

Plant Health Care Report

Scouting Report of The Morton Arboretum

August 2– August 15, 2008

Issue 2008.17

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.

There will be no Plant Health Care Report next week as we are now on a biweekly schedule. The next issue on August 29th will be our last of the season.

Quick View

What Plants Are In Bloom At The Arboretum?

One of our favorite hydrangeas, Limelight panicled hydrangea (*Hydrangea paniculata* 'Limelight') is in full bloom.



**Accumulated Growing Degree Days (Base 50):
1776.5**

Insects

- Fall webworm
- Sycamore tussock moth
- Mossy rose gall
- Birch catkin feeders
- Milkweed beetle
- Grapevine beetle

Diseases

- Botryosphaeria canker
- Bacterial leaf spot on tulip tree

Feature Article:

- "Hedges" by Trica Barron

Degree Days and Weather Information

Through August 15, we are at 1776.5 growing degree days which is 17 days behind the historical average (1937-2007) and 20 days behind last year.

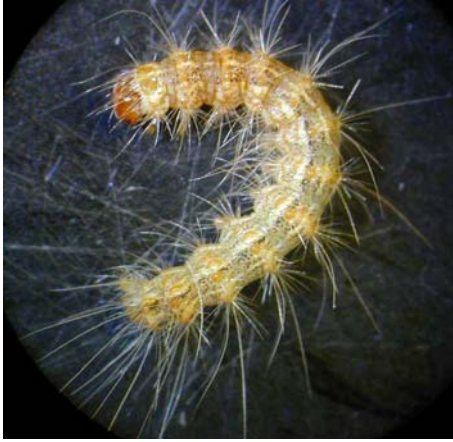
Location	Growing Degree Days through August 15	Precipitation between August 2 to August 15 in inches
The Morton Arboretum (Lisle, IL)	1776.5	2.34
Chicago Botanic Garden (Glencoe, IL)*	1848.5	088
Chicago O-Hare Airport*	1942.0	3.62
Aurora, IL	1880.5	
Bloomington, IL	2060.5	
Champaign, IL	2160.5	
DuPage County Airport (West Chicago, IL)	1996.0	
Midway Airport	2130.5	
Danville, IL	2296.0	
Decatur, IL	2265.5	
DeKalb, IL	1885.5	
Moline, IL	2129.0	
Palwaukee Airport (Wheeling, IL)	1932.0	
Peoria, IL	2264.0	
Peru, IL	2259.5	
Pontiac, IL	2012.0	
Rantoul, IL	2380.5	
Rockford, IL	1990.5	
Romeoville, IL	1926.5	
Springfield, IL	2287.0	
Waukegan, IL	1667.5	
Madison, WI	1735.5	
Milwaukee, WI	1642.5	

**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

Fall Webworm



Fall webworm (*Hyphantria cunea*) caterpillars are feeding on Zamoyski's linden (*Tilia x zamoyskiana*). This caterpillar is known to feed on more than 100 species of deciduous trees. Preferred hosts include hickory, ash, birch, black walnut, crabapple, elm, maple, oak, and pecan. The caterpillars are pale green to yellow, sometimes with black spots, and covered with long, silky white hairs. There are two races, black-headed and red-headed. The black-headed webworms are supposed to appear about a month earlier than the red-headed race. Full-grown caterpillars reach about one inch in length.

Fall webworms overwinter in the pupal stage in the ground, under loose bark, and in leaf litter. Adult moths appear from late May through August, and females deposit eggs in hair-covered masses on the underside of host leaves. Eggs hatch into caterpillars in about one week and begin to spin a silken web over the foliage on

which they feed. The webs increase in size as caterpillars continue to feed and heavily infested trees can be completely covered with nests. In about six weeks caterpillars will drop to the ground and pupate. Damage is generally aesthetic since this pest usually eats leaves late in the season and webs are typically concentrated to limited areas.

Some people confuse fall webworm and eastern tent caterpillar. How can you tell the difference? It's easy, just remember that the Eastern tent caterpillars are spring caterpillars and only eat plants in the rose family such as crabapples. Fall webworm caterpillars are active much later in the season and have a much larger number of host trees.

Control: Chemical control is generally not warranted. The unsightly webs can be pruned out of small trees. Since these caterpillars stay in the web while feeding, pruning the webs at any time of day will eliminate the caterpillars, unlike Eastern tent caterpillars which leave the web during the day to feed. Webworms also have many natural enemies including birds, predaceous bugs, and parasitic wasps. Don't burn the nests in the trees because you will only do additional harm to your tree like the caller who burned the toilet paper out of his tree. *Bacillus thuringiensis* var. *kurstaki* (Btk) can control the larvae, but you must penetrate the webs in order to be effective. Btk is also not as effective against mature larvae. For information about chemicals to use for serious infestations, refer to the *2007 Commercial Landscape Turfgrass Pest and Management Handbook* (CPM) if you are a commercial applicator or the *Home, Yard and Garden Pest Guide* (HYG) if you are a homeowner.

