

# Plant Health Care Report

Scouting Report of The Morton Arboretum

July 30, 2010

Issue 2010.15

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.

## An interesting fruit for this week's report

Burr oak (*Quercus macrocarpa*) (Figure 1)

Accumulated Growing Degree Days (Base 50): 1814

Accumulated Growing Degree Days (Base 30): 4416

## Quick View

### Weekly reminder

### What to look for in the next week

#### This week's sightings:

##### Insects

Aesculus twig pruner  
Pipevine swallowtail caterpillar  
Zimmerman pine moth update  
Birch catkin feeders  
Sycamore tussock moth caterpillar

##### Diseases

Walnut anthracnose  
Tar spot  
Melampsora rust  
Leaf blotch on linden

##### Sightings elsewhere

Dodder



Figure 1 Burr oak (*Quercus macrocarpa*)

## Degree Days and Weather Information

As of July 29, 2010, we are at 1814 base-50 growing degree days (GDD), which is approximately 19 calendar days (400 GDD) ahead of 2009 at this time, and ahead of the historical average (1937-2009) by 42 GDD, 2 calendar days. In the past week, it has rained 3.68 inches, 5.27 in this month, and 24.54 for the year.

Location	Growing Degree Days through July 29	Precipitation (in) Between July 15 - 29
Aurora, IL**	1940.2	
Cahokia, IL**	2621.5	
Carbondale, IL **	2733.5	
Champaign, IL**	2276.1	
Chicago Botanic Garden (Glencoe, IL)*	1892	3.17
Chicago Midway	2108.3	
Chicago O'Hare*	1968	6.44
Decatur, IL**	2400.7	
DuPage County Airport (West Chicago, IL)**	1956.1	
Lawrenceville, IL**	2706.7	
Mattoon, IL**	2366.2	
Moline, IL**	2203.7	
The Morton Arboretum (Lisle, IL)	1814	3.68
Peoria, IL**	2294.4	
Quincy, IL**	2334.8	
Rockford, IL**	1936.4	
Springfield, IL**	2471.4	
Sterling, IL**	2043.5	
Waukegan, IL**	1658.8	
Wheeling, IL**	1909.4	

\*Thank you to Mike Brouillard, Northbrook Park District, and Chris Henning, 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>

### Weekly Reminder:

After the heavy rains this past week the Plant Clinic has gotten several calls about what should be done after having excess water and raw sewage in landscapes and in gardens. Because of the excess water some plants may suffer from having 'wet feet'. There isn't much that can be done for this except to allow the plants to dry out, remove any debris, and improve air circulation. If you vegetable gardens had sewage in them, you don't want to eat them because harmful bacteria may be in the vegetables. This is very unfortunate, but you can till the plants under and use them as compost for next year.

### What to look for in the next week:

Fall webworm, oak wilt, smooth patch, boxelder bugs

## This Week's Sightings...

### Aesculus twig pruner

Twig pruner damage has been found on buckeye (*Aesculus glabra*). Wilted and browned branches are hanging from trees and scattered about the ground, looking very similar to cicada damage. The first sign of infestation are branch tips with fading foliage that eventually turn brown. With cicada damage you will see slits along the branches. Twigs from the twig pruner are smooth at the ends and knobby in appearance.

In spring, as leaves are beginning to form, adults emerge and deposit eggs near the tips of twigs. After making their entrance holes, larvae begin to feed in the center of the small branch. They chew (mine) down into the stem and in summer move to the sapwood and make concentric circular cuts, leaving only the thin bark to hold the branch in place. A gust of wind will cause the branch to break and fall to the ground. Larvae remain in the fallen branches, pupate in the fall, and emerge as adults the following spring.

**Control:** This insect will not kill or severely damage trees. To reduce populations, collect and destroy fallen branches and prune out wilted and damaged branches.

**Suggested reading:** <http://muextension.missouri.edu/explore/agguides/pests/g07276.htm>

### Pipevine swallowtail caterpillar

Pipevine swallowtail (*Battus philenor*) (Figure 2) larvae have just hatched on the leaves of woolly Dutchmen's pipe (*Aristolochia tomentosa*). Pipevine swallowtail larvae feed only on plants in the pipevine family.

These fascinating insects grow to two inches long, are black, and have dark outgrowths protruding from each segment. Each larva has long filaments coming out of its first segment which it uses to explore its path. It also has four longitudinal rows of bright orange projections along its body. The larvae are toxic and distasteful to animals. Soon it'll turn into a gorgeous black butterfly with blue-green metallic hind wings and a wingspan of about four inches.



