UNIVERSITY OF ILLINOIS EXTENSION

HOME, YARD & GARDEN PEST NEWSLETTER

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

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Biweekly Issues Start

After this issue, the *Home, Yard & Garden Pest Newsletter* switches to a biweekly schedule through July, August, and September until the final two monthly issues in October and November. Thus, it will be 2 weeks before the next issue of this newsletter appears in your mailbox or is posted to the Web site. *(Phil Nixon)*

INSECTS

Yellownecked Caterpillar

This is the time of year to watch for certain caterpillar pests feeding on trees and shrubs in landscapes. One of these is the yellownecked caterpillar, *Datana ministra*. Yellownecked caterpillars feed on a broad range of plants, including azalea, beech, birch, crabapple, elm, linden, maple, oak, and walnut.

Adult female moths are present in June and July. They deposit white eggs in masses of 25 to 100 on the undersides of leaves. Eggs hatch in July into caterpillars (larvae) that are yellowish with black stripes and are covered with fine hairs. They soon change into red caterpillars with yellow or white stripes. In addition, they have a jet-black head. The caterpillar gets its name from the bright orange-yellow segments behind the head. Full-grown larvae are 2 inches (50 millimeters) long and black with yellow or white stripes. When disturbed, larvae lift their heads and tails to form a distinctive U-shape, which is a defense response. The larvae are gregarious (feed in clusters), generally feeding for 4 to 6 weeks. Young larvae skeletonize the lower leaf surface, whereas older larvae may consume the entire leaf except the petiole. Late-season defoliation may not significantly harm tree health, but the injury can be unsightly. In August, larvae crawl down the trunk and burrow 2 to 4 inches (5 to 10 millimeters) into the soil to pupate. The yellownecked caterpillar overwinters as a pupa. There is one generation per year.

Pruning out small colonies or using pest-control materials are ways to manage yellownecked caterpillars. Pest-control materials recommended for control of yellownecked caterpillar include *Bacillus thuringiensis* 'Kurstaki' (Dipel, Thuricide, Javelin), chlorpyrifos (Dursban), cyfluthrin (Tempo), and spinosad (Conserve). Make spray applications when caterpillars are small by timing applications when hills-of-snow hydrangea blossoms are changing from white to green. Yellownecked caterpillars are susceptible to attack by various natural enemies, such as birds (for example, robins and bluejays), predaceous bugs, and parasitic flies. *(Raymond Cloyd)*

Woolly Aphids

We've been getting calls about flying lint and tiny drifting angels from throughout the state. These are the winged adults of woolly aphids appearing as a white fuzzy, close to 1/4 inch in diameter, that seems to float through the air. If you try to catch one, you soon realize that it is capable of powered flight. These aphids are green to blue and covered with white waxy strands that stand out from the body.

Woolly aphids typically feed on two hosts during a 1-year period, with most species apparently having to switch hosts. This host-switching occurs in various species from late June to late July, and these fuzzy female adults are their means of getting to the other host. Once reaching their summer host, they feed and give birth to additional wingless generations of females, producing winged individuals that fly back to the other host in the fall to lay eggs. These eggs hatch in the spring into females that give birth to more wingless generations of females, producing the winged females that switch hosts at this time of year. There are several species of these woolly aphids in Illinois. The woolly apple aphid feeds in the spring on apple, pear, hawthorn, and mountainash leaves and then moves to elm leaves for the summer. Woolly elm aphid feeds on elm leaves in spring and then moves to serviceberry, where it feeds on the roots for the summer. Woolly alder aphid feeds on alder and then

silver maple. There are also the woolly elm bark aphid, beech blight aphid, *Prociphilus tessellatus* (ash host), and *Prociphilus corrugatans* (serviceberry host) that do not apparently switch hosts.

These insects are more curiosities than pests. Occasionally, a host will experience enough leaf curling and honeydew production to warrant aesthetic control, and woolly elm aphid can damage serviceberry roots. Many insecticides are effective against them while on leaves. The woolly elm aphid can be controlled on elm leaves to reduce serviceberry root damage later. *(Phil Nixon)*

White Grubs

Adult annual white grubs (masked chafers) emerged in central Illinois during the last week of June and were reported in northern Illinois a few days earlier. Checking beetle numbers around lights at about 10:30 p.m. will provide insight on both the northern and southern masked chafer emergence in your area. The number of adult Japanese beetles present during the day on landscape plants will give you an idea of their numbers.

