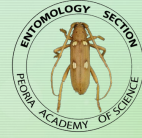


# Unusual, obscure, preposterous Illinois insects



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▶ *Chalcoela iphitalis* (Walker, 1859)  
[LEPIDOPTERA: Crambidae]



Commonly called the sooty-winged chalcoela is found throughout North America. Adults are typically encountered from May to August.

Larvae of this moth are parasitoids and consume the larvae of paper wasps. The moths often invade the wasp nest at night as the wasps don't see well in low light. Once the moth larvae have consumed wasp larvae and pupae, they spin their cocoons in now empty wasp nest cells.

▶ *Feniseca tarquinius* (Fabricius, 1793)  
[LEPIDOPTERA: Lycaenidae]



Harvester butterfly is the only carnivorous butterfly in North America. Larvae feed on various species of aphids. Relatively uncommon and is found from spring to fall in wooded areas near streams close to alders. Some caterpillar cover themselves with the remains of wooly aphids they have eaten. The caterpillars share part of the cuticular hydrocarbon profile of the aphids and seem to be protested from ants (such as *Camponotus* and *Formica*), which tend the aphids. Adults have a very short proboscis and feed on aphid honeydew, sap, and dung.

▶ ***Neoxabea bipunctata*** (De Geer, 1773)  
[ORTHOPTERA: Gryllidae]



Two spotted tree cricket (there are other species). Adult males chew holes in leaves, then place their wings near the holes to amplify the sound they produce. They rub their wings together to produce the chirps (scraper on one side and a file on the other).

To tell the temperature (approximately degree F) - count the number of chirps in 14 seconds and add 40. Dolbear's Law (published in 1897 by Amos Dolbear). If you want Celcius - count the number of chirps in 25 seconds, divide by 3 and add 4.

▸ *Arilus cristatus* (Linnaeus, 1763)  
[HEMIPTERA: Reduviidae]



Commonly known as the North American wheel bug, is one of the largest Hemiptera in North America (reaching lengths of up to 1.5 inches). Although males are a bit smaller, adults are recognized by their wheel shaped pronotal armor.

They prey on caterpillars and beetles. They pierce the exoskeleton with their beak, inject salivary enzymes which dissolve soft tissue. They then suck the fluids out.

Adults have two scent glands and emit a strong odor when disturbed. They do have a painful bite and prefer to remain hidden via camouflage.

Fun fact - this species produces an audible sound by rubbing the tip of its proboscis under a groove under its thorax. The purpose of this sound is unknown.

▸ *Belostoma flumineum* Say, 1832  
[HEMIPTERA: Belostomatidae]

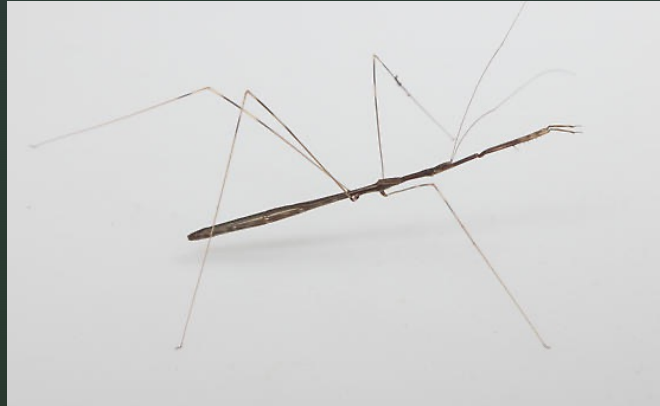


These giant water bugs are found in marshes and ponds throughout central Illinois. I have encountered them in places like Banner Marsh. They overwinter in the muddy bottoms. Adults and nymphs prey on snails, back swimmers, dragonfly nymphs, and water boatmen.

Adult females lay their eggs on the backs of males. It is the males job to protect and care for the ggs until they hatch in 1 - 2 weeks. They make certain the eggs receive sufficient oxygen and are protected from predators.



▶ *Emesaya brevipennis* (Say, 1832)  
HEMIPTERA: Reduviidae



Often found outside old buildings/ barns in central Illinois. Typically overwinter as eggs. There may be two generations per year in southern Illinois. This species has been reported to rob spiders of their prey and to also prey on spiders.

▶ *Thelia bimaculata* (Fabricius, 1794)  
[HEMIPTERA: Membracidae]



Locust treehopper lives entire life on locust trees. Avoids trees in deep woods (prefers trees with some sunshine). Sexual dimorphism (males more colorful, but smaller). Eggs laid in slits in bark near ground. Gradually move up the tree as mature. Takes about a month from egg to adult. Often protected by ants. *Aphelopus theliae* [Hymenoptera: Dryinidae], is a known parasite.



