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Hao-Yu Liu, Fu-Ming Shi*. NEW AND LITTLE-KNOWN SPECIES OF THE GENUS *PENTACENTRUS* SAUSSURE, 1878 (ORTHOPTERA: GRYLLIDAE) FROM GUANGXI ZHUANG AUTONOMOUS REGION, CHINA. – Far Eastern Entomologist. 2015. N 303: 19-23.

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Summary. *Pentacentrus transversus* sp. n. is described from Guangxi (China). The description of formerly unknown female of *P. biflexuosus* Liu et Shi, 2014 is given. New data on distribution of six species of the genus *Pentacentrus* in Guangxi Zhuang Autonomous Region are reported.

Key words: Orthoptera, Gryllidae, *Pentacentrus*, taxonomy, new species, fauna, Guangxi, China.

Х.-Ю. Лю, Ф.-М. Ши. Новые и малоизвестные виды рода *Pentacentrus* Saussure, 1878 (Orthoptera: Gryllidae) из Гуанси-Чжуанского автономного района Китая // Дальневосточный энтомолог. 2015. N 303. С. 19-23.

Резюме. Из Гуанси-Чжуанского автономного района Китая описывается *Pentacentrus transversus* sp. n. Дается описание ранее неизвестной самки *P. biflexuosus* Liu et Shi, 2014. Приведены новые данные по распространению 6 известных из Гуанси видов рода.

INTRODUCTION

Before this study, the genus *Pentacentrus* Saussure, 1878 (Gryllidae: Pentacerinae, Pentacerini) includes 33 species distributed in the Oriental and Australian Regions (Eades *et al.*, 2015). Eight species are currently known from China (Yin & Liu, 1995; Liu & Shi, 2011; Liu *et al.*, 2014), of which four species were known from Guangxi Zhuang Autonomous Region. In present paper, we described the formerly unknown female of *P. biflexuosus* Liu et Shi, 2014 and one new species. New distribution data on six species of *Pentacentrus* from Guangxi is also given below.

MATERIAL AND METHODS

The type specimens of the new species are deposited in the Museum, Hebei University, Baoding, China (MHBU). The male genitalia were dissected and cleared in 10% KOH solution. All morphological structures were photographed using a Leica M205A microscope. Images of multiple layers were stacked using Combine ZM. 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 transversus* sp. n.**

Figs 1–2, 4–7

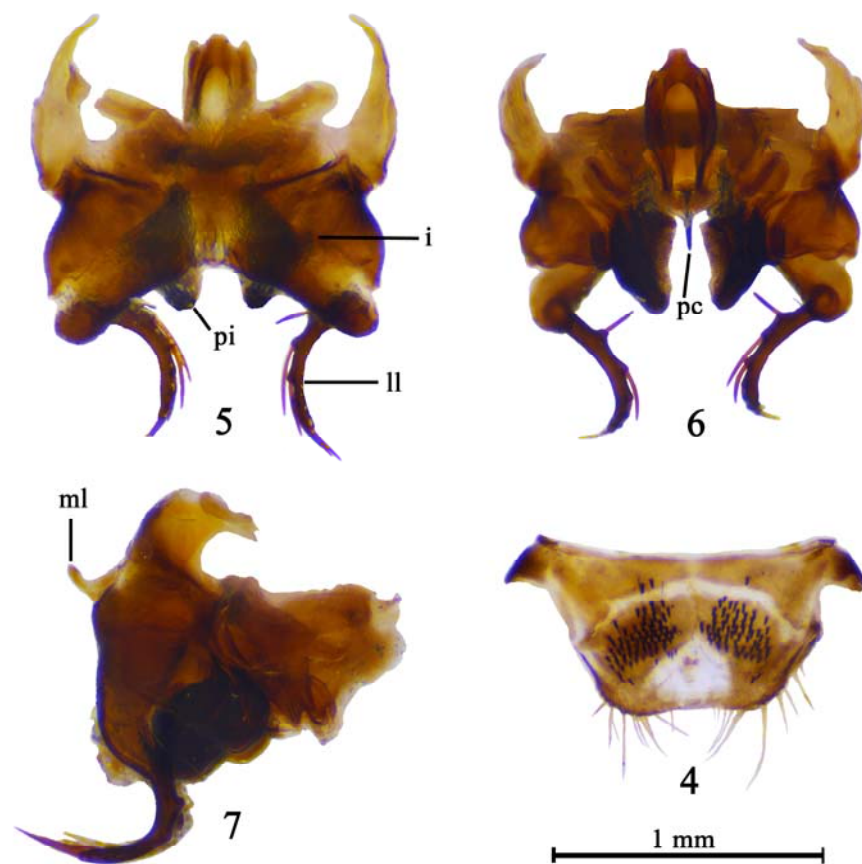
TYPE MATERIAL. Holotype – ♂, **China:** Guangxi, Jinxiu, Yinshan park, 24.VII 2015, leg. Li- Mei Li. Paratypes: 3♂, 3♀, same data as the holotype, (MHBU).

