Plant Health Care Report

Scouting Report of The Morton Arboretum

June 27, 2025 **Issue 2025.7**

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. For disease and insect problems, contact the Plant Clinic via email at plantclinic@mortonarb.org or by phone 630-719-2424 (Monday through Friday, noon to 4 pm)

There will be no PHCR next week due to the holiday.

Quick View

What indicator plant is in bloom at the Arboretum?

Catalpa trees (*Catalpa species)* (fig. 1) are in flower.

Accumulated Growing Degree Days (Base 50) at The Morton Arboretum: (unavailable at this time)

Insects/other pests

- Japanese beetles and white grubs
- European elm scale
- Aphids on native plants
- Oak slug sawfly
- Two-lined chestnut borer

Diseases

- Rust on roses….
- …and other non-cedar rusts
- Dieback, cankers, stress and weather

Weeds

- Giant hogweed or cow parsnip

Miscellaneous

- Unsolicited seeds in the mail

Figure 1 Catalpa (photo: John Hagstrom)

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 6/26/2025*	St. Charles reporting station (north)	Champaign reporting station (central)	Carbondale reporting station (south)
2-inch, bare soil	98.8	109	90.3
4-inch, bare soil	92.8	97.6	91.9
4-inch, under sod	87.5	89.6	86.4
8-inch, under sod	80.1	82.7	83.4

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

Seasonal precipitation

Seasonal precipitation (rain and melted snow) in inches.			
	2025	2024	Historical average (1937-2024)
Jan	.97	3.42	1.96
Feb	1.3	.56	1.8
Mar	4.59	3.68	2.55
April	3.34	4.44	3.66
May	1.86	3.73	4.16
June	4.78 (thru 6/26)	5.29 (whole month)	4.18 (whole month)
July			
Aug			
Sept			
Year to date	16.84 (thru 6/26)	21.12 (thru June)	18.3 (thru June)

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

The historical average (1937-2024) for this date at The Morton Arboretum is 880 $GDD_{50.}$ The table below shows a comparison of GDD in different years. We are comparing the GDD_{50} reported in this issue with the GDD reported in the first issue of last year, 2019 and 2014. 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 2019 and 2014, so there is 'no report' from those stations. Lisle was not used in 2014, so there is 'no report'.

Location	GDD as of 6/26/2025	GDD as of 6/27/2024	GDD as of 6/27/2019	GDD as of 6/26/2014
Carbondale, IL*	1702	1911	1505	1516
Champaign, IL*	1343	1513	1200	1281
Chicago Botanic Garden**	No report	1111	633	740.5 (6/25)
Glencoe*	533	766	432	No report
Chicago O'Hare*	1060	1369	858	1043
Kankakee, IL*	1091	1334	972	1094
Lisle, IL*	1099	1382	898	No report
The Morton Arboretum	No report	1153.5	775.5	882.5
Quincy, IL*	1385	1620	1231	1327
Rockford, IL*	1019	1239	795	903
Springfield, IL*	1381	1614	1239	1316
Waukegan, IL* (60087)	824	1116	645	843
Waukegan, IL* (60085)	910	1216	708	No report

*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/

**Thank you to Elizabeth Cullison, Chicago Botanic Garden, for supplying us with this information.

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
900-1200	Japanese beetle	adults	Chewing foliage; mating and laying eggs
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

Japanese beetles and white grubs (Potentially serious)

Figure 2 Japanese beetle

That special time of year has arrived. It's Japanese beetle (*Popillia japonica*) time. We have had a report already from a scout that a Japanese beetle adult was seen in Downer's Grove. Japanese beetles are up to ½- inch long, and have oval, metallic green bodies with coppery brown wing covers (fig. 2). They have five white spots along each side and two additional white spots behind their wing covers. Upon examination under a hand lens, the spots are actually tufts of hair.

Adult beetles feed on about 300 different species of ornamental plants with about 50 species being preferred. Highly preferred hosts include rose, crabapple, cherry, grape, and linden. In recent years, we have also found them feeding on basil and canna. The adults feed on leaf tissue between veins, resulting in skeletonized leaves (fig. 3). Severely infested plants may be almost completely defoliated. Early infestations of Japanese beetle may be missed since the insects often start feeding in the tops of trees.

