

Number 9 - June 17, 2011

### **Burrowing Sod Webworm**

Burrowing sod webworm has been reported in a couple of locations during the past week. In neither location was there obvious damage. The damage it causes is similar to that caused by other sod webworms in that the larva feeds on grass blades at night, causing indistinct brownish turf areas due to thatch showing. Any of several insecticides provides effective control. Subsequent irrigation usually restores the turf's health.

Most sod webworm larvae create horizontal silk-lined tunnels in the thatch where they hide during the day. Burrowing sod webworm constructs a vertical tunnel. When the larvae are reaching maturity, they construct very thick, white tunnel linings. Insectivorous birds such as starlings, red-winged blackbirds, cowbirds, and robins commonly feed on the larvae at this time, and in the process of pulling the larvae out, they also pull out this thick burrow lining. The birds eat the caterpillars but leave the burrow lining on the turf surface. This white lining is about 2 inches long by 1/4 to 1/2 inch wide. From a distance, they look like cigarette butts scattered all over the lawn. (*Phil Nixon*)

### **Scouting Report**

**Bagworms** were observed as newly hatched larvae in central Illinois about

June 11. We reported last week of their being found in the Collinsville area on June 9. We expect hatch to occur in northern Illinois during the coming week. Remember that bagworms balloon from tree to tree as young larvae for a couple of weeks before settling down to feed. Treatment is recommended two to three weeks after egg hatch so that one application provides control.

**Periodical cicada** damage was reported from Effingham County on June 16. Damage was obvious on June 13 in northwestern Kentucky. The female cicadas slit stems to insert their eggs. This stem damage frequently results in the leaves dying farther out on the branch. Damaged stems are also susceptible to snapping off in the wind, resulting in numerous fallen twigs and hanging ones on the tree whose leaves also wilt and die. One-eighth to one-quarter inch diameter stems are preferred, but oviposition can occur in stems as large as two inches in diameter. Typically, egg-laying occurs within one foot of the stem tip, so the number of dead leaves is few per branch.

This damage is not significantly harmful to the health of larger, established trees. The twig loss results in increased lateral branching and bushiness of the foliage for a couple of years. As suggested in an earlier issue of this newsletter, the trunks of very small trees should be

protected from damage with hardware cloth.

**Fourlined plant bug** probable damage has been reported on purple coneflower. Fourlined plant bug adults are about one-quarter inch long, flat-backed, and yellow with four black stripes down the back. The nymphs are present now; they are smaller and red and black. Both adults and nymphs are obvious on the foliage on examination. Their feeding on the foliage produces brownish to blackish, oblong areas that coalesce into large, elongated damaged areas. This insect also causes severe leaf damage to mint, chrysanthemum, coreopsis, veronica, artemesia, salvia, astilbe, cranesbill geranium, black-eyed Susan, and penstemon. Because the bugs are exposed on the foliage, many contact insecticides provide excellent control. Insecticidal soap is commonly recommended due to its broad labeling; however, thorough coverage is essential as there is almost no residual activity. (*Phil Nixon*)

### **Wet Weather Turf Pests**

The heavy rainfall this spring has resulted in higher numbers of some insects and insect relatives than normal. These conditions are also conducive to high numbers of crayfish, millipedes, centipedes, sowbugs, springtails, fungus gnats, slugs, and earwigs.

Millipedes are elongated, many-legged, hard-shelled, brownish, slow-moving insect relatives that feed on decaying plant material in moist situations. They have two pairs of legs per segment, totaling over one hundred legs per animal. When very numerous, they crawl out onto pavement forming masses or

rows of them on the march. On damp mornings, they crawl up the sides of buildings. As they die, they coil up.

Centipedes are also elongated, but have only one pair of legs per segment and are fast-moving. They feed on insects and other small animals, becoming numerous as prey increases.

Sowbugs and pillbugs look like tiny armadillos and are commonly called roly-pollies. Pillbugs roll up into a tight ball when disturbed. Sowbugs and pillbugs are crustaceans, having two pairs of antennae, gills under the carapace, and ten pairs of legs. They feed on decaying plant material.

Springtails are cylindrical and typically one-eighth to one-quarter inch long. Those found in turf areas typically have a forked furcula on the rear end that they use to jump into the air. They feed on molds and mildews associated with rotting plant material. They frequently become very numerous, covering paved areas on damp mornings.

Fungus gnats feed on decaying organic matter as clear, elongate, legless, worm-like larvae with dark heads. Mature larvae of some species are about one-quarter inch long. Although normally not seen above ground, in wet situations they may appear as writhing masses or marching ropes of individuals at the edge of paved areas and on mulched areas.

Fungus gnat adults are tiny, blackish flies that hover as large swarms of males. These swarms are a couple of feet across and tend to hover over upright objects such as fence posts, shrubs, and peoples' heads. These swarms are used by the males to attract females for mating.

Slugs are shell-less snails that feed on dead organic matter. They are soft-bodied with a pair of tentacles, each bearing an eye at the tip. The gray garden slug is very common, dark gray, and about one inch long. The other most common species is the spotted garden slug, which is up to three inches long but can extend to about six inches. It is brownish with obvious dark spots.

