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On the firefly (Coleoptera: Lampyridae) species  
of Carl Linnaeus

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## On the firefly (Coleoptera: Lampyridae) species of Carl Linnaeus

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**Abstract.** The firefly species described by Carl Linnaeus in 1758 and 1767 (Coleoptera: Lampyridae) were checked to determine the actual dates of publication. Nine out of twelve species were originally described in 1758 and not in 1767 as published in the majority of firefly literature. *Lampyrus hespera* Linnaeus, 1767 as a **junior synonym** of *Aspisoma lampyrus* (Linnaeus, 1758) is established.

**Key words.** *Cantharis*, nomenclature, dates of publication, Systema Naturae.

**Resumen.** Se revisaron las especies de luciérnagas descritas por Carl Linnaeus in 1758 y 1767 (Coleoptera: Lampyridae) para la determinación de fechas de publicación. Nueve de las doce especies fueron originalmente descritas en 1758 y no en 1767 como aparece publicado en la mayoría de la literatura de luciérnagas. Se establece *Lampyrus hespera* Linnaeus, 1767 como **sinónimo** de *Aspisoma lampyrus* (Linnaeus, 1758).

**Palabras clave.** *Cantharis*, nomenclatura, fechas de publicación, Systema Naturae.

**ZooBank registration.** urn:lsid:zoobank.org:pub:C04B88B3-DDBF-4878-B43E-71642AFC8AAA

### Introduction

Carl Linnaeus, the father of modern taxonomy and binomial nomenclature, described over 12,000 species of animals and plants in the 10th edition of his monumental work *Systema Naturae* (Linnaeus 1758). Nine of these species were fireflies which were described in the genus *Cantharis* Linnaeus. After Geoffroy (1762) described the genus *Lampyrus*, Linnaeus (1767) moved the nine species into *Lampyrus* and also described three new species for a total of 12 species of fireflies described by him. In over 90% of the published taxonomic literature on fireflies, the wrong date of description (1767) is used for the species described in 1758. *Lampyrus hespera* Linnaeus, 1767 was found to be a junior synonym of *Aspisoma lampyrus* (Linnaeus, 1758), which is here established.

This paper is a continuation of efforts to deal with nomenclatural mistakes (Keller and Branham 2018a, b, c; Ballantyne and Keller 2021; Keller 2021; Keller and Ballantyne 2021) continued throughout the last 264 years of firefly literature (e.g. Olivier 1910; McDermott 1966; Ballantyne et al. 2019; Keller and Branham 2021; Pérez-Hernández et al. 2022) and current online databases such as the Integrated Taxonomic Information System ([www.its.gov](http://www.its.gov)). In this paper I evaluate every species described by Linnaeus and provide the correct date of description and additional remarks if necessary.

### Materials and Methods

Linnaeus' 1758 and 1767 publications were compared to establish the correct date of publication for the firefly species he described. Additionally, other important firefly literature was examined to establish the most used dates of publication for any of the Linnaeus firefly species. Correct citations are written in bold.

## Results

### Lampyridae Rafinesque

#### Luciolinae Lacordaire

#### Luciolini Lacordaire

### *Abscondita* Ballantyne, Lambkin, and Fu

#### *Abscondita chinensis* (Linnaeus, 1758)

*Cantharis chinensis* Linnaeus 1758: 401.

**Remarks.** This species was published in Linnaeus (1758) in the genus *Cantharis* and moved to *Lampyrus* by Linnaeus (1767: 645). This species was not newly described in 1767 as published in the vast majority of firefly literature.

### *Luciola* Laporte

#### *Luciola italica* (Linnaeus, 1758)

*Cantharis italica* Linnaeus 1758: 401.

**Remarks.** This species was published in Linnaeus (1758) in the genus *Cantharis* and moved to *Lampyrus* by Linnaeus (1767: 645). This species was not newly described in 1767 as published in the vast majority of firefly literature.

### Lamprohizinae Kazantsev

#### Lamprohizini Kazantsev

### *Lamprohiza* Motschulsky

#### *Lamprohiza splendidula* (Linnaeus, 1767)

*Lampyrus splendidula* Linnaeus 1767: 644.

