



The glowworm



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First camp is behind us and we are frantically getting prepared for the second. It's going to be great if we can work it in between the rain showers. Dr. John reported that we collected 1080 insects from 14 Orders during first camp. Those are the ones pinned and placed in boxes. I'm sure there are even more that weren't processed before finish of camp. Most of the campers learned a lesson or two during the week and all of us learned that butterflies do fly in the rain. It was a fun week!

We've also finished the first round of contests for 2004 in Mississippi. Some of the Arkansas, Louisiana and Tennessee 4-Hers still have some of those activities to anticipate. 4-Hers should endeavor to get collections ready and show them at every opportunity. It helps to let folks know what you are about. The Mississippi 4-H Linnaean Superbowl is in Jackson on July 17 at the Equestrian Center. There are 8 teams preparing for the contest and we look forward to a great tournament on Saturday. Check our 4-H Entomology WEB page for all the winners.

We are still eagerly awaiting the National Bee Essay Contest results and a new topic for 2005. Our Mississippi winner this year was Nicole Boles from Kosciusko. We paid prize money for the top 10 essayists in Mississippi. It's good practice!

Featured Insect

Order – Neuroptera Family – Mantispidae common name The mantispid flies



- Mantid like in appearance, hence the common names and family name Mantispidae.
- Raptorial front legs originate on anterior portion of the elongate prothorax.
- Membranous wings with venation typical of the Neuroptera.
- Some adults are colored like green lacewings (image above), while others mimic vespid wasps.
- Size -- up to 25 mm.

- Larvae undergo hypermetamorphosis, being compodeiform in the first instar and scarabaeiform in later instars. Some species feed on the larvae of wasps and bees while other species feed on spider eggs.
- Adults are general predators. Most are collected from sweeping vegetation in bushy and weedy fields. Some nocturnal species are collected at blacklights.

There have been a number of these critters collected this summer and a number of 4-Hers have asked about them. While not super abundant, they are quite often seen on collecting trips, especially when black lights are used. Another critter which we see during the summer which is intriguing to many is the antlion. These critters also belong to the Order Neuroptera and the larvae is the reason for the name antlion. They have the habit of digging small pits in loose dry soil and using them as traps for unwary insects which happen by. These pit-digging antlions are called "doodlebugs" in the United States because of the designs they make in the sand. As a doodlebug seeks an ideal location to dig its pit, it leaves meandering trails that resemble the random "doodles" of a preoccupied artist. When it finally finds the right place to dig, the doodlebug "draws" a series of concentric spirals, each deeper than the last, until the pit is excavated.



Adult antlions from the Family Myrmeleontidae resemble dragonflies or damselflies and, like damselflies, they are feeble flyers. Antlions are easily distinguished from Odonata by their longer, prominent, clubbed antennae and different type of wing venation. Compared to other Neuroptera (e.g., lacewings), an antlion's antennae are shorter. The adult is seldom seen in the wild because it is active only in the evening; during the day it rests, motionless, well-camouflaged by its transparent wings and dusk body.



For adults the average life span is 20 to 25 days, but some adults have lived for more than 45 days. Ironically, because they emerge and lay eggs in the sand near active larvae pits, adults may occasionally be captured and eaten by their younger relatives.

The antlion larva moves deeper into the sand to build its cocoon. It extends its heavy abdomen lengthwise and from it, extrudes white silken threads which form a hollow sphere held in place by the surrounding sand. (Some of the larva's stored waste matter is used to produce this silk.) Inside this hollow sphere, it undergoes metamorphosis into a pupa. Near the end of the pupal stage, the antlion eliminates the rest of its accumulated feces in the form of a pellet called a meconium. After a pupation period of one month, a tiny-winged imago (adult) emerges from the cocoon, leaving a small hatch at the opening, and climbs to the surface.

If you want to find an antlion, check dusty areas underneath houses, sheds and barns where there is an accumulation of dry loose soil. Many people mistake the antlion pits for places where water has dripped, but when a small amount of soil is dribbled into the pit the doodlebug will flip it back out. They can be captured by blowing gently into the pit to expose the critter in his lair.

Happy Buggin'

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