

Fireflies/Lightning Bugs

Fireflies are beetles which have abdomens that can flash light to attract mates. The males flash a certain pattern to the females within their species. The females that are close to the male may flash back from their post on vegetation where they rest during the day. Light flash exchange may go on for several flashing cycles before males land to seek the responding female. The light that they produce is also used to caution predators that the firefly is unpalatable.

Firefly adults feed only sparsely on nectar, living but a few to several days. The adults are between 0.2 to 0.8 inches long. Their head is mostly hidden by an oversized pronotum. The adult firefly has a smooth, narrow, brownish –black body with long wings that hide the abdomen from above. In some firefly species, the female lacks wings. Depending upon sex and species, 1 or more lower abdominal segments produce light; they appear as opaque patches during daylight hours.

After summer evening matings, females will lay about 50 bioluminescent eggs each in the soil. In about 3 weeks the eggs develop into glowing larva (glowworms). The wingless larva lives for one to two years under shelter of bark or on the ground. The larva form is predacious. They have special mouthparts that can insert a chemical to subdue the prey so they can eat it. In this stage they are beneficial insects because they feed on snails, slugs, decomposing animals and natural debris.

Habitat & Range

Firefly adults are active at night and can be found around small bodies of water, in decaying wood and debris. The fireflies hide on shrubby overhanging trees and high grass throughout the day. There are not any glowing firefly species in Kansas but there is heavy biodiversity of these insects in Tropical Asia, Central and South America.

Fireflies & Advances in Technology

Fireflies create a cold light that is more efficient than ordinary light bulbs; such sources of light lose most of their energy as heat. Firefly chemistry has inspired inventors to develop new types of flares and flashlights. Additionally, chemicals from the firefly are used in studies for cancer, multiple sclerosis, cystic

fibrosis, and heart disease. The chemical that causes the bioluminescence in fireflies has yet to be duplicated in the lab.

Attracting Fireflies

Having a wooded area may help, but there are other considerations in attracting fireflies. By eliminating or decreasing the amount of chemicals used in your yard, you will be making a more favorable habitat for fireflies. The outdoor lights that you use at night may interrupt the fireflies' signals to each other. These signals for some species are only at specific hours of the night. Some species may not flash at all if there is bright light.



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