

Pennsylvania



"The Firefly"

Official insect of the Commonwealth of Pennsylvania

Firefly *Photuris pennsylvanica* Adopted: April 10, 1974

Retrieved from the website:

http://www.netstate.com/states/symb/insects/pa_firefly.htm

The following information was excerpted from, *The Pennsylvania Statutes*, Title 71, Chapter 6, Section 1010.

Title 71 P.S. State Government
I. The Administrative Codes and Related Provisions
Chapter 6. Provisions Similar or Closely Related to Provisions of the Administrative Code
Secretary and Department of Internal Affairs
State Emblems

1010. State insect

The firefly (Lampyridae Coleoptera) of the species *Photuris pennsylvanica* De Geer is hereby selected, designated and adopted as the official insect of the Commonwealth of Pennsylvania.

CREDIT(S)
1974, April 10, P.L. 247, No. 59, § 1. As amended 1988, Dec. 5, P.L. 1101, No. 130, § 1, effective in 60 days.

HISTORICAL AND STATUTORY NOTES

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The 1988 amendment substituted "(Lampyridae Coleoptera)" of the species *Photuris pennsylvanica* De Geer" for "(Lampyridae)".

Title of Act:

An Act selecting, designating and adopting the firefly as the official insect of the Commonwealth of Pennsylvania. 1974, April 10, P.L. 247, No. 59.

71 P.S. § 1010, PA ST 71 P.S. § 1010

The Pennsylvania Firefly is one of many species of fireflies in our area. Fireflies are not flies, but beetles.

Pennsylvania Fireflies are about 1/2 inch long. Their bodies are long and flat. They have large eyes and long thread-like antennae.

Pennsylvania Fireflies have a dull yellowish head. Behind the head is a black spot with a red ring around it.

The wings of this firefly are brown or gray, with yellow bands along the sides and a pale stripe down the middle.

Pennsylvania Fireflies are found in meadows and open woods. They are usually first seen in early Summer.

Males and females attract each other with a flashing green light in their abdomens. The females are wingless and flash from the ground. Males fly about trying to locate them.

After mating, female fireflies lay eggs, one at a time, in rotting wood or dead leaves on the ground. Larvae hatch in the Spring.

After hatching, larvae spend a lot of time eating. They eat slugs, snails, earthworms, aphids, mites and soft-bodied insects. They also eat other species of fireflies. The larva bites its prey and injects it with saliva which turns all of its insides into liquid. Then the firefly larva sucks out the liquid.

The larvae will continue to eat and grow all summer. In the fall, they will dig below the soil surface and wait until the following Spring. At this time, the larvae will become pupae (resting stage). New adults will hatch in early Summer. Pennsylvania Fireflies die after mating.

Eggs and larvae also glow, and firefly larvae are sometimes called "glowworms."

Male fireflies flash every two to three seconds while in flight.

Larvae can detect the slime trail of a slug or snail and track it down.

Adult fireflies will sometimes drink flower nectar for extra energy.

Retrieved from the website:

<http://animals.nationalgeographic.com/animals/bugs/firefly.html>

Fireflies are familiar, but few realize that these insects are actually beetles, nocturnal members of the family *Lampyridae*. Most fireflies are winged, which distinguishes them from other luminescent insects of the same family, commonly known as glowworms.

There are about 2,000 firefly species. These insects live in a variety of warm environments, as well as in more temperate regions, and are a familiar sight on summer evenings. Fireflies love moisture and often live in humid regions of Asia and the Americas. In drier areas, they are found around wet or damp areas that retain moisture.

Everyone knows how fireflies got their name, but many people don't know how the insects produce their signature glow. Fireflies have dedicated light organs that are located under their abdomens. The insects take in oxygen and, inside special cells, combine it with a substance called luciferin to produce light with almost no heat.

Firefly light is usually intermittent, and flashes in patterns that are unique to each species. Each blinking pattern is an optical signal that helps fireflies find potential mates. Scientists are not sure how the insects regulate this process to turn their lights on and off.

Firefly light may also serve as a defense mechanism that flashes a clear warning of the insect's unappetizing taste. The fact that even larvae are luminescent lends support to this theory.

Females deposit their eggs in the ground, which is where larvae develop to adulthood. Underground larvae feed on worms and slugs by injecting them with a numbing fluid.

Adults eschew such prey and typically feed on nectar or pollen, though some adults do not eat at all.

Firefly or Lightning Bug

Photinus pyralis

Retrieved from the website:

<http://www.enchantedlearning.com/subjects/insects/beetles/Fireflyprintout.shtml>

The Pyralis firefly (also known as the lightning bug) is a common firefly in North America. This partly nocturnal, luminescent beetle is the most common firefly in the USA.

The Firefly's Glow: At night, the very end (the last abdominal segment) of the firefly glows a bright yellow-green color. The firefly can control this glowing effect. The

brightness of a single firefly is 1/40 of a candle. Fireflies use their glow to attract other fireflies. Males flash about every five seconds; females flash about every two seconds. This firefly is harvested by the biochemical industry for the organic compounds luciferin (which is the chemical the firefly uses for its bioluminescence).

Anatomy: This flying insect is about 0.75 inch (2 cm) long. It is mostly black, with two red spots on the head cover; the wing covers and head covers are lined in yellow. Like all insects, it has a hard exoskeleton, six jointed legs, two antennae, compound eyes, and a body divided into three parts (the head, thorax, and abdomen).

Diet: Both the adults and the larvae are **carnivores** (meat-eaters). They eat other insects (including other fireflies), insect larvae, and snails.

Classification: Order Coleoptera, Family Lampyridae, Genus Photinus, Species *P. pyralis*.

Retrieved from the website:

http://en.wikipedia.org/wiki/Photuris_pennsylvanica

State insect

In 1974, *P. pennsylvanica* was designated the [state insect](#) of [Pennsylvania](#).^[2] Its designation as such started with a group of [Highland Park Elementary School students](#) in [Upper Darby, Pennsylvania](#).^[6] Fireflies are abundant in Pennsylvania and are enjoyed for their ability to "transform a midsummer night into a [fairyland](#) of tiny, brilliant twinkling lights"^[2] rather than being considered [pests](#).^[6] Discovering there was a species of firefly with the [taxon](#) *pennsylvanica*, and no other [U.S. state](#) had adopted a firefly as its state insect, the students began their campaign to have *P. pennsylvanica* made Pennsylvania's state insect.^{[2][6]}

With advice and support from state [legislators](#), the students began a campaign that included letter writing, the circulation of petitions, and the distribution of [bumper stickers](#). On April 10, 1974, [Governor Milton J. Shapp](#) signed their bill, making the Pennsylvania firefly their state's official insect. A few years later, Highland Park Elementary School was presented with a [bronze plaque](#) in honor of the students' achievement.^[6]

According to one source,^[citation needed] Pennsylvanians best know fireflies as "lightning bugs", and may have confused "firefly" with "[black fly](#)" when that state was plagued by them in 1988.^[5] This might be why that year the legislature again confirmed the Pennsylvania firefly's official status and specified it by [scientific name](#) so that:

The Firefly is the state insect, as enacted by the General Assembly on April 10, 1974. Act 130 of December 5, 1988, designated the particular species of firefly, "*Poturis Pensylvanica* De Geer" as the official state insect.^{[\[7\]](#)}