COOPERATIVE EXTENSION SERVICE
HOME, YARD & GARDEN PEST NEWSLETTER
College of Agricultural, Consumer and Environmental Sciences, University of Illinois at Urbana - Champaign
Illinois Natural History Survey, Champaign

Number 8 - June 11, 2012

Scouting Watch

Japanese beetle is emerging in central Illinois. Only an occasional beetle has been reported, which are probably males. Females should emerge in noticeable numbers during the week of June 11 and both sexes will make their presence known feeding on trees and shrubs. Refer to last week's newsletter for more information.

Fall webworm should be present in the southern half of the state. From Lincoln, IL south, this insect has a late spring generation in addition to the late summer generation found throughout the state. This insect lives in groups that spin silk tents over the ends of tree branches, enclosing the leaves that they feed upon. When those leaves are eaten, the silk tent is enlarged. Crabapples, maples, hickories, walnut, and other forest trees are attacked. Generally, the health impact is not serious enough to warrant control, but treatment for aesthetic reasons may be warranted. *Bacillus thuringiensis* kurstaki (Dipel, Thuricide, others), spinosad (Conserve), and various labeled pyrethroids are effective in providing control. As the silk tent is water-proof and spray-resistant, use high pressure to break up the webbing and get the spray inside to the caterpillars.

Cicada killers, sand wasps, and other ground-nesting wasps are becoming noticeable. Cicada killers usually nest in flower beds and other areas of sparse turf but will dig burrows in high quality turf. Sand wasps as well as cicada killers nest in sandy areas such as golf course bunkers, volleyball courts, and sand boxes. Although they rarely sting, concern from clientele and the public may warrant control. A dust formulation insecticide such as carbaryl (Sevin) or a labeled pyrethroid applied lightly to dry soil around the hole will usually kill the female wasp tending the burrow. Sand boxes can be covered during the day except when in use to discourage the wasps. They fly during the day and need frequent access. Without it, they will go elsewhere. Once the females are killed or leave, the cruising male wasps will leave. (*Phil Nixon*)

Ants

Anthills are commonly a problem in golf courses, lawns, and flower beds. They are primarily an aesthetic problem due to their unsightliness. Control of ants is commonly requested by homeowners but rarely warranted. On golf greens, they can hinder play. Some ants build large nests that stick up high enough to impede mowing.

Attempts at general control of ants in turf are rarely successful due to their high numbers in urban environments and their ability to colonize new areas. An understanding of their

habits makes it easier to cope with these very common insects. There are about 90 species of ants in Illinois. Different species vary from each other in size, color, and other characteristics, including where and how they live. What follows is a generalized coverage of ants that typically live in turf areas.

Although ants are familiar to everyone, they can be identified by their very obvious 3-body regions of head, thorax, and abdomen. Ant antennae are elbowed, having a sharp bend about a third of the way out from the head. There is a very obvious constriction between the leg-bearing thorax and the abdomen that is the hindmost large body area. This constriction produces an hourglass-shaped waist that will have a bump, node, or sharp-angled structure on it. The combination of these characteristics separates ants from other insects.

Ants live in colonies which are most often seen in turf as anthills, each being a hole in the ground that is about 1/4 inch in diameter with a mound of fine soil around it that is usually 2 to 3 inches in diameter. Each colony has several classes or castes of individuals. There will be 1 or more wingless queens that are usually the largest ants in the colony. Queens lay the eggs that keep the colony going.

These eggs hatch into legless, white larvae, which are kept underground in the anthill's tunnels and fed by the workers. Mature larvae pupate and emerge several days later as adult ants. Most mature larvae and pupae are about as large as the workers. When an anthill is disturbed, the mature larvae and pupae are carried to safety by the workers and are commonly called eggs by most people. Ant eggs are also white but are much smaller.

