

INSECTS

Soldier Beetles

Soldier beetles are being found in large numbers on linden trees. These beetles feed on the pollen and nectar of the linden tree blossoms. Tom Lashmett, Unit Extension Leader in Morgan-Scott Unit, reports that linden trees are blooming very heavily in Jacksonville and that the beetles are very numerous as well.

Soldier beetles are 1/2-inch-long beetles that have soft wing covers. They look very much like fireflies except that they do not have a light organ on the abdomen. Some soldier beetles are all black, but many are yellowish tan with black markings toward the end of the wing covers. Their larvae live in the ground or beneath loose bark, where they feed on other insects. These beetles will not harm the linden trees or other plants, so there is no need for control. (Phil Nixon)

Periodical Cicada

Cicada egg-laying damage is being seen in many areas of the southern two-thirds of the state where the periodical cicada emerged. I also noticed this damage last week in Tennessee, Alabama, and Mississippi where I was vacationing. This damage appears primarily as the six to ten leaves on end of a tree or shrub branch turning brown. The dieback is due to the slits in the twig made by the female periodical cicadas as they insert eggs into the branch. Any tree or shrub may be attacked, but oaks appear to be preferred.

The inserted eggs will hatch within a few weeks. The hatching nymphs will then drop to the ground and burrow in to find a root to feed upon. In the year 2011, they will emerge from the soil to become adults. There are also reports of large numbers of dead cicadas on the ground and a reduction in cicada singing. The males are the singers, and they tend to die before the females. (Phil Nixon)

Bagworm

Bagworms are approaching 1/2 inch in length in extreme southern Illinois and points south. Caterpillars this large have ended their dispersal stage—so now is the ideal time to apply insecticidal controls throughout the state before major damage occurs. Larvae this small can be controlled with several insecticides, but *Bacillus thuringiensis kurstaki* (Dipel, Thuricide), trichlorfon (Dylox), and cyfluthrin (Tempo), as well as other synthetic pyrethroids, will be most effective on these and older larvae. (Phil Nixon)

Mimosa Webworm

Mimosa webworm was not apparent in southern Illinois, Tennessee, and northern Alabama or Mississippi on the first weekend of June, but hatching should occur at any time. Don Orton's book, *Coincide*, lists the bloom of elderberry as occurring at egg hatch, and this plant is in bloom in southern Illinois. It will probably be a week before larvae occur in northern Illinois, but be watchful in the southern two-thirds of the state. With our mild winter, heavy populations this summer are very possible. (Phil Nixon)

Cottony Maple Scale

Cottony maple scale continues to be reported from Lincoln and parts north. Silver maples have been heavily infested, and there have been several reports of infestations on honey locust. The honey locust infestations have consisted of two to three scales per foot of branch, which is well below the level at which insecticide application should be needed.

Several areas are reporting the presence as well of the twice-stabbed ladybeetle larvae that feed on cottony maple scale. These larvae look like mealybugs or white egg sacs of the scale, except that they will move when poked. Dave Shetlar, Ohio State University entomologist, reports pupation of the ladybeetle in that state, so the 1/8-inch, roundish, black adults with two red spots on the back should be appearing soon.

Remember, if ladybeetles are present, treatment for the scales is probably not necessary. In any case, don't spray until the reddish pinhead-sized crawlers appear. This should occur when elderberry blooms, according to the book, *Coincide*, by Don Orton. (*Phil Nixon*)

Lecanium Scales

The Morton Arboretum reports that lecanium scale crawlers have emerged on willow. The European fruit lecanium scale is a slightly ovate, reddish brown scale about 1/8 inch in diameter as a mature female. White eggs are laid beneath the adult female's scale cover in late spring and hatch into reddish crawlers. The crawlers settle down within a week or two. Males develop and emerge as adults later in the summer. Adult male scales are pinhead-sized insects with one pair of wings and a pointed abdomen. They have no functional mouthparts and thus live for only a few days. They fly around and mate with the still immature females, who store the sperm through winter. In spring, the females mature, and eggs are fertilized and laid.

