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A NEW SPECIES OF THE GENUS *XISTRA* BOLÍVAR, 1887 (ORTHOPTERA: TETRIGIDAE) FROM CAMBODIA

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Summary. *Xistra cambodia* Storozhenko, **sp. n.** is described and illustrated from Cambodia. The new species is similar to *X. angusta* Ingrisch, 2001 and *X. strictivertex* Zheng et Ou, 2010 but differs from both species by a shape of prozonal carinae and slender hind femora.

Key words: Tetrigidae, Metrodorinae, taxonomy, new species, South East Asia.

С. Ю. Стороженко. Новый вид тетригид рода *Xistra* Bolívar, 1887 (Orthoptera: Tetrigidae) из Камбоджи // Дальневосточный энтомолог. 2021. N 430. С. 1-6.

Резюме. Из Камбоджи описан *Xistra cambodia* Storozhenko, **sp. n.** Новый вид сходен с *X. angusta* Ingrisch, 2001 и *X. strictivertex* Zheng et Ou, 2010, но отличается от обоих видов формой килей в прозоне и стройными задними бедрами.

INTRODUCTION

Nowadays the fauna of pygmy grasshoppers of Cambodia is poorly studied. The only 12 species in ten genera of Tetrigidae were recorded from this country (Blackith, 1992; Storozhenko, 2018, 2019). Here the genus *Xistra* Bolívar, 1887 is recorded from Cambodia for the first time.

At present, the genus *Xistra* includes 19 species distributed in Nepal (*X. angusta* Ingrisch, 2001 and *X. longicornis* Ingrisch, 2001), China (Tibet – *X. laticornis* Zheng, 1988 and *X. medogensis* Zheng, 2005; Yunnan – *X. foliolata* Liang et Chen, 2010, *X. klinnema* Zheng et Zeng, 2011, *X. lativertex* Zheng et Mao, 2010, *X. nigrinota* Zheng et Xu, 2010, *X. parvula* Liang et Chen, 2010, and *X. strictivertex* Zheng et Ou, 2010; Guangxi – *X. brachynota* Li, Deng et Zheng, 2014, *X. longidorsalis* Liang et Jiang, 2004, *X. longzhouensis* Zheng et Jiang, 1998, *X. nigriritibialis* Zheng et Jiang, 2002, *X. oculata* Li, Deng et Zheng, 2014, and *X. wuyishanensis* Zheng et Zeng, 2011; Sichuan – *X. yaanensis* Zheng, 2009; Jiangxi – *X. jiulianshanensis* Zheng et Shi, 2009), and the Philippines (*X. gogorzae* Bolívar, 1887 – the type species of the genus) (Bolívar, 1887; Ingrisch, 2001; Zheng, 2005; Zheng, 2009; Zheng & Shi, 2009; Liang & Chen, 2010; Zheng & Ou, 2010; Zheng & Zeng, 2011; Li *et al.*, 2014; Cigliano *et al.*, 2021). A key to species was given by Li *et al.* (2014). A new species of the genus *Xistra* from Cambodia is described below.

The morphological terminology and measurements follow those of Tumbrinck (2014). 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 types of new species are deposited in the Zoological Institute, Russian Academy of Sciences, St. Petersburg (ZIN).

DESCRIPTIONS OF NEW TAXA

Subfamily Metrodorinae

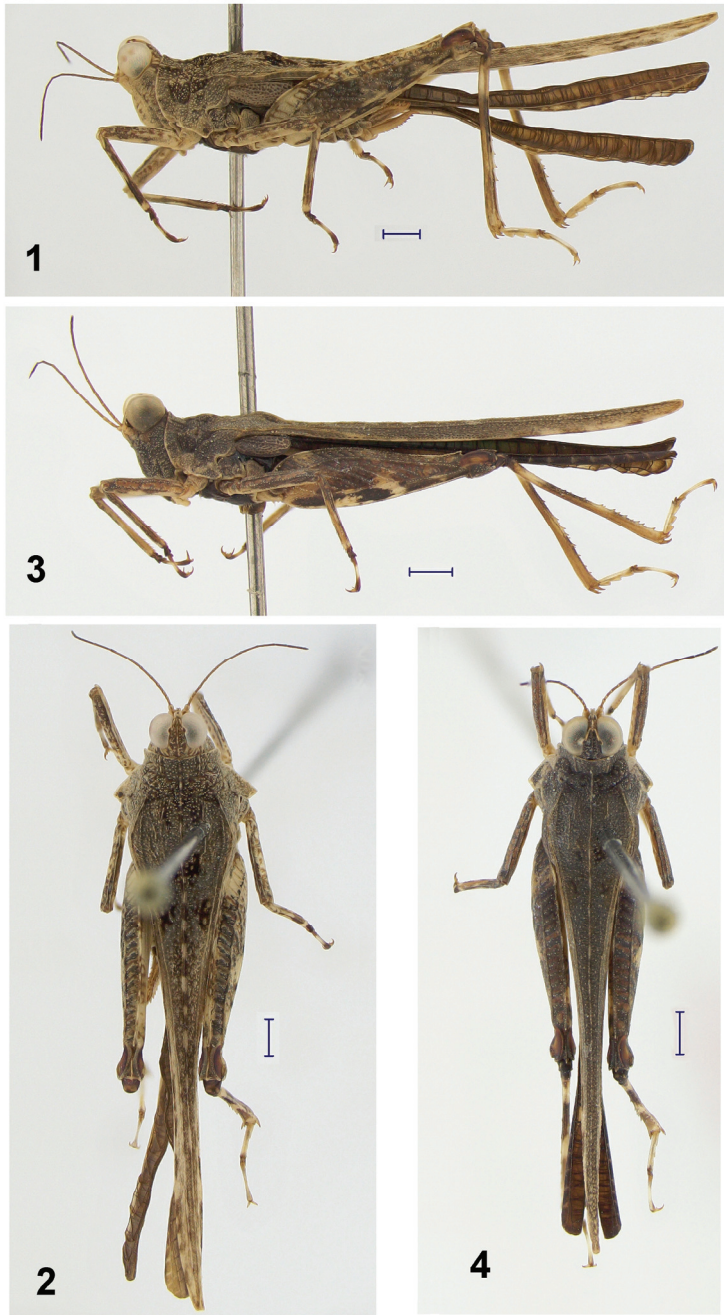
Xistra cambodia Storozhenko, sp. n.

