

# Plant Health Care Report

Scouting Report of The Morton Arboretum

---

Aug 23, 2013

Issue 2013.16

Our report includes up-to-date disease and insect pest reports, as well as color images, for northeastern Illinois. You'll also find a table of accumulated growing degree days throughout Illinois, precipitation, and plant phenology indicators to help predict pest emergence. The report is published bi-weekly on Fridays in April and August, and weekly May-July.

Arboretum staff and volunteers will be scouting for insects and diseases throughout the season. We will also be including information about other pest and disease problems based on samples brought into the Arboretum's Plant Clinic from homeowners and professionals.

If you have any comments or concerns regarding the Plant Health Care Report, please send them to Sharon Yiesla at [syiesla@mortonarb.org](mailto:syiesla@mortonarb.org).

**This is our last issue for the season.**

## Quick View

### What plant is in bloom at the Arboretum?

Cup plant (*Silphium perfoliatum*) is in bloom (Figure 1)

Accumulated Growing Degree Days (Base 50): 2028 (as of Aug 22)

Accumulated Growing Degree Days (Base 30): 4834 (as of Aug 22)

### Insects:

- Grubs
- Boxelder bugs
- Viburnum leaf beetles
- Sycamore lacebugs
- Gall midge on goldenrod
- Red goldenrod aphid
- Honeysuckle aphid

### Diseases:

- Goldenrod /pine needle rust

### Miscellaneous:

- Watering into autumn
- Seasonal needle drop
- Urban tree care conference



Figure 1 Cup plant (photo credit: John Hagstrom)

2013 index

## Degree Days and Weather Information

As of Aug 22, we are at 2028 base-50 growing degree days (GDD). In 2012, when we were having an abnormally warm season, we had accumulated 3118 GDD base-50 by this date. On average we usually have accumulated 2235 GDD base-50 by this date, so we are starting to lag behind the average. From Aug 9 to Aug 22 we have had .09 inches of rain.

Location	B <sub>50</sub> Growing Degree Days Through Aug 22 , 2013	Precipitation (in) Aug 9-22 , 2013
Carbondale, IL*	2917	
Champaign, IL*	2518	
Chicago Botanic Garden**	1945 (as of 8/21)	0" (8/14-21)
Chicago O'Hare*	2229	
Kankakee, IL*	2387	
The Morton Arboretum	2028	.09"
Northbrook, IL**	2120.5	.03" (8/15-21)
Quincy, IL*	2636	
Rockford, IL*	2148	
Springfield, IL*	2610	
Waukegan, IL*	1940	

\*\*Thank you to Mike Brouillard, Northbrook Park District and Mike Annes, 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 <http://www.gddtracker.net/>

**New this year:** To make the Plant Health Care Report (PHCR) more effective, each pest/disease article will be marked parenthetically this year to indicate the severity of the problem. 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 included in the PHCR, but are seldom serious enough for pesticide treatment, will be marked "minor". Articles that discuss a problem that is seen now, but would be treated with a pesticide at a later date, are marked "treat later". Since we will cover weeds from time to time, we'll make some categories for them as well. "Aggressive" will be used for weeds that spread quickly and become a problem and "dangerous" for weeds that might pose a risk to humans. As the season goes on please give me feedback as to whether this system helps you or not. Contact me at [syiesla@mortonarb.org](mailto:syiesla@mortonarb.org).

## **Pest Updates: Insects**

### **Grubs (potentially serious)**

The time has arrived to consider grub control in lawns. White grubs are the larvae of several beetles including Japanese beetles, chafers and June beetles. While eggs of these species will hatch into grubs at various times in late summer, most of the damage begins around July and early August, so this would be the time to apply grub control. The grubs will continue to feed on turf roots until the weather gets cold. Then they will go deeper into the soil to spend the winter. When spring returns, the grubs will come back to the surface, but by this time they are older and tougher and insecticides are less successful.

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 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. Homeowners who are irrigating the lawn should be watchful. The beetles have to bury their eggs in the soil. They are more likely to do this in soils that are moist and easy to dig. So those of you who are watering may be more likely to deal with grubs this year.

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

What about Milky Spore? Milky Spore is a bacterium that specifically targets the grubs of Japanese beetles. It will not affect the white grubs of other beetle species. Most universities in northern states are reporting poor results with this product. Even in warmer southern states where the results are better, it takes a long time for the product to be effective.