This scale attacks a wide range of trees including maple, hackberry, oak, walnut, hazelnut, and crabapple. It tends to be more numerous on trees under stress. Many trees will have very small numbers of this scale that don't seem to increase. Thus, trees with light populations should be monitored but will probably not require treatment. Control this scale once the crawlers have emerged. A wide range of insecticides are effective. If a purely contact insecticide (such as summer oil or insecticidal soap) is used, treatment after the crawlers have settled down and molted to the second nymphal stage will probably not be effective. Dormant oil sprays are particularly effective against this insect. Read the label to avoid spraying oil-sensitive plants. (*Phil Nixon*)

Slug Sawflies

The Morton Arboretum reports the presence of oak slug sawflies on oak, and pear sawflies on serviceberry. Oak slug sawflies are most common on pin oak. Pear sawflies feed on hawthorn, serviceberry, pear, and other members of the rose family. Rose slugs are close relatives that feed on rose. Slug sawfly larvae appear as slimy, elongate, slug-like creatures. Oak slug sawfly larvae are yellow and green. Pear sawfly larvae are greenish black. Rose slug larvae are yellowish green.

They cause window-feeding on the host's leaves. That is, they eat through one leaf surface or epidermis and eat the inside of the leaf, leaving one leaf surface

intact. This remaining leaf surface is initially whitish but soon dries and turns brown. As the larvae mature, they lose their slimy coverings and appear more like the sawfly larvae that they are. They will be greenish with three obvious pairs of true legs and more than five pairs of prolegs. These older larvae will skeletonize the leaves, eating holes in the leaves and eating away the leaf margins.

Although slug sawflies are usually not numerous, it is important that correct control measures are used if the population is large enough to warrant treatment. *Bacillus thuringiensis kurstaki* or slug baits are not effective. However, many other chemical insecticides used for caterpillar or beetle control will provide control. (*Phil Nixon*)

PLANT DISEASE

Larkspur (Delphinium) Bacterial Leaf Spot

Bacterial pathogens usually thrive in wet conditions. The 1998 growing season has provided almost ideal conditions for bacterial pathogens. The Plant Clinic recently diagnosed a sample of bacterial leaf spot on larkspur. Although larkspur is not a major crop or a host that we see often at the clinic, we do see a variety of annuals and perennials—many with similar bacterial problems.

The larkspur bacterial pathogen is species of *Pseudomonas*, as are many of the bacterial pathogens of ornamentals. The bacterium causes the development of black, almost tarlike spots on the leaves and stems; the spots cannot be rubbed off. They are small (1/4 inch diameter) at first but quickly enlarge or merge to cause large blotches on the leaves. In very wet conditions, they turn entire leaves black. Most of our sources list this as a serious disease of seedlings, but it will affect lower leaves of large plants and continue to move up the plant as long as wet weather continues.

It is difficult to control bacterial diseases. Generally, control measures concentrate on sanitary measures such as removing affected leaves (only when dry) as they occur. Because the bacterium overwinters in the crowns, new growth in the spring should be monitored and affected leaves removed as soon as possible. Watering the soil (as opposed to the foliage) will help prevent splashing the bacteria and causing further infection.

Bactericides are not recommended for most bacterial diseases of ornamentals. You won't find

control measures listed for this disease in the Illinois commercial or homeowner pest handbooks because in most years we do not see this disease. Copper fungicides are sometimes used as preventives of bacterial diseases with some success. In the case of larkspur bacterial leaf spot, copper fungicides can be effective if used as a drench over plant crowns in autumn, followed by a spray of the new leaves as they emerge in spring. Hi-Yield produces a bordeaux mixture for homeowner application. Many different copper fungicides are available in retail centers in package sizes appropriate for homeowner use. Choose one that lists your particular host on the label: It is illegal to use a pesticide in a manner not listed on the label.

(Nancy Pataky)

Slime Molds and Artillery Fungi

Watch for **slime molds** to appear any time now. These growths suddenly show up after heavy rains or after watering plants in warm, muggy weather—even in the best of gardens! Slime molds are primitive organisms that flow (very slowly) over low-lying objects such as mulches, sidewalks, and driveways, or over vegetation such as turfgrasses, strawberries, bedded flowers, ground covers, weeds, and the bases of woody plants.

Although these organisms cause much concern, they do not take nutrients from the plant material; they feed on decaying organic matter, fungi, and bacteria in the soil and the turfgrass thatch layer. During warm, moist weather, the mold in its slimy, amoeba-like stage moves slowly over low-lying objects and appears as watery white, gray, cream-to-light-yellow, violet, blue, green, or purple-brown greasy masses as large as one or two feet in diameter. This stage soon develops into colorful crusty fruiting bodies filled with masses of dusty spores.

