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Caterpillar Hunter

The large ground beetle *Calosoma* has been reported in the Bloomington and Joliet areas of the state. This 1.2-inch long beetle is broadly oval with long black legs and antennae. There are species with purple wing covers and others with bright metallic green wing covers that occur in Illinois. The ones being seen currently have green wing covers.

These beetles are commonly known as fiery searchers or caterpillar hunters. One species, *C. sycophanta*, was introduced from Europe into the northeastern United States in the early 1900s to control gypsy moth caterpillars. Both the larval and adult stages feed on caterpillars, with the adults climbing through trees in search of caterpillars.

Once introduced, this ground beetle spread much faster than the gypsy moth and has been known to occur in Illinois for decades. It has been blamed partially for the huge reduction in the number of giant silk moths, such as cecropia, promethia, luna, and Polyphemus moths. These moths are generally forest insects, so the loss of large forest expanses to agriculture and other development is also a factor. The small remaining forest remnants likely allow increased predation by birds and parasitic wasps, so the silk moth decline is probably due to several factors.

These adult beetles are attracted to lights at night. They may be noticeable due to their large size and bright colors in the evening around lights or in parking lots and other brightly lit areas in the morning. They are considered to be beneficial insects and should not require control measures. They are large and predaceous beetles, and they will probably bite if they are handled. (*Phil Nixon*)

Black Cutworm

There have been large flights of black cutworm moths into Illinois for several weeks. This insect overwinters in the southern U.S., flying up into the state in the spring. There are several generations per year in Illinois. Golf course personnel should be on the lookout for black cutworm larval infestations in bentgrass, ryegrass, and fescue. They do not cause damage to Kentucky bluegrass as most larvae are unable to survive on it.

Damage on greens appears as circles 2 to 3 inches in diameter where the grass blades are eaten down to the crowns. Frequently, there is a shallow hole in the center of the circle. Cutworm caterpillars feed at night, tending to feed in a circle, as far as they can reach, with their posterior end frequently inserted in a shallow hole. These damaged areas are most numerous within 30 or so feet from the green apron because the older,

larger cutworms like to hide in the taller turf around the green during the day, commuting onto the green at night to feed. Feeding damage looks like ball marks where a golf ball skipped across the green, rubbing off the grass blades. Thus, golfers do not recognize the damage as being caused by an insect.

Additional damage is caused by insect-feeding birds, such as starlings, robins, grackles, cowbirds, and blackbirds. In feeding on the younger cutworms that hide in the thatch of the green, they pull up small divots about one-half inch across. These little divots are large enough to deflect putts, causing golfers to get upset. The sand in these divots also quickly wears the edge of greens mowers blades, causing the blades to require sharpening and replacing more often. Birds feeding on black cutworms can be a hazard at airports.

Damage to lawns is frequently hidden by the taller grass, although lawns may have irregular, roundish, brown areas where the green grass blades have been eaten, revealing the thatch. More commonly, bird damage is obvious. Because lawn turf is rooted deeper and more firmly, it is unlikely to be pulled out by the birds as occurs on golf greens. Instead, round holes about one-half inch in diameter are punched through the turf by the birds' beaks as they search for larvae. Lawns with many cutworms look dingy from a distance due to the brownish to blackish holes where the underlying soil shows.

Black cutworm larvae are dark-colored, heavy-bodied, and up to one-and-one-half inches long. They can be flushed from the turf with a teaspoon of 5% pyrethrum or 1 tablespoon of dishwashing

detergent in a gallon of water. Distribute this evenly over a foot square of turf; a watering can works well. Within a couple of minutes, the irritated larvae come up onto the turf surface. Only two to three cutworms per foot square are enough to result in noticeable injury. An application of bifenthrin (Onyx, Talstar), carbaryl (Sevin), chlorantroniliprole (Acelepryn), deltamethrin (DeltaGard), spinosad (Conserve), or trichlorfon (Dylox) controls the caterpillars. Insecticidal nematodes are also effective.

