

Number 2 - May 12, 2014

## **Crayfish**

Crayfish become a nuisance in turfgrass when they burrow in high moisture soil, creating chimneys at the burrow openings. These chimneys, made of balls of clay soil that bake in the sun, become very hard. Hitting them with a mower dulls the blades and may even kill the mower's engine. The crayfish commonly emerge at night to roam about the turf. Crayfish have gills that require constant moisture. Rainy nights and standing water allow the migration of these insect relatives across land to new locations. Occasionally, one of these roaming crayfish will crawl up on a porch and be unable to find its way out, causing concern to the human residents and family dog the next morning.

Crayfish are 10-legged crustaceans in the order Decapoda. Lobsters, shrimp, and crabs are in the same order. Crayfish are frequently referred to as crawfish and crawdads. In northeastern Illinois, they are frequently called land crabs. Mud bug and ditch crickets are common names for them in the southern U.S. The front pair of legs is enlarged into chela, or pincers, at the end. The chela are used for prey capture, feeding, mating, and defense. Crayfish are scavengers, feeding on decaying organic matter, but they are also opportunistic and will capture and eat fish, worms, and other animals that they catch off guard. The other four pairs of legs are used primarily for walking and food handling.

Crayfish are elongate with the front half covered along the top and sides by a carapace. Their gills are beneath the sides of the posterior half of the carapace. The front half encloses the head and is pointed at the front. Near the front are two obvious spherical black eyes. There are two pairs of antennae. One pair is short, whereas the other is long and obvious. The abdomen makes up the back half of the crayfish. It is elongate and made up of several segments. At the end of the abdomen is a flattened, widened telson. The underside of the abdomen has a series of elongate, paired, finger-like pleopods. A female carries her eggs under the abdomen and is referred to as being "in berry" during this time. After hatching, the young crayfish cling to the pleopods and abdomen underside for several days before dropping off to fend for themselves. Most crayfish live for three years.

Of the 21 species of crayfish that occur in Illinois, only *Procambarus gracilis* and *Cambarus diogenes* commonly occur in turf. *P. gracilis* is reddish brown when young but is red when adult and about 4 inches long. This crayfish occurs in turf areas and along roadside ditches. Its burrow commonly extends 6 feet or more to an enlarged chamber within the groundwater. On rainy nights, young of this species are commonly found on the turf surface. Adults occasionally occur on the surface on warm, rainy, summer nights. Reproduction occurs in open wa-

ter, frequently in standing water after a rain. This species does not occur in southern Illinois.

*C. diogenes* can approach 5 inches when fully grown. It is reddish brown with a red carapace, although it may be green with red edging. This species lives along streams in a burrow that extends about 3 feet below the turf surface. At this point, there is usually an enlarged chamber. Another burrow runs laterally from this chamber to the nearby stream, opening below the water surface. Reproduction occurs in the stream.

Turf-living crayfish and their burrows and chimneys are numerous along streams and in low-lying areas. Golf superintendents commonly cope with crayfish by allowing these areas to revert to marsh and other wetland areas. This avoids fighting a losing battle against the crayfish and adds a different and natural hazard to the golf game. Commercial landscapes may similarly retain these areas as wetlands, occasionally mowing them at a high setting. To eliminate crayfish, the area usually must be tiled and drained. Solid wood or stone fences that fit tight against the ground have been used to reduce the migration of crayfish to fine turf areas.

Pesticides are not a factor in crayfish management. Not only are there no labeled pesticides but any chemical put into a crayfish burrow will pollute the groundwater and possibly the adjoining stream.--*Phil Nixon*

### **Lilac/Ash Borer**

Lilac borer and ash borer, *Podosesia syringae*, is susceptible to control in

southern Illinois. Insecticidal application will be effective in one to two weeks in central Illinois, and a couple of weeks after that in northern Illinois.

