



UNIVERSITY OF ILLINOIS EXTENSION

# HOME, YARD & GARDEN PEST

College of Agricultural, Consumer and Environmental Sciences, University of Illinois at Urbana-Champaign  
Illinois Natural History Survey, Champaign

NEWSLETTER

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## PLANT DISEASES

### Three Dogwood Diseases

In Illinois, we may see three foliar diseases of dogwood. All are fungal diseases: Septoria leaf spot, spot anthracnose, and *Discula anthracnose*. The first two cause aesthetic problems, but *Discula anthracnose* can kill branches and even entire trees. Fortunately, we do not see *Discula anthracnose* often in Illinois landscape settings.

**Spot anthracnose** occurs in the spring and is caused by a fungus, *Elsinoe corni*. It affects flowers, leaves, young shoots, and even fruit. The spots are very small (about the size of the head of a pin), purple, and sometimes with a yellow center. Centers often drop out. The spots may merge to cause larger affected areas. This anthracnose disease is similar to those we experience on shade trees. Intensity is definitely related to the amount of moisture in the spring, in this case before or during flowering. Fungicide sprays are available to control this disease but would only be used where the problem is annual. Sprays are applied from bud swell through flowering. In Illinois, sprays are usually not needed. The disease may be severe when spring weather is particularly wet and cool during flowering, but sprays must be initiated before flowering. They work as preventives, not curative applications.

**Septoria leaf spot** occurs near the end of summer and is visible now in Illinois. It is more common in wet conditions or high humidity. Several *Septoria* species may infect dogwoods. Purple spots, often with gray centers, occur on the leaves. These spots are larger than those of spot anthracnose, reaching about 1/4 inch in diameter. *Septoria* has tiny, submerged fruiting bodies (pycnidia) that can be seen as black specks in the lesions. Diagnostic spores are found within the fruiting bodies. No cankers are associated with the disease. Supposedly, stressed trees are more susceptible, but that does not always seem to be true on cases we have observed at the Plant Clinic. We do not usually recommend fungicide sprays to protect dogwoods from *Septoria* in Illinois.

**Discula anthracnose** appears in Illinois in early summer (June), causing leaf spots similar in size to those of *Septoria* leaf spot, but without the obvious fruiting

bodies. The leaf becomes blighted at the tip and edges. Lower leaves are affected first. *Discula anthracnose* also causes stem cankers, killing shoots and contributing to the decline of the tree. Blighted leaves often remain attached to the dead twig, even into autumn. This disease is caused by *Discula destructiva*, aptly named. It is difficult to manage this disease. Keep dead wood trimmed out of your tree so that cankers do not move into the trunk. Remove the dead wood from the site and burn if possible. Water the soil around dogwoods in drought and use shredded bark mulch over the root system. Keep the mulch off the trunk. Fertilize in the spring or fall with a balanced fertilizer. High nitrogen levels may promote anthracnose. This disease is most likely to appear on trees in shady locations. It can be managed if caught early, before cankers invade large limbs. Many fungicides are registered for use against this pathogen. Sprays are applied in the spring to protect newly emerging leaves. Refer to the *Illinois Commercial Landscape and Turfgrass Pest Management Handbook* or the *Home, Yard, and Garden Pest Guide* for registered fungicides. (Nancy Pataky)

### Does Your Tree Have BLS?

Bacterial leaf scorch (BLS) is a deadly disease for many trees. It starts out with leaf scorch but progresses 8 years or longer to kill or contribute to the death of large trees.

How do you know whether your tree may be infected? Refer to issues no. 15 and 19 in the 2007 edition of this newsletter. Large trees (especially oaks) that have healthy leaves each spring, develop scorched foliage by midsummer, and seem to be getting worse each year are most suspect. Infected trees show scorching weeks before surrounding trees begin to dry down in the fall. Some possible tree hosts include pin, red, scarlet, bur, white, willow, and shingle oaks; silver, sugar, and red maples; sweetgum; sycamore; planetree; hackberry; American elm; and red mulberry. For more information on symptoms, as well as plenty of images, go to this Web site by the National Arboretum: <http://www.usna.usda.gov/Research/BacterialLeafScorch.html>. Not every scorched tree has BLS. There is plenty of environmental scorch in our landscapes. A report discussing noninfectious leaf scorch can be found at this Web site, <http://www.ag.uiuc.edu/~vista/abstracts/a620.html>.