Most of the individuals in a colony are wingless workers. These are non-reproductive females that do everything but the egg-laying for the colony, including cleaning the tunnels, feeding the larvae, expanding the tunnels, feeding the queen, gathering food, and defending the colony. In some species of ants, those workers that defend the colony are larger than the other workers.

Usually two or three times a year, winged males and females called reproductives emerge from the colony. This will occur in all of the colonies of the same species on the same few consecutive nights. These winged ants look like the worker ants except that they are larger and have 2 pairs of wings; the first pair is much larger than the second. These winged reproductives mate and then select a site to start a new colony. They shed their wings and tunnel into the soil to construct a new anthill.

Ants are quite variable in their feeding habits, but most of them are scavengers and predators that take advantage of situations as they occur. Soft-bodied, slow-moving insects and other small animals that are poor at defending themselves—such as sod webworm larvae, small cutworms, and small grubs—will be killed and taken back to the colony for food if they are found by foraging ants. Ants more commonly scavenge dead insects, decaying plant parts, and other debris for food and take it back to the colony.

The tunnels of their anthills serve to loosen the soil, allowing air and water to more easily enter. Recent research has determined that the ants in a typical lawn are more effective in aerating the soil than earthworms. Small numbers of turfgrass plants may die as a result of the removal of soil near the roots and the drying out of roots where an anthill is constructed. Some species of ants will construct large anthills that may kill the turf in a 1- to 2-foot diameter and stick up into the air high enough to be hit by mowers. Ants' scavenging activities help to recycle nutrients back to the turf.

Large anthills can be killed by opening up the top of the anthill to expose the tunnels and then applying Bifenthrin (Onyx), deltamethrin (Deltagard), permethrin (Astro) or other labeled pyrethroid insecticide into the colony. Within a few weeks a new anthill will likely appear in the area, but it will probably be an ant species that will not build such a large anthill. Even small anthills may warrant control on golf-course greens. Ants and their anthills may need to be controlled with an insecticide application where new sod is being laid because their tunneling activities under the loose sod will allow the roots to dry out and reduce the likelihood of the sod's surviving.

Attempting to control small anthills over an extended time in turf is not recommended. The various reasons that are given for desiring control include their causing bumps as the mower runs across them; their being a source of ant infestation indoors; their sheer numbers, often considered harmful; and their very existence. None of these are valid reasons for control. Ants are so numerous that areas where the anthills have been killed with an insecticide will be colonized by new ones as soon as the insecticide residue degrades, usually in about a month. Repeated control efforts will result in recolonization of the areas with ants. If there is no other reason for avoiding general ant control in turf, the fact that control is so short-lived against an insect that causes no apparent harm should be reason enough. (*Phil Nixon*)

Daylily leaf streak (*Aureobasidium microstictum*)

Daylilies are a common ornamental plant in Illinois, but when infected with daylily leaf streak, this beautiful plant can be reduced to a withered mess. Daylily leaf streak disease is caused by the fungus *Aureobasidium microstictum*. It is most widespread under wet and cool conditions.

The disease is named after the streaks that run along the center vein of the leaf. These streaks are yellow in color, which can darken as the tissues die and form brown-colored, elongated areas on the leaves. The streaks are usually located at the tip of the leaves. In severe cases, the whole leaf may shrivel up and die. Care should be taken to differentiate daylily leaf streak from daylily rust. Both diseases have symptoms that are very similar in appearance, but daylily rust produces orange pustules.

Under the microscope, *Aureobasidium microstictum* will appear as spores of different sizes. However, from time to time, the basidium can be observed.

To combat this disease, it is highly recommended that one concentrate on cultural controls. To manage daylily leaf

streak disease, one should remove all of the past-year's foliage since the fungus can overwinter on old foliage. Because the fungus spreads through water, growers could space plants further apart to minimize rain splash between plants and allow proper air circulation. Overcrowded growing situations are more likely to become diseased. This disease is more likely to be severe early in the growing season. It is also advisable to not work with the plants when they are wet. If you are watering, it should be done at the base of the plant, not from the top! This disease should not be a major issue if the weather is dry. Temperatures above 90 degrees limit disease development.

