

Plant Health Care Report

Scouting Report of The Morton Arboretum



THE
CHAMPION
of TREES

May 2, 2025

Issue 2025.3

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)

Quick View

What indicator plant is in bloom at the Arboretum?

Korean spice viburnum (*Viburnum carlesii*) (fig. 1) is in flower.

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

Insects/other pests

- Viburnum leaf beetle update
- Boxwood psyllid
- Boxwood leafminer
- Elm zigzag sawfly
- Zimmerman pine moth
- Hydrangea leaf-tier

Diseases

- Cedar-rust diseases
- Ground cover diseases
- Volutella canker on boxwood

Weeds

- Creeping bellflower

Native Corner

- Saving stems for native bees

Miscellaneous

- Watch the weather, not the calendar



Figure 1 Korean spice viburnum in 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 5/1/2025*	St. Charles reporting station (north)	Champaign reporting station (central)	Carbondale reporting station (south)
2-inch, bare soil	65.2	74.7	78.6
4-inch, bare soil	61.8	69.6	74.9
4-inch, under sod	58.4	68.8	71.7
8-inch, under sod	56.7	64.5	68.9

* 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	.6 (thru 5/1)	3.73 (whole month)	4.16 (whole month)
June			
July			
Aug			
Sept			
Year to date	10.8 (thru 5/1)	15.8 (thru May)	14.13 (thru May)

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

The historical average (1937-2024) for this date at The Morton Arboretum is 50 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 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 5/1/2025	GDD as of 5/2/2024	GDD as of 5/2/2019	GDD as of 5/1/2014
Carbondale, IL*	545	619	371	284
Champaign, IL*	317	348	196	176
Chicago Botanic Garden**	146	185	67 (5/1)	45.5 (4/29)
Glencoe*	46	82	No report	No report
Chicago O'Hare*	209	273	123	80
Kankakee, IL*	212	254	137	106
Lisle, IL*	221	275	128	No report
The Morton Arboretum	No report	140 (5/1)	70	52
Quincy, IL*	372	409	245	197
Rockford, IL*	166	210	92	58
Springfield, IL*	366	406	227	199
Waukegan, IL* (60087)	119	193	72	51
Waukegan, IL* (60085)	152	226	No report	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
300-700	Oystershell scale	Crawlers emerging	Feeding on sap
400-600	Bronze birch borer	Larvae hatching out and beginning to enter bark	Tunneling under bark
400-500	Pine needle scale	Crawlers emerging	Feeding on sap
450	Boxwood leafminer	Adults emerging	Laying eggs

Viburnum leaf beetle update: One of our scouts has confirmed VLB larvae in Downer's Grove.

Boxwood psyllid (minor)

Boxwood psyllids (*Cacopsylla buxi*) have been found by our scouts on the Arboretum grounds. The psyllids overwinter as tiny orange eggs in the bud scales of the boxwood. As the buds open, the psyllids hatch and begin to feed. The nymphs (fig. 2) are about 1/16th of an inch long, yellowish, and partially covered with a white secretion that protects them from parasitoids and chemical sprays. Their feeding causes cupping of the leaves. If your boxwood had this pest last year, the foliage from last year will show cupping. Newly hatched psyllids will cause cupping on new leaves.



Figure 2 Boxwood psyllid nymphs

Management: Damage is mostly aesthetic. Pruning boxwoods reduces the population as the insect or the eggs are removed in the process. This physical removal of infested tissue may be enough to keep the problem in check. We sometimes see ladybugs feeding on the psyllids.

Good website: <https://extension.psu.edu/boxwood-psyllid>

Boxwood leafminer (potentially serious)

Boxwood leafminer (*Monarthropalpus flavus*) has been a big problem for the last few years, with large populations evident on many boxwoods. They overwinter, as larvae, in the leaves on boxwood. Look for 'blisters' (fig. 3) on the leaves that turn from light green to orange or brown (as the larvae mature). The larvae are inside these blisters. Look carefully, as these blisters are sometimes mistaken for fungal leaf spots. The larva will pupate



Figure 3 Spots caused by boxwood psyllids

inside the leaf and emerge as an adult around GDD₅₀ 450. When the adults emerge, they will be orange and have a mosquito-like appearance.