Good websites: [http://urbanext.illinois.edu/lawntalk/weeds/dealing\\_with\\_white\\_grubs\\_in\\_lawns.cfm](http://urbanext.illinois.edu/lawntalk/weeds/dealing_with_white_grubs_in_lawns.cfm)

### **Boxelder bugs (minor)**

Fall is just around the corner and boxelder bugs (*Boisea trivittata*) (figure 2) will soon be making a return engagement in many homes in the area. The Plant Clinic has not yet received any reports of this nuisance pest, but it is almost certain to show up as the weather cools down. These sap-feeding insects feed on sap of seeds, flowers, and leaves of boxelders (*Acer negundo*). Their feeding causes little damage to the tree. They are considered to be a nuisance when large numbers of them appear in homes, especially in fall and spring. Nymphs are bright red when they first hatch, developing black wing pads over time. Adults are about ½ inch long, have three red or orange lines in back of their heads, and have black wings with red lines and a red abdomen.



Figure 2 Boxelder bug nymph (top) and adult (bottom)

Boxelder bugs overwinter as adults in protected sites. Since they consider your house to be a protected site, if you have cracks in your foundation or around your windows, they will enter your house through those cracks in fall to overwinter. They do no harm in the house but are very annoying.

**Management:** To manage the insect while it is on the boxelder tree, spray the foliage of the tree with carbaryl. As the insects gather on the outside of your home, they can be sprayed with insecticidal soap. Do not use insecticides inside the home. Caulk around doors and window to minimize entry by the insect. Keep screens in good repair. Boxelder bugs that do enter the home can be removed with a vacuum or manually. Do not crush them as they can leave a stain.

Good website: <http://ccesuffolk.org/assets/Horticulture-Leaflets/Boxelder-Bug.pdf>

<http://www.mortonarb.org/component/content/article/193-insects-diseases/760-boxelder-bugs-leptocoris-trivittatus.html>

### **Viburnum leaf beetle (potentially serious)**

The Viburnum leaf beetle (*Pyrrhalta viburni*) is native to Europe. In the United States it has been found in only a few states, including New York, Ohio, Pennsylvania, Maine, Vermont and Massachusetts. The first confirmed occurrence of the beetle in Illinois was documented in 2009 in Cook County. A second occurrence was confirmed last year in DuPage County and we have found the beetle in the same area this year. Should we panic? No. Should we be alert and looking for this pest? Definitely! Early detection is important for management of any pest.



Figure 3 Egg laying damage

This is a pest of concern because it has the potential to be a serious defoliator of viburnums. The beetle overwinters as eggs in the tips of stems. The egg-laying damage usually occurs in rows (figure 3). The eggs are laid in holes chewed by the adult. The holes are then covered by a cap of chewed bark. These caps are fairly easy to see as they are darker than the stem.

The eggs hatch into larvae in the spring, usually in May. The larvae vary in color. They may be pale green, pale orange or yellow. They do have a distinctive pattern of black spots along their sides and a row of black dashes running down their backs. At maturity, the larvae are a little less than half an inch long. The larvae chew on the undersides of new foliage, skeletonizing it.

When mature, the larvae crawl to the ground, usually in mid-June, and pupate in the soil. Adults emerge from the soil (early



Figure 4 Feeding damage (photo credit: U of I Plant Clinic)

July) and also chew on the leaves. Their feeding damage forms irregular round holes in the leaves (figure 4). The beetles are about ¼ inch long and generally brown in color (figure 5). On close inspection golden hairs can be seen on the wing covers of the adult beetle. The adult beetles will be mating and laying eggs from summer into fall. There is one generation of the beetle each year. Heavy and repeated defoliation by the viburnum leaf beetle can lead to death of the shrubs.



Figure 5 Adult viburnum leaf beetle (photo credit: U of I Plant Clinic)

**Management:** From October through April twigs with eggs in them can be pruned out and destroyed. Insecticides can be used on the larvae in May when they are feeding, and on the adults in summer when they are feeding. University of Illinois Extension suggests the insecticides containing one of the following ingredients: carbaryl, cyfluthrin and permethrin.

**For more information and photos of beetle:**

<http://www.hort.cornell.edu/vlb/>

<http://entomology.cornell.edu/cals/entomology/extension/idl/upload/Viburnum-Leaf-Beetle.pdf>

<http://ohioline.osu.edu/sc195/013.html>

**To report this pest:** Illinois Cooperative Agricultural Pest Survey is interested in monitoring where this pest is found. To report the viburnum leaf beetle at your location go to their website <http://www.inhs.illinois.edu/research/CAPS/> for instructions on reporting the beetle.

