

Plant Health Care Report

Scouting Report of The Morton Arboretum



THE
CHAMPION
of TREES

Aug 23, 2024

Issue 2024.11

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 plant questions, contact the plant clinic via email at plantclinic@mortonarb.org or by phone at 630-719-2424 (Mon thru Fri, 10 am to 4pm). Please do not send plant questions directly to me.

Quick View

What indicator plant is in bloom?

Seven sons flower (*Heptacodium miconioides*) is just beginning to flower (fig. 1)

Accumulated Growing Degree Days (Base 50) at The Morton Arboretum: 2369 (as of Aug 22).
(GDD updated 9/23/24)

Insects/other pests

- Oak leaf itch mites
- A really cool gall

Diseases

- The truth about blight
- Bur oak blight

Miscellaneous

- Watering into autumn



Figure 1 Seven sons flower

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 8/22/2024*	St. Charles reporting station (north)	Champaign reporting station (central)	Carbondale reporting station (south)
2-inch, bare soil	77.9	92.3	89.4
4-inch, bare soil	80.9	86.6	84.3
4-inch, under sod	70.9	79.1	73.9
8-inch, under sod	69.6	74.6	72.7

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

Seasonal precipitation

Seasonal precipitation (rain and melted snow) in inches.			
2024 data updated on 9/20/2024	2024	2023	Historical average (1937-2023)
Jan	3.9	2.85	1.95
Feb	.56	4.88	1.81
Mar	2.64	2.29	2.53
April	4.44	2.23	3.65
May	3.73	.79	4.17
June	5.29	1.23	4.16
July	4.79	8.92	3.95
Aug	1.83 (as of 8/22)	2.54 (whole month)	3.75 (whole month)
Sept			
Year to date	27.74 (as of 8/22)	25.73 (thru Aug)	25.97 (thru Aug)

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

As of Aug 22, we have 2369 base-50 growing degree days (GDD) at The Morton Arboretum. The historical average (1937-2023) for this date is 2209 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 last year, and in 2019 and 2018. These years were selected since publication dates of the issue were within a day or two of each other. Glencoe, and Waukegan (60085) were not used in 2018, so there is 'no report' from those stations.

Location	GDD as of 8/22/2024	GDD as of 8/24/2023	GDD as of 8/22/2019	GDD as of 8/23/2018
Carbondale, IL*	3403	3164	3115	No PHCR this week
Champaign, IL*	2786	2677	2660	No PHCR this week
Chicago Botanic Garden**	2347	No report	No report	No PHCR this week
Glencoe*	1979	1744	1687	No PHCR this week
Chicago O'Hare*	2674	2493	2315	No PHCR this week
Kankakee, IL*	2533	2383	2390	No PHCR this week
Lisle, IL*	2694	2513	2366	No PHCR this week
The Morton Arboretum	2369***	2116	2140.5	No PHCR this week
Quincy, IL*	2993	2896	2761	No PHCR this week
Rockford, IL*	2397	2294	2157	No PHCR this week
Springfield, IL*	2924	2745	2735	No PHCR this week
Waukegan, IL* (60087)	2305	2211	1966	No PHCR this week
Waukegan, IL* (60085)	2445	2320	2071	No PHCR this week

*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.

***Data updated 9/23/24

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

Oak leaf itch mites (minor for trees, irritating for humans)

Oak leaf itch mite (*Pyemotes herfsi*) is a pest we don't deal with very often, luckily. But this year is a big year for them and they are very irritating to humans. This is a relatively new pest for the United States, having been first reported in the U.S. in 2004. In 2007, the mites were reported in Illinois and they are here again. Yes, that does coincide with the emergence of the 17-year cicadas in both years. Let's not curse the cicadas too heartily. It's not like they planned this. Nature has cycles and interactions between species and this is a case of one of those interactions affecting humans.

The oak leaf itch mite is found on oak trees and normally feeds on a variety of insects. Many university specialists feel that the eggs of the cicadas have become a food source for the itch mites. The cicadas themselves became a feast for many birds and mammals. As a result, these species produced more offspring. Now, the same thing is happening for the itch mites. There is an abundance of food and so more offspring can be produced. We humans enjoyed having more songbirds to watch, but we don't feel as happy about the mite population. Nature does not care more about us than it does about other species. The cycles of nature affect many species, sometimes in a positive way and sometimes not.