Management: Removing infested foliage now will reduce populations. Insecticides can be sprayed while the adults are emerging.

Good website:

[https://www.canr.msu.edu/news/boxwood leafminer a serious pest of a favorite landscap e plant](https://www.canr.msu.edu/news/boxwood_leafminer_a_serious_pest_of_a_favorite_landscap_e_plant)

Elm zigzag sawfly (potentially serious)

It's time to revisit a newer pest, the elm zigzag sawfly. Late last year, Dr. Fredric Miller sent out the word that the elm zigzag sawfly (*Aproceros leucopoda*) is present in several counties in Wisconsin. Previous to that, it had been found in Ohio. Dr. Miller tells me that feeding damage was found in Busse Woods last year, so the insect is present in Illinois. Adults have been collected in that area this year and egg laying is expected to be happening soon. If you find this insect in Illinois, Dr. Miller would like you to contact him at fmento84@gmail.com. As he says, this insect is not a 'tree-killer', but it still merits our attention. This invasive pest can produce significant defoliation of elms 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. See links below for images of the insect and its damage.

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/>

Zimmerman pine moth (serious)

This is a time of year when the larvae of Zimmerman pine moth (*Dioryctria zimmermani*) are active, but often overlooked. The cooler temperatures that we have been having may slow down the activity of this pest causing it to become active a bit later than usual. Larvae overwinter in cocoon-like structures under bark scales. They become active in the spring (usually between 100 and 200 GDD base 50) and tunnel into the bark and sometimes the terminals. In late spring, they migrate to the base of branches, tunneling into the whorl area where pitch masses (fig. 4) exude from the wound site. The larvae continue to feed, pupate within the pitch mass, and emerge as adults in August. After mating, female moths lay eggs, often near wounds or previous pitch masses. Eggs hatch in about a week, and the larvae feed for only a brief time before preparing to overwinter.



Figure 4 Pitch masses caused by Zimmerman pine moth larvae

Management: Larvae are very difficult to detect by scouting, so you have to focus on symptoms and phenological indicators. Damaged wood should be pruned out as soon as dieback and pitch masses are seen. Larvae can be controlled by spraying bark and foliage with insecticides when saucer magnolia is in pink bud to early bloom (70 –160 GDD). We are just passing that mark, but will have another chance to treat in mid-August; GDD 1900-2150 (this GDD derived from several universities, not “Coincide”).

Good website: <https://mortonarb.org/plant-and-protect/tree-plant-care/plant-care-resources/pine-moths/#zimmerman-pine-moth>

Hydrangea leaftier (minor)

The hydrangea leaftier (*Olethreutes ferriferana*) is an unusual little weirdo that has been showing up for the last several years. We have received reports about this pest already this year. The hydrangea leaftier (tie-er, as in “one who ties leaves together”) is showing up primarily on ‘Annabelle’ hydrangeas (*Hydrangea arborescens* ‘Annabelle’). This little caterpillar will tie leaves together to form a pouch-like structure (fig. 5) at the end of the branch. The caterpillar lives inside. In summer, the caterpillar will go to the ground to pupate. Adult moths will emerge in

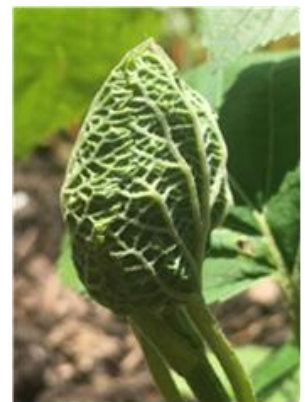


Figure 5 Damage from hydrangea leaftier

spring.