### Sycamore lacebugs (minor)

Sycamore lacebugs (*Corythucha ciliata*) have been found feeding on American sycamore (*Platanus occidentalis*). Lacebugs are a common pest of ornamental trees and shrubs, and most lacebug species are host specific. An exception is the hawthorn lacebug (*C. cydoniae*) that attacks several species within the *Rosaceae* family including cotoneaster, flowering quince, crabapple, mountain ash, *Pyracantha*, and hawthorn. Most lacebug species have two or more generations per year. The hawthorn lacebugs have only one generation per year.



Figure 6 Sycamore lacebug adult

The sycamore lacebug (figure 6) overwinters as an adult under loose bark of its host and becomes active in early spring as leaves begin to develop. Soon

afterwards, the female lays eggs on the undersides of leaves. Eggs hatch within a few days and spiny, wingless, black nymphs begin feeding. Within 4 to 6 weeks the nymphs pupate, and the next generation of adults emerge. Adults are 3 to 6 mm long (1/8 to 1/4 inch) with lacy wings.

Sycamore lace bug adults and nymphs live on the lower surfaces of leaves and feed on leaf sap causing yellow and white stippling on the upper leaf surface. As the insects feed, they deposit a brown varnish-like excrement on the underside of leaves. Heavy infestations may lead to complete stippling and premature leaf drop.

**Management:** There are several naturally occurring predators including green lacewings, mites, and assassin bugs. A forceful spray of water will dislodge newly hatched nymphs, and they will often die before they find their way back to suitable leaves. Plant site selection is also important as lace bugs prefer bright, sunny locations. Insecticides generally are not necessary except for severe infestations. Avoid using insecticides if natural predators are present.

Good website:

<http://aggie-horticulture.tamu.edu/galveston/Gardening-Handbook/PDF-files/GH-023--sycamore-lace-bug.pdf>

<http://edis.ifas.ufl.edu/in347>

### Gall midge on goldenrod (minor)

As the season wraps up, the galls continue to show up. We are now seeing a gall midge (*Asteromyia carbonifera*) on goldenrod. This gall is a little weird as it almost looks like a fungal leaf spot. The gall starts out purple (figure 7) and then changes to a foamy white appearance (figure 8). As with other galls, no management is needed.

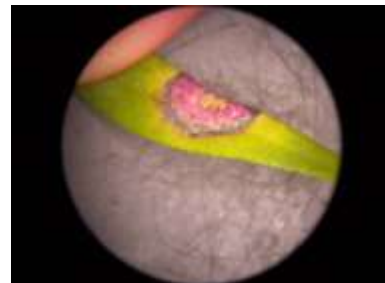


Figure 7 Gall midge on goldenrod



Figure 8 Gall midge on goldenrod



### Red goldenrod aphid (minor)

We've seen a lot of aphids this year (see issue 8). That trend continues on into late season as well. Our scouts are finding red goldenrod aphids (*Uroleucon nigrotuberculatum*) (figure 9) on goldenrod, of course. As with other aphids, the problem is minor and often solved with a strong stream of water from the garden hose.



Figure 9 Red goldenrod aphid

### Honeysuckle aphids (potentially serious)

Speaking of aphids, we have had a few samples of honeysuckle aphid (*Hyadaphis tataricae*) damage come into the Plant Clinic this season. We tend to see this one on the pink flowered, Tatarian honeysuckle (*Lonicera tatarica*). This aphid can do some damage.

Feeding by this aphid can stunt new growth and cause witches' brooms (figure 10). The red-streaked, curled, and dwarfed leaves, which result from early feeding, are typical of aphid damage. Heavy aphid infestations can kill plants. There are multiple generations during the summer.



Figure 10 Damage from honeysuckle aphid

Growing to less than 1/16 inch in length, and varying from a pale green to cream in color, the honeysuckle aphid can easily be missed during routine plant inspections. To aid in proper identification, look for a dark head and thorax and a white abdomen, which is often covered with a fine, powdery dust. The aphid's entire life cycle is completed on the host plant. In late summer, when the population of aphid colonies can reach in the hundreds, they can be found outside the damaged, curled leaves feeding on petioles and stems.

**Management:** Avoid planting Tatarian honeysuckle (it is an invasive plant). Removing infested branches 6 inches below any witches' brooms remaining from the previous season can be an effective method of control. Do this during the winter while the plant is dormant or in early spring before the eggs have hatched. As with other species of aphids, lady beetles will prey upon honeysuckle aphids in their adult and larval stages and, by late summer, many aphids will have been eaten by these natural predators.