Good web sites:

<http://ohioline.ag.ohio-state.edu/hyg-fact/2000/2026.html>

<http://www.bugwood.org/factsheets/webworm.html>

Sycamore tussock moth caterpillar

Sycamore tussock moth caterpillars (*Halysidota harrisii*), also known as Harris' tussock moth, were found feeding on sycamore (*Platanus occidentalis*). The larvae have orange heads and yellow bodies covered with yellow hairs and longer orange and white tufts of hair (called hair pencils – we did not make this up) on the second and third thoracic segments. Fully grown caterpillars are about one inch long. The larvae



feed on leaves of sycamore and London plane trees and are generally present from July through October. They overwinter as pupae.

Control: Damage is generally aesthetic and controls are not warranted. In a serious infestation, Btk can be effective on younger larvae.

Good web site:

<http://www.forestpests.org/sycamore/foilage.html>

Mossy rose galls



Mossy rose galls have developed on sweetbriar rose (*Rosa rubiginosa*). The galls are caused by *Diplolepis rosae*, a cyanid gall wasp. The wasps lay eggs in one-year-old rose twigs, and the rose forms galls in response to the newly hatched larvae. Galls are round hairy masses one to two inches in diameter. They are initially light green with pink and light green hairs, but turn brown with age. If you cut the gall in half, you can find little hard cells inside, each containing a wasp larva. The larvae overwinter in the gall and emerge the following spring. A hairy rose is an interesting sight to see.

Control: The most effective control is to prune out galls before the wasps have matured and emerged from the galls. Adults emerge from the old galls in spring; therefore, prune out galls in the fall or winter cutting below the gall and above a bud.

Good web site:

<http://www.extension.umn.edu/distribution/horticulture/components/6594-07.html>

Birch catkin feeders



A sample of birch catkin feeders (*Kleidocerys resedae*) was brought into the plant clinic. They are 1/8 inches long, with an oval reddish-brown body and thin clear wings. They emit a strong unpleasant odor when crushed. During August and September, these insects are commonly found feeding on the seeds of the catkins on birch trees (*Betula* spp.). They can also be found on azaleas, rhododendrons and other plants.

Birch catkin feeders overwinter in old catkins, in leaf debris, and in and around buildings. In the spring, the adults mate and lay eggs. The nymphs, who look like a smaller version of the adults, will also feed on the catkins. Nymphs will mature into adults by the end of summer.

Control: Management is unnecessary since they do not harm the plants.

Good web site:

<http://www.extension.umn.edu/distribution/housingandclothing/M1181.html>

Red milkweed beetle

Red milkweed beetles (*Tetraopes tetraophthalmus*) were found on common milkweed (*Asclepias syriaca*). They 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.

Control: They usually do not cause enough damage to require control.



Grapevine beetle



A sample of the grapevine beetle (*Pelidnota punctata*), also known as Grape pelidnota or the spotted June bug, was found in Glen Ellyn and brought into the plant clinic. This is a big beetle, about an inch long. It is an off yellow to a brownish-yellow tinged color. It has six small black spots on its elytra (wing covers) and a small black spot on each side of its pronotum, the area between the wings just in back of the neck. The adult beetle eats grapevines. Eggs are laid on stumps and rotting logs. The eggs hatch into larvae that feed on decaying roots and stumps of trees, and pupate to become adults from May to September.

Control: Handpicking is usually all that is necessary.

Good web site:

www.dnr.wi.gov/forestry/fh/pdf/NER-pestupdate-2006-9-18.pdf
<http://bygl.osu.edu/index.php/bygl-newsletters/bug-bytes/171-july-17-2008/387-windshield-wipes-july-17-2008>

Botryosphaeria canker

We are seeing branch wilting symptoms of Botryosphaeria canker, caused by the fungus *Botryosphaeria ribis*, on eastern redbud (*Cercis canadensis*). This common canker disease, which clearly needs a better common name, causes branch wilting and dieback. Sunken areas with swollen ridges (cankers) form on infected bark. These cankers cut off sap flow (girdle branches) and cause leaves to turn yellow, brown, and then wilt. Branches die beyond the point of girdling. Botryosphaeria cankers are usually cracked, dry, discolored, and covered with small black fruiting bodies that can be seen with a hand lens. The sapwood beneath a canker dies and is discolored brown.