The larvae are cream-colored, legless borers up to one-and-one-half inches long. They feed deep into branches and trunks, maintaining open tunnels by pushing frass, sawdust and fecal material, out of openings maintained through the bark. They pupate at tunnel openings, with empty pupal cases protruding up to one-half inch from the bark after adult emergence.

Adult moths mimic paper wasps, being about one inch long, having narrow clear wings, and a clearly separated abdomen with yellow banding. They also mimic wasps in behavior, being active during the day and flexing their abdomens as they walk on trunks and branches.

Pheromone lures are available for lilac/ash borer and are the most accurate way to time treatment. Male moths, which are attracted to the traps, emerge before the females. Traps should be checked two to three times per week, and the number of trapped males recorded. Once peak male catch is determined, apply insecticidal control one week later. Application can also be made just after the end of bloom of common lilac, *Syringa vulgaris*.

Lilac borer attacks large lilac trunks and is effectively controlled mechanically by cutting off trunks more than two inches in diameter at ground level. Maximum bloom and longevity is achieved by encouraging sucker growth.

Ash borer attacks recently transplanted young trees at branch crotches and

along the trunk. Emergence holes are circular and one-quarter inch in diameter. Attack typically ceases three to five years after transplanting once the tree has adapted to site and sufficient root regrowth has occurred for normal annual shoot elongation. In older trees, ash borer attacks at wounds caused by rubbing branches in the canopy. It can be considered to be beneficial in this role as it hastens natural branch thinning.

Control lilac/ash borer with a trunk and branch spray of chlorantraniliprole (Acelepryn), clothianidin (Arena), or permethrin (Astro, Pounce). If treating lilacs, do not spray until after bloom to avoid harming pollinating insects. (*Phil Nixon*)

### European Pine Sawfly

European pine sawfly larvae are present throughout the state feeding on Scotch, mugo, and other two and three needle pines. The larvae grow to about one inch long with dark and lighter green stripes. They have large black heads. Sawfly larvae can be distinguished from caterpillars by having six or more pairs of prolegs.

They drop to the ground to pupate as first year needles are breaking from the candles. As such, their defoliation is not a serious threat to tree health, but the mostly bare stems left behind reduce aesthetic appearance.

Because the larvae feed in groups, hand-picking is an effective control. Spraying with acephate (Orthene), acetamiprid (TriStar), azadirachtin (Azatin, Bioneem, Ornazin), carbaryl (Sevin), indoxcarb (Provaunt), or spinosad (Conserve) is also effective. (*Phil Nixon*)

### Modified Growing Degree Days (Base 50°F, March 1 through May 8)

Station Location	Actual Total	Historical Average (11 year)	One-Week Projection	Two-Week Projection
Freeport	234	219	302	373
St. Charles	179	212	243	309
DeKalb	185	243	260	337
Monmouth	255	281	337	421
Peoria	282	311	368	454
Champaign	295	299	382	472
Springfield	382	350	479	579
Brownstown	390	399	490	593
Belleville	431	421	535	641
Rend Lake	457	461	568	680
Carbondale	461	441	563	667
Dixon Springs	475	482	584	694

Insect development is temperature dependent. We can use [degree days](#) to help predict insect emergence and activity. Degree day accumulations are slightly behind the 11-year average. 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*)

### Illinois Invasive Species Awareness Month

You are invited to come see what is happening with invasive species in Illinois!

The Illinois Wildlife Action Plan's Invasive Species Campaign is sponsoring

the 2014 Illinois Invasive Species Symposium. This event is a one-day, all-taxa symposium that features a great lined up of speakers to give presentations on invasive plants, diseases, insects, and animals. To see a full list of the day's presentations can be found [here](#).

### **Illinois Invasive Species Symposium**

May 29th, 2014 9:30-4:00

IDNR Office Building - Springfield, IL  
One Natural Resources Way, Springfield,  
IL 62702

The meeting is free to attend (lunch is on your own) and will include a ceremony for this year's Invasive Species Awareness Month Awards.