Management: Hand removal and destruction of the affected leaves is usually sufficient control.

Good website: <https://bygl.osu.edu/node/1303>

Pest Updates: Diseases

Cedar rust (unattractive, but generally not life-threatening)

The cedar-rust diseases are starting to be active on the evergreen host (juniper) and all we need is a little rain to push them forward. There are three main rusts on juniper: cedar-apple, cedar-hawthorn, and cedar-quince. Cedar-apple rust and cedar-hawthorn rust both form golf ball-shaped galls on junipers. During spring rains, the gelatinous telial horns (fig. 6) expand from the golf ball-like galls. The sample we saw recently is in the early stage and looks more like figure 7. Spores are released from the horns and are blown to a host in the rose family, e.g., apples, crabapples, and hawthorns. Orange leaf spots subsequently develop on the rose family plants during the summer.



Figure 6 Cedar-apple rust on juniper

Cedar-quince rust is a bit different. Of the three cedar rust diseases, cedar-quince rust can cause the most damage by infecting fruits and twigs on trees in the rose family, especially hawthorns and serviceberries. Although cedar-quince rust spends part of its life cycle on junipers similar to cedar-apple rust and cedar-hawthorn rust, it does not form galls on the junipers. Cedar-quince rust appears as orange ooze that seems to be leaking directly from the twigs and branches of junipers. We have seen one sample of cedar-quince rust starting to sporulate. It is possible for all three diseases to be present on the same host at one time.



Figure 7 Spore horns emerging

Management: The disease is usually not serious on the juniper host. Once the orange jelly horns and ooze stop, the juniper will look fairly normal. No real treatment is needed.

Management is usually more focused on the hosts in the rose family. The best management is to plant resistant varieties of crabapples and hawthorns. Remember, resistance is not the same thing as immunity. Being resistant does not mean that the tree will never get rust. It only means that, in an average year, it is not likely to have much problem with the disease. In a year that is very favorable to the fungus, even resistant trees may show some signs of disease. When considering the purchase of a new crabapple, check with your local nursery about which rust-resistant cultivars they offer. Chemical control for rose family hosts, if used, needs to start as leaves are emerging and when the telial horns are expanding on junipers (both are starting to happen now). Although the rust diseases will cause orange spots on leaves and infect fruit, actual long-term damage is mostly minor, and may not require treatment. Cedar-quince rust can lead to stem swelling on hawthorn, and those swellings can lead to dieback on infected twig tips. Dead branch tips should be pruned out.

Good web sites: <https://mortonarb.org/plant-and-protect/tree-plant-care/plant-care-resources/cedar-apple-rust/>

<https://extension.umn.edu/plant-diseases/cedar-apple-rust>

Ground cover diseases (serious)

The Plant Clinic at the Morton Arboretum is receiving numerous reports of diseases on ground covers. Different ground covers are being affected by different diseases, but the ground covers have one thing in common. They are evergreen ground covers, specifically pachysandra, vinca (periwinkle) and English ivy. It has been several years since we have seen an extensive outbreak of ground cover diseases, so why now?

It may be linked, in part, to the lack of snow cover this winter. Evergreen ground covers can be damaged when exposed to the drying winds and harsh sun of winter. This winter had its fair share of windy days and sunny days. Those factors, combined with lack of snow cover, likely lead to some winter damage on these plants. Then, in March, we had just over 4.5 inches of rain. Disease organisms love water.

So, what are we seeing? On pachysandra, we are seeing *Volutella* blight. We reported on this in [issue 2](#) of the Plant Health Care Report.

On vinca, we believe we are seeing a fungal problem commonly known as phoma stem blight. Early symptoms are dark spots on leaves or stems (for photos of symptoms, see the link to Purdue University below under 'good websites'). Under wet conditions, stems are girdled by the disease and the leaves beyond the girdled area will die. Large areas of the planting can die and we are seeing that this year. The fungal spores of phoma can live in the soil and in infected plant tissue, so replanting of vinca may not be possible.

