



A new species of *Photinus* (Coleoptera: Lampyridae: Photinini) from Jalisco, Mexico, with comments on intraspecific aedeagal variability and a key to the species of the subgenus *Paraphotinus*

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Abstract

A new species of *Photinus*, *P. anisodrilus* **sp. nov.**, is described from material collected from a tropical deciduous forest in San Buenaventura, Jalisco, Mexico. Males of this species are characterized by having considerable intraspecific variation in the aedeagal parameres. *Photinus anisodrilus* appears to be closely related to *P. cookii* Green, *P. curtatus* Green, *P. immaculatus* Green, and *P. marginellus* LeConte because they share the presence of ventral branches in their parameres. Therefore, these species are grouped in the subgenus *Paraphotinus* Zaragoza-Caballero (1995a). A key for the Mexican species of *Paraphotinus* is provided.

Key words: Coleoptera, Lampyridae, Photinini, new species, México, aedeagus parameres, intraspecific variability

Introduction

Male genitalia (aedeagi) are valuable features for species recognition in many groups of insects. In fireflies (Lampyridae), as well as in other related groups such as net-winged beetles (Lycidae), the aedeagus has been considered by some authors as one of the main diagnostic features employed to distinguish species and even genera (e.g., Green 1956, McDermott and Buck 1959). Zaragoza-Caballero (1995a) proposed *Paraphotinus* as a subgenus of *Photinus* based on the lack of sclerotized dorsobasal excrescences on the median lobe of the aedeagus. Subsequently, four species with the same condition were described and included in that subgenus (Zaragoza-Caballero 1995b, 1996). This last feature had also been proposed by Green (1956) to group eight species of *Photinus*, which he called Division 1. The species here described lack the aforementioned dorso-basal excrescences and assigned to *Paraphotinus*.

Material and methods

A total of 152 specimens (150 males and 2 females), were collected in the locality of San Buenaventura, Jalisco, from a tropical deciduous forest. The specimens were collected with an aerial net and killed in a bottle containing ethyl acetate. All collections were done at dusk, five days prior to the new moon, during a period comprising 12 months between November 1996 and October 1997. The aedeagus was extracted and examined from each of 129 of the 150 males. Drawings showing the variation in the parameres were done using a camera lucida adapted to an SZH10 Olympus® microscope. All measures were taken to millimeters.

The intraspecific variability of the following qualitative and morphometric characters was examined: