

**The Plant Health Care Report
The Morton Arboretum**

July 1 - 14, 2000

Issue 2000.15

The Plant Health Care (PHC) Program at The Morton Arboretum involves monitoring diseases and insects of woody plants at the Arboretum and alerting others about our findings. Each week, we will provide timely information about what we are seeing and how you, too, can identify and control problems.

Degree Day Information (Base 50)

At the Arboretum, we're one week ahead of average and two days behind last year.

Location	Base 50 Degree Days	Through
Morton Arboretum (Lisle, IL)	1524.0	7/12/00
Chicago Botanic Garden (Glencoe, IL) *	1175.5	7/11/00

**Thanks to Tom Tiddens from the Chicago Botanic Garden for supplying us with this degree day information.*

June weather

Our temperatures were average, but we had much more rain than average. Our average June temperature was 70.0 ° F(21.1° C). Our 61-year June average is 69.9°. The mercury soared to 92° F (33.3° C.) on June 9 and dipped to a low of 38° F (3.3° C) on June 4. We received rain on 17 days for a total of 6.82 inches (173.2 mm.). Our 61-year June average is 4.01 inches (101.9 mm). Our greatest amount of precipitation was 1.58 inches (40.1 mm.) which fell on June 12.

What insects are we seeing on our trees this week?

Gypsy moth male adults

On July 11, we began to catch adult male gypsy moths in pheromone traps. The males are brown with black markings and have a wingspan of 1 ½ inches (see figure A). Their antennae are feathered. The males should be around for ten days or so. They only live long enough to mate. The males are able to fly, but the females are too heavy to do so. Female moths are white to cream-colored with black markings on their wings. They have a wingspan of about two inches. We haven't seen any females but will continue looking for them and the egg masses that the females may be laying. The egg masses are about 1 1/2 inches long and 3/4 inch wide. They are covered with buff to yellow colored hairs. The egg mass will contain from 100 to 1,000 eggs and can be found on tree trunks, under loose bark, in woodpiles, on outdoor furniture, or the underside of cars and RV's.



Figure A. An adult male gypsy moth – this is the stage we're catching now

See the previous Plant Health Care Report for more information about the larval stage, which is the damaging stage.

Good web site:

<http://willow.ncfes.umn.edu/fidl-gypsy/gypsy.htm>

Grapevine beetle

This is a big beetle, about an inch long, found on grape (*Vitis* spp.). It has been described as reddish brown or brownish yellow and tinged with green. We have beetles of both colors. Grapevine beetle has three small black spots on its elytra (wing covers) and a small black spot on each side of its pronotum. It eats grapevines.

Willow sawfly larvae

We found willow sawfly larvae on willow (*Salix* spp.). It would be easy to confuse these with imported willow leaf beetle larvae. Willow sawflies have six pairs of pro legs (hind legs), while leaf beetle larvae have no pro legs. Willow sawfly larvae are black with distinct yellow spots along each side (see figure B). They are about half an inch long. This is the first of two generations. Soon the larvae will drop down into the soil under the tree to pupate. The adults will emerge to lay eggs in the leaves and the second generation of larvae will be out later in the season. Willow sawflies overwinter as pupae. Hosts are willow and poplar. They are vigorous eaters and can defoliate trees.

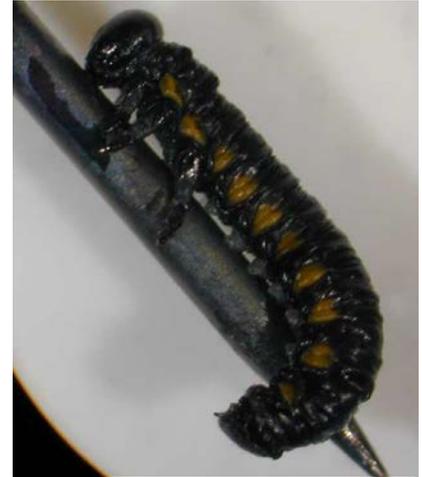


Figure B. Willow sawfly larvae

Control:

We were able to hand-pick ours. A fact sheet put out by Agriculture and Agri-Food Canada (<http://www.agr.ca/pfra/shbpub/pest/pest15.htm>) claims that chemical control such as carbaryl, diazinon or malathion can be used on large trees. Be sure to read the label to see if those chemicals are registered for use on willow sawfly on willow. Always follow label directions.

Baldcypress rust mites

Baldcypress rust mites were found on baldcypress (*Taxodium distichum*). The infestation is just beginning. Eventually the damage will look like leaf yellowing and interior browning. Some leaves will turn an orangish brown. Occasionally, leaf tips become dwarfed and distorted. When we looked at the foliage under the dissecting scope, we saw a lot of white, discarded skins on the older, brown foliage and rust mites crawling on the midrib. These rust mites are REALLY small; even when magnified 40 times, they look like tiny, pale, wedge-shaped mites (see figure C). These mites like warm weather.