▶ *Triatoma sanguisuga* (LeConte, 1855)  
HEMIPTERA: Reduviidae



Eastern blood sucking conenose (also known as kissing bugs). Found throughout North America and I have collected several times at lights in central Illinois. Adults typically feed on blood of mammals (raccoons, rats, dogs, cats, humans), and tree frogs. Typically bites humans in face around mouth or eyes. Known vector for Chagas disease. If person rubs area near bite and the kissing bug feces is nearby, and contains the trypanosome, an infection occurs. However, this species does not defecate while feeding so the chances of Chagas disease infections are very rare in central Illinois.

▶ *Panorpa anomala* Carpenter, 1931  
[MECOPTERA: Panorpidae]



Common scorpionfly found in wooded areas in central Illinois. Adults feed on dead insects, nectar, and rotting fruit. Adults have been known to raid spider webs to steal the insect carcasses. A few instances have been observed where they prey on the spiders too. Larvae consume dead insects on the ground. The end of the male abdomen is enlarged (making it look like the stinger on a scorpion). Adults are typically seen in June and September. This order is most closely related to fleas (Siphonoptera) [sister clade].

▶ *Bittacus strigosus* Hagen, 1861  
[MECOPTERA: Bittacidae]



This scorpionfly is found throughout eastern North America. The common name is hanging scorpionfly. Males have a raptorial tarsus (which they use to capture insects). During mating, the male captures a prey insect and offers it to the female as a nuptial gift. The larger the insect, the more receptive the female is to mating. Adults superficially resemble crane flies.

▶ *Alaus oculatus* (Linnaeus, 1758)  
[COLEOPTERA: Elateridae]



The eyed elater beetle is found in central Illinois during summer months. Larvae (called wireworms) are unique among the click beetles because they are predaceous. They eat other beetle larvae (mostly Cerambycidae) also found in rotting wood. One caged larvae was observed devouring more than 200 Cerambycidae larvae. Adults feed mostly on nectar and plant juices.

▶ *Brachinus fumans* (Fabricius, 1781)  
[COLEOPTERA: Carabidae]



This is the most common bombardier beetle species in central Illinois. I have observed this in woodlands as well as grasslands.

Adults of this species have a unique defense mechanism. They have two glands near the tip of their abdomen. One gland produces hydrogen peroxide; the other produces hydroquinone. The two chemicals are mixed in what is evocatively called the "explosion chamber" and have two enzymes, catalase and peroxidase, added to them. These enzymes speed up the reaction to a level where the beetle can make an audible "pop" as it ejects the now-boiling chemical stream at whatever unlucky predator happened to disturb it. Added to this, the beetle can rotate the end of its abdomen 270 degrees in any direction, which allows for an impressive "firing range."

▶ *Melanactes piceus* (DeGeer, 1774)  
[COLEOPTERA: Elateridae]



Commonly called the black patent leather click beetle. The adults look like they just left shoeshine stand. Adults are most commonly encountered in moist bottomland forests in central Illinois.

Click beetles get their name from their propensity to — you guessed it — click. If you touch a click beetle, it will often roll over onto its back and pretend to be dead. When the moment of danger has passed, the click beetle will bend its head and thorax forward, which latches a little spine into a notch on the beetle's abdomen. When the beetle unlatches the spine, its head and thorax fly backward with enough force to produce an audible click and send the beetle hurtling into the air. If you're stuck on your back, it's a great way to right yourself!



*Meloe impressus* Kirby, 1837  
[COLEOPTERA: Meloidae]



This blister beetle is encountered on vegetation in central Illinois. The common name is oil beetle because it releases droplets of blood (haemolymph) from its joints when disturbed. These droplets contain a blistering agent (cantharadin). This can also cause swelling of joints and gastrointestinal distress when swallowed by mammals. Larvae (called triungulins) feed on grasshopper eggs and bees (they attach to the adult female and drop off while she is laying her eggs). The larvae then become more grub like and feast on the developing insect. Adults feed on plants.

▶ *Odontotaenius disjunctus* (Illiger, 1800)  
[COLEOPTERA: Passalidae]



The common name for this species is “Bess Beetle” (it is also sometimes called the patent leather beetle). These beetles are most often encountered in rotting wood. The larval stage may last as short as three months; the entire life span of this species may be a year (sometimes longer).

