

Plant Health Care Report

Scouting Report of The Morton Arboretum

July 4 - 10, 2008

Issue 2008.13

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.

Quick View

What Indicator Plants are in Bloom at the Arboretum?

Bottlebrush buckeyes (*Aesculus parviflora*) are in bloom.

**Accumulated Growing Degree Days (Base 50):
1081.5**



Insects

- Redbud leaffolder
- Columbine leafminer
- Cypress twig gall
- Promethea moth caterpillar

Diseases

- Oak wilt

Miscellaneous

- Sooty mold

Degree Days and Weather Information

As of July 4, 2008 we are at 1081.5 growing degree days which is 10 degree days behind the historical average (1937-2007) and 15 growing degree days behind last year.

Location	Growing Degree Days through July 10	Precipitation between July 4 to 10 in inches
The Morton Arboretum (Lisle, IL)	1081.5	0.22
Chicago Botanic Garden (Glencoe, IL)*	1015.0	1.07
Chicago O-Hare Airport*	1096.0	0.26
Aurora, IL	1118.5	
Bloomington, IL	1263.0	
Champaign, IL	1346.5	
DuPage County Airport (West Chicago, IL)	1154.0	
Midway Airport	1234.0	
Danville, IL	1458.5	
Decatur, IL	1421.0	
DeKalb, IL	1119.5	
Moline, IL	1301.0	
Palwaukee Airport (Wheeling, IL)	1092.0	
Peoria, IL	1373.0	
Peru, IL	1399.5	
Pontiac, IL	1246.5	
Rantoul, IL	1487.5	
Rockford, IL	1166.5	
Romeoville, IL	1138.5	
Springfield, IL	1431.0	
Waukegan, IL	925.0	
Madison, WI	976.0	
Milwaukee, WI	870.5	

**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 Virtual Arborist web site. For additional locations and daily degree days, go to <http://virtualarborist.com/>.

This Week's Sightings

Redbud leaffolder



The redbud leaffolder (*Fascista cercerisella*) has been found feeding on leaves of redbud (*Cercis canadensis*). They fold leaves nearly in half and secrete silk webbing that holds the leaf together. Larvae feed within these folds as skeletonizers and consume the epidermis of both the upper and lower leaf surfaces. The larvae are striped black and cream and reach ½ inch at maturity.

Control: Redbud leaffolder is a minor pest in our region. Damage is primarily aesthetic and controls are not necessary.

Columbine leaf miner

We are seeing mines in columbine leaves created by the columbine leaf miner (*Phytomyza aquilegivor*). Damage is serpentine or snake-like white mines in leaves, usually after the plants flower. The adults are small flies that deposit eggs on the underside of leaves. After hatching, the maggots burrow into the leaves, creating the mines.

Control: Removing and destroying infested leaves early in the season will help reduce later infestations, because there are several generations.

Good web site:

http://www.urbanext.uiuc.edu/focus/per_aquilegia.html



Cypress twig gall



We are beginning to see 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. We sliced one in half and found really tiny maggots inside.

The larvae overwinter in the gall and emerge as flies beginning in mid-May. Females lay eggs on newly developing leaves, and the midge 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 leaves.

Control: Some people find the galls aesthetically displeasing (we don't), 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 the midges become active and lay eggs. Damage is minimal.

Good web site:

<http://woodypest.ifas.ufl.edu/400.htm>

Promethea moth caterpillar



A rare sighting of the promethea moth caterpillars (*Callosamia promethea*) has been found on an ash tree on our grounds this week. This find is very exciting because the promethea moth species has declined across much of the Northeast United States. Scientists to date have not been able to pin-point the cause for the decline. Some possible causes may be due to habitat loss, pesticide use, or the introduction of the tachinid fly (*Compsilura concinnata*) which is used to control the populations of the gypsy moth, and city lighting, which disrupts moth mating. The early stage instars are marked with yellow and black bands around their bodies. These young caterpillars can be found feeding together in rows on the underside of leaves. Older caterpillars feed alone and molt to a greenish color with four bright orange knobs on the body near the head. When the older caterpillar is ready to pupate, it will spin silk around the

leaf petiole and then build its cocoon inside the leaf. The cocoon remains on the host plant throughout the winter. In early spring the adult moths emerge. The male body is black, its wings are black with tan borders, and there is a pink colored area near the eyespots which are located on the forewing tips. The female body is dark brown to reddish brown with tan borders and tan spots on all wings. Here in the north there is only one brood from May to July.

These caterpillars have a wide range of preferred host plants which include: spicebush (*Lindera benzoin*), sassafras (*Sassafras albidum*), tulip tree (*Liriodendron tulipifera*), sweetbay magnolia (*Magnolia virginiana*), white ash (*Fraxinus americana*), lilac (*Syringa vulgaris*), and cherry (*Prunus spp.*).

