

Plant Health Care Report

Scouting Report of The Morton Arboretum

June 12 – 18, 2009

Issue 2009.10

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.

Summer officially arrives on June 21!! Now, if only it would start to feel like summer around here! The summer solstice marks the beginning of summer in our northern hemisphere with the longest day and shortest night of the year. On June 21, there are 24 hours of daylight north of the Arctic Circle and 24 hours of darkness south of the Antarctic circle. Those living in the Southern hemisphere celebrate their summer solstice in December.

Quick View

What Indicator Plants are in Bloom at the Arboretum?

Northern catalpa (*Catalpa speciosa*), is blooming.

Accumulated Growing Degree Days (Base 50): 611.5

Insects

- Black vine weevil damage
- Rose midge
- Woolly larch adelgid
- Aesculus leafminer
- Pine false webworm
- Oak bullet gall

Diseases

- Spot anthracnose
- Rose rust
- Island chlorosis
- Septoria leaf spot

Weed Note

- Field bindweed
- Curly dock



Photograph taken by John Hagstrom

Degree Days and Weather Information

As of June 18, 2009, we are at 611.5 growing degree days which is 8 days behind the historical average (1937-2008) and 3 behind last year.

Location	Growing Degree Days through June 18	Precipitation between June 12 to 18 in inches
The Morton Arboretum (Lisle, IL)	611.5	1.68
Chicago Botanic Garden (Glencoe, IL)*	441.5	.61
Chicago O'Hare Airport*	548.5	1.68
Aurora, IL**	568.4	
Champaign, IL**	904.1	
DuPage County Airport (West Chicago, IL)**	663.6	
Decatur, IL**	926.9	
Moline, IL**	763.1	
Peoria, IL**	846.2	
Quincy, IL**	947.9	
Rockford, IL**	603.8	
Waukegan, IL**	379.0	
Wheeling, IL**	498.5	

*Thank you to Mike Brouillard, Green Living, Inc., and Chris Yooning, 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/?zip=60185&model=2&state=IL>

This Week's Sightings

Black vine weevil damage



Black vine weevil (*Otiorhynchus sulcatus*) damage has been found on the leaves of catawba rhododendron (*Rhododendron catawbiense*). Adult black vine weevils are nocturnal creatures that feed along leaf margins producing crescent-shaped notches. Moderate feeding is not damaging to plant health. The more serious damage is done by the larvae which consume tender feeder roots, causing foliage of infested plants to turn yellow or brown. When young roots become scarce or the soil becomes excessively moist, the larvae will move to larger roots at the base of the plant. Severe larval infestations can ultimately kill the host plant.

Adult female weevils emerge from the soil in late May through early July and feed for three to four weeks at night before laying eggs in the soil beneath the host plant. Eggs hatch in two to three weeks and the larvae feed on roots until late fall. With the onset of colder temperatures, larvae burrow deeper in the ground to overwinter. Black vine weevils feed on a wide range of herbaceous and woody ornamentals. Preferred hosts are yew, hemlock, and various rhododendrons.

Control: If you place boards down in infested areas, the weevils will hide under the boards during the day. You can then pick them up and destroy them. Insecticidal sprays are effective in controlling adult weevils. Insecticides should be

applied now before egg laying occurs and repeated twice at two week intervals. Parasitic nematodes, *Steinernema feltiae* and *Heterorhabditis bacteriophora*, have been found to be effective in controlling larvae. They should be applied when larvae are present (in about five to seven weeks). Moderate to high soil moisture in July and August will help egg and larva survival. Remove excessive mulch layers to reduce soil moisture levels, and do not water plants unless necessary. Excessively damp soils in the fall also force larvae to move up the base of the plant where girdling can occur. For specific chemical recommendations, refer to the *Commercial Landscape and Turfgrass Pest Management Handbook* (CPM) for commercial applicators or the *Home Yard and Garden Pest Guide* (HYG) for homeowners.