The disease is also common on many trees including apple, birch, dogwood, elm, hickory, horsechestnut, linden, oak, and sycamore. Botryosphaeria infects both healthy and stressed trees but the disease is more severe on plants stressed by drought, heat, freezing, defoliation, and planting outside native ranges.

Botryosphaeria and *Verticillium* both attack redbud and cause similar wilt symptoms from afar. To differentiate the two, peel back the bark of a wilted branch. Streaked sapwood is a symptom indicative of *Verticillium* wilt and not the canker. The canker disease will also have sunken cankers on the bark and the black fruiting bodies present. Don't confuse this with cicada damage. Many redbuds have cicada damage this year. Cicada damage is only on branch tips, while both verticillium and Botryosphaeria kill whole branches.





Branch wilt caused by Botryosphaeria canker.

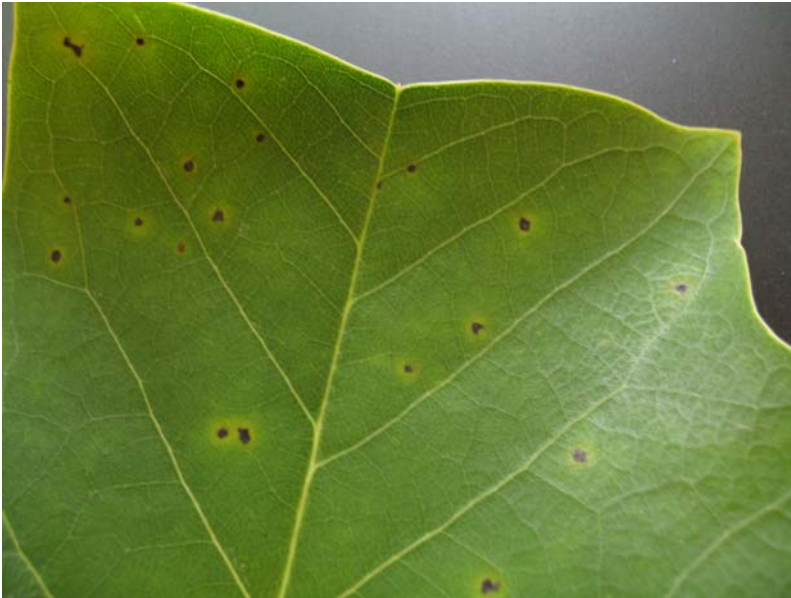
Control: Prune infected branches during dry weather to keep spores from spreading. Prune at least 6 to 8 inches below affected tissue. To prevent the spread of the disease, clean pruning tools with 70% alcohol (or similar) between cuts. Remove diseased branches from the site since the fungus can persist and sporulate in dead plant material. Keep trees healthy by watering during drought periods and mulching properly. Avoid wounding the tree since the fungus can enter through tree wounds.

Good websites:

<http://www.ag.uiuc.edu/~vista/abstracts/a813.html>

<http://ohioline.osu.edu/hyg-fact/3000/3023.html>

Bacterial leaf spot on tulip tree



Bacterial leaf spot has been found on Tulip-tree (*Liriodendron tulipifera*). The spots are black with faint yellow halos, irregularly shaped, and about 1/16 to 1/8 inches in diameter. Initially light green and water-soaked, the spots turn brown then black. Under dry conditions, the lesions become brittle and may drop out. Bacterial leaf spots appear similar to fungal lesions, however, leaf spots caused by bacteria are more angular. Also, fungal leaf spots often have fruiting bodies within their lesions and do not have an initial water-soaked appearance.

Bacteria overwinter in host debris or diseased plant parts. They become active and begin to multiply with the onset of wet and warm spring weather. Bacteria require water to multiply and spread to healthy leaves.

Control: Remove diseased plant material to reduce inoculum. Prune to improve air circulation and reduce humidity levels. Clean tools between cuts as bacteria are easily spread to healthy plants via pruning tools. Avoid overhead and evening irrigation. Refer to the, CPM for commercial applicators or the HYG for homeowners for chemical control recommendations.

What to Look for Next Week

Next week we will be looking for the American dagger moth caterpillars, measles on peonies, and bullseye leaf spot.

Feature Article:

Hedges

By Trica Barron

Plant Health Care Technician

Why have hedges in the yard? There are a quite a few good reasons. They make a great alternative to the wooden fence, chain link or picket fence. They make great privacy barriers and wind barriers. They create a natural looking setting, along with good homes for birds and, if you're lucky, a frog might take up residence under the hedge. You have an option between a formal hedge and a natural hedge. Your decision depends on how much time you want to invest in shaping your hedge.

