

Plant Health Care Report

Scouting Report of The Morton Arboretum

May 10, 2013

Issue 2013.4

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.

Quick View

What indicator plant is in bloom at the Arboretum?

Flowering Quince (*Chaenomeles speciosa*) (Figure 1)

Accumulated Growing Degree Days (Base 50): 122 (as of May 9)

Accumulated Growing Degree Days (Base 30): 846.5 (as of May 9)

Insects:

- European pine sawfly
- Boxwood psyllids
- Carpenter bees

Disease:

- Downy mildew on impatiens
- *Volutella* on pachysandra

Weeds:

- Creeping bellflower



Figure 1 Flowering quince (photo credit John Hagstrom)

Degree Days and Weather Information

As of May 9, we are at 122 base-50 growing degree days (GDD). The average GDD base-50 for May 9 is 116. So far for May, our rainfall is .19 inches.

Location	B ₅₀ Growing Degree Days Through May 9 , 2013	Precipitation (in) May 3-9, 2013
Carbondale, IL*	360	
Champaign, IL*	268	
Chicago Botanic Garden**	102	
Chicago O'Hare*	172	
Kankakee, IL*	239	
The Morton Arboretum	122	.19 inches
Northbrook, IL**	140	.13 inches (5/2-8)
Quincy, IL*	251	
Rockford, IL*	163	
Springfield, IL*	263	
Waukegan, IL*	115	

**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 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 .

Pest Updates: Insects

European pine sawfly (potentially serious)

University of Illinois is reporting that the European pine sawfly (*Neodiprion sertifer*) (figure 2) has hatched in Central and Southern Illinois, so we should be looking for them here soon. This insect can cause heavy defoliation on red, Scots, mugo, Japanese red, and jack pines.

European pine sawflies are interesting to watch. Groups of sawfly larvae rear up their heads simultaneously when disturbed, making the group appear to be one much larger organism. This is a great defense mechanism.

When fully grown, the sawflies will be about $\frac{3}{4}$ - 1 inch long and will have several light and dark green stripes on each side of their bodies. Their heads and the three pairs of legs are black. Their mouths are so small after hatching, they can only eat one side of each needle, and therefore the chewed-on needles look like straw. Eventually as the insects mature, they are able to eat entire needles. The larvae feed for weeks on old conifer needles but are finished feeding before current year's needles emerge. Then they drop down into the ground to pupate, emerging in September as adults to mate and lay eggs. The eggs look like small gold dots along the needles. In an extremely heavy infestation, trees could be entirely defoliated or stunted. But because new growth is rarely attacked, the trees survive.



Figure 2 European pine sawfly larvae

Management: Birds feed on the larvae and rodents eat the pupae in the soil, but these predators are usually inadequate to control the larvae. If you can find the needles before the larvae hatch, remove the needles. Larvae can be removed by hand or washed off with a strong stream of water from the garden hose. They have no hooks on their feet like caterpillars do, so they can't hang on very well. Since European pine sawfly larvae are not caterpillars, *Bacillus thuringiensis* (Bt) does not control them.

Good websites:

<http://www.mortonarb.org/component/content/article/193-insects-diseases/772-pine-sawflies.html>

http://woodypests.cas.psu.edu/FactSheets/InsectFactSheets/html/European_Pine_Sawfly.html

<http://www.entomology.umn.edu/cues/Web/128EuropeanPineSawfly.pdf>

Boxwood psyllid (minor)

Boxwood psyllid (*Cacopsylla buxi*) damage (figure 3) was submitted to the Plant Clinic this week.

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 are about 1/16th of an inch long, yellowish, and partially covered with a white, flocculent secretion that protects them from parasitoids and chemical sprays. Their feeding causes cupping of the leaves. Winged adults normally appear in late May to early June, but this stage may show up



Figure 3 Boxwood psyllid damage

earlier this year. We sometimes see ladybird beetles (also known as ladybugs) feeding on the psyllids.

Management: Damage is mostly aesthetic. Shearing boxwoods reduces the population as the insect or the eggs are removed in the process. Chemical insecticides can be applied, but if using a spray, it is important to spray inside the cupped leaves.

Good websites:

http://woodypests.cas.psu.edu/FactSheets/InsectFactSheets/html/Boxwood_Psyllid.html

<http://extension.umass.edu/landscape/fact-sheets/boxwood-psyllid>

Carpenter bees (minor)

Carpenter bees have been seen in various areas around the Arboretum. Carpenter bees bore into wood trim, outdoor wooden furniture, porch ceilings, dead tree limbs, and any weathered wood. They excavate tunnels and can cause damage. They look like bumble bees, but are larger and have a shiny black abdomen. The males cannot sting. Females will only sting if they are agitated. They do not nest in living wood. Carpenter bees have strong jaws and chew 1/2 inch round entrance holes on the underside of wood. They then chew horizontal tunnels up to seven inches long. The bees are not actually eating the wood. They only create tunnels for nesting sites. We don't have any good pictures of this insect, so visit the websites listed below to see what carpenter bees look like.

