

# Plant Health Care Report

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Scouting Report of The Morton Arboretum

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**June 4 – 11, 2009**

**Issue 2009.09**

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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?

My favorite indicator plant, the Japanese tree lilac (*Syringa reticulata*), is blooming.



**Accumulated Growing Degree Days (Base 50):  
515.5**

### Insects

- Currant spanworm
- Pear slug sawfly
- Balsam twig aphid
- Oak shothole leafminer
- Lady bird beetle larva
- Erineum patch gall on beech

### Diseases

- Powdery mildew
- Black spot on rose

### Weed Note

- Creeping Charlie
- Black medic

# Degree Days and Weather Information

As of June 11, 2009, we are at 515.5 growing degree days which is 9 days ahead of the historical average (1937-2007) and the same as last year.

Location	Growing Degree Days through June 11	Precipitation between June 4 to 11 in inches
The Morton Arboretum (Lisle, IL)	515.5	.52
Chicago Botanic Garden (Glencoe, IL)*	386.5	.57
Chicago O-Hare Airport*	461	.51
Aurora, IL**	465.4	
Champaign, IL**	756.1	
DuPage County Airport (West Chicago, IL)**	553.5	
Decatur, IL**	787.9	
Moline, IL**	634.5	
Peoria, IL**	712.2	
Quincy, IL**	806.8	
Rockford, IL**	491.8	
Waukegan, IL**	317.4	
Wheeling, IL**	416.0	

\*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

### Currant spanworm

The currant spanworm (*Itame ribearia*) has been found on our green mound alpine currant (*Ribes alpinum* 'Green Mound'). This lemon yellow and frosty white, black spotted caterpillar is quite beautiful. The currant spanworm is a fairly uncommon pest. They got our attention by chewing on all of our currant leaves. When disturbed, the caterpillars drop down from the plant on a strand of silk. The spanworm pupates in the ground and the moth emerges in late June. The moth is light tan with a row of parallel gray dashes across each wing. The eggs are laid on the bark in July and hatch the following spring.

**Control:** Treatment is seldom needed. In a severe infestation, *Bacillus thuringiensis kurstaki* (Bt) can be used. 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.



## Pear slug sawfly



Feeding damage by the pear slug sawfly

We are finding feeding damage from the pear slug sawfly (*Caliroa cerasi*) on serviceberry (*Amelanchier spp.*). After overwintering as a pupa in the soil, the adult sawflies emerge in the spring. They are black, wasp-like, winged insects, and are about one quarter of an inch long. Female sawflies lay their eggs in the underside surface of leaves. The slug-like larvae have a slimy olive-green coating that makes them look blackish in color and can reach up to one half inches long. They feed for about a month, and then drop to the soil to pupate. In late summer, the adults will emerge and a second generation cycle will begin.

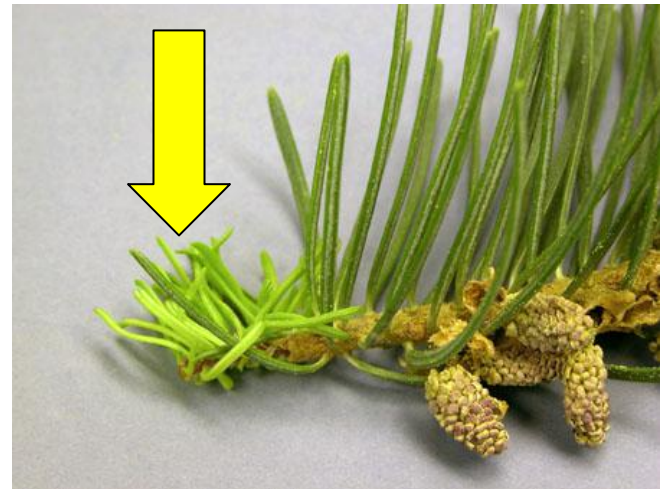
Feeding damage by the larva occurs on the upper leaf surface. Leaves become skeletonized with only the leaf veins remaining. The chewed leaf areas turn brown, giving the plant a scorched appearance. Feeding by the larvae may cause premature leaf fall in heavily damaged plants. Severe defoliation can affect the overall health of the tree.

**Control:** Remove or destroy small populations of the pear slug sawfly larva by hand. If hand picking is not your cup of tea, try using a forceful stream of water from your garden hose to knock them off the plant. For chemical recommendations, refer to the University of Illinois CPM or HYG.

## Balsam twig aphid

We are finding balsam twig aphid adults (*Mindarus abietinus*) on balsam fir (*Abies concolor*). They are about one twelfth of an inch long, pale blue, and are beginning to cover themselves with white waxy wool. Due to the presence of the wool, the balsam twig aphids can be mistaken for balsam woolly adelgids. The aphids, however, are needle feeders (under the microscope, you can actually see their mouth part pierced into the needle) whereas the adelgids feed on stems, branches, and twigs. Also, adult adelgids are purplish-black while the adult aphids are pale blue to pale green. Usually the colors of both are masked beneath their white waxy wool.