Figure 2 Pipevine swallowtail (*Battus philenor*)

**Control:** Handpicking severe infestations works well at The Arboretum, but *Bacillus thuringiensis var. kurstaki* (Btk) could also be used to control young larvae. Btk is not as effective on mature larvae. Refer to the *2010 Commercial Landscape & Turfgrass Pest and Management Handbook* (CPM) for commercial applicators or the *Home, Yard & Garden Pest Guide* (HYG) for homeowners for chemical control recommendations.

**Suggested reading:**

<http://www.uky.edu/Ag/CritterFiles/casefile/insects/butterflies/swallowtail/swallowtail.htm>

### Zimmerman pine moth update

Keep an eye out for Zimmerman pine moth (*Dioryctria zimmermani*) larvae (Figure 3). They are dirty white to pale pink or green with rows of black spots on their abdomens. They should hatch and begin crawling around the bark of pine trees within the next few weeks and will be highly susceptible to insecticides at that time. Treatments should be made when larvae are exposed and before they tunnel into



Figure 3 Zimmerman pine moth larvae

pine trees and start the overwintering process. Refer to the *2010 CPM and HYG* for specific chemical controls.



Figure 4 Birch catkin feeders (*Kleidocerys resedae*)

### Birch catkin feeders

Birch catkin feeders (*Kleidocerys resedae*) (Figure 4) were found in our birch collection at The Arboretum. 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.

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

### Sycamore tussock moth caterpillar

Sycamore tussock moth caterpillars (*Halysidota harrisii*) (Figure 5), 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.

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



Figure 5 Sycamore tussock moth caterpillars (*Halysidota harrisii*)

### Walnut anthracnose

The first symptoms of walnut anthracnose on black walnut (*Juglans nigra*) (Figure 6) have been found at The Arboretum. Symptoms are small black leaf spots with pale centers and dark-brown margins (photo on right). The spots are somewhat circular and first appear on the underside of leaves, eventually becoming apparent from both sides. They range in size from pinpoints to about 6 mm (1/4 inch) in diameter. When numerous, they cause leaf yellowing, curling, and margin browning. In addition, sunken necrotic spots develop on the husks of infected nuts. Infection of immature nuts may result in their premature drop. Occasionally, lesions appear on current year's shoots. Walnut anthracnose



Figure 6 walnut anthracnose on black walnut (*Juglans nigra*)

may cause premature defoliation and diminish nut quality, but is not considered a major problem in ornamental walnuts.

**Control:** Gather and destroy fallen leaves to reduce inoculum. Reduce tree stress by watering during periods of drought and through proper fertilization.

**Suggested reading:**

[http://www.na.fs.fed.us/spfo/pubs/fidls/walnut\\_anthr/wal\\_anthr.htm](http://www.na.fs.fed.us/spfo/pubs/fidls/walnut_anthr/wal_anthr.htm)

[http://web.aces.uiuc.edu/vista/pdf\\_pubs/600.pdf](http://web.aces.uiuc.edu/vista/pdf_pubs/600.pdf)

## Tar spot of maple

Tar spot of maple (Figure 7) was found on cut-leaved silver maple (*Acer saccharinum* 'Laciniatum'). The disease looks just like shiny black spots of tar flung about on the upper surface of maple leaves. Several different fungi in the genus *Rhytisma* infect the leaves of maples and cause the spots. The spots range from 1/5 to 4/5 inch in diameter. *Rhytisma* spp. most commonly infects leaves of silver and Norway maples, although big leaf, mountain red, Rocky Mountain, and sugar maples are also susceptible. It does little harm to the trees this late in the season, but is unsightly.

**Control:** Control is not necessary unless a tree is severely infected. To reduce inoculum, rake up and discard the leaves in fall. An appropriate fungicide may also be helpful. For chemical recommendations, refer to the CPM if you are a commercial applicator or HYG if you are a homeowner.

**Suggested reading:**

<http://plantclinic.cornell.edu/FactSheets/tarspot/tarspots.htm>

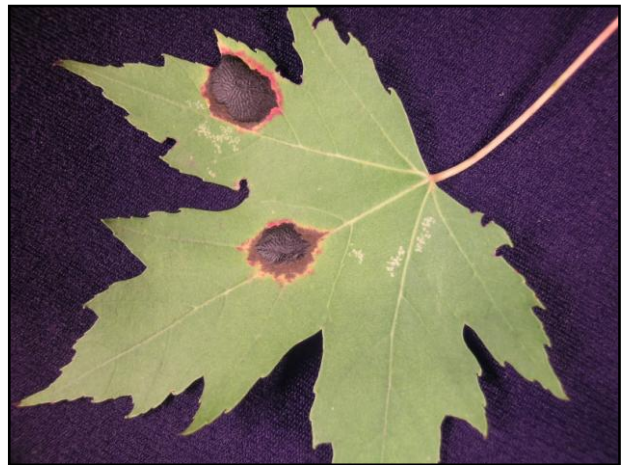


Figure 7 Tar spot on sugar maple

## Melampsora rust

Melampsora rust, caused by the fungus *Melampsora epitea*, has been found on peach-leaved willow (*Salix amygdaloides*) (Figure 8). Small yellow spots have developed on upper leaf surfaces with corresponding small yellow-orange pustules on lower leaf surfaces. 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 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



Figure 8 Melampsora rust on peach-leaved willow

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.

