

A new species of the genus *Saussurella* Bolívar, 1887 (Orthoptera: Tetrigidae) from South-East Asia

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Новый вид рода *Saussurella* Bolívar, 1887 (Orthoptera: Tetrigidae) из Юго-Восточной Азии

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Abstract. In the present paper the *Saussurella tarbinskyi* **sp. nov.** is described from Cambodia and Vietnam. The new species is most similar to *S. javanica* Bolívar from Java Island but differs from the latter in an elongated tegmen, visible part of which 2.3–2.5 times as long as wide, and the male genital plate with parallel lateral sides (in *S. javanica* visible part of tegmen about 2.0 times as long as wide, and male genital plate insignificantly but distinctly narrowing apically).

Key words. Pygmy grasshoppers, Batrachideinae, Cassitettigini, taxonomy, new species, Cambodia, Vietnam.

Резюме. В настоящей статье из Камбоджи и Вьетнама описан *Saussurella tarbinskyi* **sp. nov.** Новый вид близок к эндемику острова Ява *S. javanica* Bolívar, но отличается от него удлинненно-овальными надкрыльями (длина видимой части надкрылья в 2.3–2.5 раза превышает его ширину) и параллельными боковыми краями генитальной пластинки самца (у *S. javanica* длина видимой части надкрылья лишь в 2.0 раза превышает его ширину, а вершина генитальной пластинки самца незначительно, но отчетливо, сужена).

Ключевые слова. Тетригиды, Batrachideinae, Cassitettigini, таксономия, новый вид, Камбоджа, Вьетнам.

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Introduction

The pygmy grasshoppers (Tetrigidae) are divided into seven subfamilies: Batrachideinae, Cladonotinae, Lophotettiginae, Metrodorinae, Scelimeninae, Tetriginae, and Tripetalocerinae (Cigliano et al., 2023). Within the subfamily Batrachideinae, three tribes exist, namely Batrachideini Bolívar, 1887 (South and Central America), Bufonidini Hancock, 1907 (Australia and New Guinea) and Cassitettigini Yin, 1984 (South Africa, South Asia and New Guinea) (Storozhenko, 2019). In Cassitettigini, only four species of the genus *Saussurella* Bolívar, 1887 were recorded from the continental part of South-East Asia (Myanmar, Malaysia,

Thailand, Laos, and Vietnam), namely *S. brevifrons* Zha, 2020, *S. cornuta* (Haan, 1843), *S. decurva* Brunner-Wattenwyl, 1893, and *S. inelevata* Podgornaya, 1992 (Grant, 1966; Blackith, 1992; Podgornaya, 1992; Storozhenko, Dawwrueng, 2015; Zha et al., 2020; Cigliano et al., 2023). A key to species of the genus was recently published (Han et al., 2020). One new species of *Saussurella* from South-East Asia is described below.

This paper is based on the collections of the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia (ZIN). The morphological terminology followed those of Tumbrinck (2014). The measurements are given according Grant (1966). Photographs were taken with an Olympus SZX16 stereomicroscope and an Olympus DP74 digital camera, and then stacked using Helicon Focus software. The final illustrations were post-processed for contrast and brightness using Adobe® Photoshop® software. The specimens examined are dry and pinned. Holotype and paratypes of a new species are deposited in ZIN.

Systematics

Subfamily Batrachideinae Bolívar, 1887

Tribe Cassitettigini Yin, 1984

Genus *Saussurella* Bolívar, 1887

Saussurella tarbinskyi Storozhenko, sp. nov.

<https://zoobank.org/FD3838BD-0751-43EA-BB90-CF879A2C4057>

(Figs 1–9)

Type material. Holotype: male, CAMBODIA, Rattanakiri Prov., environs of Banlung Town, 1–2.III.1988 (A. Gorochov) (ZIN). *Paratypes*: 1 male, same data as for holotype (ZIN); 1 female, VIETNAM, Gia Lai Prov., 20 km N of Kannak Town, environs of Buon Luoi Village, 22–31.III.1995 (A. Gorochov) (ZIN).

Description. *Male.* Body medium-sized for this genus; its surface dotted by dense and fine granules. Head hidden under produced pronotum. In dorsal view, vertex wide and short, slightly narrowing forward, 1.5 times as wide as width of one eye from above; medial carina absent; lateral carinae indistinct, paired fossulae deep and distinct. In lateral view, face inclined, vertex together with frontal costa rounded. In frontal view, bifurcation of frontal costa situated at the level of upper third of compound eye, below lateral ocelli the lateral margins of costa nearly parallel; costa between bases of antennae as wide as scape (first segment of antenna) and disappear below medial ocellus. Antenna filiform, 19–22-segmented, 2.1–2.3 times as long as fore femur, inserted slightly above lower margin of eye; middle antennal segments 6–7 times as long as wide. Eyes globose. Lateral ocelli situated at middles of inner margins of eyes. Maxillary palpi 5-segmented, with two apical segments considerably widened.

