

# Plant Health Care Report

Scouting Report of The Morton Arboretum

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Aug 9, 2013

Issue 2013.15

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).

**PHCR will be published bi-weekly in August. Our last issue will be Aug 23.**

## Quick View

**What indicator plant is in bloom at the Arboretum?**

Panicked hydrangea (*Hydrangea paniculata*) is in bloom (figure 1)

**Accumulated Growing Degree Days (Base 50): 1781.5 (as of Aug 8)**

**Accumulated Growing Degree Days (Base 30): 4307.5 (as of Aug 8)**

### Insects:

- Emerald ash borer after 10 years
- Red milkweed beetle
- ...and milkweed bug
- Cypress twig gall
- Tortoise beetle
- Banded longhorn beetle

### Diseases:

- Melampsora rust
- Fungal problems on kerria

### Miscellaneous:

- Sycamore bark falling off
- Urban tree care conference for professionals



Figure 1 Panicked hydrangea (photo credit: John Hagstrom)

## Degree Days and Weather Information

As of Aug 8, we are at 1781.5 base-50 growing degree days (GDD). In 2012, when we were having an abnormally warm season, we had accumulated 2343 GDD base-50 by this date. On average we usually have accumulated 1900 GDD base-50 by this date, so we are starting to lag behind the average. From July 26 to Aug 8 we have had 1 inch of rain.

Location	B <sub>50</sub> Growing Degree Days Through Aug 8 , 2013	Precipitation (in) July 26-Aug 8 , 2013
Carbondale, IL*	2586	
Champaign, IL*	2228	
Chicago Botanic Garden**	No report	No report
Chicago O'Hare*	1939	
Kankakee, IL*	2109	
The Morton Arboretum	1781.5	1"
Northbrook, IL**	1834.5	.72" (8/1-7)
Quincy, IL*	2321	
Rockford, IL*	1878	
Springfield, IL*	2312	
Waukegan, IL*	1685	

\*\*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**

### **Emerald ash borer after 10 years**

Entomologists from the U.S. Forest Service's Northern Research Station (NRS) laboratory in East Lansing, MI, and other NRS scientists from Delaware, OH, are in the forefront of EAB research (along with their Michigan State and Ohio State University partners). Their efforts have involved studying many aspects of EAB biology and control-basic behavior, reactions to pesticides, detecting the larvae in logs and trees, and traps for detecting adult beetles.

Get the report on the expanding information and technology that have contributed to control efforts and slowing the spread of the beetle. "Emerald Ash Borer Research: A Decade of Progress on an Expanding Pest Problem" was released by the U.S. Forest Service this summer (2013). See the report at <http://www.fs.fed.us/nrs/news/review/review-vol20.pdf>

### **Red milkweed beetle (minor)**

Red milkweed beetles (*Tetraopes tetraophthalmus*) (figure 2) are showing up on common milkweed (*Asclepias syriaca*) this week. The beetles are 1/2 to 3/4 inch long and red with black spots and long black antennae. Adults feed on milkweed leaves; while in the larval stage they bore into and feed on milkweed stems and roots.

**Management:** Milkweed beetles usually do not cause enough damage to require control.

Good websites:

<http://www.duke.edu/~jspippen/naturephotos/milkweedbeetle.htm>



Figure 2 Red milkweed beetle

### **....and milkweed bug (minor)**

Milkweed bugs are also showing up on milkweed and butterfly weed, along with the milkweed beetles. There are two species of milkweed bug, the large milkweed bug (*Oncopeltus fasciatus*) and the small milkweed bug (*Lygaeus kalmia*). These two insects look very much alike, both sporting bright orange-red and black colors. Young bugs (nymphs) also have these colors, but lack fully developed wings (figure 3). Both the adults and the nymphs will feed on the milkweed seeds, and it is not uncommon to see groups of them huddled together on the milkweed fruits. These insects are often mistaken for boxelder bugs which are similar in color.



Figure 3 Milkweed bug nymphs

**Management:** None usually needed.

Good websites: <http://bugguide.net/node/view/504>

<http://insected.arizona.edu/milkinfo.htm>

### Cypress twig gall (minor)

We are seeing cypress twig galls on bald-cypress (*Taxodium distichum*). When you first see the trees, they seem to have white cones hanging on the leaves. The cypress twig gall midge (*Taxodiomyia cupressiananassa*) causes the heavy, spongy galls to form on leaf bud tissue. When numerous, the galls may cause branches to droop under their weight. Galls are oval, light green to whitish in color, about 3/4 inch long, and located at the tips of new growth. Needles (leaves) grow out of the galls (figure 4). The tiny larvae develop inside the gall.



Figure 4 Cypress twig gall

The larvae overwinter in the gall and emerge as midges beginning in mid-May. Females lay eggs on newly developing leaves, and the larvae induce the gall formation by the leaflets. At the end of the growing season, galls turn brown, and, in autumn, they drop to the ground with the needles.

**Management:** Some people find the galls aesthetically unpleasing, but the galls do not affect tree health. Control may be obtained by raking and destroying fallen galls in autumn and pruning out galls in early spring before adults become active and lay eggs. Damage is minimal.