**Remarks.** One of three species described by Linnaeus (1767).

### Lampyrinae Rafinesque

#### Cratomorphini Green

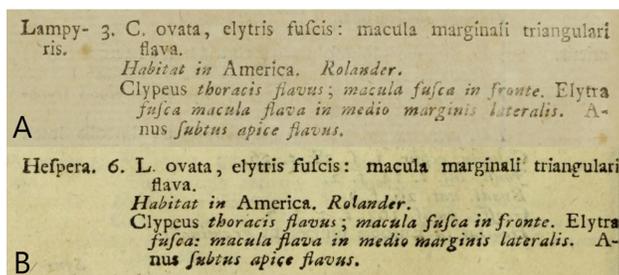
### *Aspisoma* Laporte

#### *Aspisoma lampyris* (Linnaeus, 1758)

*Cantharis lampyris* Linnaeus 1758: 400.

*Lampyrus hespera* Linnaeus 1767: 644. **New synonym.**

**Remarks.** This species was erroneously referred to as *Aspisoma hesperum* Linnaeus, 1767, but the valid name is *Aspisoma lampyris* (Linnaeus, 1758). In fact, *Lampyrus hespera* Linnaeus, 1767 is a junior synonym of *A. lampyris* (Linnaeus, 1758) as both share the same exact description (Fig. 1).



**Figure 1.** Comparison of Linnaeus' descriptions. **A)** Description of *Cantharis lampyris* Linnaeus, 1758. **B)** Description of *Lampyris hespera* Linnaeus, 1767 **new synonym.**

### ***Aspisma ignitum* (Linnaeus, 1758)**

*Cantharis ignita* Linnaeus 1758: 400.

**Remarks.** This species was published in Linnaeus (1758) in the genus *Cantharis* and moved to *Lampyris* by Linnaeus (1767: 645). This species was not newly described in 1767 as published in the vast majority of firefly literature.

## **Lampyrini Rafinesque**

### ***Lampyris (Lampyris) Geoffroy***

#### ***Lampyris noctiluca* (Linnaeus, 1758)**

*Cantharis noctiluca* Linnaeus 1758: 400.

**Remarks.** This species was published in Linnaeus (1758) in the genus *Cantharis* and moved to *Lampyris* by Linnaeus (1767: 643). This species was not newly described in 1767 as published in the vast majority of firefly literature.

## ***Pelania* Mulsant**

#### ***Pelania mauritanica* (Linnaeus, 1758)**

*Cantharis mauritanica* Linnaeus 1758: 401.

**Remarks.** This species was published in Linnaeus (1758) in the genus *Cantharis* and moved to *Lampyris* by Linnaeus (1767: 645). This species was not newly described in 1767 as published in the vast majority of firefly literature.

## **Photinini LeConte**

### ***Photinus* Laporte**

#### ***Photinus corruscus* (Linnaeus, 1767)**

*Lampyris corrusca* Linnaeus 1767: 644.

**Remarks.** One of three species described by Linnaeus (1767).

***Photinus lucidus* (Linnaeus, 1758)**

*Cantharis lucida* Linnaeus 1758: 400.

**Remarks.** This species was published in Linnaeus (1758) in the genus *Cantharis* and moved to *Lampyris* by Linnaeus (1767: 645). This species was not newly described in 1767 as published in the vast majority of firefly literature.

***Photinus marginatus* (Linnaeus, 1767)**

*Lampyris marginata* Linnaeus 1767: 644.

**Remarks.** One of three species described by Linnaeus (1767).

***Photinus phosphoreus* (Linnaeus, 1758)**

*Cantharis phosphorea* Linnaeus 1758: 400.

**Remarks.** This species was published in Linnaeus (1758) in the genus *Cantharis* and moved to *Lampyris* by Linnaeus (1767: 645). This species was not newly described in 1767 as published in the vast majority of firefly literature.

***Photinus pyralis* (Linnaeus, 1758)**

*Cantharis pyralis* Linnaeus 1758: 400.

**Remarks.** This species was published in Linnaeus (1758) in the genus *Cantharis* and moved to *Lampyris* by Linnaeus (1767: 644). This species was not newly described in 1767 as published in the vast majority of firefly literature.

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