Chemicals do not provide control. Instead, for abundant molds, break up the unsightly spore masses by vigorous raking, brushing, or hosing down with a stream of water. Mowing the lawn usually removes the spore masses. Slime molds disappear with hot, dry weather, so we probably will have them with us for a while longer. For more information about slime molds, read *Report on Plant Diseases* No. 401, which discusses slime molds in turf.

The **artillery fungus** (also known as the **shotgun fungus**) is another fungus that thrives in wet weather and has become a nuisance with the popular use of mulch in planting beds near homes. The fungus, which grows in the mulch, is white and forms tiny (1/4 inch) puffball-like structures that contain spore masses. As

these structures dry, the spore mass is “shot out” of the fungal vessel a distance as much as 10 or 20 feet. These spore masses have a very sticky surface and stand out as black spots on sides of homes. You will find it nearly impossible to remove these spore masses from a home without removing the paint. A counterpart in the Ohio Extension system recommends using only bark-based mulch, especially true cypress bark, and avoiding wood-based mulches that were made from wood chips and ground-up wood pallets. In either case, it is recommended that the mulch be raked or stirred to help it dry out so that it is less desirable to the fungus.

(Nancy Pataky)

Rose Downy Mildew

When I speak of this disease to gardeners, they usually think I am referring to powdery mildew and have changed the name slightly. Downy mildew is *not* related to powdery mildew. Powdery mildew is a disease that we see every year on rose and many other hosts. Downy mildew is usually a greenhouse or production problem that rarely makes its way to home gardens in Illinois. This year may be an exception.

We have had several reports and two confirmations of downy mildew on rose in Illinois. Both were from commercial growers who spotted the problem, had it identified, and removed infected plants from the sales area.

Downy mildew is a fungal disease that causes brown blotches on rose leaves, often with a yellow area around the blotches or a reddish tint to affected leaves. The first time I saw the disease, I thought that the plant roots had pulled up some herbicide into the leaves. The blotches tend to be limited by veins, resulting in a somewhat blocky pattern. Reddish streaks or blotches may occur on stems and calyxes. The fungus sporulates on the undersides of leaves, but this can go unnoticed, especially in dry weather. Use a hand lens to look at the undersides of the blotches. A white, downy fungus should be present in humid conditions. This disease becomes serious in extended cool, wet weather. Leaves turn yellow and drop, and the entire plant may become defoliated except for the youngest leaves.

Greenhouse and nursery production areas concentrate control practices on maintaining relative humidity below 85 percent and using chemical controls. Homegrowers should watch for this disease on newly purchased plants and destroy infected leaves, stems, and flowers. The fungus overwinters in stems, but it is not clear whether it will overwinter outdoors in

Illinois. Fungicides registered as preventives include Aliette T & O, Chipco Aliette, and mancozeb. The fungus is an oomycete, so effective fungicide choices are limited.

We do not have an RPD that discusses rose downy mildew. A very good source of information is the *Compendium of Rose Diseases* by APS Press. Junius Forsberg also discusses this disease in *Diseases of Ornamental Plants*. (Nancy Pataky)

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.

Major authors are Phil Nixon, (217) 333-6650, and Fredric Miller, (708) 352-0109, entomologists; Nancy Pataky, plant pathologist, (217) 333-0519; and Rhonda Ferree, Tom Voigt, and David Williams, horticulturists, (217) 333-0350. Phil Nixon is the executive editor of the Home, Yard and Garden Pest Newsletter. This newsletter is written by faculty in the Department of Natural Resources and Environmental Sciences and the Department of Crop Sciences. The newsletter is edited by Peggy Currid, typeset by Oneda VanDyke, and proofread by Kathy Robinson, all of Information Technology and Communication Services.

Return Services Requested

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN
69 MUMFORD HALL
1301 WEST GREGORY DRIVE
URBANA IL 61801



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

State • County • Local Groups—U.S.D.A. Cooperating
The Cooperative Extension Service provides equal
opportunities in programs and employment.

Presorted First Class
U.S. Postage Paid
Permit #75
Champaign, IL