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

**Suggested reading:** <http://www.ipm.uiuc.edu/diseases/series600/rpd605/>



Figure 9 Leaf blotch of American linden

## Leaf blotch on linden

Leaf blotch of American linden (Figure 9), caused by the fungus *Asteroma tiliae*, was found on American linden (*Tilia americana*). We're seeing large, very dark brown irregular blotches with feathery margins on the leaves. The blotches are slightly lighter in the center of the blotch and appear mainly on the upper leaf surface. The corresponding lower leaf surface is tan with an indistinct margin. These blotches appear after mid-summer.

**Control:** Damage is aesthetic and control is not necessary.

## Dodder



Figure 10 Dodder (*Cuscuta* species)

Chris Henning at the Chicago Botanic Gardens reported finding dodder, a parasitic plant, growing in their natural plant collection. Dodder is a more serious problem in tropical and warm temperate areas, but in our cool temperate climate, it can attack green or succulent parts of low-growing woody plants. Dodder can kill herbaceous plants and greatly weakens woody ones by smothering or stunting the host plant. Dodder looks like masses of yellow orange spaghetti strands (Figure 10) (now you probably think I'm making this one up). It generally reproduces from seed. The parasite penetrates the host plant by means of haustoria through which the dodder receives water and nutrients.

**Control:** Don't allow the dodder to produce seed. It generally reproduces through seeds and this will allow the problem to continue. Pick the dodder off the host plants or remove and destroy infested plants.

**Suggested reading:**

<http://www.coopext.colostate.edu/TRA/dodder.html>

---

The Plant Health Care Report is prepared by Stephanie Adams, M.S., Plant Health Care Technician, and edited by Donna Danielson, M.S., Plant Clinic Assistant; Fredric Miller, Ph.D., research entomologist at The Morton Arboretum and professor at Joliet Junior College; and 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 that scouted this past week and found most of the insects and diseases that are in this report. The Scouting Volunteers include: LeeAnn Cospers, Fritz Porter, Ann Klingele, and Loraine Miranda. Your hard work is appreciated.

### Literature recommendations:

David Arora. 1986. *Mushrooms Demystified 2<sup>nd</sup> ed.* Ten Speed Press. Berkeley, CA. ISBN-13: 0-89815-169-4.

Michael Dirr. 1998. *Manual of Woody Landscape Plants.* ISBN-10: 0-87563-800-7.

Mark L. Gleason, Margery L. Daughtrey, Ann R. Chase, Gary W. Moorman, and Daren S. Mueller. 2009. *Diseases of Herbaceous Perennials.* ISBN: 978-0-89054-374-0

Harris, J.G. and M. Woolf Harris. 2001. *Plant Identification Terminology: An Illustrated Glossary.* ISBN-13: 978-0964022164.

Donald A. Orton. 2007. *Coincide, The Orton System of Pest and Disease Management.* Publisher website: <http://www.laborofloveconservatory.com/>.

F.W.M.R. Schwarze. 2008. *Diagnosis and Prognosis of the Development of Wood Decay in Urban Trees.* ISBN: 978-0-646-49144-8.

F.W.M.R. Schwarze, J. Engels, and C. Mattheck. 2000. *Fungal Strategies of Wood Decay in Trees.* ISBN: 3-540-6705-2.

Triplehorn, C.A and N.F. Johnson. 2005. *Study of Insects.* 7<sup>th</sup> ed. Brooks/Cole, Cengage Learning. Pp. 606-7.

William T. Stearn. 2002. *Stearn's Dictionary of Plant Names For Gardeners.* ISBN-10: 088192556X.

University of Illinois. 2010. *The 2010 Commercial Landscape & Turfgrass Pest Management Handbook.* <https://pubsplus.uiuc.edu/ICLT-10.html>.

University of Illinois. 2008. *Home, Yard & Garden Pest Guide.* <https://pubsplus.uiuc.edu/C1391-08.html>.

UIPlants: The Woody Plant site for the University of Illinois <http://woodyplants.nres.uiuc.edu>.

This report is available on-line 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 Stephanie Adams at [sadams@mortonarb.org](mailto:sadams@mortonarb.org).