



Review of the genus *Pentacentrus* Saussure (Orthoptera: Gryllidae: Pentacentrinae) from China

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Abstract

Four new species of *Pentacentrus* Gorochov from China are described and illustrated, *P. acutiparamerus* Liu & Shi sp. nov., *P. biflexuosus* Liu & Shi sp. nov., *P. emarginatus* Liu & Shi sp. nov. and *P. parvulus* Liu & Shi sp. nov. A key and a distribution map of the Chinese species of this genus are provided.

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

Introduction

The subfamily Pentacentrinae is one of the small groups in Gryllidae, it has 67 extant species worldwide belonging to 12 genera (Eades, Otte, Cigliano & Braun, 2014), of which *Pentacentrus* Saussure, 1878 is the largest genus, with *P. pulchellus* originally designated as the type species. At present, *Pentacentrus* included 29 species, distributed in the Oriental and Australian Regions, of which 4 species were known from China (Yin & Liu, 1995; Liu & Shi, 2011).

In our recent study, four new species of *Pentacentrus* are discovered, *P. acutiparamerus* Liu & Shi sp. nov. (CHINA: Yunnan), *P. biflexuosus* Liu & Shi sp. nov. (CHINA: Guangxi), *P. emarginatus* Liu & Shi sp. nov. (CHINA: Guangxi, Jiangxi) and *P. parvulus* Liu & Shi sp. nov. (CHINA: Hainan). The number of the Chinese species of this genus is increased from 4 to 8, which are distributed in the South China (Map 1), and a key for their identification is provided.

The type specimens of the new species are deposited in the Museum, Hebei University, Baoding, China (MHBUE). Figures abbreviations are as follows: i = epiphallus, ll = lateral lobes of epiphallus, ml = medial lobes of epiphallus, pi = epiphallus parameres, pc = ectophallus parameres.

Taxonomy

Pentacentrus, Saussure, 1878

Pentacentrus, Saussure, 1878: 339; Kirby, 1906: 62; Chopard, 1930: 20; 1931: 249; 1968: 255; 1969: 220; Hubbell, 1938: 203; Otte, 1994: 49; Yin & Liu, 1995: 77.

Type species: *Pentacentrus pulchellus* Saussure, 1878

Generic diagnosis. Body small and slender. Head rather short, vertex sloping, frontal rostrum indistinctly projecting. Tegmina slender, venation similar in both sexes, with a few distinct longitudinal veins and transverse veins; mirror absent in male. Fore tibia only with a large membranous internal tympanum; hind tibia with 3 long spines on apical part of dorsal side, and 5 apical spurs, of which 3 spurs on outer side and 2 on inner side. Epiphallus of male genitalia usually rather short. Ovipositor short and slightly curved.

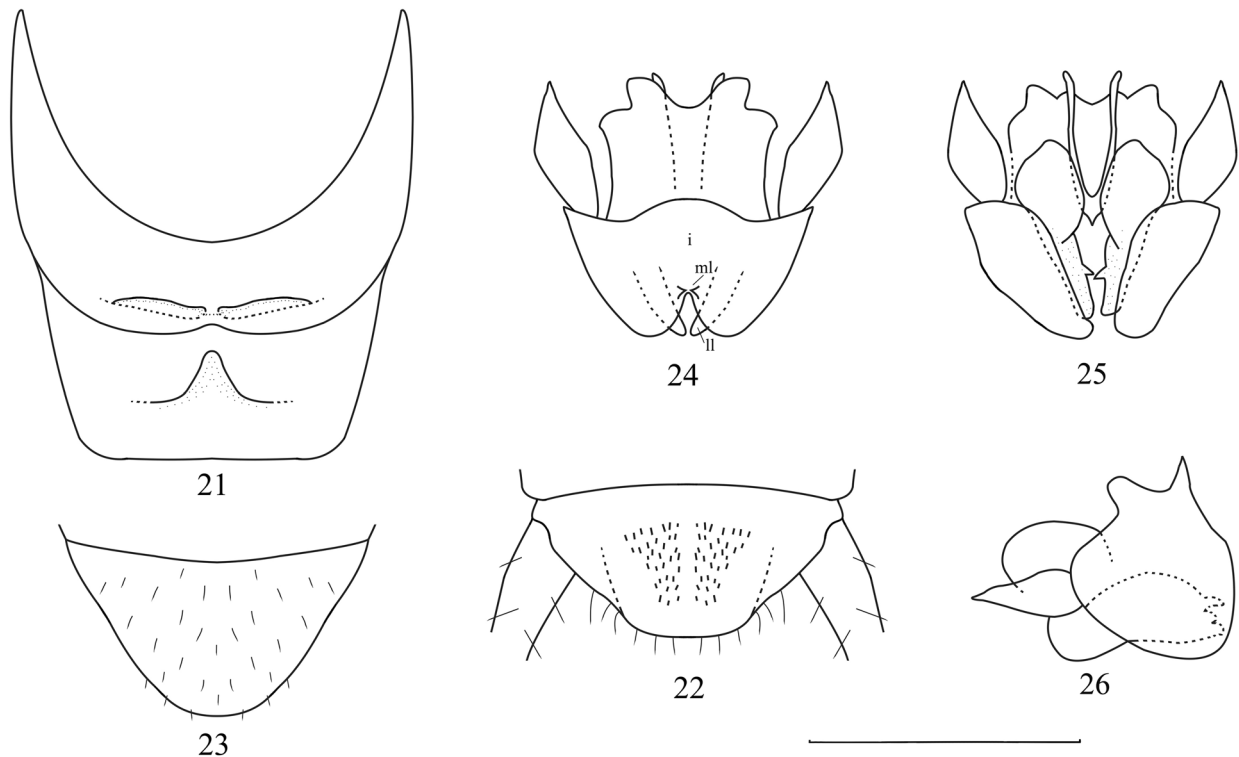
Measurements (mm). Male: body 7.8, length with wings 11.8, pronotum 1.3, tegmen 6.5, hind femur 5.8.

Type material examined. Holotype ♂, CHINA, Hainan, Ledong, Jianfengling, 25.V.2010, leg. Ming Qiu.

Distribution. China (Hainan).

Diagnosis. This new species is related to *P. multicapillus* Liu & Shi, but can be distinguished by posterior margin of supra-anal plate nearly round; ventral parts of the genitalia without long and black setae, lateral lobes of epiphallus not bent upwards.

Etymology. This new specific name is derived from the Latin *parvulus* (small), a reference to genitalia rather small.



FIGURES 21–26 *Pentacentrus parvulus* Liu & Shi sp. nov. Male: 21. abdominal tergites I–II, dorsal view; 22. supra-anal plate, dorsal view; 23. subgenital plate, ventral view; 24–26. genitalia (24. dorsal view; 25. ventral view; 26. lateral view). Scale bar = 1 mm

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