Good web sites:

<http://ohioline.osu.edu/hyg-fact/2000/2016.html>

<http://www.uwex.edu/ces/wihort/gardenfacts/X1065.pdf>

Rose midge

Rose midges, which can be destructive pests, have been found in rose (*Rosa* sp.) buds on a sample brought into the arboretum. Adult females lay tiny yellow eggs on new growth, under the sepals of flowers buds in leaf buds or in shoots. After the eggs hatch into small white larvae, one-twelfth of an inch long, they create deep gouges in plant tissue and feed on sap. There may be many midges in a bud. They usually feed at the base of flower buds or on the upper leaf surface and leaf petioles. Their feeding causes buds to become deformed and blackened. Eventually new shoots are killed and the larvae create a hole in the bud to emerge and fall to the ground to pupate, which is the overwintering stage. The adults emerge in late spring, living for only a day or two.



Control: Remove and destroy infested plant parts. If necessary, acephate (Orthene), and malathion can be used according to the University of Illinois. For more chemical recommendations, refer to the HYG.

Good web site:

http://oregonstate.edu/dept/nurspest/rose_midge.htm

Woolly larch adelgid



We are beginning to see woolly larch adelgids (*Adelges laricis*) on a few of our European larches (*Larix decidua*). They look like tiny white flecks. The insect covers itself with white woolly material for protection. When heavily infested, larches look like they have snow on them! When infestations are heavy, sooty mold and needle distortion develop, but usually it doesn't cause significant injury to the tree.

Control: Controls are rarely necessary as this adelgid does not cause significant harm to the tree.

Good website:

<http://www.forestpests.org/poland/larchwooly.html>

Aesculus leafminer

There are numerous species of minute insects known as leafminers that live and feed inside leaves of many different plant species. Leafminer larvae eat leaf tissue between the upper and lower epidermis leaving the leaf intact. Leafminers and their black frass can be seen within the mined leaf by holding a damaged leaf up to sunlight. This week we found the serpentine mines on Ohio buckeye (*Aesculus glabra*) caused by the aesculus leafminer.



Control: Leafminer injury is generally an aesthetic problem so control is rarely justified. The occasional severe infestation can be controlled with systemic insecticides and should be applied when mines first appear. Refer to the CPM and HYG for timing and chemical recommendations.

Good web site:

<http://www.forestry.gov.uk/fr/INFD-6Q3AS5>

Pine false webworm



Nest of the pine false webworm

A sample of the pine false webworm (*Acantholyda erythrocephala*) was brought into the plant clinic. This sawfly belongs to a group of insects in the order Hymenoptera (sounds like the name of a group of dinosaurs), which includes wasps, bees, hornets, etc. The wasp-like adults have a shiny blue-black body. Females have a small area of yellow to yellow-orange on the front of their head. Females are seven-sixteenth to one-half an inch long, and males are slightly smaller at three-eighth of an inch long. After mating, the females lay groups of two to six eggs side by side on pine needles. When the larvae hatch, they move to the base of last year's needles. Larvae then construct loose webbing and feed on needles. They prefer to feed on old foliage of pines; they will consume needles of the current year's growth only when high infestations occur. The larvae are green with two small antennae-like projections that stick out of their head. Feeding lasts for 18-20 days. Then the mature larvae drop to the ground, burrow into the soil and remain dormant until the next spring when they emerge as an adult. Only one generation per year occurs.

The false pine webworm differs from the true pine webworm by having no silken tunnels present; they have smaller nests and contain fewer larvae per nest. But the most important distinction is that the true pine webworm belongs to the moth and butterfly order Lepidoptera.

Control: Small numbers of nests can be pruned out and destroyed. Refer to the CPM and HYG for chemical control.

Good web site:

http://bugs.osu.edu/~bugdoc/Shetlar/factsheet/christmasstree/pine_faalse_webworm.htm



Oak bullet gall



The oak bullet gall has been found on twigs and branches of bur oak (*Quercus macrocarpa*). This gall is made by a tiny wasp called a cynipid (*Disholcaspis quercusmamma*). The wasp is one twelfth to one eighth of an inch long, winged and is brown or black in color. They are rarely seen.

In the spring, the tiny adult female wasps chew their way out of last year's galls. The female wasps deposit their eggs on the midrib of oak leaves. When these eggs hatch, the larvae feed on leaf tissue, causing small blister-like galls to appear on the mid veins of the leaves. These larvae mature inside these galls, mate, and deposit their eggs on branches and twigs of their oak tree host. When these white, legless larvae feed, they inject plant growth regulating chemicals, which react with the tissue in the tree to produce the abnormal plant tissue that comprises these galls. The gall provides the

larvae with a nutritious source of food and protects them from parasites, predators and insecticides. Like all galls, the only damage, is cosmetic.