Figure 3 Japanese beetle damage

Japanese beetles overwinter as larvae (grubs) about four to eight inches beneath the soil surface. In spring, as the soil temperatures warm to about 55° F, the grubs move upward through the soil to pupate. Adults normally emerge from late June through July. Within a few days after emergence, the adults mate and the females burrow into the soil to lay eggs. Nearly all eggs are laid by mid-August. In sufficiently warm and moist soil, eggs will hatch in about ten days. Lawns that

are being watered regularly could become a prime target for egg-laying, since it will be easier for the female to dig in moist soil. Grubs feed on plant roots until cold weather forces them to greater depths in the soil for the winter. There is one generation of this beetle per year.

Japanese beetles are harmful as adults, but also in the larval or grub stage. Even if you do not see Japanese beetles in your yard, your lawn could still have grubs. Other species of beetles also have grubs as their larval stage. How do you know if your lawn needs grub control? Grubs eat grass roots, and this will lead to brown areas in the lawn. Unfortunately, other causes, like drought and fungal diseases, can lead to a brown lawn. If your lawn has grubs, you will be able to pull the lawn up like a carpet since the roots are gone.

Is grub control a good idea for everyone? Not necessarily. If your lawn has never had grubs before and you are not irrigating, it would be best to skip the grub control. Usually control is not warranted unless 10-12 grubs are present per square foot of lawn.

Management: Adult Japanese beetles can be handpicked. It is easiest to catch them by placing a soapy-water filled container directly under the leaf that they are chewing on and then shaking the leaf. The soapy water ensures that the beetles die while you're collecting them. The beetles generally drop straight down into the collecting container. Sometimes Japanese beetle pheromone traps are used to trap them. We don't recommend these, as they will attract even more beetles to your property (more than the trap can collect). Insecticides can be used in the case of valuable plants, but even insecticides do not guarantee control. A soil drench of systemic insecticide in spring is sometimes recommended for control of Japanese beetles. **It should be noted that imidacloprid, chlothianidin and dinotefuran labels indicate that these products can no longer by used on lindens (*Tilia* species). That means it is illegal to use it on those trees. Some other systemic products have the same labeling. Be sure to check the label of any systemic product concerning its use on lindens.**

Managing the Japanese beetle grubs that will hatch out around late July/early August may help to reduce populations of adult beetles for next year. Eggs and first instar larvae require moisture to survive; therefore, the easiest way to reduce grub populations is to limit lawn irrigation during the egg-laying period when beetle populations peak (mid-July through early August). Japanese beetles also avoid laying eggs in shade, which is another great reason to plant more trees and shrubs. Insecticide applications are effective in controlling young grubs.

If you plan to manage the grub stage with insecticides, know that the timing of application depends on the product selected. There are now many insecticides available to treat grubs, and they have different application times. Traditional grub control insecticides are applied to the lawn when young grubs are active (August and September). Other products may be applied in mid-summer or even late spring, but are still targeted at new grubs. The bottom line

is to read the product label carefully and use it at the appropriate time. The information given here is very general. The product label will give specific information.

Biological insecticides that contain *Bacillus thuringiensis* var. *galleriae* are targeted toward beetles and their grubs. Other grub control insecticides are broad spectrum and may kill other insects besides beetles.

We receive a lot of questions about the use of the biological control milky spore disease. This is a bacterium that is specifically toxic to the grub stage of the Japanese beetle and is applied to the soil. This is a slow method at best in the warmer southern states (may take 3-5 years to build up in soil enough to be effective) and is often not very effective at all in colder, northern states. Also, if you have grubs that come from another type of beetle, it won't work on them at all. The product is specific to the grubs of Japanese beetles. This product is really not recommended for our area.

Beneficial nematodes can be watered into turf, again in late July, where they infest and kill grubs. Products containing *Heterorhabditis bacteriophora* nematodes are recommended by the University of Illinois. Beneficial nematodes are not always available in stores; they are available through mail order/internet sources.