On English ivy, we are possibly seeing two diseases, one fungal and one bacterial. A lab test may be needed to verify which disease is present, in order to manage the disease properly. Lab testing in Illinois is available through the [University of Illinois Plant Clinic](#). Residents of other states can find a state lab in their area through the [National Plant Diagnostic Network](#). Both diseases cause leaf spots.

The bacterial leaf spot produces spots that start out light green, with a water-soaked appearance. Later, the spots appear dark and greasy-looking and may have definite margins and a yellow halo visible when the leaf is lifted up to light (fig.8). Often the spots crack with age and bacterial ooze may emerge from lesions when the conditions are wet and warm. Severe infection can cause leaf distortion, blight, and premature defoliation. The disease can also cause black cankers on stems, killing them.



Figure 8 Bacterial leaf spot on English ivy

The fungal leaf spot disease produces spots that are tan to brown and may be irregularly shaped. As the disease progresses, fruiting bodies that look like black specks can be seen within the spots. Lesions may develop on leaf stalks and stems, leading to dieback and defoliation.

Management: With all of these diseases, good sanitation is vital. That means removal of all infected plant material, including fallen leaves. Maintaining an open planting bed is important as well. We want to be sure that the ground cover does not become overly dense and we want to rake out leaves that may be falling into the bed from trees above the ground cover. Once sanitation is in hand, fungicides may prevent new infections from occurring on those diseases caused by a fungus. They will not ‘cure’ an existing infection. Because phoma fungal spores and the bacterium that causes the bacterial leaf spot of English ivy may survive in the soil, it may not be feasible to replant more vinca or English ivy.

Good website: <https://mortonarb.org/plant-and-protect/tree-plant-care/plant-care-resources/ground-cover-diseases/>
<https://purduelandscapereport.org/article/phoma-stem-blight-of-vinca/>
<https://extension.psu.edu/english-ivy-hedera-diseases>

Volutella canker on boxwood (potentially serious)

Volutella on boxwood is showing up all over the region. This is caused by a different fungus than the volutella on pachysandra that we mentioned in Issue 2. Volutella on boxwood is

caused by *Pseudonectria rouselliana* (imperfect stage *Volutella buxi*) while *volutella* on *pachysandra* is caused by *Volutella pachysandrae*.

Volutella on boxwood causes the leaves on infected branches to turn yellow (fig. 9) and then a buff color. This may be mistaken for winter damage. Examination of the stems will show cankered areas where the bark is cracked or even loose and peeling. In areas where the bark peels away, the wood underneath will be dark-colored. During wet weather, salmon-pink fruiting bodies will be present on the infected stems and leaves.



Figure 9 *Volutella* on boxwood

Management: When the plant is dry, infected stems should be cut out. Clean tools between cuts. Thin out dense shrubs to improve air circulation. Clean up fallen leaves to reduce the amount of fungal spores. A fungicide may prevent new infections, but will not cure current ones. Removal of dead plant material is key to management of the disease.

Pest Updates: Weeds

Creeping bellflower (aggressive; considered a restricted invasive plant in Wisconsin)

For the last few years, we have been receiving reports of an annoying weed making itself known in flower gardens and lawns. Those complaints often come later in the season when this weed starts flowering, but we have already received several emails about creeping bellflowers this season. There are actually two plants that are nearly identical, ladybells (*Adenophora* spp.) and creeping bellflower (*Campunula rapunculoides*). The two plants differ only by a small structure within the flower. Ladybells and creeping bellflower are closely related, but on doing a little research, it seems that the creeping bellflower may be the ‘bad seed’ of this family. It is the one that seems to be overly aggressive. Unfortunately, because the plants are so identical, if a friend shared some ladybells with you from their garden, you may actually have creeping bellflower.