Cutworm moths lay their eggs near the tip of grass blades, so frequent mowing and clipping removal reduce caterpillar numbers 75 to 97%. Dump clippings baskets well away from greens and other bent-grass areas. Over 90% of the eggs survive the mowing process, so dumping the clippings at the green apron results in caterpillars that can easily attack the green. Homeowners who collect grass clippings and use them to mulch around vegetable plants and flowers concentrate the eggs into smaller areas, resulting in heavy feeding damage from the resulting larvae to their garden plants. Top-dressing the green with sand also reduces the number of cutworm larvae. (*Phil Nixon*)

Invasive Species Spotlight: European Gypsy Moth

Throughout the summer, my two interns, Lily and Evan, will be providing readers with some articles focusing on invasive species in Illinois. While they will be heavily involved with invasive species monitoring, they'll also be gaining some experience in outreach as well. If there is a particular invasive species topic you'd like to learn more about, let us know! First up, gypsy moth!

The European gypsy moth (EGM), *Lymantria dispar*, is a non-native moth that can attack up to 500 tree and shrub species. It is one of the most destructive forest pests in the United State. It is also present in the northern part of Illinois. Larvae can commonly be found on hardwood trees such as oak and aspen. EGM attacks trees by feeding on their leaves. If defoliation is heavy and repeated, trees may die after 2 years of infestation. Tree mortality may also be increased when trees regrow a new set of leaves. This is energetically costly to the tree which may make it susceptible to other pests.

EGM caterpillars are voracious leaf eaters. These caterpillars consume as much leaf tissue as they can, as quickly as they can, in order to nourish themselves and become reproducing adults. A single caterpillar can consume 11 square feet of vegetation during its lifetime.

Female EGM lay their eggs in summer on any flat surfaces such as patio furniture, auto tires, fire wood, grills, and children's toys. When these objects are transported, the egg masses are moved with them.

Caterpillars are most active in May and June when they are feeding on leaves. Full grown gypsy moth caterpillars are about 2-3 inches long. They are a grayish color with long hairs throughout their bodies. Caterpillars have five pairs of blue spots and six pairs of red spots along their backs.

Around mid-summer, caterpillars go into the pupal stage of their life cycle. After 2 weeks adult moths emerge from the cocoon. Cocoons vary in size according to their sex. (*Lilly Calderon, Kelly Estes*)

Modified Growing Degree Days (Base 50°F, March 1 through May 29)

Station Location	Actual Total	Historical Average (11 year)	One-Week Projection	Two-Week Projection
Freeport	558	436	647	762
St. Charles	450	414	532	638
DeKalb	466	479	561	680
Monmouth	560	533	659	783
Peoria	595	569	697	825
Champaign	625	583	733	866
Springfield	742	651	857	996
Brownstown	735	711	856	1000
Belleville	778	744	901	1040
Rend Lake	829	803	960	1112
Carbondale	827	760	952	1096
Dixon Springs	846	818	976	1124

Insect development is temperature dependent. We can use [degree days](#) to help predict insect emergence and activity. Home, Yard, and Garden readers can use the links below with the degree day accumulations above to determine what insect pests could be active in their area.

[GDD of Landscape Pests](#)

[GDD of Conifer Pests](#)

Degree day accumulations calculated using [the Illinois IPM Degree-Day Calculator](#) (a project by the University of Illinois Department of Crop Sciences and the Illinois Water Survey). (*Kelly Estes*)

Giant Confusion: Giant Hogweed and Common Look-Alikes

Giant Hogweed (*Heracleum mantegazzianum*) is an invasive plant from Asia and was likely introduced into the United States due to its use as a spice in foreign dishes. This exotic, invasive has been identified in a couple of Illinois counties.

This plant can grow to heights of 10 to 15 ft and a width of 5 ft. It is a biennial or short lived perennial that has a mostly green hollow stem with reddish purple raised spots along with coarse short hairs on the stalk. The stem can grow to 2 to 4 inches in diameter. The plant has small white flowers in flat umbels that bloom in mid-May through July. The seeds are elliptical shaped and one plant can produce up to 20,000 seeds. After seeding, the plant dies back to the taproot which can live throughout the winter.