Figure C. A baldcypress rust mite magnified about a zillion times – note the wedge shape

Control:

A severe infestation may stress a baldcypress and control may be warranted. We're unaware of any cultural control. According to the 1998 Home, Yard and Garden Pest Newsletter from the Cooperative Extension Service of the University of Illinois, Carbaryl (Sevin), dicofol (Kelthane), or oxythioquinox (Morestan) will control the mite if the foliage is thoroughly covered. Don't use horticultural oils to control baldcypress rust mites because baldcypress is sensitive to them.

Tilia lacebug

Lace bug nymphs and adults were found on American linden (*Tilia americana*). The adults are black and white and about 1/8 inch long found on the underside of leaves. They are quite beautiful to see under a hand lens. The adults are flat and nearly rectangular with white lacy-looking bodies, a dark area on the

thorax, and two black spots on the wings. The nymphs are black and spiny-looking. Dark fecal spots are also commonly found on the lower surface of leaves. Lace bugs cause leaf stippling. Under a heavy infestation, leaves can eventually turn white starting at major veins.

Control:

Lace bugs generally do not cause serious harm. To help minimize harm, keep plants healthy by growing plants well-suited to the site and water during drought periods. Ohio State University states that a hard jet of water from a hose can knock young nymphs off the plant when they hatch in the spring. For chemical control, refer to the *Commercial Landscape & Turfgrass Pest Management Handbook 2000* (CLTPMH) or the *Illinois Homeowner's Guide to Pest Management* (IHGPM).

Good web site:

<http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn029.html>

Great picture on the internet:

<http://www.ent.agri.umn.edu/cues/dx/vk/lacebug.htm>

What diseases are we seeing on our trees this week?

Melampsora rust

We're seeing Melampsora rust on eastern cottonwood (*Populus deltoides*). Look for small yellow-orange pustules on the lower surfaces of leaves. The life cycle involves two hosts, cottonwood or aspen and an evergreen such as Douglas-fir, pine, fir or spruce. The disease causes little damage on the conifer. In spring, spores are released during wet weather from last year's fallen cottonwood leaves. These spores infect the conifers. After only two to three weeks, conifers produce spores that are subsequently blown back to *Populus* sp. Once the rust is established on the *Populus*, the rust can multiply rapidly if the weather is wet. If the rust is severe for several years in a row, it can slow growth of the tree, but otherwise is not too big of a problem for a landscape tree.

Control:

Avoid planting the alternate hosts near cottonwoods or aspens. For chemical control, refer to the CLTPMH or IHGPM.

Bullseye leaf spot (*Cristulariella*)

Cristulariella leaf spot or bull's eye leaf spot was found on Bokhara fleece flower (*Polygonum baldschuanicum*). This is called bull's eye leaf spot because the grayish-brown leaf spots have concentric circles, which almost look like a target. The spots have a light center and alternating light and dark concentric rings. The spots are up to an inch in diameter. We found severely infected leaves turning yellow and falling off the vine. This fungal disease kills plant tissue by creating toxic amounts of oxalic acid. Cool, wet weather in mid-summer can favor the disease. If the weather remained that way, it could have done more serious damage to the plant, but fluctuations in the weather usually retard the growth of the fungus. It has many common hosts.

Control:

Rake up and discard leaves in the fall.

Leaf blotch of Tilia

Leaf blotch of American linden caused by *Asteroma tiliae*



Figure D. Leaf blotch of *Tilia*

was found on an American linden (*Tilia americana* 'Dentata'). We're seeing large, very dark brown irregular blotches with feathery margins on the middle of the leaves. The blotches are slightly lighter in the center of the blotch and appear mainly on the upper leaf surface (see figure D). These blotches appear after mid-summer. Control is not necessary.

Cedar-apple rust galls on Juniper

New cedar-apple rust galls are forming on common juniper (*Juniperus virginiana*). Right now these look like olive green balls of clay hanging on twigs. They are about half an inch in diameter. They will not be mature for another year. See PHC Report of March 27 – 31 (2000.01) for more information.

Have a great week and happy scouting!

The Plant Health Care Report is prepared by Donna Danielson of The Morton Arboretum and reviewed by Karel Jacobs, Ph.D., Plant Pathologist at The Morton Arboretum, and Fredric Miller, Ph.D., Entomologist of the University of Illinois. 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 Plant Health Care Report is available on The Morton Arboretum web page at www.mortonarb.org.