

# Plant Health Care Report

Scouting Report of The Morton Arboretum



THE  
CHAMPION  
of TREES

Sept 13, 2024

Issue 2024.12

For comments regarding PHCR, or to subscribe to email alerts regarding posting of new issues, contact me at [syiesla@mortonarb.org](mailto: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](mailto: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 in flower (fig. 1)

**Accumulated Growing Degree Days (Base 50) at The Morton Arboretum: 2766 (as of Sept 12).**  
(GDD revised 10/8/2024)

### Insects/other pests

- Elm zigzag sawfly
- Why are my oak leaves dropping?
- Tulip tree scale
- Eyespot gall on tulip tree

### Diseases

- Tar spot on maple

### Miscellaneous

- Seasonal needle drop



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 9/12/2024*	St. Charles reporting station (north)	Champaign reporting station (central)	Carbondale reporting station (south)
2-inch, bare soil	92.3	91.3	79.8
4-inch, bare soil	84.8	86.1	76.7
4-inch, under sod	69.2	75.5	73.1
8-inch, under sod	97.5	73	71.6

\* 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 10/8/2024	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	3.44	2.54	3.75
Sept	0 (thru 9/12)	4.38 (whole month)	3.31 (whole month)
Year to date	29.35 (as of 9/12)	30.11 (thru Sept)	29.29 (thru Sept)

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

As of Sept 12, we have 2766 base-50 growing degree days (GDD) at The Morton Arboretum. The historical average (1937-2023) for this date is 2630 GDD<sub>50</sub>. The table below shows a comparison of GDD in different years. We are comparing the GDD<sub>50</sub> reported in this issue with the GDD reported last year.

Location	GDD as of 9/12/2024	GDD as of 9/8/2023
Carbondale, IL*	3908	3510
Champaign, IL*	3209	2991
Chicago Botanic Garden**	2766	No report
Glencoe*	2414	2039
Chicago O'Hare*	3132	2800
Kankakee, IL*	2939	2659
Lisle, IL*	3152	2820
The Morton Arboretum	2766***	2418
Quincy, IL*	3479	3223
Rockford, IL*	2782	2571
Springfield, IL*	3371	2059
Waukegan, IL* (60087)	2722	2505
Waukegan, IL* (60085)	2877	2624

\*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 revised 10-8-2024

### 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**

### **Elm zigzag sawfly (potentially serious)**

A couple of weeks ago, Dr. Fredric Miller sent out the word that the elm zigzag sawfly (*Aproceros leucopoda*) is present in several counties in Wisconsin. Late in 2023, it was found in Ohio. So, Illinois' neighbors have it and we should be looking around in Illinois. If you find this insect in Illinois, Dr. Miller would like you to contact him at [fmento84@gmail.com](mailto:fmento84@gmail.com). As Dr. Miller says, this insect is not a 'tree-killer', but it still merits our attention. This invasive pest can produce significant defoliation of elm trees. That type of damage is certainly of concern and could have impacts on the health of the host (elm trees).

Elm zigzag sawfly overwinters in the pupal stage on leaf litter, soil and even man-made objects. When adults emerge in spring, they start to lay eggs. The entire population is female and can reproduce without mating. Larvae begin to hatch within a few days and start feeding. The sawfly larva, which resembles a green caterpillar, will eat the leaf in a distinctive zigzag pattern. Multiple generations per year are possible.

**Management:** Management strategies have not been fully explored. For landscape trees, measures used to manage other sawfly larvae should be effective. Multiple generations may make management of this pest more difficult.

#### **Good websites:**

<https://hort.extension.wisc.edu/articles/elm-zigzag-sawfly/>

<https://www.invasivespeciescentre.ca/invasive-species/meet-the-species/invasive-insects/elm-zigzag-sawfly/>

<https://content.ces.ncsu.edu/elm-zigzag-sawfly>

<https://entomologytoday.org/2023/07/20/here-we-go-again-meet-the-elm-zigzag-sawfly-another-non-native-forest-pest/>

### **Why are my oak leaves dropping?**

We have many reports of small clumps of leaves falling off of oaks. This has been the big question this year. There are multiple answers to this question. This year, we saw a lot of fallen twigs due to the egg laying of the cicadas. Fallen twigs due to cicadas will show multiple slits lined up along the twig. Sometimes the culprit is squirrels chewing off branches and dropping them. In that case, the cut end of the branch will have a ragged, chewed look.

There are a couple of insects that may be the cause. At this time of year, we may see this damage from twig pruners (*Elaphidionoides villosus*). Twig pruner larvae will cut the twig from

the inside, leaving a smooth circle inside (fig. 2). In spring, as leaves are beginning to form, adult twig pruners deposit eggs near the tips of twigs. Larvae move to the center of the branch and begin to feed, tunneling down to the base of the twig. In late summer, they move to the sapwood, making circular cuts, weakening the stems. The weakened stems may hang on the tree and eventually fall to the ground on windy days or during storms. Larvae remain in the fallen branches, spend the winter as pupae, and emerge as adults the following spring.



Figure 2 Twig pruner damage

The adult is a gray-brown beetle 1/2 to 3/4 inches long. Larvae are creamy white, legless, segmented, and reach 3/4 of an inch at maturity. Oak twig pruner larvae feed on many tree species, including maple, oak, hickory, elm, walnut, and a number of fruit trees.