The Plant Clinic at the University of Illinois will be testing trees for the presence of *Xyllella*, a bacterial pathogen that causes bacterial leaf scorch (BLS) of trees. Common lab procedures to detect bacteria do not work with this bacterium. We need to assay with ELISA (enzyme-linked immunosorbant assay) to be certain this bacterium is present. The clinic runs this particular ELISA only in the fall. If you have a suspect tree, send a sample in for testing. We will run assays the last week in August and the first week of September at the normal clinic fee of \$12.50. We can accept only Illinois samples.

How do I prepare a sample for testing? We are going to grind the sample and extract plant sap to use in the ELISA. For this reason, we need live plant material showing symptoms. Send three branch tips, each about 3 inches long, with all the leaves attached. Flatten and place these in a zip-lock plastic bag, labeled with the tree species and the words "for BLS testing." Enclose a completed specimen data form (<http://plantclinic.cropsci.uiuc.edu/hortdf.pdf>) and your check payable to the University of Illinois for \$12.50. Send by overnight express or one-day service to Plant Clinic, 1401 W. St. Mary's Rd, Urbana, IL 61802. Call (217)333-0519 if you have questions. (*Nancy Pataky*)

### Plant Clinic Thriving

The University of Illinois Plant Clinic is a seasonal laboratory. Some have called to find out whether we are still open. Yes, we are open from May 1 through mid-September every year. Our official closing date for 2008 is September 15. Anything submitted by that date will be completed, no matter how long it takes us to culture or otherwise process the samples.

Most of the Midwest plant labs started out slowly because of cool, wet weather. Now we are all working diligently to keep up with the constant flow of samples. For details on submitting samples, consult our Web pages at <http://plantclinic.cropsci.uiuc.edu/>. (*Nancy Pataky*)

## WEEDS

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### Invasive Species Spotlight: Brazilian Elodea (*Egeria densa*)

Brazilian elodea, or Brazilian water-weed, can often be found for sale in pet stores, where it is used as décor and habitat-enhancement material for freshwater aquariums. When it is carefully restricted to the tanks it was intended for, it isn't a concern of land and wetland resource managers. The problem is when the plant becomes introduced to natural wetlands and lakes. Here, it can grow very quickly and dominate the subsurface landscape, altering habitat for fish and wildlife by

displacing native plants and manipulating water quality. These ecosystem-changing qualities have made it a plant of top concern for all interested in wetland resource management.

This subsurface aquatic plant is native to Brazil, Argentina, and Uruguay. Because it has been traded and used in freshwater aquariums, it can now be found worldwide—including several countries in Europe and Asia; Australia and New Zealand; as well as spread throughout South and North America. In the United States, it can be found from coast to coast, being fairly common in the southern states, with isolated infestations in other areas. It has been found in several counties in the southern portion of Illinois.

Brazilian elodea can be found growing in open ponds and lakes, old reclaimed quarries, slow-moving streams, and wetlands. It can be found growing at depths of up to 20 feet. Its only primary form of spread is through introductions from unwanted aquarium waste and fragmentation, whereby a portion of the plant becomes separated from the main plant and floats away or roots in a new area. Elodea is dioecious, with all the plants found in the United States thought to be males; it is not known to spread through seed production.

As the plant can grow very rapidly in new areas, it can quickly outcompete native plants for space. It also can slow down or alter water flow, thereby trapping sediment and creating stagnant pools, often places where mosquitoes and other pests can breed. It is also a problem for aquatic recreationists, often being difficult to paddle or fish through.