While the meeting is no cost and no registration is required, we ask that you let us know if you plan on attending this symposium by emailing [chris.evans@illinois.gov](mailto:chris.evans@illinois.gov). (*Kelly Estes*)

### **They're Baaacckk – Brown Marmorated Stink Bugs are Beginning to Make Their Presence Known**

The sun has been shining, the temperatures have begun to warm, the landscape is turning into a rainbow of color - life is good! That is, until you notice the stink bugs crawling in or near your house.

[Brown marmorated stink bug](#) calls and emails are starting to come in once again. Over the past couple of weeks, I've received several reports of [Brown Marmorated Stink Bugs \(BMSB\)](#) being found in or near homes. It's a sure sign that the seasons are changing and these home invaders are searching for their winter vacation spots.

During the spring, adults break their dormancy and move from their overwintering locations such as houses, garages, barns, and other dry places. Like many invasive insects, the brown marmorated stink bug has a very long list of host plants it will feed on. During this time of year, we would expect to find them on ornamental landscape plants, such as holly, crabapples, and other fruiting and seed-producing shrubs. As summer approaches, they move to other hosts--peaches, apples, grapes, soybeans, corn, tomatoes, peppers, and more. During the spring, adults mate and the females begin laying eggs. Egg laying will occur throughout the summer months.

A single generation per year is expected for most of Illinois. Some areas of southern Illinois could experience another generation. Typically, the adults will begin to move to overwintering locations in September, with peak movement in late September and early October. Homeowners may start to see BMSBs begin gathering on homes, barns, and garages during this time.

BMSB has been making headlines in Illinois for a couple of years. Already this spring, we have new confirmations out of Knox and Lake counties.

Currently, the known distribution of this insect in Illinois is limited. Homeowners are our primary source of information during the fall and spring. As always, we are very interested in where these insects may be and continue to try to determine where they are in Illinois. If you believe you have BMSB, we would be very interested in looking at it. Suspect stink bugs may be sent to Kelly Estes, 1816 S. Oak St., Champaign, IL 61820.

Please put stink bugs in a crush-proof container (pill bottle, check box, etc). You can also send a photo to kcook8@illinois.edu for preliminary screening if you wish. (*Kelly Estes*)

### **Gymnosporangium Rusts on Eastern Red Cedar**

Three common Gymnosporangium rusts affect trees in Illinois landscapes: Cedar-apple rust, Hawthorn rust, and Quince rust. These pathogens require two hosts to complete their life cycles. The most damaging stage occurs on deciduous hosts within the *Rosacea* family. Infections to deciduous hosts occur during the spring and become evident later in the season. The Eastern red cedar is an evergreen species and serves as the alternate host for these pathogens. Infections to evergreen hosts are not as damaging, but serve an important stage in each pathogen's life cycle. These rust pathogens overwinter on Eastern red cedars as hard and pitted galls or swollen branches. Galls are light brown to reddish or chocolate brown and range from 1/8 inch to 2 inches in diameter.

Internal tissue is solid. Insect galls may appear similar but contain chambers, exit holes, or insects. In recent weeks, the rust galls have started to form masses.

As spring temperatures increase and moisture fluctuates, the galls form distinct orange, gelatinous spore masses. These spores blow to and infect nearby susceptible deciduous hosts.

The most common control strategies for Gymnosporangium rusts in the landscape focus on protecting the deciduous

hosts. These recommendations start with utilizing resistant or immune species and varieties. Where feasible, infections to the broad-leaved host can be reduced by removing unwanted host trees within a ½ mile radius. Galls can also effectively be pruned out or hand-picked from small junipers during the fall and winter months. Fungicide sprays are effective at protecting susceptible trees from infection. Many of the fungicides used to protect deciduous hosts are also labeled for use on *Juniperus* spp. If fungicides are deemed necessary to protect the evergreen host, they should be applied at two-week intervals during July and August or as directed by specific product label recommendations.