The relative number of these adults plus the soil moisture will provide you with the information you need for preventative white grub treatments in turf. All three species feed in the larval stage as white grubs on the roots of turfgrass. The adults are attracted to damp soil, which they tunnel into to lay their eggs.

If your area has received enough rainfall so that nonirrigated grass is green with moist soil and the beetle flight is not unusually heavy, then it is likely that grubs will be present in damaging numbers only in small areas, which are conducive to spot treatments with quick-acting insecticides in August. If only irrigated turf is very green with moist soil and the adult flight is normal to heavy, then those irrigated turf areas will likely have heavy grub numbers. These are the turf areas where imidicloprid (Merit) or halofenozide (Mach 2, Grubex) should be applied by the end of this month to prevent grub damage in the second half of August. Many areas of the state have enough soil moisture that white grubs will not be a problem this year. However, that can reverse itself if the rains stop and temperatures are high for the next couple of weeks, and unwatered turf goes dormant. *(Phil Nixon and The Morton Arboretum)*

PLANT DISEASES

Wetwood and Slime Flux

Wetwood and slime flux is a condition caused by bacteria that enter wounds in a tree. *Enterobacter cloacae* (formerly known as *Erwinia nimipressuralis*) and other bacteria are associated with this problem, and often the disease is called *bacterial* wetwood and slime flux. This condition in trees is very noticeable by the homeowner because infected trees often have seepage coming from a major crotch or wound in the trunk. In some cases, the liquid has a foul odor because secondary microorganisms colonize in this liquid, producing disagreeable smells.

Wetwood causes a water-soaked condition of wood in the trunk, branches, and roots of many shade and ornamental trees, especially old street trees. Elms, poplars, cottonwoods, oaks, and maples are most commonly affected in Illinois, but many other tree species are susceptible. This is a chronic, rarely serious, disease of trees that can contribute to general decline in tree vitality but is not known to cause tree death.

Wetwood is most visible externally as a bubbling seepage of bacteria and toxins from wounded tissue in V-shaped branch crotches, pruning wounds, injection holes, and trunk cracks. You cannot always see the wound, but you can see the liquid. Bacteria in the inner sapwood and heartwood of the tree ferment causing internal gas pressure. This pressure commonly reopens old wounds, and the sour liquid flows down the bark. As it dries, a light gray to white encrustation remains. This encrustation is called slime flux. The liquid commonly causes localized death of the cambium. Although fluxing occurs from April to December, it is most conspicuous in the summer.

There is no cure for this condition, but the following may be helpful. Fertilize stressed trees in the spring or fall to stimulate vigorous growth. Some people like to install perforated plastic or iron drain tubes in the tree to relieve the gas pressure and to allow continual drainage away from the tree. The idea is to keep the liquid off the trunk so that the cambium is not killed. A disadvantage of drain tubes is that another deep wound is made, breaking the compartment that the tree has made to encompass the wetwood, thereby allowing the internal discoloration and any future decay to spread outside the wetwood

affected area. In other words, drain tubes often make the problem worse. Removing dead or weak branches plus promptly pruning and shaping bark wounds is helpful. Such measures encourage rapid callousing of wounds. The sap flow that results from pruned branches is normal and not the same as wetwood. The liquid we see with wetwood may flow year-round and is often followed by the foul-smelling slime flux just described. Consult *Report on Plant Diseases* No. 656, *Bacterial Wetwood and Slime Flux of Landscape Trees,* for more on this condition. *(Nancy Pataky)*

Gray Mold, or Botrytis Blight

We have all sorts of molds and mildews that cause infectious diseases on plants, often causing confusion to growers trying to establish a disease-management plan. Botrytis blight is one of the fungal diseases that causes a rather distinct type of sporulation. The *Botrytis* fungus forms gray masses of spores on the infected plant part. The spore mass is often very fluffy and dusty. Color may range from green to brown but always appears dusty because of the mass of spores produced by the fungus. Gray mold is an appropriate common name for the disease.