Another insect, the twig girdler (*Oncideres cingulata*), does similar damage, but the damage is caused by the adult, not the larva. In late summer, in order to lay eggs, the adult beetle will chew a groove around the twig. The eggs are laid in the part of the branch that will fall off the tree. The larva will develop in the fallen twig where it will spend the winter and then pupate inside the twig in spring. Adults will emerge in late summer. The damage on the twig is rough in the center and smooth on the outside, opposite of the damage done by the twig pruner.

**Management:** Looking at the cut end of the stem can help us sort out cicada and squirrel damage from that caused by twig pruners and twig girdlers. There is not much we can do to deter squirrels. The twig girdlers and pruners will not kill or severely damage trees. To reduce populations, collect and destroy fallen branches and prune out wilted and damaged branches.

**Good websites:**

<https://extension.missouri.edu/publications/g7276>

<https://extension.okstate.edu/programs/digital-diagnostics/insects-and-arthropods/twig-girdler-ncideres-cingulata/>

<https://extension.unl.edu/statewide/dodge/the-oak-twig-girdler/>

**Tulip tree scale (potentially serious)**

Tulip tree scale (*Toumeyella liriodendri*) is being reported on tulip tree this year. This native soft scale preys upon tulip tree and magnolia. The life cycle is similar to that of magnolia scale. The adult scale closely resembles an adult magnolia scale, but is often bigger (fig. 3). During its feeding stage it produces an abundance of honeydew, which eventually becomes black when

sooty mold begins to grow on it. The females mature in late summer and then give birth to live crawlers in August and September. They only have one generation per year and overwinter as partially grown nymphs.

**Management:** This scale is similar to [magnolia scale](#) and has a similar life cycle, so management strategies are the same for the two pests.

**Good websites:** <https://extension.psu.edu/tuliptree-scale>  
<https://extension.umd.edu/resource/tuliptree-scale/>

### Eyespot gall on tulip tree (minor)

Just when you feel confident that you can recognize a gall when you see one, a little weirdo like eyespot gall comes along. One of our scouts reported this recently. Eyespot gall looks like it could be a fungal leaf spot (fig. 4), and so, often gets overlooked. This gall is caused by a midge (*Resseliella liriodendri*) and like most other galls, is harmless to the host tree. There is another midge species that produces eyespot galls on maple trees.



Figure 3 Adult tulip tree scale

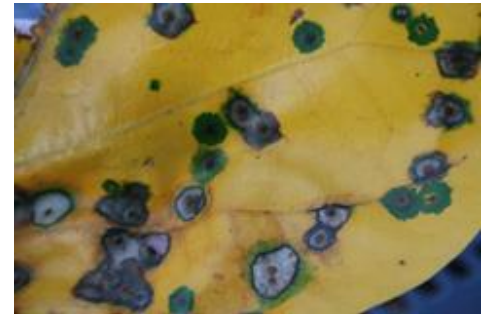


Figure 4 Eyespot gall on tulip tree leaf

### Pest Updates: Diseases

#### Tar spot on maple (minor)

We have been waiting all season for this, and one of our scouts has finally reported tar spot of maple. We had very few reports of this in 2023 due to the drier than normal spring. With the wetter weather of this spring, we knew tar spot would show up. As the name indicates, the spots will look just like shiny black spots of tar flung (fig. 5) about on the upper surface of maple leaves. The report from our scout showed the earlier stage of development when the spot is not fully black (fig. 6).

Several different fungi in the genus *Rhytisma* infect the leaves of maples and cause the spots. The spots range from 1/5 to 4/5 inch in diameter. In some cases, a red ring surrounds the



Figure 5 Tar spot (photo: S. Yiesla)

spot. *Rhytisma* spp. most commonly infect leaves of silver and Norway maples, although red and sugar maples are also susceptible. It does little harm to the trees, but is unsightly.

**Management:** Fungicides generally are not necessary. To reduce inoculum, rake up and discard the leaves in fall. Raking, however, is only effective if you and your neighbors with infected maples all rake and discard leaves.



Figure 6 Early stage of tar spot

Good website: <https://mortonarb.org/plant-and-protect/tree-plant-care/plant-care-resources/tar-spot-of-maple-rhytisma-spp/>

## Miscellaneous

### Seasonal needle drop

A phenomenon of fall is heading our way soon: seasonal needle drop (also known as normal needle drop). In autumn, many evergreens will drop older needles. This is a normal process. Needles on an evergreen live for a limited number of years. At the end of their lives, these needles will turn yellow or brown and eventually fall off. On some evergreens, such as white pine or arborvitae, this process can be very dramatic, making the evergreen look like it is dying. To determine if your tree has a disease or is going through normal needle drop, check the location of the yellow or brown needles. Trees going through normal needle drop will have a fairly uniform brown or yellow appearance in the interior of the tree since this is where the oldest needles are located (fig. 7). After a few weeks these needles will fall off, leaving the tree looking normal and healthy. Trees with a disease may have brown needles in various areas of the tree, depending on the disease, but the appearance will not be as uniform as that of needle drop. Diseased needles may eventually fall off, but the tree won't look healthy.



Figure 7 Seasonal needle drop on white pine

Good website: <https://mortonarb.org/plant-and-protect/tree-plant-care/plant-care-resources/seasonal-needle-drop/>



***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://www.ipm.msu.edu/agriculture/christmas_trees/gdd_of_landscape_insects)

[http://extension.unh.edu/resources/files/Resource000986\\_Rep2328.pdf](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](mailto: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](mailto:syiesla@mortonarb.org) .

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# 2024 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 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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