Management: Insecticides can be applied to the tunnel entrances on cool evenings when bees are less active. Do not plug the tunnel entrance. All bees are pollinators, so don't kill them unless necessary.

Good web sites: <http://www.ces.ncsu.edu/depts/ent/notes/Urban/carpenterbees.htm>

<http://ento.psu.edu/extension/factsheets/carpenter-bees>

Pest Updates: Disease

Downy mildew on impatiens (potentially serious)

Downy mildew, caused by the fungus *Plasmopara obducens*, has been showing up in Illinois for the last couple of years. It is a serious problem on impatiens (*Impatiens walleriana*). New Guinea impatiens appear to be highly resistant. Symptoms of the disease include stippling of the leaves, a downward curling of the leaves, a white, downy 'fuzz' (spores) on the underside of leaves, defoliation and possible collapse of the plant.

Management: The disease-causing organism can overwinter in the soil, so if you suspect your plants are infected, good cleanup of the area is important. Remove and destroy all infected plant parts, including the roots. Do not compost infected plants. To minimize the risk of infection, avoid planting in cool, wet periods; avoid overhead watering, and overcrowding of the plants. Monitor the plants and quickly remove any plants that appear to be infected. Fungicides are not recommended for home use at this time.

Good websites: <http://hyg.ipm.illinois.edu/article.php?id=451>

<http://bygl.osu.edu/content/downy-mildew-impatiens-0>

***Volutella* on pachysandra (potentially serious)**

Volutella blight (figure 4) was diagnosed on ornamental ground cover Japanese pachysandra (*Pachysandra terminalis*) on our grounds. This is a serious, destructive stem and leaf blight. *Volutella* blight, caused by the fungus *Volutella pachysandricola*, will cause leaf blight and stem cankers on most pachysandra species. Symptoms first noticed in early spring as brown to tan leaf spots can be confused with winter desiccation. The spots will enlarge and may eventually cover the entire leaf. Concentric circles form within the spots and are diagnostic for this disease. Leaves eventually turn yellow and fall off the plant. Stems turn dark and die. During extended wet periods, salmon or peach colored fungal spore masses may be visible. Eventually, large patches of the ground cover may become infected and die.



Figure 4 *Volutella* on pachysandra

Volutella is an opportunistic pathogen. It can infect a plant any time during the growing season but is more common during periods of rainy weather. Infections tend to diminish as the weather becomes drier in the summer, but the high humidity created by densely planted and heavily mulched beds can promote the blight. Stress from overcrowding, too much sun, winter injury, and shearing may increase susceptibility to stem blight. Older and injured plant parts of Japanese pachysandra are more susceptible to the disease than young succulent tissue. Bottom line: consider whether the site is one in which pachysandra can thrive.

Management:

- Purchase healthy plants that are free of disease.
- Pachysandra prefers filtered sun or full shade more than full sun conditions, and will be stressed by the latter and more susceptible to blight.
- Plants should be watered during dry periods by using drip irrigation and/or by watering early in the day to allow foliage to dry out.
- Avoid working with plants when they are wet to prevent the spread of disease.
- Remove and discard diseased leaves and plants as soon as symptoms are visible to limit spread to healthy plants.
- Clean up fallen leaves and other debris that may have accumulated on top of ground covers.
- Thin and divide overcrowded plants in early spring, when weather is dry, to improve air circulation.
- Avoid over-fertilization, which causes dense foliage that encourages infection.
- Fungicides may be helpful in the early stages of the disease.

Good websites:

<http://www.mortonarb.org/tree-plant-advice/article/734/ground-cover-diseases.html>

<http://extension.umass.edu/landscape/fact-sheets/volutella-blight>

Pest Updates: Weeds

Creeping bellflower (aggressive)

In 2012 and now in 2013, we are receiving many reports of an annoying weed making itself known in flower gardens and lawns. 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, to the point that one of the Plant Clinic clients declared it to be "worse than creeping Charlie". Unfortunately, because the plants are so identical, if a friend shared some ladybells with you from her garden, you may actually have creeping bellflower.



Figure 5 Creeping bellflower

Young plants have leaves that are heart-shaped to lance-shaped (figure 5). 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 (figure 6). If the plants are not removed, a flowering stalk with purple, nodding, bell shaped flowers will form.



Figure 6 Patch of creeping bellflower

Management: 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 weed killer containing glyphosate. Glyphosate will be absorbed by the leaves and taken down to kill out the roots. Do not get the glyphosate on desirable plants as it will kill them as well.

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, Arnis Krusow, 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 . Inquiries or comments about the PHC reports should be directed to Sharon Yiesla at syiesla@mortonarb.org .

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