The aphids overwinter as eggs in bark crevices of the host plant. In early spring a few weeks before balsam fir bud break, small blue-green nymphs emerge and feed primarily on the old growth, causing little damage. In late spring, the second and third generations feed on new needles, causing curling and permanent deformity of new shoots. Copious amounts of honeydew are also present.



Damage from the balsam twig aphid

Balsam twig aphids also infest Fraser's fir (*Abies fraseri*), Siberian fir (*A. sibirica*), subalpine fir (*A. lasiocarpa*), white spruce (*Picea glauca*), Colorado blue spruce (*Picea pungens*), and juniper (*Juniperus*).

**Control:** Damage to trees is primarily aesthetic, so control is not recommended.

## Oak shothole leafminer

We're seeing "shotholes" (one tenth to one fifth of an inch holes that appear in a shot gun pattern) in the leaves of bur oak (*Quercus macrocarpa*). The shotholes are caused from feeding by the oak shothole leafminer (*Agromyza viridula*).

Adult females feed on emerging leaves by inserting their ovipositor into leaves, jabbing it around to liquefy the tissue, then lapping up the fluids. Eggs are laid inside a feeding site and emergent larvae mine into the leaf. The injured tissue browns, dries into a disk, and drops out of the leaf.



Shothole injury can be mistaken for leaf tatter damage. Leaf tatter occurs during hard frosts when leaves are still in bud. Frost, combined with heavy winds during leaf emergence, causes somewhat uniformly distributed jagged, open spaces between the main veins of the leaves. Shotholes are more randomly distributed and more clearly defined.

*Control:* Damage is usually an aesthetic problem and control is not recommended.

Good web site:

<http://bugs.osu.edu/~bugdoc/Shetlar/factsheet/ornamental/FSoakshotholelm.htm>

## Lady bird beetle larva



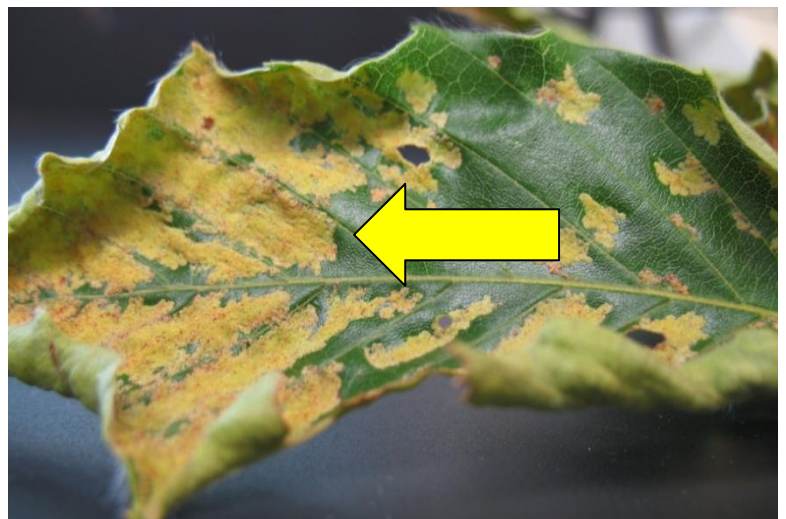
The larvae of lady bird beetles have been found all over our balsam fir trees (*Abies concolor*). They are more commonly but incorrectly known as ladybugs, and are an important beneficial insect. Both adults and larvae are predators of many different soft-bodied insects including one of their favorite foods – aphids (which is why there is a high population of them on our fir trees), spider mites, and mealybugs. A single larva will eat as many as 1,000 aphids during its development and an adult will eat up to 5,000 aphids during its lifetime. When ladybird beetles are present, insecticides should be used sparingly or use less toxic horticultural oils and insecticidal soaps.

There are over 400 species of lady bird beetles in North America. One species, the orange-colored multicolored Asian lady bird beetle, *Harmonia axyridis*, has become an irritating household pest. Known as ‘halloween ladybugs’, they abound in the fall and are attracted, often en masse, to the warm surfaces of light-colored buildings. They finagle

their way inside and take up residence for the winter. These ladies are worth their weight in gold in terms of controlling agronomic crop pests, but they have largely out-competed our native ladybird beetles.

## Erineum patch gall on beech

Erineum patch gall caused by the eriophyid mite (*Acalitus fagerinea*) has been found on our American beech tree (*Fagus grandiflora*). The gall patches are located on the upper leaf surface. They begin as a green color and turn to a bright golden-yellow to red. On the lower leaf surface beneath the gall patch a dimpling is formed. The erineum patch gall can be easily mistaken for leaf spot or rust disease.



*Control:* Despite the patch galls' appearance and abundance, they seldom cause enough damage to warrant control.

## Powdery mildew



Powdery mildew is appearing on the leaves of alpine currant (*Ribes alpinium*) and common ninebark (*Physocarpus opulifolius*). Hundreds of plant species are susceptible to powdery mildew, but the disease is caused by many different fungal species and is host specific. This means that the powdery mildew on coralberry will not infect lilacs and so forth.