Good web sites: <http://learningstore.uwex.edu/pdf/A3184.pdf>  
<http://www.mortonarb.org/tree-plant-advice/article/766/honeysuckle-aphid-hyadaphis-tataricae.html>

## Pest Updates: Diseases

### **Goldenrod/pine needle rust (minor)**

Rust has been found on the underside of the lower leaves of goldenrod (*Solidago spp.*). This is likely pine needle rust, although we haven't found the rust on any of our pines. However, goldenrod and asters are the alternate host for pine needle rust. Pine needle rust is caused by the fungus *Coleosporium asterum*. It seldom causes serious damage on either plant. The rust on pine kills older needles on young trees, primarily on red, Scots, and jack pine.



Figure 11 Rust spores on leaves of goldenrod

Needles on the bottoms of the trees turn brown in spring. Then orange droplets appear on infected foliage. Later, orange blisters appear. Spores are blown from the orange blisters to infect the leaves of asters and goldenrod in early summer. By late summer, orange spores have formed on the undersides of the lower leaves (figure 11). This is what we're seeing now on the goldenrod leaves. Spores from the goldenrods are carried by winds to pine needles, where they cause new infections.

**Management:** Asters and goldenrod should not be planted in the immediate vicinity of susceptible pines. It causes little damage to either host, but needle loss on lower branches may disfigure and retard growth of young pines.

Good website:

<http://extension.psu.edu/pests/plant-diseases/all-fact-sheets/goldenrod-solidago-diseases>

## Miscellaneous

### **Watering into autumn**

With the excess rain we had in spring, who knew we would be talking about needing to water in autumn? But we do, since the rain has become sparse as of late. As autumn comes on and the temperatures cool, 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. Our plants continue to need water into autumn.

With autumn, we will start to see plants go dormant and perennials will even start to die back. The root systems of all are plants are still quite 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. 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.

If we start to get rain on a more regular basis, we will be able to modify our watering practices. 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 know how much rain really fell.

### **Seasonal needle drop**

Coming soon to an evergreen near you: 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 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



**Figure 12 Seasonal needle drop**

location of the browning. Trees going through normal needle drop will have a fairly uniform brown appearance in the interior of the tree (figure12) since this is where the oldest needles are located. After a few weeks the brown 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.

Good website: <http://www.mortonarb.org/tree-plant-advice/article/23074/seasonal-needle-drop.html>

### **Urban tree care conference for professionals**

#### **Selecting and Planting Trees**

The Morton Arboretum Urban Tree Care Conference (November 18-19, 2013)

The Morton Arboretum  
4100 Illinois Route 53  
Lisle, Ill. 60532

Selecting the right tree for the site and planting it correctly makes it more likely to live a long, healthy life and reduces maintenance costs. The Morton Arboretum in Lisle, Ill., will hold a day-and-a-half-long

conference in November on best practices and latest recommendations for urban tree selection and planting. Speakers will include James Urban (author of *Up By Roots*), Guy Sternberg (co-author of *Native Trees for North American Landscapes*), and Gary Watson (co-author of *The Practical Science of Planting Trees*). Aimed at arborists, landscape contractors, landscape architects, municipal foresters, nursery growers, and other professionals, The Morton Arboretum Urban Tree Care Conference will be held Monday, November 18, and Tuesday, November 19, at the Arboretum, 4100 Illinois Route 53, Lisle, Ill. Cost: \$165 July 15–September 30, \$185 September 30–November 13, \$205 onsite or after November 13; students \$50. Includes Arboretum admission, refreshments, Monday reception, Tuesday lunch, and program materials. Eligible for ISA continuing education credit. For more information or to register, see [mortonarb.org/urbantreeconference](http://mortonarb.org/urbantreeconference).

## **2013 index**

### **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, Anthracnose, oak .....8 means that it was discussed in the PHC report issue #8.

Alternaria blight .....	2	Chlorosis .....	9
Anthracnose, ash .....	6	Clematis wilt .....	9
Anthracnose, oak .....	8	Crabgrass .....	3
Anthracnose, sycamore .....	9	Creeping bellflower .....	4
Aphids .....	8	Cypress twig guide .....	15
Aphid, honeysuckle .....	16	Dothistroma .....	3
Aphid, red goldenrod .....	16	Downy leaf spot.....	8
Aphid, woolly alder.....	5	Downy mildew on impatiens .....	4
Apple scab.....	5	Drought stress .....	1
Article: So what are degree days and why do we care about them anyway .....	1	Dutch elm disease.....	9
Aster yellows .....	13, 14	Eastern tent caterpillar .....	5
Bagworm .....	6, 10	Egg masses .....	2
Banded longhorn beetle .....	15	Elm bark beetle .....	3, 5
Bark cracks .....	9	Emerald ash borer .....	15
Black knot .....	3	Environmental stress .....	14
Black spot, elm .....	9	Euonymus caterpillar .....	7
Botrytis blight .....	12	European elm flea weevil .....	5
Boxelder bugs .....	16	Fire blight .....	8
Boxwood psyllid .....	4	Flooding .....	2
Brown marmorated stink bug .....	5	Four-lined plant bug .....	9
Bulls-eye leaf spot .....	14	Frog-eye leaf spot .....	11
Canker, golden .....	6	Fruitworms .....	7
Canker, nectria .....	14	Gall, ash flower .....	6
Canker, phomopsis .....	16	Gall, cone .....	10
Cankerworm.....	5	Gall, fragrant sumac .....	11
Carpenter bees .....	4	Gall, hackberry nipple.....	8