Good web sites:

<http://www.eco-usa.net/fauna/prometh.shtml>

<http://tdserver1.fnal.gov/peterson/tom/Moths/Saturniidae/Saturniidae-Pages/PrometheaMoth.html>

Oak wilt

We have found oak wilt (*Ceratocystis fagacearum*), a very serious fungal disease, on some of our northern red oaks (*Quercus rubra*) on our grounds. Symptoms on red oaks include leaf wilting and bronzing, and premature leaf drop. Both the red and white oak groups are susceptible to oak wilt; however, the former is most susceptible. Symptoms between the two groups are different. In red oaks, death is rapid with wilt symptoms starting at the top of the tree and progressing inward and downward on the lateral branches within a few weeks. Leaves wilt from the leaf tip and margins to the bases and typically turn an off-green before showing bronze coloration. Near complete leaf drop usually occurs by the middle of summer, making infected trees stand out. Fallen leaves are often green at the base. There can be profuse suckering at the base of the tree.



When an infected branch is cut in cross section, or bark peeled back, very light brown streaking or speckling can sometimes be seen in the outer ring of sapwood. Symptoms of the disease on white oaks are similar, but infected white oaks die slowly, a branch at a time, over a period of one to many years. Leaf discoloration of affected white oaks usually resembles autumn colors (but appears much earlier than autumn), and brown streaking in the outer growth ring of sapwood is often apparent.

The fungus invades the xylem and induces the tree to clog its own water-conducting vessels. Water flow is stopped and cells begin dying. Oak wilt can spread from infected trees to healthy trees through root grafts and by sap-feeding beetles that carry spores of the fungus from one tree to another as they feed and visit wounds.

Control: Monitoring and rapid removal (sanitation) is key to controlling oak wilt. Remove infected oaks as soon as you confirm the disease. Vector insects feed on fresh pruning wounds; therefore, oaks should not be pruned during the growing season when the nitidulid beetles are active. This disease can spread to other healthy oaks about 25 to 50 feet away (depending on tree size) via root grafts. To help halt the spread, dig a trench to a depth of approximately three feet between infected and healthy trees to break root grafting. Some systemic fungicides are labeled for preventing this disease. Refer to the *2007 Commercial Landscape & Turfgrass Pest Management Handbook (CPM)* from the University of Illinois for chemical recommendations. The fungicides must be injected into the tree by someone trained in tree injections.

Good websites:

http://na.fs.fed.us/spfo/pubs/howtos/ht_oaklab/toc.htm

<http://www.ag.uiuc.edu/~vista/abstracts/a618.html>

Sooty mold



We discovered sooty mold on PJM rhododendron (*Rhododendron* 'PJM'). This looks like a black coating and lives on the surfaces of leaves. To be sure it is sooty mold, try rubbing it off the leaf. You should be able to. The black coating is actually a dark fungus. These are saprophytic fungi that live on insect honeydew (insect poop), in this case created by the azalea bark scale (*Erlococcus azaleae*), see previous report (July 3, 2008 issue 2008.12). If you see sooty mold, look for the insect that created the honeydew. Sooty molds harm plants indirectly by blocking out light and reducing photosynthesis. They have no host preference as far as we know. There are two types of sooty mold growth. The first is growth on leaves, which lasts for the life of the leaf. The second is a persistent growth on stems and twigs of woody plants and also on outdoor structures and furniture. They are normally considered an aesthetic problem.

Control: Sooty mold is best controlled by controlling the honeydew producing insect. Remember, you need to identify the insect to control it. Ohio State University claims that a strong spray of water can be used to dislodge the mold growth from many plants.

Good web sites:

<http://www.ag.ohio-state.edu/~ohioline/hyg-fact/3000/3046.html>

http://www.na.fs.fed.us/spfo/pubs/howtos/ht_sooty/ht_sooty.htm

What to Look for Next Week

Next week we will be looking for cottony maple scale, milkweed beetles and sycamore lacebug.

Quote of the week: “On every stem, on every leaf ... and at the root of everything that grows, is a professional specialist in the shape of grub, caterpillar, aphid, or other expert, whose business it is to devour that particular part.” –Oliver Wendell Holmes



The Plant Health Care Report is prepared by Trica Barron, Plant Health Care Technician, and edited by Donna Danielson, Plant Clinic Assistant; Fredric Miller, PhD, research entomologist at The Morton Arboretum and professor at Joliet Junior College; Doris Taylor, Plant Information Specialist, and by Carol Belshaw, Plant Clinic 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.

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.mortonarboretumphc.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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