In addition to being an invasive weed that can quickly overtake an area by crowding out other plants, giant Hogweed is also harmful to humans by creating a clear watery sap that can cause burning and blistering on the skin when combined with sunlight and can also cause blindness. This sap can get onto someone just by brushing by the leaves or breaking the stem or leaves. It is highly recommended that when dealing with this plant one should wear gloves and protective clothing to allow no contact with skin.

Giant Hogweed belongs in the carrot or parsley family (*Apiaceae*). It has several look-a-likes including cow parsnip (*Heraclium lanatum*), angelica (*Angelica atropurpurea*), and poison hemlock (*Conium maculatum*) - all common plants in Illinois and all commonly mistaken for giant hogweed. Although many of these plants may look like giant hogweed at first glance, none of them get to be as large or have its exaggerated characteristics.

Giant hogweed is still rare in Illinois. While visitors in natural areas are unlikely to encounter this plant, it never hurts to keep a watchful eye for this and other invasive plants. (*Evan Crokek, Kelly Estes*)

Anthracnose on Shade Trees: A Review of the Tolerable, the Bad, and the Ugly

Anthracnose samples are just beginning to show up at the Clinic this season. Conditions have been favorable this spring for the development of anthracnose on shade trees. Anthracnose is the disease name designated for a group of closely related pathogens which cause a variety of symptoms including leaf blight and deformation and cankers on stems and branches, though symptoms that develop depend on the tree that is infected. The occurrence of anthracnose on shade trees is favored by cool, wet springs. Anthracnose diseases can be hosted by a number of shade trees including sycamore, ash, and maple.

This disease is very noticeable on sycamores, you can observe what appears to be delayed leafing on the tree and leaves and growing tips dying as they emerge. Upon closer examination of twigs you can find cankers which are sunken, dead looking areas. Cankers on twigs can restrict water and nutrient movement to leaves, resulting in leaf and twig die-back, while cankers on larger branches can girdle and kill entire branches. The small black fruiting bodies of anthracnose which have a "pimple" like appearance (but black) can also be found on twigs and branches. Another symptom you may observe is witches brooming around terminal shoots that were killed by the anthracnose infection.

Anthracnose also can develop on ash trees. The symptoms you would observe if your ash has anthracnose are dark blotches along the margins of leaves which in turn cause distorted leaves, and small purplish-brown spots

located near the leaf centers. The most significant symptom is leaf drop, when new green leaves fall from the tree. Though this disease is not known to cause significant stress to ash trees in a single year, 3 or more consecutive years of heavy defoliation (more than 25% defoliated) of ash trees can leave them more susceptible to other diseases.

Symptoms of anthracnose disease on maple are similar to those of ash: purplish brown blotching along leaf veins that can span out to the leaf margin.

That being said, anthracnose is usually not a severe disease on maples. It is more known for detracting from the aesthetic beauty of maples by the discoloration of the leaves, usually no significant defoliation ever occurs.

Cultural methods to help control this disease include maintaining proper sanitation of leaves and pruning off and burning (or remove from site) twigs and branches with cankers. Fertilizer can be applied in late fall one month before the first frost or in early spring one month before last frost to help increase tree

vigor. Concentrate on boosting tree vitality to promote new growth. Prune in and around the tree to open it to better air movement. Remove dead or dying branches, water in periods of drought, and mark calendars now to fertilize affected trees in the fall. Watering in summer drought is probably the best advice we can give to help infected trees.

Unless anthracnose fungi have repeatedly hit a tree or a very young tree is involved, we do not recommend using fungicides. However, if the problem is severe enough, fungicide sprays can be applied to trees in the early spring when buds begin to swell, and should be applied every 7-14 days when it is a rainy, wet spring as these are conditions most favored by development of anthracnose. Fungicides that will help control anthracnose in shade trees include chlorothalonil, thiophante-methyl, mancozeb, propiconazole, and copper fungicides.

For more information, see [Report on Plant Diseases, no. 621](#) (Adobe PDF). (*Chelsea Harbach and Suzanne Bissonnette*)