DESCRIPTION. MALE. Body small and slender. Head short, frontal rostrum nearly as wide as scapus; median ocellus small and transverse oval, lateral ocelli rather large and nearly round; eyes oval and distinctly projecting; apical joint of maxillary palpi distinctly widened and sloped at apex, slightly longer than third joint; apical joint of labial palpi slightly widened, slightly longer than second joint. Pronotum distinctly wider than long, disc with a pair of nearly triangular impressions; anterior margin straight, posterior margin sinuate and slightly protruding around midway; lateral lobes longer than high, anterior lower angles widely rounded, posterior lower angles rounded, lower margin slightly straight. Tegmina slightly extending over apex of abdomen, with 4 longitudinal veins on dorsal area; hind wings distinctly longer than tegmina, reaching apex of hind tibia. Fore tibia with a large and oblong internal tympanum, nearly as long as half length of tibia, without external tympanum. Hind tibia with 3 long spines on each margin of apical part. Abdominal tergite I with a pair of medium-sized swellings, tergite II with a medium-sized swelling in centre and inclined forwards. Supra-anal plate distinctly wider than long, slightly narrowed posteriorly; dorsal area densely covered with 2 short setae area in centre; posterior margin nearly straight (Fig. 4). Subgenital plate rather long, with posterior margin narrowly rounded. Genitalia (Figs 5–7): epiphallus distinctly transverse; medial lobes of epiphallus small and acute teeth-like; lateral lobes of epiphallus distinctly curved, covered with several long hairs at apex and along inner margin; epiphallus parameres short, no reaching middle of lateral lobes; ectophallus parameres very short, acute at apex.



Figs. 1–3. *Pentacentrus* spp., body from above. 1, 2 –*P. transversus* sp. n.: 1 – male, 2 – female; 3 – *P. biflexuosus* Liu et Shi, 2014, female.

FEMALE. Similar to male. Subgenital plate transverse, with posterior margin gently emarginated midway, posterior angles protruding in angular fashion. Ovipositor slightly short, and bent upwards.



Figs. 4–7. *Pentacentrus transversus* sp. n., male. 4 – supra-anal plate, dorsal view; 5 – genitalia, dorsal view; 6 – the same, ventral view; 7 – the same, lateral view.

COLORATION. Body brown. Tegmina light brown, each transverse vein surrounded by irregular brown spot; lateral field dark brown. Fore and mid legs brown, hind legs yellow brown.

MEASUREMENTS (mm). Male: body 8.3–9.0, length with wings 13.5–14.3, pronotum 1.3–1.4, tegmen 7.8–8.4, hind femur 5.9–6.5; female: body 8.4–8.9, length with wings 13.5–14.5, pronotum 1.4–1.5, tegmen 8.3–8.9, hind femur 6.4–6.8, ovipositor 3.8–4.0.