Powdery mildew appears as a superficial white to gray coating over leaf surfaces, stems, flowers, or fruits of affected plants. Initially, circular powdery white spots appear. These spots coalesce producing a continuous patch of "mildew." Later in the season, cleistothecia (fungal fruiting bodies that look like black pepper under a hand lens) will appear. Warm days and cool nights favor this fungal disease. This disease is one of the few that is deterred by free water since spores will not germinate in

free water on leaves. However, the disease still needs high humidity to infect the plant. Leaf curling and twisting result. In severe infestations you may see premature defoliation and deformed flower buds. Although unsightly, powdery mildew is usually not fatal in the landscape.

*Control:* Plant resistant cultivars and species. Infected plant parts should be removed as soon as symptoms appear. Dispose of fallen leaves and do not handle plants when foliage is wet. Water plants during periods of drought to keep them healthy. High humidity can increase disease severity, so avoid overhead watering in late afternoon or evening. Plant ninebark in locations where there is good soil drainage and sufficient sunlight. Provide proper plant spacing for good air circulation. Powdery mildew on some plants can result in significant damage and fungicides may be needed. To obtain optimum results, spray programs should begin as soon as mildew is detected. For chemical recommendations, refer to the CPM or HYG.

Good web sites:

<http://ohioline.osu.edu/hyg-fact/3000/3047.html>

<http://plantclinic.cornell.edu/FactSheets/powdery/powdery.htm>

## Black spot on rose

We have spotted the beginning of black spot on rose on rugosa rose (*Rosa rugosa*). Black spot is caused by the fungus *Diplocarpon rosae*. Round to irregular black leaf spots with fringed margins appear on either leaf surface but primarily on the upper surface. When infection is severe, the entire leaf will turn yellow and drop. Repeated defoliation will lead to reduction in flower quality and quantity, stunting and weakening of the plant, and increased susceptibility to other diseases.

The fungus overwinters on fallen leaves and diseased canes. Spores are splashed by water or wind-blown rain from fallen leaves and cane lesions to newly emerging leaves and succulent stems in the spring. Warm temperatures, combined with wet leaves and high humidity, will result in abundant spore



germination and infection in about one day. Black spots become evident three to sixteen days later.

**Control:** Remove infected leaves and canes to reduce inocula. Plant roses in sunny locations with good air circulation and avoid overhead watering. Avoid planting them too densely. Fungicides should be applied as soon as leaves emerge and continued, at labeled intervals, until leaves drop in the fall. Lengthen spray intervals or skip applications during dry weather. For specific chemical recommendations, refer to the CPM or HYG. Plant disease resistant varieties. The Ohio State University has listed many varieties of roses, including hybrid teas, floribundas, and miniatures that are reported to be resistant. See <http://ohioline.osu.edu/hyg-fact/3000/pdf/3072.pdf>.

Good web site:

<http://www.ianrpubs.unl.edu/epublic/live/g1060/build/g1060.pdf>

## Weed Note

### Creeping Charlie (*Glechoma hederacea*)

Creeping Charlie, also known as ground ivy, is an aggressive cool season perennial. It will invade lawns, flower and vegetable beds. This weed grows in patches that can be up to two and a half feet long. Leaves are round to kidney-shaped with a scalloped toothed margin, and are one half to one and a half inches in diameter. They have long petioles and are in an opposite leaf arrangement. The leaves have a minty odor when crushed. Tiny, funnel-shaped, purplish-blue flowers bloom in leaf axils (the area between the leaf and the stem) from April to June. Creeping Charlie also has square stems. It spreads by seeds and roots from nodes. It can often be found growing in moist shaded sites or in full sun.

**Control:** Creeping Charlie can be difficult to control. Small infestations can be controlled by repeated hand pulling. Apply a post-emergence herbicide with products containing 2,4-D, MCPP, or dicamba in mid-spring to early summer and/or mid to late autumn when plants are actively growing. 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.



### Black medic (*Medicago lupulina*)

Black medic is a low growing annual/cool season perennial (sometimes grows as a biennial) that spreads 12-24 inches wide. It has three leaflets that are one-fifth to three-fifths inches long. Each leaflet is dark green, fully subdivided, oval, and has toothed margins. Small bright yellow flowers bloom from April to October. Black medic stems are hairy and branched at the base. Flowers are one-eighth to one-sixth inches long and are arranged in clover like clusters on short stems. This weed reproduces by seed. Seed pods turn black at maturity. Black medic grows in soil that is compacted.

**Control:** Hand pull or apply a post-emergence broadleaf herbicide from late spring through early summer. If necessary treat again in mid-fall. For further information on chemical control, refer to the University of Illinois CPM or HYG.



## What to Look for Next Week

We will be looking for rose rust, black vine weevil, and birch leafminer.

*Quote of the week:* “Almost any garden, if you see it at just the right moment, can be confused with paradise.” -Henry Mitchell



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.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](mailto:plantclinic@mortonarb.org). Inquiries or comments about the PHC reports should be directed to Trica Barron at [tbarron@mortonarb.org](mailto:tbarron@mortonarb.org).

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