



New data on taxonomy of recent Prophalangopsidae (Orthoptera: Hagloidea)

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Abstract

Keys to subfamilies, genera and species of the Prophalangopsidae are provided. Two new species *Aboiloilomimus guizhouensis* sp. n. and *Aboiloimimus ornatus* sp. n. are described respectively from Guizhou and Sichuan of China. The female of *Prophalangopsis obscura* is found for the first time from Tibet and is given a diagnosis. All type specimens examined in this study are deposited in Shanghai Entomological Museum, CAS.

Key words: Orthoptera, Prophalangopsidae, new species, China

Introduction

The family Prophalangopsidae Handlirsch (1929) in the superfamily Hagloidea is a small group of Orthoptera and consists of 6 subfamilies (five fossil and one recent), at least 25 genera presently (Gorochov 2003). As it contains most fossil species and rare recent species, bearing some primeval characters, the Prophalangopsidae is interesting for studies on the evolutionary processes of Orthoptera and has attracted attentions of taxonomists who have worked on it. One study has proposed that the Prophalangopsidae possibly originated from the Triassic to Early Cretaceous family Haglidae which is the ancestor for two large recent superfamilies: Tettigonioidea and Stenopelmatoidea (Gorochov 1995). We conclude that Hagloidea has its closest affinity with Stenopelmatoidea in the suborder Ensifera of Orthoptera.

The Prophalangopsinae is an earliest subfamily with more rank changes in history. In 1898 Saussure referred it to a “tribu des Tarragiens”. Then, Kirby (1906) treated it as a new subfamily Prophalangopsinae and placed it in the family Phasgonuridae (=Tettigoniidae), but it lacks specific statements. Caudell added the subfamilial characters in 1911. Later, Handlirsch (1925) transferred it to the family Stenopelmatidae. In 1929, Handlirsch upgraded it as a new family Prophalangopsidae and this arrangement was accepted by most entomologists subsequently. But Karny (1937) transferred it to the family Gryllacrididae. Nowadays, the subfamily Prophalangopsinae contains 3 genera: *Prophalangopsis*, *Tarragoilus* and *Aboilomimus*. *Prophalangopsis* was erected by Walker (1870) based on a single species *Tarraga obscura* Walker, 1869 from northeastern India. In the original description, this species was regarded as a gryllid because of its three-segmented tarsi. *Tarragoilus* and *Aboilomimus* were two recent genera erected by Gorochov (2001) based separately on *Tarragoilus diuturnus* Gorochov, (2001) and *Aboilomimus sichuanensis* Gorochov, (2001) from China.

The Cyphoderrinae of the Prophalangopsidae was established by Gorochov in 1988. So far 2 genera, *Cyphoderris* and *Paracyphoderris*, are known in this subfamily. *Cyphoderris* Uhler was erected in 1864 based on a brachypterous species *Cyphoderris monstrosa*. This genus was placed in the group Anostostomata of the Gryllacrididae in 1898 by Scudder. Kirby (1906) first placed it in a tettigoniid subfamily, the Decticinae. Subsequently, Zeuner (1935) moved it to the Prophalangopsinae and Karny (1937) placed it into the