Figure 10 Leaves of creeping bellflower

Young plants have leaves that are heart-shaped to lance-shaped (fig. 10). This innocent looking plant has fleshy roots growing horizontally under the soil. These fleshy roots help to spread the

plant and before you know it you have a healthy patch of them in your flower bed. If the plants are not removed, a flowering stalk with purple, nodding, bell shaped flowers will form (fig. 11).

Management: Small groups of plants can be removed manually through digging, but any roots left will continue to produce new plants. As new plants develop and are actively growing, spray them with a systemic weed killer that will be absorbed by the leaves and taken down to kill out the roots. Use with care, as many systemic weed killers are non-selective and will kill desirable plants if the product comes in direct contact with them.

Native corner

Many people are becoming interested in native plants and their pollinators. This is a great trend and The Morton Arboretum wants to encourage that. Some people have told us that they are having trouble finding reliable information on this topic. So, from time to time, we will have articles that focus on use of native plants and helping pollinators. Here is our first article.



Figure 11 Flowers of creeping bellflower

Saving stems for native bees?

This has become a very popular topic and it is a good one. Anything that helps native pollinators has some value. As with any topic, we want to delve a little deeper into this one so we understand it better. The current trend is to leave stems up in the garden to give bees a place to use as a 'nest' in which their young can develop. A good idea, but more needs to be considered. [This article](#) from Tufts University outlines the right way to do this. Stems may need to remain in the garden for two or even three years in order for the bees to benefit from them. This is important information that is not always talked about. In addition to that, the plants that benefit bees the most will either have hollow stems or a softer ('pithy') center. Not every plant provides that.

Keep in mind, that not all bees nest in stems and other pollinators may have completely different needs for their young. There are many species of ground bees that nest in the soil and will need access to bare ground. Other species of bees may need some type of cavity in which to build a nest.

Butterflies will need certain plants on which to lay their eggs. While many plants can provide nectar as a food source for adult butterflies, not all of them serve as a food source for the young caterpillars which will become butterflies. When looking for plants for a butterfly

garden, it is good to find out which ones serve as a nectar source and which serve as a larval (caterpillar) food source.

It's exciting to see so many people turning to native plants these days. To help you learn even more, here are some resources to help you:

<https://mortonarb.org/plant-and-protect/tree-plant-care/plant-care-resources/plants-that-attract-butterflies/>

<https://sites.tufts.edu/pollinators/2021/04/the-right-way-to-leave-stems-for-native-bees/>

<https://xerces.org/pollinator-conservation/nesting-resources>

<https://content.ces.ncsu.edu/garden-cleanup-for-pollinators-trim-perennial-stems-in-their-first-winter>

Miscellaneous

Watch the weather, not the calendar

When can I plant my annual flowers? What month should I treat my crabapple for apple scab? Is it time to divide my perennials? The Plant Clinic at The Morton Arboretum receives a lot of calls and emails about when to do certain garden tasks. Those asking the question are usually hoping to get a specific week or month to do that task. That has never been an easy thing to do and these days, it is nearly impossible to be that specific.

Why is that? The answer is, the weather. Let's look at some recent weather. In March and of April, the weather has been a true roller coaster ride. First, we would get a warm day and that would be followed by two or three cold ones. That is still continuing. In one week, we recently had night temperatures near freezing and a day with a high in the 80's! Midwestern weather has always been a bit changeable, but now it is almost unbelievable.

This type of weather really makes it difficult to time garden tasks. Stormy weather keeps us out of the garden altogether. Heavy rains and flooding make it impossible for us to dig holes to plant a tree, or possibly even walk in our backyard, without damaging the soils. High temperatures affect plant (and insect) development. Numerous cold days in April kept the native wildflowers undercover until late April. Heat can also push leaves to open more quickly than expected. To make a decision on when to treat, plant, etc. we have to look at the weather AND the stage of development of the plant, not the date on the calendar. Luckily, both the weather and our plants are easy to observe. We just have to look.



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 Julia 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.

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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.

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