

# State of the Fireflies of the United States and Canada:



Dot-Dash Firefly, Pennsylvania Firefly

## THREATENED & NEAR THREATENED SPECIES PROFILE

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This species profile was compiled based on information gathered from the IUCN Red List assessments and augmented with new information that has become available since its publication. Full Red List assessments (including range maps) are available at [www.iucnredlist.org/](http://www.iucnredlist.org/).

### KEY TO SPECIES PROFILE

#### Conservation Status

IUCN—Red List ranking

NS—NatureServe Global (G), National (N), and Subnational (S) Conservation Status Rank:

GX   NX   SX	Not located despite intensive searches and virtually no likelihood of rediscovery
GH   NH   SH	Known from only historical occurrences but still some hope of rediscovery
G1   N1   S1	At very high risk of extinction or collapse
G2   N2   S2	At high risk of extinction or collapse
G3   N3   S3	At moderate risk of extinction or collapse
G4   N4   S4	At fairly low risk of extinction or collapse
G5   N5   S5	At very low risk or extinction or collapse
GNA   NNA   SNA	A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities
GNR   NNR   SNR	Global rank not yet assessed
GU   NU   SU	Currently unrankable due to lack of information or due to substantially conflicting information about status or trends
G#G#   N#N#   S#S#	Numeric range rank (e.g., G2G3, G1G3) is used to indicate uncertainty about the exact status of a taxon or ecosystem type

SGCN—Species of Greatest Conservation Need, legal designation by state

US ESA—Species' legal status under the US Endangered Species Act

#### Male Size Ranges

The documented size range for males of each species has been provided in the profiles as follows:

9–10 mm



With the smallest size in grey ( ) superimposed over the largest size in green ( ). When printed at 100% scale, the bars match the lengths provided.

#### Habitat Threats

Pollution	Agriculture	Habitat Loss, Degradation, Fragmentation	Climate & Severe Weather
Excess light	Crop systems	Habitat loss	Climate change
Energy & mining	Livestock & pasture	Commercial & development	Severe storms & flooding
Pesticides & run-off		Trampling / crushing	Rising temperatures
		Urban & residential development	Drought
		Invasive species	Sea level rise
		Water quality	

# *Photuris pensylvanica*

## Dot-Dash Firefly, Pennsylvania Firefly



< VULNERABLE >

VU



Ideal habitat for the dot-dash firefly in Allegheny National Forest, where the species has been recorded in the past [above]; illustration of the often-misidentified species [below]. (Photo: Jim Mullhaupt / Flickr [above]; Jim White [below and on cover].)

### Conservation Status

- » IUCN: VU
- » SGCN: Delaware
- » US ESA: Not listed
- » NS: G3?; S1S2 (DE), SNA (NY, WV), SNR (DC, MD, NJ, PA, RI), SU (VT)

### Distribution

USA—Delaware, Maryland, New Jersey, New York, Pennsylvania



8–11 mm

### Description

The dot-dash firefly is a habitat specialist associated with high quality tidal and non-tidal freshwater wetlands, such as shrub and forest acidic seepage swamps, emergent marshes, fens, fresh-water tide marshes, and floodplains.

The main threat to this species is habitat degradation due to sea-level rise, development, and invasion of the non-native plant, common reed (*Phragmites australis*), which can overtake this species' wetland habitats and make them uninhabitable for the firefly.

### Flash Pattern & Activity Period

Adults are active in June and July an hour after sunset until midnight. Males emit a characteristic greenish dot-dash flash pattern, comprised of a quick flash followed by a long flash that lasts up to three seconds.

	0	1	2	3	4	5	6	Seconds
♂	[Green bar from 0 to 3]							→ The dot-dash flash is repeated at seven- to eight-second intervals
♀	[Diagonal lines from 0 to 7]							→ Female response unknown*

\* Due to the aggressive mimicry utilized by some "femme fatale" firefly species—some of which have been documented using multiple flash-pattern responses—it has been difficult to determine which flash-patterns are used to attract mates or, alternately, to lure in unsuspecting prey males from other firefly species.