



## A new species of the genus *Diaphanes* Motschulsky (Coleoptera: Lampyridae) from Gaoligong Mountains of Yunnan, Southwest China

XUEYAN LI & XINGCAI LIANG<sup>1</sup>

Kunming Institute of Zoology, the Chinese Academy of Sciences, 32 Jiaochang Donglu, Kunming, Yunnan, 650223 China.

E-mail: lixy@mail.kiz.ac.cn.

<sup>1</sup>Corresponding author. E-mail: liangxc@mail.kiz.ac.cn

### Abstract

A new species, *Diaphanes pectinealis* Li & Liang, from Gaoligong Mountains of Yunnan, Southwest China, is described. Individuals of this species are characterized mainly by the long and strongly pectinate antennae in males and the greatly developed and sclerotized incurved lobe along the dorsal inner margin of male parameres. The characters of the new species challenge the traditional generic diagnoses of *Diaphanes* and the limits between *Diaphanes* and its similar genus *Pyrocoelia*, and reinforce the necessity of a taxonomic revision on these two genera. The types are deposited in Kunming Institute of Zoology, Kunming, and Institute of Zoology, Beijing, the Chinese Academy of Sciences. A checklist of known Chinese *Diaphanes* species is provided.

**Key words:** Lampyridae, China, *Diaphanes*, new species, checklist

### Introduction

*Diaphanes* Motschulsky, 1852 is the fourth most taxonomically diverse genus of Lampyridae and includes 98 species distributed mainly in the Oriental and Ethiopian regions (Motschulsky, 1852; Olivier, 1907a, 1910a; Liu, 1931; Wu, 1937; McDermot, 1964, 1966; Jeng *et al.*, 2001). Of these, 51 species are recorded in the Ethiopian region and 46 species in the Oriental region, with the remaining one species from South America (McDermot, 1966; Jeng *et al.*, 2001). Fourteen species have been recorded from China (Olivier, 1907b, 1908, 1909, 1910b, 1911, 1912; Pic, 1927, 1935, 1938; Lai *et al.*, 1998; Jeng *et al.*, 2001).

The genus *Diaphanes* is morphologically similar to the genus *Pyrocoelia* Gorham, 1880 from the Oriental and Eastern Palearctic regions, sharing characters such as vitreous spots on pronotum, luminous areas on 6<sup>th</sup> and 7<sup>th</sup> sternites (corresponding to 5<sup>th</sup> and 6<sup>th</sup> ventrites) (McDermot, 1964). According to Gorham's definition (1880), *Pyrocoelia* was separated from *Diaphanes* by the serrate antennae, antennae longer than pronotum and as long as half of body, and the 2<sup>nd</sup> antennomere is shorter than 3<sup>rd</sup> and later segments. McDermot (1964) and Ohba (1978, 1983, 2004) followed the above definition but added that the last ventral segment (last sternite = 7<sup>th</sup> ventrite) of *Pyrocoelia* is never deeply emarginated and that the 11<sup>th</sup> antennomere of *Diaphanes* possesses a minute appendage. Jeng *et al.* (2001) further pointed out the comparative ratios of head size to pronotum and eyes to head in *Pyrocoelia* are smaller than those of *Diaphanes*, but did not give a range of ratios for each genus. These two genera are not easy to be separated, as they show overlapping distributions in the Oriental region, and there has been an emphasis put on their antennal structure and eye size (Gorham, 1880; McDermot, 1964; Jeng *et al.*, 2001). So, it has usually been accepted that *Diaphanes* has simple and short antennae with a minute appendage on their 11<sup>th</sup> antennomere, large eyes, emarginated sternite 7, while