High moisture levels will allow slugs to leave turf and mulched areas to climb on lawn furniture and up the sides of houses, particularly at night and damp mornings. They leave slime trails wherever they go that glisten like silver ribbons in the morning sunlight. Slugs eat holes in the leaves of thin-leaved, shade-loving plants such as hosta, violets, and impatiens.

Earwigs are about five-eighths inch long and reddish-brown with large pincers called forceps protruding from the posterior end. These insects are turning from nymphs into adults at this time. As adults, they are much more active, becoming obvious in their activities. They are nocturnal insects, hiding in cracks and crevices during the day. They work their way into buildings as well. People commonly find them under damp clothes and along baseboards indoors as well as in crevices of outdoor furniture and playground equipment. Landscapers notice them under loose pieces of bark.

Earwigs feed primarily on decaying organic matter and prefer moist locations. They will also feed on the leaves and flower petals of rose, daylily, dahlia, zinnia, and other flowers. They are commonly found hiding in the heads of lettuce and cabbage. They are also

predators, feeding on adult fleas and other insects.

All of these animals are more numerous in areas with high amounts of dead organic matter and moisture. They will be more numerous in thatchy turf areas that are kept moist. Lawn care clients that over-water and insist on high fertilization will have more of these creatures than others. Core-aerification of turf along with appropriate fertilization and irrigation can reduce their numbers. Clients who mulch too deeply around trees and in landscape beds will also have more of these animals. Two to three inches or less of mulch is recommended.

Millipedes are not effectively controlled with pesticide applications. Centipedes, sowbugs, pillbugs, and springtails can be controlled with pyrethroid sprays. Fungus gnat larvae are also difficult to control with insecticides. Slugs can be controlled with slug baits containing iron phosphate (Sluggo, Escar-Go) or metaldehyde (Deadline). Earwigs can be controlled on foliage with carbaryl (Sevin) or pyrethroids. Do not spray blossoms. They can be kept out of houses with permethrin foundation sprays. With all of these, the most effective control is to reduce the amount of moist, dead organic matter. (*Phil Nixon*)

### **Avoiding and Handling Chemical Injury to Non-target Plants**

Well, it is June and the curled and yellowed leaves have started to arrive at the U of I Plant Clinic. Puzzle pieces then have to be put together by me and other diagnosticians to determine if nearby pesticide (often herbicide) applications

are possibly to blame for the injured plants that are dead, yellowed, curled, etc. Of course environmental conditions, diseases, and insect problems can mimic these symptoms which makes a proper diagnosis especially challenging. Couple this with all the different herbicides and various plants we have gracing our Illinois landscape and things can get complicated quickly. Then factor in the unknowns such as not knowing when a neighbor sprayed, what they sprayed or even *if* they sprayed. The process has been likened by us as being “CSI for Plants”. We are easily entertained you think, but at least we are enthusiastic about what we do. “CSI – Urbana”. I like that.

*Injury Prevention.* Prevention of this unwanted pesticide injury to your plants is certainly important. It makes things the easiest for all involved. The reality is that pesticide applications are going to happen across Illinois this summer. Producers, landscapers, and others have crops, lawns, and other investments to protect from weeds, insects, and diseases. If you are a homeowner or perhaps a grower of a sensitive crop, I STRONGLY encourage you to build good relations with your neighbors and ask them for advance notice when they spray. By law and depending on the type of application, they may not be required to give you notice. But, most are willing to provide this information if asked. If you are concerned about the health of your plants or maybe that of your family, share your concerns. If you know “what” will be sprayed “when,” you can plan accordingly by covering your garden with old blankets, making sure the windows are shut, or keeping the kids out of the yard during that time. I’m not saying drift is permissible. Most applicators will do everything possible to

prevent off target movement of pesticides. However, wind gusts and sudden changes in wind direction can occur. Talking with your neighbors is the FIRST step towards preventing drift. I would discourage you from automatically filing a complaint with the Illinois Department of Agriculture (IDA) when you see the sprayer nearby. Not surprisingly, that is bad for good neighbor relations! You will have your neighbor’s attention, but is that the type of attention you are looking for? Growers don’t want their pesticide products to land on your plants any more than you do. With good neighborly communications, not only can herbicide injury be prevented but also long drawn out court cases can be avoided.

A helpful publication on this topic is, “*Reducing Pesticide Drift: Specialty Crops and Conventional Crops as Good Neighbors*”. It can be viewed at: <https://my-s.extension.uiuc.edu/documents/960111006110611/reducingdrift.pdf>.

Additionally, if you have a particularly sensitive crop or area that must be protected from pesticide drift, let neighboring applicators know about it. You can register your sites at [Driftwatch.org](http://Driftwatch.org), which is an online registry designed to help pesticide applicators, specialty crop growers, and stewards of at-risk habitats communicate more effectively to protect pesticide-sensitive areas. Sensitive crop areas registered on this site include beehives, certified organic crops, fruits, grapes, nursery crops, pumpkins, melons, tomatoes, and vegetables.