Good web site:

<http://bugguide.net/node/view/484696>

[http://entnemdept.ufl.edu/creatures/orn/trees/cypress Twig\\_gall\\_midge.htm](http://entnemdept.ufl.edu/creatures/orn/trees/cypress Twig_gall_midge.htm)

### Tortoise beetle (minor)

Tortoise beetles have been found on hop hornbeam (*Ostrya virginiana*). There is more than one species of tortoise beetle. The body shape of tortoise beetles is somewhat shell-shaped, thus the name. In general, the beetles are about ¼ of an inch in diameter, with round bodies (figure 5). The body color is generally a beautiful shiny gold. Apparently its outer shell is transparent and it is able to change colors. The larval is really interesting as it carries fecal material on its back to deter predators from eating it (figure 6). The larvae and adult both chew holes in leaves.



Figure 5 Tortoise beetle adult



**Management:** Management is not usually needed. The beetle has some natural enemies, and is seldom present in numbers large enough to do serious damage.

Good website:

<http://insects.tamu.edu/fieldguide/bimg195.html>

[http://ipm.ncsu.edu/ag295/html/tortoise\\_beetles.htm](http://ipm.ncsu.edu/ag295/html/tortoise_beetles.htm)



Figure 6 Tortoise beetle larva

### **Banded longhorn beetle (minor)**

Our scouts have found the banded longhorn beetle (*Typocerus velutinus*) on boneset (*Eupatorium perfoliatum*). This is not a pest, but we include it here so if you see it you'll know it is not a problem. The adult beetles have distinct bands of brown and yellow and long antennae figure 7. The adults feed on pollen and nectar. The larvae feed on decaying hardwoods. Like so many of the native longhorn beetles, the larvae are generally found on dying, decaying trees, rather than healthy trees.

**Management:** Maintain trees in good health. Remove any dead or dying branches.

Good website: <http://bugguide.net/node/view/12707>



Figure 7 Banded longhorn

### **Pest Updates: Diseases**

#### **Melampsora rust (minor)**

Melampsora rust, caused by the fungus *Melampsora epitea*, has been found on peach-leaved willow (*Salix amygdaloides*). Small yellow spots have developed on upper leaf surfaces with corresponding small yellow-orange pustules on lower leaf surfaces (figure 8). In late summer, the pustules turn dark brown to black and become crust-like. Occasionally, the rust will be severe enough to cause leaf drop. If the rust is severe for several years in a row, it may slow the growth of a tree, but



Figure 8 Melampsora rust on willow

otherwise is not too big of a problem in landscapes except in small trees.

The fungus overwinters in fallen leaves. In spring, spores are blown by air currents to alternate hosts (e.g., larch, Douglas-fir, and balsam fir) and infect expanding needles during wet periods. The needles of alternate hosts develop yellow spots on their upper surfaces. During the summer, spores are produced on the conifer needles and are dispersed by wind to willows where they cause the spots we are seeing now. Severe infections may cause willow leaves to become distorted, wither, and drop prematurely. Repeated infections may slow the tree growth, but this slow growth is often masked by the normally rapid growth of willows. Usually *Melampsora* rust is not a problem in landscape willows.

**Management:** Rake and destroy fallen leaves in the fall to reduce inoculum.

Good website: <http://www.ipm.uiuc.edu/diseases/series600/rpd605>

### Fungal problems on kerria (potentially serious)

*Septoria* leaf spot is once again showing up on Japanese kerria (*Kerria japonica*). This disease can be fairly damaging to kerria leaves. Leaves become covered with small brown and yellow spots (figure 9) and may fall prematurely. Kerria has also been very susceptible to a canker disease caused by the fungus *Phomopsis japonica* for the last few years. This has become such a common problem on kerria that it has resulted in the demise of a lot of kerria in the Chicago area. Cankers on branches vary in size and appear as discolored areas (figure 10). Branches girdled by the cankers wilt and die. The cankered areas may crack exposing black fruiting bodies. Microscopic spores (conidia) are produced in large numbers during extended periods of wet weather. *Phomopsis* is spread by splashing water, by insects, and mechanically (pruning, wounds). This fungus overwinters in cankers as mycelia and pycnidia.

**Management:** For the canker, prune stems four to six inches below diseased tissue. Clean pruning tools between cuts. For the leaf spot, remove and eradicate diseased leaves to reduce inoculum. Give plants adequate space so leaves dry thoroughly and air movement is unimpeded.



Figure 9 *Septoria* on kerria



Figure 10 *Phomopsis* canker

Good web site for pictures:

<http://www.forestryimages.org/browse/hostimages.cfm?sub=11556>

## **Miscellaneous**

### **Sycamore bark falling off**

The Plant Clinic has received a number of calls regarding bark falling off of sycamore trees. This is actually normal. The bark falling off is what gives the sycamore trunk its mottled look. The concern this year is that there has been quite a quantity of bark falling this year. We can't find a specific reason for this, but there is a good chance that environment is playing a role (drought last year and flooding this year). As long as there is nothing abnormal visible on the tree (insects, trunk wounds, cankers), there should be no reason for concern.

### **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).

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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) .

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