



<http://dx.doi.org/10.11646/zootaxa.3795.5.5>

<http://zoobank.org/urn:lsid:zoobank.org:pub:B441E091-90A9-435E-9DB9-0A7CA57FCB9B>

***Flexitibia*, a new genus of Harpactorinae (Hemiptera: Heteroptera: Reduviidae), with a discussion on the functional morphology of fore legs of the related genera**

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Abstract

Flexitibia, a new genus, in the division Euagorasaria of the assassin bug subfamily Harpactorinae from Yunnan Province of China is described. The type species, *Flexitibia orientalis* sp. nov., is described and illustrated. A key to the closely related genera is provided. The type specimens are kept in the Entomological Museum of China Agricultural University, Beijing.

Key words: Reduviidae, Harpactorinae, taxonomy, China, new genus, new species

Introduction

Euagorasaria, a division of the reduviid subfamily Harpactorinae, was established by Distant in 1904 based on the following characters: body slender, head with a pair of spines or tubercles at the base of antennae, lateral pronotal angles generally spinously produced. In our recent examination of the oriental reduviids in the Entomological Museum of the China Agricultural University, we discovered an undescribed species belonging to Euagorasaria. As it can't be assigned to any known genus, we erected a new genus to accommodate the species. A key to the new genus and the related genera is provided. The structure of fore leg of the new genus and four related genera adapted for preying are discussed. Nothing is known about the biology of this species.

Material and methods

This study is based on the material deposited in the Entomological Museum of China Agricultural University, Beijing. Male genitalia of the reduviid was soaked in hot 10% potassium hydroxide solution for approximately five minutes to remove soft tissue, rinsed in distilled water, and dissected under a Motic binocular dissecting microscope. All drawings were traced with the aid of a camera lucida. Morphological terminology follows that of Cai & Tomokuni (2003). Measurements were obtained using a calibrated micrometer. Body length was measured from the apex of head to the tip of the hemelytra in resting position. Maximum width of pronotum was measured across humeral angles.

The fore femur of the new genus is much like those in *Endochus* Stål (Fig. 16) as well as most genera in the tribe or Division Euagorasaria with the most of fore femur in similar thickness (Figs. 14, 16). In *Camptibia*, *Brassivola*, *Rihirbus*, the basal 1/3 to basal half of the fore femur is depressed and inner surface densely covered with short erect hairs (Figs. 11–13). In *Agyrius*, fore femur is distinctly thickened (Fig. 15).

From the structure of fore legs of above mentioned genera, we can easily find that there is no space left when fore tibia against the fore femur in genera *Endochus* and *Agyrius*. However, there are different-sized spaces or gaps when fore tibia sits against the fore femur in genera *Camptibia*, *Brassivola*, *Rihirbus* and new genus. For this reason, we deduce that the reduviids in last four genera may capture and hold on larger sized preys.

Acknowledgments

We sincerely thank Dr. M. Malipatil (Department of Environment & Primary Industries Bundoora Centre) for suggestions and critical reading of the manuscript. This research is supported by grants from the National Basic Research Program of China (No. 2013CB127600), the National Natural Science Foundation of China (No. 31201737), the National Key Technology R & D Program of the Ministry of Science and Technology (2012BAD19B00) and the Special Fund for Scientific Research (No. 2012FY111100), the Special Fund of the Governor of Guizhou Province for Excellent Scientific, Technological and Educational Talents (No. [2012] 52), the Science and Technology Foundation of Guizhou Province (No. J[2009]2285) and Kaili University (No. Z0902); Excellent Scientific Research Innovative Team of Education Department of Guizhou Province (No. [2013]26).

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