When these very tiny mites land on humans, they will taste us. The mite's saliva leads to an allergic reaction in most people, but the welts may not show up until many hours have passed. As food supplies dwindle, the mite population will also go down. It is thought that the population will also be greatly reduced when the frost comes.

Management: There is no way to treat for the mites on the trees. University specialists feel that insect repellents for people don't give consistent results, but they may be worth trying. If you are going outside, you are likely using them already, so you may get some protection from the mites. Limit time spent in areas where oak trees are present. It may be possible to limit reactions to the bites by laundering clothes and showering immediately after being under or near oak trees. Contact your physician for medical advice, if you come into contact with the mites. Remember that other biting pests, like ticks and mosquitoes, are out at this time. If you get a bite that produces a bad reaction, don't assume it is itch mites, it may be a tick instead and medical attention may be needed.

A really cool gall (minor)

We have seen a lot of galls this summer, and most of them are the ones we see year after year. I have been eagerly awaiting one my favorites and it is starting to show up in the Plant Clinic

email. It is the oak lobed gall (fig. 2), sometimes called the pine cone oak gall, and it is a crowd-pleaser. It shows up on oaks and looks a bit like a pine cone, due to actually being a cluster of small wedge-shaped galls. The whole cluster is often 2 to 3 inches across and goes through some interesting color changes (pinks, reds and browns), that really get it noticed. Oak lobed gall is most commonly found on swamp white oak and bur oak. It is caused by a tiny wasp, *Andricus quercustrobilanus* (a cool name for a cool gall). Like other galls we commonly see, it does not harm the tree.



Figure 2 Oak lobed gall

Pest Updates: Diseases

The truth about 'blight'

In the Plant Clinic at The Morton Arboretum we often hear this statement, "I was told my plant has blight." This does not tell us much, because blight is such a broad term. It indicates that we are looking at a serious problem that can produce major damage to, or even the death of, a plant. The word blight, used by itself is vague. To really get some meaning from it, we need to have another word in front of it. If we say fire blight, we are discussing a specific disease that can do a tremendous amount of damage to plants that are in the rose family, like crabapple. It often kills the host. Fire blight has a specific group of hosts and has a distinct set of symptoms. If we put the word 'boxwood' in front of blight, we are again talking about a specific disease found on certain hosts (mostly boxwood) and which has a distinct set of symptoms. Now, we are communicating!

One simple word changes the conversation. If you are a green professional, diagnosing a problem for your customer, take some time to give them a bit more detail. Some homeowners know a lot about plants, but some don't. Many homeowners don't converse with green professionals on a regular basis and may not understand the jargon and may not be sure what questions to ask. A little extra information is good customer service and that could bring a customer back to you time and time again.

Bur oak blight (potentially serious)

Speaking of blight diseases, this is the time of year to look for the symptoms of bur oak blight (BOB). This disease is caused by the fungal pathogen *Tubakia iowensis*. There are other species of *Tubakia* that cause less serious fungal diseases. BOB infects bur oak (*Quercus macrocarpa*).

We have only one possible report of this disease so far this year, but we should be looking for it. The first symptoms are purplish spots on the veins on the lower side of the leaves (fig. 3). The spots then spread and develop into purple coloration along the veins on both the lower and upper side of the leaves. In August and September, symptoms will worsen, with veins dying and the infection moving to the end of the leaf, leading to a wedge-shaped dead area. While there may be some defoliation during the growing season. In autumn, the main part of the leaf may fall, but the petiole often remains attached to the tree. The fungal spores will overwinter in pustules located on the infected petioles (fig. 4). The presence of these pustules is considered a requirement for the confirmation of BOB. New spores will be released in spring. Repeated years of defoliation may predispose the tree to other problems, such as Armillaria root rot and two-lined chestnut borer. Often, these secondary problems contribute to the death of a tree as much as BOB itself.



