

**INSIDE GRUNDY COUNTY**  
**By Bill Arndorfer**  
**Grundy County Extension Education Director**  
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My kids are captivated by the flashing glow of the lightning bugs that have been visible lately. They get busy chasing them in an attempt to capture them so they can “study” them up close. It is a great joy to watch their faces light up as they catch their trophies. Because of their natural curiosity, my children ask me a lot of questions about lightning bugs and how they make light. I thought you might be interested in learning more about them as well. The following news release was written by Donald Lewis, Extension Entomologist at Iowa State University.

"Lightning bug" and "firefly" are two different names for the same thing. They are beetles in a specific family called the Lampyridae. There are 124 species of fireflies in the United States and Canada, mostly in the East and South. Like all beetles, the fireflies have a complete life cycle consisting of four stages: egg, larva, pupa and adult.

The adults we see now live for one to two weeks. They may feed on nectar and pollen or other insects, but most of the time is spent in the process of reproduction. The flashing lights are an integral part of the process. The lights help the males and females of the different species find and recognize each other.

After mating, the adult females lay their eggs in moist places such as in tall grass and under mulch and leaf litter. The eggs will hatch this summer. The larvae live until next summer when they complete their transformation to the adult stage.

Lightning bug larvae are found in moist areas such as under the loose bark of dead trees, under mulch and debris and within moist, loose soil. The elongate, worm-like larvae are flattened and the segments on the top side of the back are expanded into shield-like plates that protrude slightly to the sides and to the back, overlapping the next segment. Larvae have six legs and are usually brown. The full-grown length is about 3/4 inch. The larvae possess light organs similar to those of the adults, and their luminescence often attracts the attention of gardeners. Lightning bug larvae are active at night and are predacious; they feed on small insects, worms, snails and slugs.

Lightning bug larvae and adults produce light by an interesting reaction of chemicals and enzymes. The light flashing is regulated according to a genetically fixed pattern and is used by the adults for courtship. Each species has a distinctive pattern of flashes, varying in flash number, duration, interval between flashes, motion accomplished during the flash, height of the flash above ground and so forth. The males and females recognize their own species' flash and get together as a result of the illumination. The light-producing organs are on the underside of the last two segments of the abdomen.

Now you know how to answer lightning bug questions from “inquiring minds”. For more information, call the Grundy Office of ISU Extension at 319-824-6979.