Control: Control for these wasps is not effective.

Good web site:

<http://www.extension.iastate.edu/newsrel/2004/may04/may0414.html>

Spot anthracnose

Small tan leaf spots with reddish-purple borders have been found on flowering dogwood (*Cornus florida*). The causal agent of spot anthracnose is the fungus *Elsinoe corni*. Flower bracts are usually attacked first, followed by young leaves. Infection occurs during wet, spring weather. Individual spots eventually coalesce to form larger spots and the centers may drop out. When infection is severe, flower bracts and leaves become wrinkled and distorted but otherwise there is not a major impact on the tree vigor.

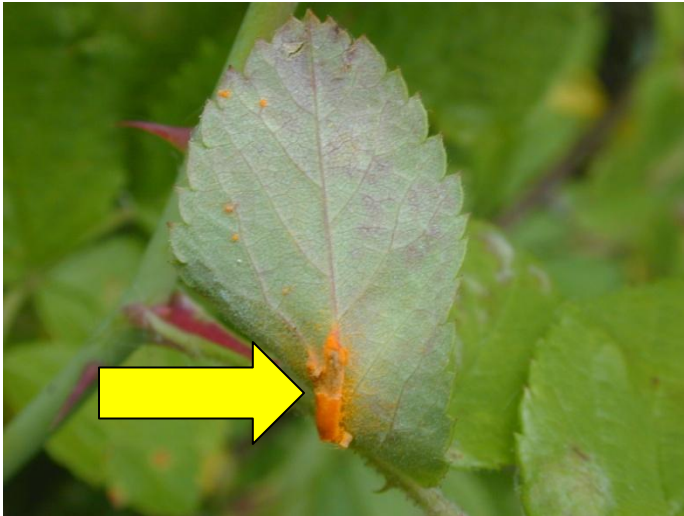
Control: This fungus survives from year to year on fallen leaves. Collect and discard leaves from around the base of infected trees and plant disease-resistant varieties.

Good web sites:

<http://www.ext.vt.edu/pubs/plantdiseasesfs/450-611/450-611.html>



Rose rust



We're finding rose rust on prairie rose (*Rosa setigera*) leaves. Bright orange "powder" appears initially as spots on the leaves and later may coalesce as the disease worsens. This powder is actually a cluster of aeciospores of the fungus *Phragmidium* sp. These spores re-infect other roses and cause orange red spots on the leaves and long, narrow lesions on the stems. Leaves may wither and fall off, and shoots may become distorted and reddish. Plants infected by this obligate parasite will gradually decline in vigor.

Control: Infected plant parts should be pruned out and destroyed immediately. Do not work with the plants in wet weather and provide ample air circulation in plantings. Plant disease -resistant roses. Tea roses are considered highly resistant, while hybrid teas, ramblers, and polyantha types are moderately resistant. For chemical control, refer to the

CPM or HYG.

Good web sites:

<http://www.extension.umn.edu/yardandgarden/ygbriefs/p459roserust.html>

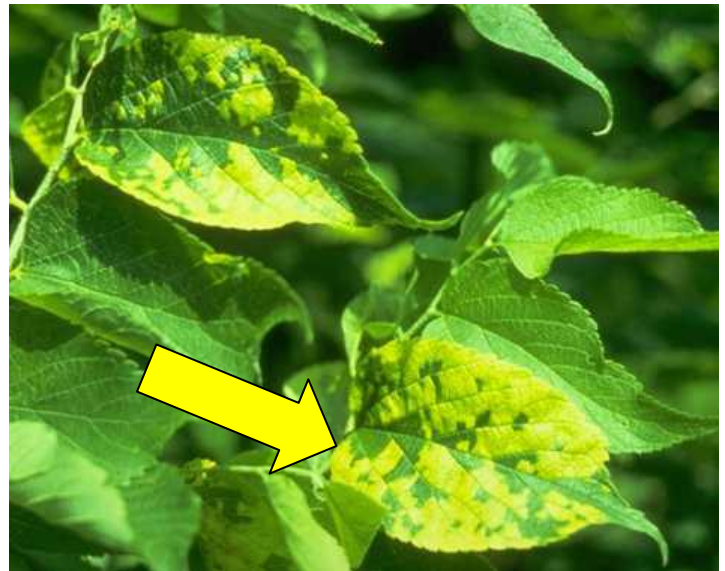
Island chlorosis

Island chlorosis is beginning to appear on hackberry (*Celtis occidentalis*). This common viral disease causes yellow mottling intermingled with green areas on the leaves and mosaics symptoms. Little long-term damage occurs on infected trees, although slowed growth and reduced vigor may result. When leaves are held up to the light, it makes for a pretty picture.