Fungicide application can be helpful in controlling the disease and protecting new growth. However, ensure that the fungicide is specifically manufactured for daylilies or daylily-related species.

Other useful links:
http://www.freshfromflorida.com/pi/enpp/pathology/pathcirc/pp376.pdf
http://www.sar-headsup.com/trials/daylily/Day_Lily_article_MDFGA_2002.pdf

(*Stephanie Porter and Zu Dienle Tan*)

Bacterial Spot of Stone Fruit

Bacterial Spot of Stone Fruit (*Xanthomonas campestris* pv. *Pruni*) is a disease that can infect a number of stone fruits, from peaches and plums to cherries and almonds. It was originally discovered in 1903 on a Japanese Plum tree in Michigan. Since then it has spread to nearly every stone fruit producing country in the world. This disease can affect leaves, branches, and fruits, and is more severe in areas where fruits are grown in light, sandy soils with a warm and humid environment. Prunus species and their cultivars vary widely in susceptibility.

Bacterial spot appears on leaves as angular, gray or brown to purple, water-soaked lesions that are about 1-3mm in diameter, and are most concentrated around the midrib, leaf tip, leaf margin, or a combination of these. The lesions will increase with size as they age, eventually becoming purple and necrotic. After this, the lesions will often abscise, leaving what is called a shot-hole in their place. Many lesions can result in leaf chlorosis or yellowing and eventually premature abscission. This can often be confused with a nitrogen deficiency, so make sure you have a correct diagnosis before treating.

Lesions can also occur on twigs or branches and are designated as one of three types: "spring" or "summer" cankers or as "black tip." Spring cankers will appear at about the same time as leaf emergence on last autumn's growth. These will look like slightly raised, blister like areas that will extend along the twig for several centimeters. "Summer" cankers will form on new green growth and appear in late spring or early summer. These are similar in appearance to "spring" cankers. "Black tip" becomes visible late into the winter and is limited to the terminal bud of the previous year. This terminal bud will usually fail to open, and turn into a dark cankered area that can extend down a few centimeters on the twig. Fruit can also become infected, and these symptoms will become obvious at about 3-5 weeks from petal fall. Symptoms will

appear as small, water-soaked, brownish lesions. As the season goes on these lesions will become cracked and sunken. Note that the frequency and the severity of these symptoms do not necessarily correlate between leaves and fruit. Severe symptoms on one do not mean severe symptoms on the other.

Both "spring" cankers and "black tip" are results of infections of the previous year, and the disease can overwinter in lateral buds. Once symptoms of the disease are noticeable, it is already at a point where it is very difficult to control. Successive years of infection will weakened trees and result in reduced fruit production and quality.

A cultural strategy aimed at disease prevention is always our primary recommendation. Purchase trees that are healthy and disease free. When available, select disease resistant species and cultivars. Avoid introducing and spreading material that might contain the bacteria to environments conducive to the pathogen's growth. One way to avoid spreading the bacteria is by sanitizing pruning tools. Soil should be kept fertile to promote steady but not excessive foliar growth. Well-draining soil in an area with good air circulation as well as keeping foliage and fruits dry can help considerably.

Chemical options are available for commercial orchards, but are not practical for homeowner use. Commercial orchards should refer to the 2012 Midwest Tree Fruit Spray Guide for options. Spray programs help to control bacterial spot by suppressing development of disease, but they do not eliminate it. Because of the cost and uncertainty of chemical control, the best way to control bacterial spot is the use of the cultural practices outlined above.

Further References:
http://ohioline.osu.edu/hyg-fact/3000/pdf/HYG_3019_08.pdf
http://agsci.psu.edu/fphg/stone/diseases/bacterial-spot
http://www.aces.uiuc.edu/vista/abstracts/a810.html

(*Travis Cleveland and Sean Mullahy*)