(*Travis Cleveland*)

### **Bad Weeds and Bad Neighbors**

Plants can bring out the best and worst in people. This Mothers' Day, many will give or receive a bouquet of tulips, a hanging basket of begonias, or perhaps a shrub rose for the landscape. Unless Mom suffers from horrible allergies, these gifts will be appreciated. However, present to her a pot of skin-sticking catchweed bedstraw and she may tell you to go clean your room, even if you are over 30 years old. She will find a glass of dandelions to be acceptable only if you are a child still. It's funny how people are particular about their plants.

And they can be even pickier about their lawns. If it's not an acceptable turfgrass species, they sometimes go to great lengths to remove it from the lawn. White clover used to be included in seed mixes back in the 1950's. Today, herbicides are sought out to selectively remove the clover. Certainly, we have good

reasons for wanting to control our lawn weeds. A nice uniform appearance is more often desirable by homeowners and turf managers. Certain species can cause allergic reactions. In athletic fields, weeds can lead to injuries as they don't cushion falls like turfgrass does. On golf courses, weeds affect play. Weeds such as dandelions produce seeds that have been known to blow into neighboring lawns. If one neighbor is slacking in his weed control efforts, you can bet the surrounding neighbors who are working harder will notice. Of course, some are more tolerant than others and are fine with letting a few weeds grow. Honestly, learning to live with weeds is much easier than stressing out over eliminating every single last one of them. Finally, many simply like the color that dandelion, violets, henbit, and the like add to their lawns and landscapes.

Every year, I hear about struggles that neighbors have over weeds not being controlled or perhaps being controlled in the wrong manner. Last week a coworker said that her neighbor had sprayed something on her creeping Charlie (ground ivy) and now NOTHING is growing back. She only knew because she had caught her doing it. The neighbor said she was trying to help and that she didn't like how the weed was spreading over to her property. Therefore she took matters into her own hands, which is unacceptable and illegal. In Illinois, you must have a pesticide license to spray a pesticide on someone else's property. Even if a neighbor grants permission to spray, consider the liability if something goes wrong. It has happened before.

Recently, an old friend posted this picture on Facebook of his backyard. He

had this to say, "The yard is surrounded by dandelions. I may be fighting a losing battle." Then he added, "Sprayed again today. Made the kids make their "wishes" in the common ground. Wonder how much a dome is?" This made me giggle. Then another friend commiserated and suggested that they both sneak over in the middle of the night and spray a herbicide onto their neighbors' properties. I hate reading or hearing stuff like this. I know it happens though.

I encouraged my friend to have a friendly discussion with his neighbor. Invite him over to show him what you are up against. Talk about what efforts you are making and tell him why this is important to you. Maybe they will understand your situation and try to do better. Maybe they can't handle the work themselves. Volunteer your kids to help pull weeds. Your kids will LOVE you for it.

Some people have weedy lawns because they do not want to use conventional herbicides. That's fine. Raising the mowing height will also help to shade out dandelions and other broadleaf weeds such as plantains. For a "low risk" control of dandelion that works fairly well, check out the new chelated iron (a commonly used mineral) products that are available in many garden centers and labeled for weed control.

As a reminder, it is recommended that only registered and labeled pesticides be used. Carefully read and follow all label directions. It is unfortunate that the owner of the creeping Charlie infested lawn does not know what product or mixture was used. My guess is that it was Borax, a commonly used home remedy for this weed. However, if the rate is

too high, the boron in the Borax renders the soil useless for growing anything – a sad situation indeed. Borax is not a registered herbicide. It comes with no label directions for rates and safety precautions. Salt is another home remedy for killing weeds that has been used by bad neighbors in the night. Long lasting damage occurs. There are better ways. Talking to your neighbor is the first step.

Some neighbors might even be a little more passive aggressive. Just this morning, I read this post on Facebook. The author is a funny man and I'm sure he was kidding, but I could see this happening by some. "Had a busy morning blowing dandelions into the yards of people I don't like." Again, I laugh but know I can do little to prevent this act from occurring. (*Michelle Wiesbrook*)