

# Official insect of the Commonwealth of Pennsylvania

**Firefly *Photuris pensylvanica* Adopted: April 10, 1974**

Firefly: Official insect of the Commonwealth of Pennsylvania  
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## Pennsylvania Law

The following information was excerpted from the *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 pensylvanica* 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

1990 Main Volume

The 1988 amendment substituted "(Lampyridae Coleoptera)" of the species *Photuris pensylvanica* 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

## Sources...

Thomson Reuters: Westlaw *The Pennsylvania Statutes*, <<http://government.westlaw.com/linkedslce/default.asp?SP=pac-1000>> (Accessed August 10, 2010)  
Shearer, Benjamin F. and Barbara S. *State Names, Seals, Flags and Symbols: A Historical Guide Third Edition, Revised and Expanded*. Westport, Conn: Greenwood Press, 3 Sub edition, 2001.

## Pennsylvania State Insect

### Firefly



*(Photinus Pyralis)*

**Adopted on April 10, 1974.**

Pennsylvania lacked a state insect at the time, so the students entered their selection of an insect to the General Assembly. The **firefly**, (*Photinus Pyralis*), was formally designated by an enactment from the Pennsylvania General Assembly on April 10, 1974 as Pennsylvania Official State Insect.

Pennsylvanians know fireflies as "lightening bugs" that brighten a still summer night. That may be why some Pennsylvania citizens heard the word "firefly" and confused it with "blackfly," a pest that plagued the Commonwealth in 1988. To clarify the identity of the State Insect, the General Assembly rewrote the law later that year singling out the firefly by its Latin name - "Poturis Pensylvanica De Geer."

### Pennsylvania State Insect: Firefly



These interesting insects really aren't flies at all, but rather beetles from the family Lampyridae. Lampyridae is of Greek origin and is from the same root which gave us the word lamp. These luminescent beetles are the very envy of physicists around the world, because of their ability to produce "cold light". Light production in these creatures is very complex, and still not completely understood.

The firefly, or lightning bug beetle, is the popular name of the luminescent insects of the Lampyridae family. In fact, there are about 136 different species of fireflies illuminating earth's summer nights. In Tennessee, *Photinus Pyralis* is the most familiar species. Their extraordinary light is generated in special organs and it is most often white, yellow, orange, greenish blue or reddish. Rather small, they are blackish, brown, yellow or reddish in color. In certain species the females remain in the larvae state and are called glowworms. Most fireflies produce short rhythmic flashes which provide a signaling system to bring the sexes together and also a protective mechanism to repel predators.

## Characteristics of the Pennsylvania Firefly

### ***The Firefly's Glow:***

At night, the very end (the last abdominal segment) of the firefly glows a bright yellow-green color. The signal of this firefly is recognizable because it always rises upward as it flashes its bright, yellow light. This rising pattern is formed because *Photinus pyralis* is quite simple and is based on the time that elapses between its burst of light and the female's responses. The brightness of a single firefly is 1/40 of a candle. Males flash about every five seconds; females flash about every two seconds. The adult fireflies signal each other with their lights and mate. The female's eggs are laid a few days after mating, on or slightly under soil. The eggs hatch in 4 weeks. The larvae, once hatched, begin to feed until fall. They burrow underground and overwinter. Fireflies overwinter as larvae buried in the soil and emerge in the spring to feed. In summer, they pupate for about 2 weeks within a small earthen cell before emerging as adults.

The light given off by fireflies during their abdominal flashes is called bioluminescence. It happens when oxygen and the organic compound luciferin react together in the presence of the enzyme, luciferase. This creates light. Although other insects can produce light, fireflies are the only insects that can flash their light on and off in distinct signals. Even the eggs and larvae of some firefly species glow. That's where the name "glow worm" comes from.



### ***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:***

Fireflies are carnivorous. They eat other insects, small animals in the soil, and snails.

## Pennsylvania Law

The law designating the firefly as the official Pennsylvania state insect is found in the Purdon's Pennsylvania Statutes and Consolidated Statutes, Title 71 (P.S. State Government) Part 1 (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 Section 1006

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### Taxonomic Hierarchy: Firefly

**Kingdom:** Animalia (Animals)

**Phylum:** Arthropoda (Arthropods)

**Subphylum:** Hexapoda (Hexapods)

**Class:** Insecta (Insects)

**Order:** Coleoptera (Beetles)

**Suborder:** Polyphaga (Water, Rove, Scarab, Long-horned, Leaf and Snout Beetles)

**No Taxon:** (Series Elateriformia)

**Superfamily:** Elateroidea (Click, Firefly and Soldier Beetles)

**Family:** Lampyridae (Fireflies)

**Subfamily:** Lampyrinae

**Tribe:** Photinini

**Genus:** Photinus

**Species:** pyralis (*Photinus pyralis*)