Gall, hedgehog .....	5	Poison Hemlock .....	8
Gall, hickory midge.....	10	Powdery mildew .....	7
Gall, leaf petiole .....	10	Red milkweed beetle .....	15
Gall, maple bladder.....	13	Rose plume moth .....	6
Gall midge on goldenrod .....	16	Rose rosette.....	9
Gall, oak apple.....	6	Rust, cedar .....	3, 7
Gall, Oak bullet .....	11	Rust, crown on buckthorn .....	5
Gall, spangles .....	11	Rust elderberry .....	12
Gall, spindle.....	8, 11	Rust, goldenrod/pine needle .....	16
Gall, spiny rose .....	8	Rust, rose .....	10
Gall, unknown species .....	3	Rust, veronica .....	12
Gall, vein pocket.....	6, 13	Salt damage .....	1
Gall, white oak club .....	10	Sawfly, azalea .....	7
Grape phylloxera .....	13	Sawfly, European pine .....	4
Grubs .....	16	Slug .....	13
<i>Guignardia</i> .....	11, 14	Sawfly, roseslug .....	6
Hemlock rust mite.....	3	Scale, azalea bark .....	12
Imported currantworm .....	10	Scale, euonymus .....	2
Japanese beetles.....	10	Scale, kermes .....	12
Lacebugs .....	12	Scale, Lecanium .....	10
Larch casebearer.....	3	Scale, magnolia .....	12
Leafminer, columbine .....	12	<i>Schizophyllum commune</i> .....	12
Leafminer, elm .....	5, 7	Seasonal needle drop .....	16
Leafrollers .....	8	<i>Septoria</i> leaf spot.....	9, 16
Leafroller, oak leaf .....	6	Slime mold .....	14
Lichens .....	3	Spider mites, spruce .....	10
Linden looper .....	13	Spittle bug.....	8
<i>Melampsora</i> rust .....	15	Stinkbugs.....	10
Milkweed bugs .....	15	Sycamore bark falling off .....	15
Mycosphaerella leaf spot .....	14	Sycamore lacebugs .....	16
Oak leaf blister .....	12	Tar spot of maple .....	13
<i>Pestalotiopsis</i> .....	2		

---

The Plant Health Care Report is prepared by Sharon Yiesla, M.S., Plant Clinic Assistant and edited by Stephanie Adams, M.S. Research Specialist in Plant Health Care; Fredric Miller, Ph.D., Research Entomologist at The Morton Arboretum and Professor at Joliet Junior College; Doris Taylor, Plant Information Specialist, and Carol Belshaw, an 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 the volunteers who will be scouting for us this season. They find most of the insects and diseases that are in this report. The Scouting Volunteers include: LeeAnn Cosper, Deborah Finch-Murphy, Anne Finn, Ann Klingele, Jack Leider, Loraine Miranda, Bill Sheahan and Kathy Stephens. Your hard work is appreciated.

Literature recommendation:

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. This book may be purchased through the publisher at: <http://www.laborofloveconservatory.com/>

The Commercial Landscape & Turfgrass Pest Management Handbook (CPM), for commercial applicators, and the Home, Yard & Garden Pest Guide (HYG) for homeowners from the University of Illinois, are available by calling (800-345-6087).

This report is available as a PDF at The Morton Arboretum website at <http://www.mortonarb.org/tree-plant-advice.html>

For pest and disease questions, please contact the Plant Clinic at (630) 719-2424 between 10:00 and 4:00 Mondays through Saturdays or email [plantclinic@mortonarb.org](mailto:plantclinic@mortonarb.org) . Inquiries or comments about the PHC reports should be directed to Sharon Yiesla at [syiesla@mortonarb.org](mailto:syiesla@mortonarb.org) .

Copyright © 2013 The Morton Arboretum

Not printed on recycled paper, or any paper for that matter.