Here are some important factors to take into consideration when selecting plant material. What size do you want? What purpose will it serve? Do you want a formal or informal look? Look at your site. Is it shaded or full sun? Is it dry all the time or soggy? Are the hedges needed for soil erosion control? With so many different plant varieties available, plant selections go beyond the usual privet or yew hedge. Here is a look at a few excellent choices:

Formal hedges: for plant selection, it would be wise to choose a variety that naturally stays narrow or columnar and grows not much taller than what you want your hedge to be. By doing this, it will help to minimize labor and keep a tidy appearance. Other qualities to look for in a formal hedge plant include twiggy (texture), tolerance to shearing, slow growth, and small leaves. Shearing, however, will reduce flowering. Some suitable plant selections are:

- Amur maple (*Acer ginnala*) is a large multi-stemmed shrub that reaches up to 18 feet tall. This shrub has great yellow and red fall color when planted in full sun. The amur maple has a medium growth rate and withstands heavy pruning.
- Japanese boxwood (*Buxus microphylla* var. *koreana*) is slow growing and an extremely hardy variety that grows up to 2 ½ feet tall. The Japanese boxwood is a broadleaf evergreen that has yellowish-brown foliage in the winter. Other boxwood cultivars, such as *Buxus* 'Glencoe' (Chicagoland Green ® boxwood) and *B.* 'Wilson' (Northern charm™ boxwood) stay green all winter. The cultivar 'Cheyene' has larger, more fragrant flowers.
- Common European privet (*Ligustrum vulgare*) has a rapid growth rate and can grow up to 15 feet tall with irregularly spreading branches. White flowers in mid-June have a heavy, and some say, objectionable odor.
- Ninebark (*Physocarpus* spp.) is a large shrub with beautiful exfoliating papery bark which provides some winter interest. Ninebark has a medium to fast growth rate and can reach a height of 5 to 10 feet. It blooms with white to off-white flowers in early summer. Clusters of pinkish to flesh color fruit develop in mid-late summer. Plant in full sun to part shade, in wet or dry sites. It can also be used as an informal hedge.
- Alpine currant (*Ribes alpinum*) is a small shrub that reaches up to 3 feet tall and one of the best shrubs for a shady site. It is small-leaved and twiggy, and tolerant of shearing. Currant is one of the first shrubs to leaf out in the spring with a moderate growth rate.
- Dwarf lace shrub (*Stephanandra incisa* 'crispa') is a small size shrub that grows up to 2 - 3 feet tall with an equal or greater spread. This shrub has a medium texture and suckers freely from the base. The dwarf lace shrub is a fast grower with red-purple or red-orange fall color, and does well in full sun or light shade.
- Yews (*Taxus* spp. and cvs.) are medium to large evergreen shrubs. This shrub has a moderate growth rate. Some varieties can reach up to 20 feet tall. Yews are very tolerant to pruning and make an excellent formal hedge.
- Eastern arborvitae (*Thuja occidentalis*) is a large evergreen with a slow to medium growth rate. This shrub can withstand heavy shearing and occasional flooding. There are many smaller cultivars available.
- Arrowwood viburnum (*Viburnum dentatum*) has a mature height of 6 to 12 feet. In late spring, it has creamy white flowers (some find their fragrance to be unpleasant). If plants have not been pruned after flowering, small dark blue fruit develop in late summer. Plants have red fall color that varies in intensity from year to year. *V. dentatum* 'Autumn Jazz' has good orange-red fall color. *V. dentatum* 'Morton' has burgundy fall color, and *V. dentatum* 'Chicago Lustre'® has yellow fall color. It can also be used as an informal hedge.

- Wayfaring tree (*Viburnum lantana*) has clusters of white flowers (which have an unpleasant odor) in late spring, followed by fruit that changes from yellow to red to black and all three colors may be present at the same time, giving the shrub a very colorful appearance. Also the fruit does persist through autumn. Autumn color is purple red, but not always consistent. Plants can reach a mature height of 10 to 15 feet. A smaller variety, the *V. lantana* 'Mohican', grows 6 to 8 feet tall. It can also be used as an informal hedge.

Pruning tips;

To maintain a clean look, the best practice is to prune often. But keep in mind that pruning often will reduce flowers/ fruit in shrubs. Proper training in the first three years will pay off for years to come. Purchase plants that are 20" high or less. Cutting them to back when planted will encourage branching near the ground. In the second year, trim off half of the new growth. The third year, trim off half of the new growth again and begin shaping the hedge so the base is broader than the top. This is to ensure dense branching and allow sunlight to reach lower branches.