Good websites:
https://mortonarb.org/plant-and-protect/tree-plant-care/plant-care-resources/japanese-beetles/

https://www.canr.msu.edu/news/how_to_choose_and_when_to_apply_grub_control_products_for_your_lawn

European elm scale (potentially serious)

A report of European elm scale (*Eriococcus spurius*, formerly *Gossyparia spuria*) on elm came into the Plant Clinic at The Morton Arboretum last week. These are soft scales, and since they feed in the phloem, they produce honeydew, which supports the growth of sooty mold. This scale can produce honeydew in large quantities, so look for sticky plants and obvious growth of sooty mold. Very heavy infestations can cause leaf and twig dieback.

Figure 4 European elm scale

The photos we received showed mature females, which are dark in color and surrounded by a fringe of white (fig. 4). This insect produces one generation per year. It overwinters as half-grown nymphs and matures into adults in early summer. Eggs are laid around the end of June

into July. The eggs hatch within a few hours into bright yellow crawlers. Crawlers migrate to feeding sites along the midrib of the underside of leaves, where they will remain until the end of summer. In fall, crawlers return to limb or bark crevices to overwinter as immature females.

Management: Insecticides that target crawlers can be used. Systemic insecticides can also be useful in control of this species. As with other scale insects, this species can cause stress to the host tree. Watering trees during dry weather can help boost the vigor of the tree. Applications of nitrogen fertilizers should be avoided. Excess nitrogen helps the plant produce more amino acids, and these serve as a food source for the scale. This could actually increase the population of this pest.

Good website: https://bygl.osu.edu/node/1974

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). Now as we get into summer, we are starting to see 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. 5). The red ones (fig. 6) 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 5 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.

Figure 6 Red aphids

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 have done this myself 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 larval and pupal stages, ready to become adults. So, help is on the way!

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

Oak slug sawfly (minor)

Figure 7 Oak slug sawfly damage

One of our scouts found oak slug sawfly (*Caliroa* species*)* larvae feeding on bur oak (*Quercus macrocarpa*) this week. The sawflies feed on the lower layer of the leaf, leaving behind the upper epidermal layer and creating a 'window pane' effect (fig. 7). It is typical to see the larvae all lined up side by side while feeding (fig.8). The larvae are about 1/8 inch long and pale yellow-green; they will reach about 1/2 inch when mature. There are two to three generations per year. Completely skeletonized oak leaves may drop prematurely. Common hosts include bur oak, white oak and swamp white oak. Damage is generally an aesthetic problem.

Figure 8 Oak slug sawfly larvae (photo: Deb Link)

Management: This pest is kept in check by parasites, microbial disease, and other natural enemies. Even noticeable outbreaks are generally not dangerous to the health of the host oaks.

Good website: https://bygl.osu.edu/node/1980

Two-lined chestnut borer

We are getting a number of reports of two-lined chestnut borer (*Agrilus bilineatus*). This is not a new pest for our area, but it is worth discussing. In the title of this article, I did not rate this pest in terms of severity. Here's why. This borer, which is a native insect, attacks weakened oaks. This is a key point to understand. This borer is not usually the primary cause of decline of an oak. Unlike the emerald ash borer, this is NOT an aggressive pest targeting healthy trees. It is an opportunistic pest that takes advantage of an oak that is already under stress from some other problem or problems. On healthy oaks, the borer's activity is usually restricted to branches that died from some other cause.

Why is this worth noting? If we treat for the borer and do nothing else, we really have not solved the problem. We need to look to see if there is another insect or disease affecting the tree. We need to know if the tree has been affected by storm damage or nearby construction. We also need to consider the weather. For the last ten years or so, our weather has been less

than good (several droughts, flooding spring rains, a couple of harsh winters, widely fluctuating temperatures). In short, we need to identify other stressors and see if we can do anything to mitigate them.

Larvae of this native borer feed in the tissues under the bark, like many other borers do, making galleries in the tissue. The larvae overwinter under the bark. They pupate in spring and begin to emerge as adults in late May. The emergence hole of the adult is similar to that of other borers in the genus *Agrilus* (bronze birch borer and emerald ash borer). It is shaped like a capital 'D' and is about the size of half a pencil eraser. The adults mate and lay eggs over the next few weeks. The eggs hatch, and the new larvae enter the bark to feed.