Control: No control is warranted.

Good web site:

<http://hyg.ipm.illinois.edu/pastpest/200807c.html>



Septoria leaf spot

The Plant Clinic has received a sample of black-eyed susans (*Rudbeckia* spp.) that are infected with Septoria leaf spot. Septoria leaf spot is a common disease of Rudbeckia and is caused by the fungus *Septoria rudbeckiae*. Symptoms begin as one-eighth-inch dark brown leaf spots that quickly coalesce into large, brown blotches. The disease begins on lower leaves and progresses up the plant.

Control: Septoria leaf spot is generally an aesthetic problem so fungicides are not needed. Remove infected leaves and improve air circulation around the foliage. Avoid overhead irrigation which will promote leaf wetness and also splash spores to nearby plants. Rake and discard leaves in fall to reduce inoculum.

Good web site:

<http://www.extension.umn.edu/yardandgarden/ygbriefs/p154rudbeckiadisease.html>

Weed Note

Field bindweed



Field bindweed (*Convolvulus arvensis*) is a very aggressive and persistent perennial weed that is a vine. Its stems are slender, somewhat twining, branched and can grow two to four feet long. The leaves are arrowhead to bell-shaped, a half inch to two inches long and in an alternate arrangement along the stem. Field bindweed flowers are similar to morning glories in that they persist for only a single day, opening in the morning and close by late afternoon. They are white to pink in color, trumpet-shaped, and are one to one and a half inches wide. Seeds are dark brown, a quarter inch long, egg-shaped capsules that contain two to four seeds. One plant can produce up to 500 seeds per growing season. The seeds can remain dormant for 20+ years. This weed has an extensive root system. Its vertical roots alone can reach depths of 20 feet or more. Field bindweed spreads by seed and rhizomes (an underground stem that often sends out roots and shoots from its nodes). It prefers full sun and is drought tolerant. It does not grow in wet and shaded areas.

Control: Once established field bindweed is difficult to control. Mechanically control by tilling, hoeing or hand pull. Apply a post-emergence herbicide with products containing 2,4-D or glyphosate (Roundup®) to the foliage of individual plants in the seedling to flower stage of growth during the growing season. Use caution when using Roundup®. It is a non-selective herbicide and will kill both desirable and undesirable plants. For further information about chemical control and timing, refer to the CPM if you are a commercial applicator in Illinois or the HYG if you are a homeowner.

Curly dock

Curly dock (*Rumex crispus*) is a broadleaf perennial weed. It has oblong, lance-shaped leaves with curled margins that grow in a basal rosette form. Leaves become a reddish-purple color with age. Green colored flowers bloom on tall narrow spikes, which grow from the center of the plant and are two to three feet tall. Flowers turn a reddish brown at maturity. Curly dock blooms from April to July. This weed has a deep fleshy tap root and spreads by root fragments. It grows in shady damp sites.

Control: When hand pulling, remove all pieces of the root or it will re-sprout. Apply a post-emergence broadleaf herbicide containing 2,4-D or mecoprop + 2,4-D + dicamba. For further information on chemical control and timing, refer to the University of Illinois CPM or HYG.



What to Look for Next Week

We will be looking for chlorosis, bagworm, and rose curculio.

For all the dads out there, Happy Fathers Day!!

Quote of the week: “Every garden is unique with a multitude of choices in soils, plants and themes. Finding your garden theme is as easy as seeing what brings a smile to your face.” -- Teresa Watkins



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The *2007 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). You may also purchase them online at <https://pubsplus.uiuc.edu/ICLT-07.html> (commercial handbook) and <https://pubsplus.uiuc.edu/C1391.html> (homeowners' guide). One further source is your local county extension office.

This report is available on-line at The Morton Arboretum website at <http://www.mortonarb.org/>.

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 Trica Barron at tbarron@mortonarb.org.

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