We have seen gray mold on garden flowers, but this fungus has a broad host range, including herbaceous ornamental plants, vegetables, fruits, and greenhouse crops. Infection may occur on buds, flowers, foliage, stems, bulbs, and even roots. You will see sporulation on the most tender, newest growth as well as on the tissues that are injured or dying. *Botrytis* may be found on the new buds and dying flowers on the same plant. Refer to *Report on Plant Diseases* No. 623 for a list of plants commonly infected by this fungus. Some of the more common hosts infected with gray mold are zinnia, peony, marigold, phlox, rose, snapdragon, strawberry, tulip, and geranium.

Gray mold is prevalent in cool weather, so why are we seeing the disease now? The fungus thrives in cool, wet, humid weather. We have had hot, humid (or wet) days, but nighttime temperatures have been conducive to fungal development in some locations. This disease can spread rapidly, so long periods of cool weather are not needed. The time from infection to spore production is short, and spore production is prolific compared to many other fungal pathogens.

Fungicides are effective against *Botrytis* but only as protectants. To manage the disease, we need to produce conditions that do not favor fungal development. Avoid overhead watering, which splashes spores from plant to plant. Keep fruit (strawberries) from touching bare soil. Follow seed-packet recommendations for plant spacings to allow good air movement in the garden. Avoid overfertilization and constantly wet mulches. Know how to identify this disease so that you can stop it quickly. Fungicide recommendations can be found in the *Illinois Homeowners' Guide to Pest Management* or the *Commercial Landscape and Turfgrass Pest Management Handbook 2000. (Nancy Pataky)*

Root Rot

Earlier in the season, we were concerned about drought conditions. Now it seems that heavy rains are more common. As they say, if you don't like the weather, just wait and it will change. Excessively wet soils have led to many cases of rotted roots on annuals, perennials, and nonwoody plants in the landscape. We've had more problems with established plants because roots were initially injured by drought. Plants may be stunted or low in vigor, may grow slowly, or may wilt easily on a warm day. These problems always become more visible in hot weather because the lack of healthy roots causes a more rapid decline of plants, which is very noticeable to the homeowner, client, or groundskeeper. The foliage may turn yellow to brown and drop prematurely, usually starting with the older leaves and moving up the plant. The severity of the root rot depends on the fungal pathogen, the susceptibility of the host plant, and the soil and moisture conditions.

If a root rot is suspected, remove the plant from the ground carefully, place it in a bucket of water, and carefully move the plant up and down in the water to dislodge the soil. Then examine the roots for indications of rotting. If roots are washed too vigorously, all of the rotted tissue will be washed off, often leaving a white root interior that appears healthy, but close examination will show that such roots are much thinner than healthy white roots. A healthy plant has numerous white roots that appear fibrous. Roots of a diseased plant show various degrees of water soaking and usually are some shade of brown or black, both externally and internally. The discolored roots are often soft and mushy, while healthy roots are firm. There are many root-rot pathogens, but the major root-rot fungi that are encountered in Illinois landscapes are *Rhizoctonia, Fusarium, Pythium,* and *Phytophthora*. In a very simplified scheme, we can group the first two fungi as those causing a dry rot, often with a reddish pink cast, to affected roots.

Pythium and *Phytophthora* can be grouped as the types causing a soft, brown-to-black rot of roots. We can work with these in the lab to confirm the exact pathogen involved, but symptoms give you an idea of the disease involved.

We try to prevent root rots from becoming a problem in our gardens by using sound horticultural practices. This includes use of healthy transplants, proper site preparation to provide good water drainage away from roots, use of balanced fertilizer, and rotation in the garden plantings for 2 or 3 years with unrelated plants to help prevent the buildup of pathogens in one area. It is also important to remove crop residue at the end of the season to help reduce pathogen survival. Once a pathogen is identified, try to find and use resistant varieties when available.

Even if all of the above practices are followed, root rot may still occur. Fungicides are available to control the major groups of fungi discussed here. The fungicides protect plant stems and roots not yet affected but do not "cure" infected plants. Their use seems most significant in cases where a root rot is discovered in a flower bed and the goal is to preserve remaining healthy plants to the end of the season. Specific chemicals are listed by host crop in the *Illinois Commercial Landscape and Turfgrass Pest Management Handbook 2000* or the *Illinois Homeowners' Guide to Pest Management*. Consult *RPD* No. 615 for more details on root rots of garden 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.*

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