very precious commodity, so we want to use it wisely. This is the second article in our series about watering [properly](#) and trying to strike a balance between giving our trees what they need, and doing so with as little waste as possible. This article will deal with the use of soaker hoses and root feeders. Future articles will look at proper use of other

watering devices. Remember that we want to focus on watering deeply and infrequently. This is important, no matter which watering device we use. Get to know the watering device, how it delivers water and, most importantly, how quickly it delivers that water.

Let's take a look first at soaker hoses. There are a lot of benefits to soaker hoses. They can be turned on and the gardener can go do some other gardening while the hoses are watering the plants. The water goes directly onto the soil, so the leaves stay dry. This helps to minimize the possibility of fungal diseases. The water is delivered slowly, so wasteful runoff of water is often minimized.

That slow delivery of water can be a problem, as well. Too often, we underestimate just how slow that delivery is. Looking at the hose in action reveals that it just weeps water out in small droplets. This means that it could take a while to do a deep, thorough watering of the garden. Many people who report dissatisfaction with soaker hoses simply have not let them run long enough. It is not easy to know exactly how long to let them run, because the delivery of water can depend on a number of factors. These factors may include the type and age of the hose, the water pressure available at the site and the type of soil being watered.



Figure 8 Root feeder (photo: S. Yiesla)

To get a feel for how quickly the hose delivers water, run a test. It is common for home gardeners to run a soaker hose for about 15 to 30 minutes. That is not likely to be sufficient to meet the guideline of an inch of water at a time. An inch of water should penetrate into a clay soil about 5 to 6 inches deep. Lay out the soaker hose and let it run for an hour. Turn it off and dig a small hole to see how far the water went down. If it only went down two inches, it may be necessary to double or triple the time the hose runs. After this test is done once, it should not have to be repeated.



Figure 9 Tip of root feeder (photo: S. Yiesla)

Let's look now at root feeders. These devices are really marketed as a fertilizing tool, but they are often used to deliver just water to trees and shrubs. The root feeder has a handle at the top which connects the feeder to a garden hose. The lower part of the feeder is a long metal tube with a pointed end. Sizes vary by brand, but the tube is often 2 feet long or longer (fig. 8). There are usually two or three holes at the bottom of the tube (fig. 9) that deliver water into the soil.

A common mistake is to attempt to push the root feeder as deep into the soil as possible. That could put the tip of the root feeder, and thus the actual flow of water, too deep into the soil. Most trees have their roots in the top 18 to 24 inches, so putting the tube in too deep means that we may not be getting water to some of the roots in the top few inches of soil. Watering can be more efficient by putting the tube end in just a few inches and letting the water percolate down by gravity. That will deliver water to more of the root system.

Another concern is turning the water pressure on too high. The water is coming out relatively small holes, into a soil that may not be able to absorb it quickly. If water starts to bubble up at the soil surface, the soil may not be absorbing the water and the pressure should be adjusted. The root feeder will also need to be moved around the perimeter of the root system to deliver water evenly over as much of the root system as possible.

Upcoming Education

Upper Midwest Invasive Species Conference (Oct 25-27, 2022)

Hosted by: [Invasive Plants Association of Wisconsin](#), [Midwest Invasive Plant Network](#), and [Minnesota Invasive Species Advisory Council](#).

KI Convention Center in Green Bay, Wisconsin; Tuesday, Oct 25 - Thursday, Oct 27, 2022

This will be a hybrid event, so you can opt to join us in Green Bay or to access the conference virtually. An overview of the [conference agenda](#) can be found on the UMISC website. Note that over 90% of our speakers will be in person.

The goal of UMISC is to strengthen management of invasive species, especially prevention, control, and containment. This conference provides numerous opportunities to network with professionals, land managers, researchers, nonprofits, and others.

In addition to the excellent lineup of sessions we have for you this year, there are [two workshops](#) and [seven field trips](#) to choose from to enhance your conference experience. The workshops are being offered free of charge, but registration is required. The field trips must be selected and paid for at the time of registration. Space is limited, so book early. You don't want to miss out. Information on [hotel accommodations](#) at the convention center is also available at the [UMISC website](#).

REGISTER TODAY!

Members of [MIPN](#) and [IPAW](#) receive a \$30 discount on conference registration, so there's no better time to become a member. UMISC represents a strong partnership between its three hosts: [Invasive Plants Association of Wisconsin](#), [Midwest Invasive Plant Network](#), and [Minnesota Invasive Species Advisory Council](#).



[Bartlett Tree Experts, Presenting Sponsor of the Plant Clinic.](#)

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 Professor at Joliet Junior College; Julie Janoski, Plant Clinic Manager; 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. I would like to thank all the staff and volunteers that report disease and pest problems when they find them. Our scouts this year 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. Arboretum members need [a timed entry ticket](#) to enter the Arboretum and visit Plant Clinic in person. Non-members need [a timed ticket](#) and must pay the Arboretum entry fee. Inquiries or comments about the PHCR should be directed to Sharon Yiesla at syiesla@mortonarb.org .

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2022 Plant Health Care Report Index



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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 2022.01 or the newsletter dated April 1, 2022. 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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