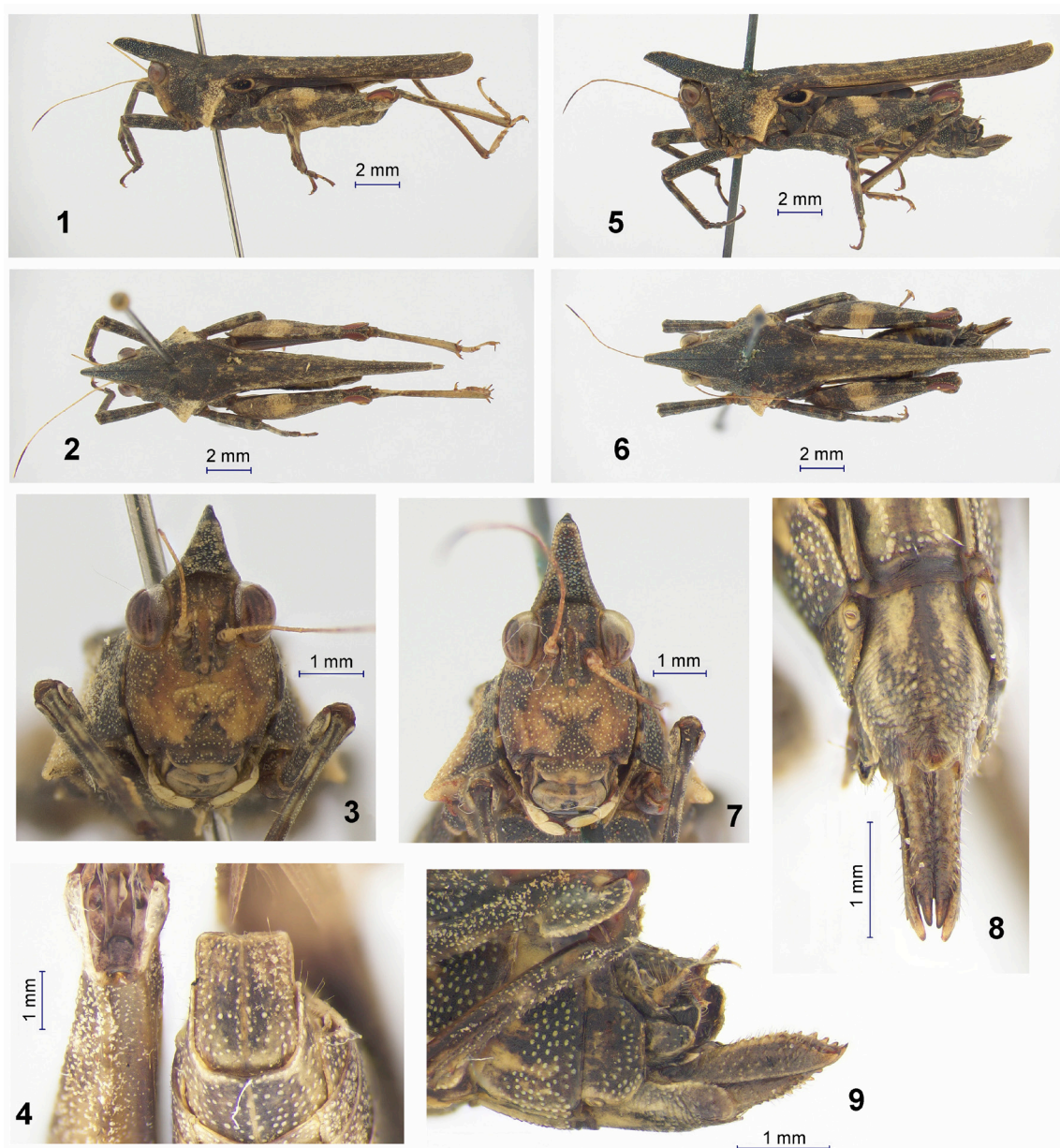
Pronotum extending far forward and forming a horn-like anterior process distinctly directed upwards; this process covering whole vertex and surpassing far beyond anterior margin of eyes, in dorsal view acutely angled, surpassing 2.6 mm beyond posterior margin of eyes, and with rounded apex; in lateral view, upper margin of process straight, lower margin weakly sinuate above eye; tip not at all hooked downward. Pronotum between shoulders slightly concave on both sides of median carina. Median carina distinct, erect and entire, somewhat lamellate, in lateral view a little undulated before shoulders and straight after them. Hind process of pronotum narrow and long, cone-shaped, reaching about two-thirds of hind tibia, with apex obtuse and nearly truncated. Prozonal carinae barely visible, expanded backward; humeral angles obtuse, arched; external lateral carina long and extending to apex of hind process. Lateral lobes of pronotum dotted by fine granules but lower and posterior margins with a row of tubercles; posteroventral projection of lateral lobe acutely angular, directed obliquely outwards; tegminal sinus deep and V-shaped, while ventral sinus very shallow.