Management: Treating this borer with systemic insecticides can be useful, if the decline of the tree has not gone beyond 40% loss of the canopy. As noted above, this is only part of the solution. New oaks need to be planted and cared for properly. This means planting at the right depth, using best practices, such as regular watering, mulching and pruning out dead limbs (in the dormant season). All oaks should be protected from compaction and construction damage. Fertilizer should be considered carefully. It is a source of nutrients, not a magic elixir to fix all problems. Young trees that are putting on a lot of growth may need to fertilized annually. Older, established trees may need it less frequently (maybe every 3 to 5 years). Trees under stress may not need it at all. Fertilizer applied to dry or damaged roots may do more damage. Fertilizer can push growth in a tree and lead to increased water needs. In a drought, this may also add stress.

Good websites: https://extension.umn.edu/tree-and-shrub-insects/metallic-wood-boring-beetles
www.fs.usda.gov/foresthealth/docs/fidls/FIDL-168-TwolinedChestnutBorer.pdf

Pest Updates: Diseases

Rust on roses… (potentially serious)

Figure 9 Rust on rose

Rust on rose (*Rosa* spp.*)* leaves and canes is being reported to the Plant Clinic. Bright orange "powder" appears initially as spots on the leaves and later may coalesce as the disease worsens (fig. 9). This powder is actually a cluster of spores of the fungus (*Phragmidium* sp.). These spores re-infect other roses and cause orange- red spots on the leaves and long, narrow lesions on the stems. Leaves may wither and fall off, and shoots may become distorted and reddish. Plants infected by this disease may gradually decline in vigor.

Management*:* Infected plant parts should be pruned out and destroyed immediately. Do not work with the plants in wet weather and provide ample air circulation in plantings. When buying new roses, select roses that are resistant to rust. It is too late to use fungicides. They must be applied as new growth emerges in the spring.

Good website: https://bygl.osu.edu/index.php/node/2378

….and other non-cedar rusts

We talk a lot about the cedar rusts in which the disease requires two hosts, one deciduous and one the cedar (really juniper). There are a number of rust diseases where cedar plays no role at all. In some rust diseases, the alternate host is some plant other than cedar. The rust we see in lawns in late summer, will have alternate hosts like barberry and buckthorn. The rust that affects goldenrod has pine for an alternate host. Some rust diseases don't require an alternate host at all. The rose rust mentioned above is one of those. The rust that shows up on blackberries is another.

Dieback, cankers, stress and the weather

That title has a lot going on, and those things often go hand in hand. One of the most popular questions in Plant Clinic is "Why is my (name of plant) leafing out slowly/having dead twigs/turning yellow"? Everyone expects the problem to be a disease or insect, but these days it is often a combination of weather-related events that cause stress. This stress can make plants more susceptible to canker diseases, and those cankers lead to dieback of branches. We have had stressful weather years since at least 2012. That year gave us early and extreme heat, coupled with a drought (which most likely led to some root damage). The next two years gave us extremely wet springs and flooded soils in many areas (more root damage). We have also had two polar vortices since then. We again had really wet springs in 2019 and 2020. Then 2021 gave us a dry spring and a dry summer. In recent years, we have had up-and-down springs, where the temperature was 80 degrees one week, and near freezing levels the next week. With 10-12 years of stressful weather extremes, it is no wonder that some plants are struggling.

Figure 10 "It's not always my fault!"

The cicada brood (fig. 10) of 2024 is getting blamed for a lot of stem dieback. Sometimes they are the cause, but they are not to blame for ALL the dieback. Many trees and shrubs we have looked at this year have cankered stems that have nothing to do with the cicadas. Canker disease organisms are usually not very aggressive in healthy trees. They need an entryway, such as wounds, to infect the host. When

trees are under the kind of stress we have been seeing for the last several years, the disease organism can get in to stressed trees through natural openings. The canker disease organism grows under the bark and destroys the tissue that moves water through the plants, cutting off the water supply. Cankered stems may have broken or peeling bark, sunken areas or discolored bark. These stems need to be cut out. Disinfect pruning tools between cuts to minimize spread of these diseases.