They are semi-social insects that live in colonies in rotting wood and co-parent their young. Larvae eat wood pre-chewed by adults (and may also consume adult feces). Adults and larvae stridulate (make a sound by scraping body parts together to communicate).

▸ **Scaphinotus elevatus** (Fabricius, 1787)  
[COLEOPTERA: Carabidae]



Commonly called the eastern snail eater, adults of this species will also eat slugs. The narrow head allows the adult to eat every last morsel from the snail shell. Adults are most active at night and are flightless. Larvae feed on soil arthropods.

▸ *Dicromantispa sayi* (Banks, 1897)  
[NEUROPTERA: Mantispidae]



This species is sometimes found along forest edges and prairies in central Illinois (where spiders are present). While adults feed on small flying insects; the larvae hunt for any spider species egg. They appear to prefer wolf and hunting spiders (Lycosidae)

▸ *Stigmatomma pallipes* (Haldeman, 1844)  
[HYMENOPTERA: Formicidae]



Although not regularly encountered, this ant is found in central Illinois. Adults tend to collect centipedes (mostly geophilomorph centipedes) as food for the larvae. Prey is paralyzed with a powerful sting. Nests are often found in decaying wood (usually in contact with soil) in forested areas.

▶ *Proceratium pergandei* (Emery, 1895)  
[HYMENOPTERA: Formicidae]



This ant nests in rotting wood which is touching the soil (may also nest underground). Food preferences are thought to be spider eggs and spiders; possibly other ants. Not that much is known, but it can often be found when sifting dead leaves on the forest floor.



▶ *Strumigenys louisianae* Roger, 1863  
[HYMENOPTERA: Formicidae]



This trap jaw ant is sometimes encountered sifting leaves in forested areas in central Illinois. Although adults move very slowly, their main food appears to be springtails (Collembola). Mandibles are kept open at almost a 180° angle while the ant is stalking its prey. Trigger hairs act as range finders and detectors. When the prey is encountered, the jaws snap shut rapidly, impaling the prey.

▸ *Chrysopilus thoracicus* (Fabricius, 1805)  
[DIPTERA: Rhagionidae]



The golden backed snipe fly is found in wooded areas in central Illinois. Personally, I like the name. After all, who doesn't love a good snipe hunt?

The genus name means "golden hair." Little is actually known about the life cycle of this insect. Maggots are found in the soil, but it is not certain what they eat. Adults may also be predatory, but have rarely been observed eating anything.

▸ *Diogmites neoternatus* (Bromley, 1951)  
[DIPTERA: Asilidae]



Hanging thief fly (so named due to the adult habit of hanging from one or both of its legs while consuming prey). Adults are often observed in the understory of woodlands or along field edges. It is thought that larvae feed on scarab beetle larvae. Individuals live between 1 and 3 years.

▀ *Gasterophilus intestinalis* De Geer, 1776  
DIPTERA: Oestridae



The horse bot fly is found worldwide (including central Illinois). Adult females resemble bumblebees (with a distinct ovipositor at the end of their abdomen). She cements individual eggs on the forelimbs and shoulders of horses, donkeys, and mules. Eggs are locked into the mouth. First instar larvae burrow into the tongue tissue. Second instar larvae are swallowed and remain in the stomach for 8-10 months. Third instar larvae pass through the gut and are deposited with feces. They pupate in the soil for 3-5 weeks. Adults are active only a short time and lack functional mouthparts.

▶ *Mydas clavatus* (Drury, 1773)  
[DIPTERA: Mydidae]



Adults are one of the largest flies encountered in central Illinois. Larvae live in soil or rotting wood and eat the larvae of scarab beetles (mostly June beetles). Adults feed on nectar. Adults seem to be Batesian mimics of certain spider wasps such as *Anopilus*.

▶ *Pyrgota undata* Wiedemann, 1830  
[DIPTERA: Pyrgotidae]



The waved light fly. Gets its common name from the waved edge on the forewing. Members of this family are one of two Dipteran families which lack ocelli as adults. Females pursue scarab beetles in flight and lay an egg under the elytra (where the beetle can't reach it). Egg hatches and larvae burrows into beetle. Takes roughly 2 weeks to kill the beetle. Pupation happens in the carcass and the adult emerges the following spring. Adults are mostly nocturnal and attracted to artificial lights.



## Just a few Illinois insects

### Glimpses of their biology

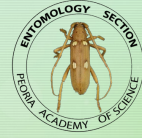
- 9 orders
- 19 families
- 25 species
- Out of well over 30,000 species of insects known from Illinois

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