Visible part of tegmen ovate, 2.3–2.5 times as long as wide, equal to or slightly wider than mid femur. Hind wings developed, extending beyond apex of posterior pronotal process by 0.5–0.8 mm.

Fore femur 3.7–3.9 times as long as wide; dorsal margin with longitudinal sulcus; ventral margin entire. Mid femur 3.2–3.5 times as long as wide; dorsal margin sulcate. Hind femur 3.1 times as long as wide, with dorsal and ventral margins entire and finely dentate. Hind tibia with 5–10 outer and 5–7 inner spines. First segment of hind tarsus as long as its third segment (without claws), with three pulvilli equal in length and having obtuse apices.

Epiproct narrowly triangular, with pointed apex. Genital plate elongated, 1.2–1.3 times as long as wide; lateral margins of plate parallel. Cerci conical, 2.3–2.5 times as long as wide near base, with obtuse apex.

Coloration of body blackish brown with yellowish brown marks and numerous very small whitish granules; head brown with dark brown eyes, blackish vertex and genae as well as lower part of face, black vertical stripe along frontal costa, and yellowish white antennae having brown apical segments; pronotum blackish brown with yellowish brown posterior part



Figs 1–9. *Saussurella tarbinskyi* sp. nov., holotype, male (1–4) and paratype, female (5–9). 1, 5 – body, lateral view; 2, 6 – body, dorsal view; 3, 7 – head, front view; 4, 8 – apex of abdomen, ventral view; 9 – apex of abdomen, lateral view.

of lateral lobes and a few small yellow spots on rest part; tegmin black in center but surrounded by light brown; hind wings black; fore and mid femora blackish with yellowish rings; hind femur blackish with slightly lighter dorsal area, light brown vertical outer stripe in basal half and reddish brown genicular lobes; all tibiae dark brown to brown with a few lighter marks; all tarsi light brown; abdomen blackish to dark brown with brown venter and light brown spots on tergites, but genital plate additionally with a pair of darker stripes around median carina.

Female. Similar to male but larger and with some other differences given below. Antenna 23-segmented, 2.0 times as long as fore femur, with middle segments 6.6–7.4 times as long as wide. Anterior horn-like pronotal process extending beyond posterior margin of eyes by 2.8 mm. Visible part of tegmen 2.5 times as long as wide. Hind wings extending beyond posterior process of pronotum by 0.8 mm. Fore, mid and hind femora 4.5, 3.9 and 3.0 times as long as wide, respectively. Hind tibia with 5 outer and 7 inner spines. Epiproct narrowly triangular and with pointed apex. Genital plate elongated, 1.6 times as long as wide; apex of plate with middle lobe shorter than lateral lobes. Cerci conical, 2.6 times as long as wide near base, with obtuse apex. Ovipositor narrow; upper valvula 3.7 times as long as wide, with upper margin nearly arched and armed

by saw-like teeth; lower margin of lower valvula with saw-like teeth. Hind femora blackish brown with two yellowish brown transverse spots. Genital plate dark brown with light longitudinal stripes. Ovipositor dark brown with light brown saw-like teeth.

Length in mm. Body (from frontal ridge to apex of genital plate): male 11.3–12.0, female 14.2; pronotum: male 16.3–16.4, female 18.0; antenna: male 6.3–6.7, female 6.5; fore femur: male 3.0, female 3.2; mid femur: male 2.8–2.9, female 3.1; hind femur: male 6.7–6.8, female 7.5; ovipositor 1.9.

Comparison. The new species is most similar to *Saussurella javanica* Bolívar, 1898 from Indonesia (Java), but the latter species is characterized by ovoid tegmin, the visible tegminal part about 2.0 times as long as wide, and by the male genital plate very slightly, but evenly, narrowing apically (Grant, 1966). From *S. cornuta*, the new species differs in a narrow frontal costa and an elevated (directed forward/upward) pronotal horn-like process (in *S. cornuta*, the frontal costa between the antennal bases is wide, 2.3 times as wide as scape, and the pronotal horn-like process is directed forward). From other congeners known from continental part of South-East Asia, *S. tarbinskyi* sp. nov. is easily recognizable by its smaller size and shape of the male genital plate (in *S. decurva*, *S. inelevata* and *S. brevifrons*, length of pronotum 17.2–19.1 and 18.5–23 mm for male and female, respectively, and lateral sides of male genital plate are weakly sinuate and/or plate-like widened at apex). The new species is also similar to *S. yunnanensis* Mao, Han et Li, 2020 from China (Yunnan), but in the latter species, the horn-like anterior pronotal process moderately decurved distally and with an obtusely rounded apex in profile.

Etymology. The new species is named in memory of the Russian entomologist Sergey P. Tarbinsky (1902–1942).

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