



***Cosmosycanus perelegans* (Hemiptera: Reduviidae: Harpactorinae), a new record from China, with report of its female genitalia**

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Abstract

The oriental genus *Cosmosycanus* Ishikawa & Tomokuni, 2004 and the species *Cosmosycanus perelegans* (Breddin, 1903) are newly recorded from China. *Cosmosycanus perelegans* is redescribed and illustrated. The female genitalia is reported for the first time. The variations of colour patterns and male genital structures among Chinese and Vietnamese individuals are briefly noted.

Key words: Reduviidae, Harpactorinae, taxonomy, China, new record, genitalia, polymorphism

Introduction

The monotypic genus *Cosmosycanus* was erected by Ishikawa & Tomokuni in 2004 to accommodate the species *Agriosphodrus perelegans* Breddin, 1903. The genus is easily separated from the allied genus *Agriosphodrus* Stål, 1867 by the head being much longer than the pronotum, and the posterior pronotal lobe lacking a median depression as diagnosed by Ishikawa & Tomokuni (2004). The type species of *Cosmosycanus* is only known from northern Vietnam prior to this study. During a recent insect survey in the Nonggang National Natural Reserve which is situated in the Chinese border area near Vietnam, we found the *C. perelegans* (Breddin). Ishikawa & Tomokuni (2004) redescribed this species with excellent photos and illustrations, however they didn't report the female genitalia. In the present paper, we redescribe the species based on materials from broader regions, report the female genitalia and note the variations in color patterns of abdomen beneath and in the number of endosoma apical spines among Chinese and Vietnamese individuals.

Material and methods

This study is based on the materials deposited in Entomological Museum of China Agricultural University, Beijing (CAU), College of Life Sciences, Nankai University, Tianjin (NKU) and the Natural History Museum, London (BMNH). The external structures were examined using a binocular dissecting microscope. Male genitalia was soaked in hot 90% lactic acid for approximately 10 minutes to remove soft tissue, then in hot distilled water, and dissected under the microscope. Female genitalia was soaked in hot 5% NaOH for approximately 10 minutes to remove soft tissue, then in hot distilled water, and dissected under the microscope. The dissected parts of genital structures were placed in a plastic microvial with lactic acid under the corresponding specimen. All photos were taken with the aid of the UV-CTS optical microscope image processing system. The drawings were traced with the aid of a camera lucida. The distribution map is derived in ArcMap 10.0. Measurements were obtained using a calibrated micrometer. All measurements are in millimeters. Body length was measured from the apex of head to

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