DIAGNOSIS. This new species is similar to *Pentacentrus biflexuosus*, but distinguished by hind legs uniform yellow brown, by genitalia differently shaped, by epiphallus distinctly transverse, by lateral lobes of epiphallus distinctly curved, covered with several long hairs at apex and along inner margin, by epiphallus parameres very short (in *P. biflexuosus* hind legs yellow brown, with irregular brown bands at apex and outer side; epiphallus rather narrow; lateral lobes of epiphallus double curved, without long hairs along inner margin; epiphallus parameres slightly long, reaching middle of lateral lobes).

ETYMOLOGY. This new specific name is derived from the Latin *transversus* (transverse), a reference to epiphallus distinctly transverse.

DISTRIBUTION. China (Guangxi).

***Pentacentrus biflexuosus* Liu et Shi, 2014**

Fig. 3

Pentacentrus biflexuosus Liu *et al.*, 2014: 561.

ADDITIONAL MATERIAL. **China:** Guangxi, Wuming, Mt. Daming, 30.VII 2015, 2♀, leg. Li-Mei Li; Guangxi, Mt. Jiuwan, 4.VIII 2015, 1♂, leg. Zhi-Lin Chen.

REMARKS. This species was described by male only (Liu *et al.*, 2014).

DESCRIPTION. FEMALE (*nova*). Female very similar to male. Subgenital plate slightly transverse, gentle narrowed posteriorly, with posterior margin weakly emarginated midway. Ovipositor short, and bent upwards.

MEASUREMENTS (mm). Male: body 8.2–9.5, length with wings 14.0–14.3, pronotum 1.3–1.4, tegmen 7.8–8.2, hind femur 5.8–6.0; female: body 9.0–9.2, length with wings 13.5–13.7, pronotum 1.4–1.5, tegmen 8.3–8.5, hind femur 6.4–6.5, ovipositor 3.7–3.8.

DISTRIBUTION. China (Guangxi).

***Pentacentrus formosanus* Karny, 1915**

Pentacentrus formosanus Karny, 1915: 70; Shiraki, 1930: 222; Otte, 1994: 49; Yin & Liu, 1995: 77; Liu *et al.*, 2014: 564.

ADDITIONAL MATERIAL. **China:** Guangxi, Jinxiu, Yinshan park, 24.VII 2015, 3♂, leg. Li-Mei Li; Guangxi, Shanglin, Mt. Daming, 18.VII 2012, 1♂, leg. Jin-Rong Bai.

REMARKS. Herein this species is firstly recorded from Guangxi Zhuang Autonomous Region, China.

DISTRIBUTION. China (Fujian, Taiwan, Yunnan, Guangxi).

***Pentacentrus bituberus* Liu et Shi, 2011**

Pentacentrus bituberus Liu & Shi, 2011: 3; Liu *et al.*, 2014: 561.

ADDITIONAL MATERIAL. **China:** Guangxi, Guilin, Longshen, Huaping, 10.VII 2015, 3♂, leg. Teng-Fei Qiu.

REMARKS. All types of this species original recorded from Guangxi, and herein is second record from Guangxi Zhuang Autonomous Region.

DISTRIBUTION. China (Guangxi, Guangdong).

***Pentacentrus emarginatus* Liu et Shi, 2014**

Pentacentrus emarginatus Liu *et al.*, 2014: 562.

ADDITIONAL MATERIAL. **China:** Guangxi, Mt. Pinglong, Mucaijianchazhan, 26.VI 2015, 1♂, leg. Teng-Fei Qiu.

REMARKS. Holotype and paratype of this species respectively recorded from Guangxi and Jiangxi, and herein is supplied new data on distribution.

DISTRIBUTION. China (Guangxi, Jiangxi).

***Pentacentrus multicapillus* Liu et Shi, 2011**

Pentacentrus bituberus Liu & Shi, 2011: 6; Liu *et al.*, 2014: 564.

REMARKS. At present, this species only was located in Guangxi (Mt. Mao'er), and new data on distribution hasn't been found.

DISTRIBUTION. China (Guangxi).

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