Description of Oligophlebia minor (Lepidoptera: Sesiidae), a New Species of Clearwing Moth from China

Authors: Hai-Ming Xu, Guo-Yi Wu, Yutaka Arita, and Min Wang
Source: Florida Entomologist, 97(2): 707-709
Published By: Florida Entomological Society
URL: https://doi.org/10.1653/024.097.0251
DESCRIPTION OF OLIGOPHLEBIA MINOR (LEPIDOPTERA: SESIIDAE), A NEW SPECIES OF CLEARWING MOTH FROM CHINA

HAI-MING XU1, GUO-YI WU2, YUTAKA ARITA3 AND MIN WANG1,*

1Department of Entomology, South China Agricultural University, Guangzhou, Guangdong 510642, P. R. China

2Dadongshan (Mt.) Management Station, Nanling National Nature Reserve, Guangdong 513400, P. R. China

3Zoological Laboratory, Faculty of Agriculture, Meijo University, Tempaku-ku, Nagoya, 468-8502 Japan

*Corresponding author; E-mail: minwang@scau.edu.cn

ABSTRACT

A new species of the clearwing moths, Oligophlebia minor XU & ARITA sp. nov., from Guangxi, South China was described. Photos of adult and male genitalia were provided. The type specimens are deposited in Department of Entomology, South China Agricultural University.

Key Words: clearwing moths, new species, Oligophlebia, South China

The wings of the Lepidopteran family, Sesiidae, have very few scales, which leave the wings transparent; hence they are known as clearwing moths in the world. Also it is well known that the sesiids typically mimic certain Hymenoptera, in that their general appearance is superficially similar to that of a wasp or hornet. The larvae of Sesiidae are typically wood-borers, but some burrow in plant roots; therefore some species are serious pests of fruit trees or timber or other crop plants (Edwards et al. 1999). The contributions to the taxonomy of Chinese Sesiidae before the 1970's mainly depended on some foreign taxonomists, but thereafter 2 native taxonomists, J. K. Yang (Yang & Wang 1989a, 1989b) and Z. G. Xu (Xu & Liu 1992, 1994; Xu 1993; Xu et al. 1997a, 1997b, 1998, 1999a, 1999b), concentrated on the Sesiidae of northern China. Hua (2005) listed 75 species of Sesiidae from China, and a catalog of the family Sesiidae in China was provided by Jin et al. (2008).

The adults of Sesiidae are rarely observed in nature although some species frequent flowers. The chemical identification and synthesis of the Sesiida female pheromones provided a breakthrough for the discovery and study of Sesiid species (Edwards et al. 1999). The genus Oligophlebia is a small group in the Sesiidae, and among the 7 known species 2 have been recorded in Palaearctic Region and 5 in the Oriental Region. The Oligophlebia of the world were summarized in a catalogue by Pühringer & Kallies (2004).

During surveys of Lepidoptera in southern China, we collected a new species of the genus Oligophlebia Hampson, 1893 by pheromone, which is described in the present paper.

MATERIALS AND METHODS

The specimens were collected in Guangxi Mao’ershan National Nature Reserve, Guangxi Province. Photos of adult and male genitalia were taken by a NikonCoolpix S8000 digital camera. The process for dissection of the genitalia followed Robinson (1976). Types were deposited in the Insect Collection of the Department of Entomology, South China Agricultural University, Guangzhou, China. All the photos were processed with Adobe Photoshop 6.0.
RESULTS

OLIGOPHLEBIA MINOR XU & ARITA SP. NOV. 
(FIGS. 1-4)

Diagnosis

The new species is similar to *O. cristata* Le Cerf, 1916 and *O. nigralba* Hampson, 1893, which can be separated by the shape of triangular external transparent area on forewings. The new species is also similar to other species in *Oligophlebia*, but it can be easily separated from others by the forewings. For example *O. ulmi* (Yang & Wang 1989) has 2 streaks on forewings, *O. amalleuta* Meyrick, 1919 has 6 streaks on forewings, *O. subapicalis* Hampson, 1919 has 4 white points on forewings, *O. episcopopa* (Meyrick 1926) has a large ochreous-hyaline posterior blotch crossed by 3 veins on forewings, while the new species has 3 streaks on forewings. The new species is also separated from *O. micra* (Gorbunov 1988) by hindwing venation.

Description

Male (Fig. 1). Alar expanse 13.0 mm; fore wing 5.5 mm; antenna 3.0 mm; body length 5.0 mm. Head: antenna filiform, black; vertex black; frons with silver sheen scales; occipital fringe dorsally black, laterally white; labial palpus short and white; proboscis long. Thorax: black; patagia black; tegula black; metapleuron posterior with long hair-like black scales. Leg: fore coxa black; fore femur covered with black scales; fore tibia with black hair-like scales; fore tarsus light yellow with fourth and fifth tarsomere black; mid coxa and mid femur covered with black scales; mid tibia covered with black hair-like scales, with a pair of distal spur covered with black hair-like scales; on mid tarsus, first and second tarsomere with black hair-like scales; third and fourth tarsomere light yellow; fifth tarsomere black; hind coxa and hind femur covered with black scales; hind tibia with black hair-like scales, with a pair of mid spurs, with a pair of distal spurs covered with black hair-like scales; hind tarsus mainly light yellow, longer than hind tibia, with first tar-


Host Plant

Unknown.

Habitat and Bionomics

The type specimens were collected in early Aug 2007 and 2008 at the edge of the secondary forest of Mt. Mao’ershan.

Material Examined

HOLOTYPE: ♂, CHINA, Guangxi, Guilin, Mao’ershan, 800 m, 12-VIII-2008, collected by WU Guoyi, deposited in Department of Entomology, South China Agricultural University; PARATYPE: ♂, same locality as the holotype, 8-VIII-2007, collected by Mamoru Owada.

Distribution

At present only known from the type locality.

Etymology

The specific name is derived from Latin, minor means tiny, referring to the tiny body of the species.

ACKNOWLEDGMENTS

We thank Mamoru Owada for collecting materials. We extend our thanks to the administrators of Guangxi Mao’ershan National Nature Reserve.

REFERENCES CITED