We can't control the weather, but we can give our trees and shrubs good care to help mitigate some of the effects of the weather. It is always a good idea to prune out dead wood and cankered branches. We do not recommend fertilizing these stressed plants. If the roots are compromised and not taking up water from the soil, they won't be able to take up nutrients either. Chemically, fertilizers are considered salts and may further damage stressed roots. Water is the best remedy for injured roots. We need to supply enough water to allow new roots to grow, but must be careful not to saturate the soil. Roots need water, but they also need air. Water is also essential for forming new leaf buds, which many species of trees and shrubs are doing in the summer months. So watering now, helps to provide new growth for next year.

Pest Updates: Weeds

Giant hogweed or cow parsnip?

Plant Clinic has received a couple of inquiries from concerned citizens about possible sightings of giant hogweed. While this plant has been found in the Chicago region, the plants in question have turned out to be cow parsnip. Why do we care? Giant hogweed has become an invasive plant in some areas and it can cause extremely serious skin damage when a person comes in contact with the sap and is exposed to UV light.

Giant hogweed lives up to its name. It is not just big, but giant (really UNBELIEVEABLY HUGE) reaching heights up to 14 feet. One leaf can be as much as 5 feet across!! Cow parsnip is a big plant, but more like 8 feet tall and leaves about a foot to 16 inches long. If in doubt of a plant's identity, leave it alone. For more information on giant hogweed go to https://ohioline.osu.edu/factsheet/anr-35. For more information on plants that are look alikes for giant hogweed go to https://www.maine.gov/dacf/php/horticulture/hogweedlookalikes.shtml

Cow parsnip can also produce a rash in some individuals, but not to the extent that giant hogweed can. Best to leave it alone as well. Both these plants belong to the carrot family. While this family has some very friendly members, it also has some that can be very nasty to handle (including poison hemlock that was featured in Issue 6 of this newsletter and wild parsnip, which will be blooming soon, but with yellow flower clusters). Use caution.

Miscellaneous

Unsolicited seeds

Unsolicited seeds are being sent through the mail. These seeds may pose an environmental risk if they are an invasive species. USDA APHIS has provided this information:

If you receive unsolicited seeds in the mail, do not plant the seeds. Please submit them along with all packaging and packing slips to the Illinois USDA APHIS PPQ State Plant Health Director's (SPHD) Office at:

USDA APHIS PPQ
State Plant Health Director's Office
Unsolicited Seed Submissions
1001 E. Touhy Ave., Suite 187
Des Plaines, IL 60018

Images and information can be emailed to greg.j.rentschler@usda.gov.

If you are unable to send the seeds in the mail, the USDA recommends the following for the destruction of seeds:

- Completely wrap and enclose the packet with duct tape.
- Place the wrapped seed packet in a zip-lock bag, squeeze out any air, and seal.
- Place inside another zip-lock bag, squeeze out any air, and seal.
- Fold over to reduce size and completely cover the folded bag with duct tape. This will help prevent the bag from bursting and will keep water and sun from reaching the seeds.
- Discard in the trash.

If you destroy the seeds yourself, we ask that you email photos of the seeds, packing slips, and packaging to the USDA at greg.j.rentschler@usda.gov.

***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 Fredric Miller, Ph.D., Research Entomologist at The Morton Arboretum; and Juluia Lamb, 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 2025 are Deb Link, Maureen Livingston, Loraine Miranda, Molly Neustadt and Moira Silverman.

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 (630-719-2424) or visit in person, Monday thru Friday noon to 4 pm. Inquiries or comments about the PHCR should be directed to Sharon Yiesla at syiesla@mortonarb.org .

2025 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, Ficaria verna….. 1 means that it was discussed in the PHCR 2025.01 or the newsletter dated April 4, 2025. The index is updated with the publication of each full issue and is included at the end of each full issue.

2025.1	April 5	2025.5	May 30
2025.2	April 18	2025.6	June13
2025.3	May 2	2025.7	June 27
2025.4	May 16		