*What to do if you suspect spray drift.* Once again, neighborly discussions are

important. Perhaps the two of you can meet to talk about the injury symptoms being shown and what possible causes there are. Consider when the symptoms first appeared and when the application was made. What pesticide was applied? Is there a pattern to the injury? Are many species showing symptoms or is it only one plant in a row of similar plants? What have the weather conditions been and what were they like at the time of application? Is the applicator willing to pay for damages or replace dead plants? It is often faster, easier, and cheaper to settle these disputes without legal involvement.

Compare what you are seeing to other plants. What does herbicide injury look like on landscape plants? Check out some pictures at <http://urbanext.illinois.edu/hortanswers/>. Search by problem and then type in "herbicide". The pictures were the result of some recent U of I demonstration plots. You can even use your smart phone to view the pictures. Also, these pictures *and more* are available as a pocket sized, spiral bound flip book for \$10. To purchase, call U of I Crop Sciences at 217-333-4424.

You can send affected plant samples to the University of Illinois Plant Clinic. For information on how to do so, click on: <http://web.extension.illinois.edu/plantclinic/>. Be sure to include as much relevant information as possible. Keep in mind that the Plant Clinic does not perform pesticide residue tests, and without such tests, the cause of a symptom cannot be attributed to pesticide drift with 100% certainty. However, it is possible for Clinic staff and specialists to rule out other possible causes and establish whether the likely cause is drift.

If you choose to file a complaint with IDA, time of the essence. The pesticide drift complaint process is started by calling IDA's Bureau of Environmental Programs at 1-800-641-3934 (voice and TDD) or 217-785-2427 for a complaint form. Complaint forms must be received by IDA within 30 days of the incident or within 30 days of when the damage was first noticed. Complaints filed after that will be kept on record, but no administrative action can be taken.

*The complaint process.* Once a complaint is filed with the department, a field inspector is assigned the case. In most cases, the inspector will interview the complainant and inspect the site. Various types of samples, such as plants, water or soil, may be collected for analysis at an approved laboratory. The inspector may also interview applicators in the area, examine pesticide records and collect weather data in an attempt to determine the nature and cause of the damage. The field investigator will then submit a report to the Department for review.

Both parties will receive written notification if the Department finds a violation and takes an enforcement action. Penalties range from advisory or warning letters to monetary penalties of \$750 to \$10,000, depending on the type and severity of the violation. Penalties are determined through a point system defined in the Illinois Pesticide Act. Even if a violation of the Illinois Pesticide Act cannot be substantiated, both the complainant and the alleged violator will be notified in writing of the complaint's status. Remember, the Department's role in pesticide misuse incidents is limited to determining whether a violation has occurred. IDA cannot help complainants recover damages.

*Will affected plants die?* That is the million dollar question and the answer is that it depends. The degree to which the plant is affected depends on several factors: the type and amount of chemical applied, the time of year, the growth stage of the plant, overall health of the plant, etc . The healthier the plant is (adequate fertilizer, moisture, and light) the more likely it is to survive.

For more drift resources, check out the University of Illinois Pesticide Safety Education website at: [www.pesticidesafety.uiuc.edu](http://www.pesticidesafety.uiuc.edu) . (*Michelle Wiesbrook*)

### **My Tree is Stressed!**

Stress is caused by a difference between what a plant requires from its environment, and what is available to it. Stress makes trees vulnerable to pests, such as borers, and pathogens, such as cankers. It is a factor in all but the most virulent conditions.

Plant diseases are best avoided. Careful plant selection can prevent problems that are difficult or impossible to remedy. This is especially true of trees. They are (potentially) large, long lived elements of the landscape. Each species has evolved to fit into a discrete environmental niche; your tree will reach its genetic potential only if it matches your site.

Will your selection have room to mature? Roots can spread through the top 30" of soil for twice the height of the tree; is there room underground? Is the soil compacted? Has the top soil been

stripped? Some trees (notably those that inhabit floodplains) are more tolerant of disturbed urban soils than others. If your selection is pH sensitive (pin oak or sweet gum, for example), have the site tested. It is very hard to change the pH of highly buffered Illinois soils.

Is the tree adapted to the volatile climate of the prairie state? This includes cold and heat tolerance, as well as the ability to endure sudden changes in temperature. Trees that evolved in maritime regions, such as Japanese maples, are often injured by sudden temperature fluctuations. How much sunlight does the site receive? Shade tolerant denizens of mature forests, such as sugar maples can find exposed sites stressful. Windy sites can cause winter desiccation in broadleaved evergreens , such as rhododendrons, or boxwoods. Their foliage loses water; their roots can't replace it if the soil is frozen. Many conifers, notably Colorado spruce, will die in dense shade. What other plants are present? Groups of plants are better able to withstand high winds and desiccating heat, but large established trees are aggressive competitors.

Trees can endure, for a time, miserable growing conditions. They will cling to life on tiny parking lot islands, in tree coffins awash in exhaust fumes, on sun baked clay lots in raw subdivisions. They bring solace to human beings who are also trapped in stressful environments. But, the best tree for any site is one that belongs there and will grow and thrive in the conditions that are found there. (*Jean A. BurrIDGE, ISA Certified Arborist and Edited by Stephanie Porter*)