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First record of the genus *Anaxiphomorpha* Gorochov (Orthoptera: Gryllidae) from China, with description of four new species

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Abstract

The genus *Anaxiphomorpha* Gorochov, 1987 is recorded to China for the first time. We provide supplementary characters of female for generic diagnosis. Four new species from China are described and illustrated, *Anaxiphomorpha serratiprotuberus* **sp. nov.**, *A. brevisparamerus* **sp. nov.**, *A. biserratus* **sp. nov.** and *A. longiserratus* **sp. nov.** A key and a distribution map of all species in the world are presented.

Key words: Orthoptera, Gryllidae, *Anaxiphomorpha*, new species, China

Introduction

The genus *Anaxiphomorpha* was established by Gorochov (1987) for *A. brachyapodemalis*, the type species by original designation. With the exception of the two species occurring in Vietnam, which were both described based on male types in the original publication by Gorochov (1987), no species were added to this genus until now (Eades, Otte, Cigliano & Braun, 2014).

During our study, four new species of *Anaxiphomorpha* were discovered. They are described here under the names of *A. serratiprotuberus* **sp. nov.** (CHINA: Hainan), *A. brevisparamerus* **sp. nov.** (CHINA: Yunnan), *A. biserratus* **sp. nov.** (CHINA: Yunnan) and *A. longiserratus* **sp. nov.** (CHINA: Guizhou). The number of the species of this genus is increased from 2 to 6. They are distributed in Vietnam and South China (Map 1). A key for their identification is provided. Additionally, this genus is added to the Chinese fauna for the first time, and the generic diagnosis is supplemented with female characters.

The type specimens of the new species are deposited in the Museum, Hebei University, Baoding, China (MHBU).

Taxonomy

Anaxiphomorpha Gorochov, 1987 New record to China

Anaxiphomorpha Gorochov, 1987: 15; Otte, 1994: 38.

Type species: *Anaxiphomorpha brachyapodemalis* Gorochov, 1987

Generic diagnosis. Body small and slender, usually light color. Head small, frontal rostrum distinctly wider than scapus; ocelli absent. Pronotum strongly widened posteriorly in male, while slightly widened posteriorly in female. Tegmina flat and membranous, nearly extending to abdominal apex, mirror slightly long in male, while in female, tegmina rather convex and slightly sclerotized, extending to abdominal mid-length, with several regular veins on dorsal field. Fore tibia with a large and oblong external tympanum, without internal tympanum or only with

Diagnosis. This new species is related to *A. brevisparamerus* **sp. nov.**, but can be distinguished on the structure of the lateral lobe of the epiphallus with its upper margin protuberant in middle, and the protuberance serrated at apex; dorsal area of head and pronotum without longitudinal stripes.

Etymology. This new specific name is derived from Latin *serratus* (serrate) + *protuber* (protruding), a reference to lateral lobe of epiphallus rather short.

4 *Anaxiphomorpha longiserratus* sp. nov.

Figs. 6, 16–18

Description. Male. (Fig. 6) Body small-sized and pubescent. Head as wide as width of anterior margin of pronotum; frontal rostrum rather obvious and about 1.4 times as wide as scapus; eyes large and protruding forwards; 3rd-5th joints of maxillary palpi distinctly elongate, 5th joint straight at apex. Pronotum transverse, strongly widened posteriorly, about 1.7 times as long as width of posterior margin, anterior and posterior margins straight. Tegmina nearly extending to apex of abdomen, present with one oblique vein, mirror slightly elongate, about 1.2 times as long as wide; wings absent. Fore tibia with a large and oblong external tympanum, about 2.5 times as long as wide; internal tympanum absent. Hind tibia with two internal apical spurs longer outer ones.

Supra-anal plate narrowed posteriorly, posterior margin narrow and round; dorsal area with a transverse impression in centre. Subgenital plate slightly transverse, slightly narrowed posteriorly, posterior margin almost straight with a small protuberance in middle. Genitalia (Figs 16–18): lateral lobe of epiphallus bent downwards apically in lateral view, slightly shorter than medial lobes, slightly narrowed apically in dorsal view, with upper margin serrated along the whole length; endophallus apodeme short.

Female. Unknown.

Coloration. Body yellow. Dorsal area of head with 4 darker longitudinal wider stripes; eyes dark. Apex of hind femur with a small dark spot on outer and inner side respectively.

Measurements (mm). Male: body 5.8–6.0, pronotum 0.9–1.0, tegmen 3.8–4.0, hind femur 4.8–4.9.

Type material. Holotype ♂, CHINA, Guizhou, Chishui, 27.V.2000, leg. Fu-ming Shi. Paratypes: 2♂, 28.V.2000, other data same as the holotype.

Distribution. China (Guizhou).

Diagnosis. This new species is related to *A. biserratus* **sp. nov.**, but can be distinguished by lateral lobe of epiphallus bent downwards apically in lateral view, with upper margin serrated along the whole length.

Etymology. This new specific name is derived from Latin *longus* (long) + *serratus* (serrate), a reference to lateral lobes of epiphallus with upper margin serrated along the whole length.

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