It can be identified by the leaves and stems. Its leaves grow in whorls around the stem in groups of four to eight. They are oblong to linear, about 1 inch long and 1/4 inch wide. The margins have very fine serrations that may be difficult to see. Brazilian elodea may flower from spring and early summer, with sporadic flowers up into the autumn. Each three-petaled white flower is held above the water's surface on a fine stalk up to 3/4 of an inch in diameter. It can be confused with American Elodea (*Elodea canadensis*), which can look very similar but has leaves whorled usually in groups of threes that are only 1/2 inch long.

Additional information for Brazilian elodea can be found at USDA Plant Profile: <http://plants.usda.gov/java/profile?symbol=EGDE>. (*Mike Garrett*)

## INSECTS

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### Scouting Watch

**Armyworms** have been reported damaging turf in Metamora, near Peoria. These caterpillars feed on the grass blades, moving like an army across the turf. They

typically eat all the grass blades in a home lawn over two nights. Although the damage is impressive, the grass blades grow back quickly from the undamaged crowns. An application of spinosad (Conserve), a pyrethroid, or other labeled insecticide is effective in preventing more damage.

**Aphids** have been reported damaging turf in Normal, north of Bloomington. These are probably greenbugs, which are pinhead-sized and green. They will be found feeding on the grass blades. Damaged turf is orangish brown, killed by toxins injected by the aphids into the leaf tissue. Damage occurs first in the shade of trees or buildings but spreads across the turf area. Because greenbugs are serious pests of wheat, sorghum, and other small grains in southern states, they are resistant to many insecticides. Control is obtained with the application of an insecticide not used on field crops, such as acephate (Orthene) or insecticidal soap.

**Zimmerman pine moth** is susceptible to permethrin (Astro) application, particularly in southern Illinois, at this time. Application in northern Illinois is more effective around the end of the month. There is a several week window of control while the newly hatched larvae crawl around on the trunk before entering an overwintering site under loose bark. (*Phil Nixon and Kevin Black*)

## **Emerald Ash Borer: New Finds and Field Day**

Emerald ash borer continues to be found in new locations in Illinois and elsewhere in the Midwest. We reported previously about the borer being found in southwestern Bloomington, Illinois, where adults were found on one of the purple traps used to survey for this pest. Intensive inspections of trees in the immediate area around the trap turned up no infestations. The trap was located in an area where wood is brought from other locations in the county, so inspectors started looking elsewhere in the county. They soon found a large infestation in Chenoa that had apparently been present for several years.

To help educate central Illinois professionals on emerald ash borer, the mayor and city council of Chenoa have invited public works directors, city park directors, tree-care companies, and arborists in central Illinois to come to Chenoa September 4 for a field day on emerald ash borer. The first session will be at 10 a.m., a second session at 1 p.m. The field day will be held at the main pavilion located in the main city park near Zubeck Field. There will be a peeling station to train everyone who attends on what to look for and how to examine ash limbs for evidence of emerald ash borer larvae. There will also be presentations on emerald ash borer identification, its effect on public and private entities, its his-

tory of spread in Illinois and North America, how Chenoa is planning to respond to this insect, other options for public-entity response, and methods of control. For more information, visit <http://www.agr.state.il.us/eab/>. Please RSVP your attendance and indicate which session you plan to attend to [juliann.heminghous@illinois.gov](mailto:juliann.heminghous@illinois.gov).

Elsewhere in the Midwest, emerald ash borer has also been found infesting trees east of Newburg, Wisconsin, about 30 miles north of Milwaukee. This represents the first find of the borer in Wisconsin. It has also been found on a trap near Georgetown, Indiana, which is in southern Indiana about 15 miles west of Louisville, Kentucky. Although emerald ash borer has been found in 19 Indiana counties, these locations are primarily northeast of Indianapolis. This is the first find in southern Indiana.

It is likely that more finds will be made as the purple attractant traps are taken down and inspected for emerald ash borer. There were about 5,000 traps set in Illinois, and they are now being taken down. With this large number of traps, it will probably be a couple of months before all of them have been inspected and suspicious specimens identified.