Informal (naturalistic) hedges: for plant selection, be sure to first decide how high and wide you would like your hedges to be. Informal hedges require little maintenance; a light yearly pruning is all that should be needed. Some suitable plant selections are:

- Korean barberry (*Berberis koreana.*) is a dense shrub that can grow up to 6 feet tall. The Korean barberry has a multi-stemmed oval shaped habit with a medium growth rate.
- Cornelian-Cherry dogwood (*Cornus mas*) is a large multi-stemmed shrub or small tree that can grow up to 25 feet tall. This dogwood has a medium growth rate with yellow flowers in March.
- Hedge cotoneaster (*Cotoneaster lucida*) has blooms of small, pale pink flowers in the spring. It produces small black fruit in late summer through fall. Autumn color is a combination of yellow, orange, and red. This shrub can reach 6 to 10 feet in height.
- Flowering quince (*Chaenomeles* sp.) is a large shrub that grows up to 10 feet tall. It has a medium growth rate with a dense twiggy habit. The flowering quince blooms in April, before the leaves appear, in varying colors of scarlet, pink or white. There is a smaller variety, *Chaenomeles* 'Texas Scarlet', that grows up to 3 feet tall.
- Vernal Witch-Hazel (*Hamamelis vernalis*) is the earliest flowering shrub in our area. In very early spring (March), it blooms red to yellow fragrant flowers. It has a mature height of 6 to 10 feet. *H. vernalis* 'Autumn Embers' is a variety that has orange flowers and a red-purple fall color.
- Winterberry (*Ilex verticillata*) has an oval to rounded habit. The winterberry has a slow growth rate and can grow up to 10 feet tall. It prefers a more acidic soil and can develop chlorosis in our high ph soils.
- Dwarf tartarian honeysuckle (*Lonicera tatarica* 'Nana') has multi-stemmed branches with an upright habit. This slow growing shrub will only reach 3 feet in height. It blooms pink flowers in May. All honeysuckle shrubs require annual pruning to keep them from getting leggy.
- Nanking cherry (*Prunus tomentosa*) is a wide spreading, twiggy shrub reaching a mature height of 6 to 10 feet. In spring, the flowers bloom pink flowers fading to white and produces edible red tart cherries. The stems are reddish-brown and exfoliating, adding winter interest. Plant in full sun with moist, well-drained soils.
- Lilac (*Syringa* spp.) comes in a wide range of flower colors. Flowers can be purple, white, pink, and lavender. Some are more fragrant than others. Choose varieties that are resistant to powdery mildew. Some of the more popular varieties that can also make a nice formal hedge include: *S.patula* 'Miss Kim' which has lilac colored flowers that bloom in late spring with a mild red-purple fall color, and *S. meyeri* 'Palibin' which has a mature height of 4 to 5 feet and blooms whitish-pink flowers in the spring.

Pruning tips:

To maintain a natural hedge requires little work. In fact, depending upon the size of the site, you can go for years without pruning. It is a good idea to do a yearly spot pruning of dead or broken branches, and to remove a couple of older stems from the base of the plants to encourage new growth. Prune out suckers during the growing season to keep the plant from taking over. Make sure you time your pruning to match your shrubs needs or you may reduce flowers/fruit. See the following web sites:

http://www.mortonarb.org/res/CLINIC_hort_Prunin...
http://www.mortonarb.org/res/CLINIC_hort_Prunin...

Types of pruning tools:

It is important to clean all gardening tools after each use. This helps stop the spread of diseases that may be lurking. Sharpen hand tools once or twice a season.

Long-handled shears: These make cleaner cuts than power trimmers. For tall hedges, these are safer to use than a power trimmer.

Hand pruners: Look for bypass blades, which pass each other, rather than anvil type blades, which crush a branch between them, causing injury to plants. These are good to use for thinning and removing deadwood, selective pruning of most shrubs, and clipping topiary and low boxwood hedges.

Power trimmers: Available with gas engines, corded electric, and cordless electric. These are used for formal hedge shearing. They are available with poles and with articulating heads for pruning the tops of tall hedges. Some of these trimmers can be loud, so wear proper ear and eye protection.

I have only mentioned a few excellent plant choices that could make a good hedge. Basically just about any shrub can be trained and shaped into a hedge. If you are having a hard time making up your mind on the selection of plants to chose, plan a visit to the Morton Arboretum and take a stroll through our Hedge Garden.

Quote of the week: “A perfect summer day is when the sun is shining, the breeze is blowing, the birds are singing, and the lawn mower is broken.” ~James Dent



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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