



***Ocelliemesina sinica*, the second ocelli-bearing genus and species of thread-legged bugs (Hemiptera: Reduviidae: Emesinae)**

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Abstract

Ocelliemesina sinica, **gen. & sp. nov.**, from Yunnan Province, China is described. It represents the second genus and species with ocelli in the reduviid subfamily Emesinae. Dorsal habitus, male genitalia, and other diagnostic morphological characters of the new species are illustrated. The type specimen is preserved in the Entomological Museum of China Agricultural University, Beijing.

Key words: Reduviidae, Emesinae, new genus, new species, China

Introduction

Emesinae is one of the most species-rich subfamilies of Reduviidae, containing about 930 species worldwide (Putshkov & Putshkov 1985; Maldonado-Capriles 1990). Prior to this study, all the known species in this subfamily lacked ocelli, except *Armstrongocoris singularis*, which was described by Wygodzinsky (1949) from New South Wales, Australia. Recently, during the insect biodiversity investigation in Huanglian Mountain Natural Reserve of Yunnan Province, southwestern China, we found a remarkable emesine bug bearing ocelli, which represents the second thread-legged genus and species with ocelli in the world.

Material and methods

This study is based on the material kept in the Entomological Museum of China Agricultural University (CAU). Male genitalia of the specimen was soaked in hot 10% KOH solution for approximately 3 minutes to remove soft tissue, rinsed in distilled water, and dissected under a Motic binocular dissecting microscope. Dissected pygophore and abdominal segment VIII were removed from the body and placed in a plastic microvial with glycerol under the corresponding specimen. All drawings were traced with the aid of a camera lucida. Morphological terminology mainly follows those of Wygodzinsky (1966). Measurements were obtained using a calibrated micrometer. All measurements are in millimeters.

Taxonomy

***Ocelliemesina* Wang, Wang, Cao & Cai, gen. nov.**

Type species. *Ocelliemesina sinica* Wang, Wang, Cao & Cai, sp. nov.

hind legs elongate, hind leg longest. Abdomen long-ovate; sixth segment widest. Seventh tergite protruding backwards; 1/3–1/2 of eighth tergite and posterior part of pygophore exposed. Pygophore ovate in dorsal view, almost semicircular in lateral view; median pygophore process broad, flattened, linguated (Figs. 7–9). Parameres club-shaped, with apex pointed and bent inwards (Figs. 10–12). Pedicel shorter than basal plate; basal plate curved; basal plate bridge absent; struts of phallus long, separated each other, apically wide and flat (Figs. 13–15).

Measurements. [in mm, ♂ (n=1), holotype]. Length of body: to apex of fore wings 7.53; to apex of genital capsule 6.67; length of head 0.98; length of anteocular portion 0.31; length of postocular portion 0.45; width across eyes 0.38; interocellar space 0.05; length of synthlipsis 0.35; lengths of antennal segments I–IV= 3.52, 2.31, 0.84, 1.10; lengths of visible labial segments I–III= 0.51, 0.28, 0.49; length of anterior pronotal lobe 0.55; length of posterior lobe 0.83; width of thorax 1.28; length of scutellum 0.33; length of hemelytron 5.36; greatest hemelytron width 1.76; length of abdomen 3.42, greatest abdomen width 1.35; length of fore femur 2.90, width of fore femur 0.21, length of fore tibia 2.52; length of mid femur 3.73, length of mid tibia 4.52; length of hind femur 4.57, length of hind tibia 6.67.

Type material. Holotype, ♂, China, Yunnan Province, Lvchun County, Huanglian Mountain, 6.V.2011, 1800 m, N22.894270°, E102.296580°, Yang Hailin & Wang Jianyun leg, by light trap. (CAU).

Etymology. The specific name refers to the locality of the holotype.

Distribution. China (Yunnan).

Remarks. The new species resembles the Australian endemic *Armstrongocoris singularis* in having ocelli, however it differs from the latter in shorter anteocular portion, flattened postclypeus and only two celled hemelytron as mentioned in the generic diagnosis. In addition, the posterior pronotal lobe of new genus nearly as two times wide as the anterior, while the posterior pronotal lobe is just about 1.5 times as wide as the anterior. The biology of this unique species is unknown except it was collected at light trap.

The ocelli-bearing species in “ocelli-less” subfamilies of Reduviidae have been briefly discussed by Wygodzinsky (1946, 1947, 1949, 1950). Presently only five cases have been reported in the Reduviidae: *Lentia corcovadensis* Wygodzinsky in the subfamily Chryxinae from Brazil (Wygodzinsky 1946), *Mirambulus morio* Breddin (= *Megavescia cazieri* Wygodzinsky) and *M. niger* Breddin in the subfamily Vesciinae from South America (Breddin 1901, 1903; Wygodzinsky 1947), and two cases in the Emesinae. It seems that more ocelli-bearing emesines can be found in the future as the emesines are widely distributed, greatly diversified, and poorly studied despite the great monograph published by Wygodzinsky (1966). The origin and evolution of the ocelli-bearing emesine bugs remain to be studied further.

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