Looking at a few of the emerald ash borer traps confirms that they are very effective at attracting *Agrilus*, the genus of metallic woodboring beetles that includes the emerald ash borer. The traps are also capturing bronze birch borer, twolined chestnut borer, honeylocust borer, and probably several other species in this genus that are all about the same size and shape as emerald ash borer. There are 57 species of *Agrilus* that occur in northeastern North America. (*Phil Nixon*)

## **Asian Longhorned Beetle**

Asian longhorned beetle, *Anoplophora glabripennis*, has been found in Deerfield, Illinois. A single adult specimen was found in a parking lot near the corner of Lake-Cook and Waukegan Roads. This insect previously was found in the Ravenswood area of Chicago, as well as in several suburban locations. An aggressive program of tree removal and systemic insecticide application using imidacloprid had apparently eradicated the insect from Illinois. It is still too early to tell whether this find stems from one of the original infestations farther south or is a new introduction. There have also been new finds of this insect elsewhere in North America this year. The previous Illinois infestation apparently resulted from at least three separate introductions.

Asian longhorned beetle attacks a variety of trees, including maple, box elder, poplar, plum, alder, birch, willow, horsechestnut, elm, ash, and hackberry. It attacks and kills healthy trees, representing a serious threat to maples and other trees in North America. The adult

beetle emerges through a hole that is perfectly round and 3/8 to 1/2 inch in diameter. The beetles are shiny black and about 1-1/4 inches long. They have long antennae banded in black and white, and the back of the beetle has about 40 white spots of various sizes.

After mating, the female chews a 1/4-inch-diameter hole with sloping sides through the bark and lays an egg in the cambium area. This type of hole is diagnostic for this pest, as it is unlike those being produced by any other insect in North America. The egg hatches into a larva that tunnels extensively through the cambium area before eventually tunneling deeper into the wood. Larvae are legless, white, and elongate, with a brown head area. Full-grown larvae approach 3 inches in length and create large tunnels through the wood. Infested trees show severe dieback of the canopy.

The larva pupates in the tunnel that it creates, with the adult chewing the large, round hole in the bark through which it emerges. Adult emergence is most common during June and July, but adults have been found from spring to December. The adult beetles can fly at least 0.6 mile but most commonly fly only to the next host tree, which may be a very short distance. *(Phil Nixon)*

## Cicada Killer

Cicada killer continues to be very numerous in many parts of Illinois this summer. These wasps are about 2 inches long, black with yellow markings, and have reddish, transparent wings. The females dig 1/2-inch-diameter burrows that extend about 8 inches into the soil. This results in mounds of loose soil around the burrow openings. Annual (dogday) cicadas are captured, stung to paralyze them, and dragged down into the bur-

rows. Eggs laid on the prey hatch into wasp larvae that eat the paralyzed but still living prey. Pupation occurs in the burrow with adults emerging the next summer.

Male cicada killers establish aerial territories where the females are located. Because bee, wasp, and ant stings are modified egg-laying devices, males cannot sting. However, they are intimidating to people entering their territory, by buzzing and hovering around one's head.

Females are very unlikely to sting, with the only stings that I have heard of due to stepping on them barefoot or grabbing them barehanded. Thus, the main concerns are people's reaction to the wasps. Their burrows are also disruptive to sand traps and turf areas. Cicada killers tend to prefer sandy soil for their burrows.

Carbaryl, sold as Sevin Dust, is effective in eliminating females when the dust is sprinkled near the burrow opening. As with many other species of animals, once the females are gone, the males leave. *(Phil Nixon)*

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*Home, Yard, and Garden Pest Newsletter* is prepared by Extension specialists from the University of Illinois at Urbana-Champaign and the Illinois Natural History Survey. Information for this newsletter is gathered with the help of staff members, Extension field staff, and others. Karel Jacobs and Donna Danielson of The Morton Arboretum also provide information and articles.

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