Figure 3 Vein discoloration due to bur oak blight

Management: First, confirm that the tree actually has bur oak blight. Get a sample tested at the University of Illinois Plant Clinic

(<http://web.extension.illinois.edu/plantclinic/>). Keep trees vigorous through proper watering and pruning (during dormant season). Some universities are indicating that injections of propiconazole in spring may be useful in slowing the disease. Injections must be done by a licensed professional. Raking fallen leaves does not help manage this disease because the petioles that remain on the tree are a source of infection.

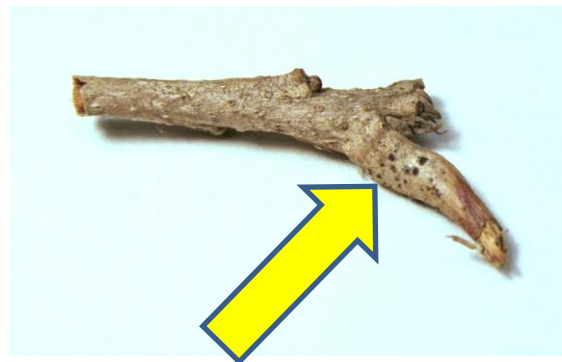


Figure 4 BOB pustules on petiole (arrow)

Good websites:

<http://www.mortonarb.org/trees-plants/tree-and-plant-advice/help-diseases/bur-oak-blight>
https://files.dnr.state.mn.us/assistance/backyard/treecare/forest_health/bob-one-pager.pdf
<https://yardandgarden.extension.iastate.edu/encyclopedia/bur-oak-blight>

Miscellaneous

Watering into autumn

This has been another difficult year for watering. Overall, precipitation has been plentiful this year, but it did not always come at regular intervals. We would get long, hot, dry spells, followed by heavy storms. Sometimes, the rain from those storms could not soak in because the soil was so dry that it had trouble absorbing the rain. During some periods of the growing season, we had rain several days in a row, but the rainfall on any given day was no more than a quarter of an inch. As autumn comes on and the temperatures cool (we hope), there is often the assumption that the growing season is over and we can put the garden hose away. That really is not the case, even in a 'normal' year (if there is such a thing).

Should we be watering now? Because the rain has been so inconsistent, we really need to go out and observe the soil in our own yard. If the soil is dry, we should be watering. Watering is all about what the plant needs now. The weather, not the calendar, is our guidepost. Look at and feel the soil to see if it needs moisture. When watering, be sure to water long enough so that water penetrates down into the soil five or six inches. You may need to dig a little hole to verify that. If you find yourself watering every day or every other day, it is likely that you are not supplying enough water on any given day.

With autumn, we will start to see plants go dormant, and perennials will even start to die back. The root systems of all plants are still active, and watering will help to keep them in good health. You can continue to water until the soil freezes. Pay special attention to evergreens. Since they retain their needles year-round, they can continue to lose water through those needles. Make sure that all evergreens go into winter fully hydrated. If you are planting bulbs like tulips or daffodils, they will also need to be watered. When bulbs are planted, they need to grow a root system in the fall. That can be difficult to do if the soil is too dry.

Other areas that would need special attention are newly seeded or sodded lawns and any newly planted trees, shrubs or perennials. All these plants will need a good supply of water to help them become established. Even newly planted trees and shrubs do not need to be watered every day. As mentioned above, water as needed. Check the soil to see how dry it is. Remember that on a newly planted tree there will be a limited root ball. Apply the water to the root ball area.

We need to modify our watering practices based on the rainfall we get this autumn. Consider purchasing a rain gauge for your yard so you can accurately determine how much rain you are receiving. Storms can be deceiving. A heavy storm may give the impression that a lot of rain fell, but a rain gauge will let you show you the true amount. Ideally, for most established plants we want to deliver an inch of water per week. If the rain provides half an inch, we need to

provide the other half. Try to do the watering all at once so we get a nice deep watering. Sprinkling a little bit everyday does not give the plant the water it needs, and it promotes fungal diseases, not to mention what it does for your water bill.



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 2024 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 10 am to 4 pm. Inquiries or comments about the PHCR should be directed to Sharon Yiesla at syiesla@mortonarb.org .
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2024 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 2024.01 or the newsletter dated April 5, 2024. 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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