<http://zoobank.org/NomenclaturalActs/C4A203D6-D6F6-416B-A91A-139F89A15208>

Figs 1–9

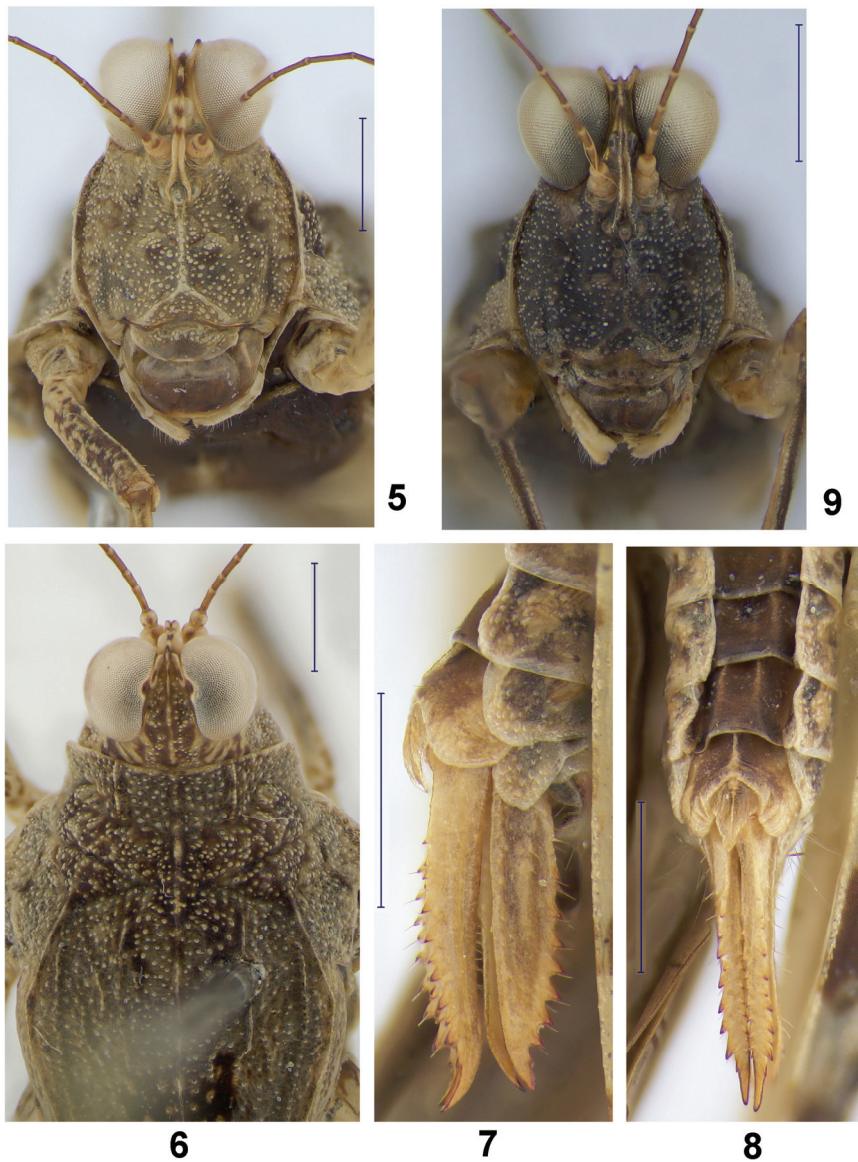
MATERIAL. Holotype: ♀, **Cambodia**: southern part of Elephant Mountains, Phom-Bokor Mt., Bokor Nat. Park, 700–1000 m, 18–22.IX 2003, leg. A. Gorochov and M. Berezin (ZIN). Paratype: ♂, same data as for holotype (ZIN).

DESCRIPTION. Female. Body medium-sized for genus. Head in frontal view with vertex forming V-shaped shallow concavity. Antennae filiform, 15-segmented, 1.8 times as long as fore femur; middle segments (7–9th) 5–7 times as long as wide. Antennal sockets situated between lower margins of eyes. Eyes distinctly protruding above pronotum in lateral view; in dorsal view one eye 1.3 times as wide as vertex. Lateral ocelli situated at the lower one-third of eyes. Width of frontal ridge near the base of the antennae considerably narrower than width of the 1st antennal segment. Median carina of pronotum in profile low, distinctly sinuate in anterior part, straight in posterior part; posterior process of pronotum long, almost reaching the apex of hind tarsi. Prozonal carinae parallel-side; prozona transverse. Disc of pronotum depressed between prozona and humeral angles and concave behind apex of tegmina, with weak interhumeral carina. Lower side of lateral lobes pronotum in dorsal view oblique truncated. Tegmina ovate, with broadly rounded apex; visible part of tegmen 2.7 times as long as wide; width of visible part of tegmen 1.4 times width of mid femur.



Figs 1–4. *Xistra cambodia* sp. n., habitus (1, 2 – holotype; 3, 4 – paratype). 1 – female, lateral view; 2 – the same, dorsal view; 3 – male, lateral view; 4 – the same, dorsal view. Scale = 1 mm.

Hind wing almost reaching apex of posterior process of pronotum. Upper and lower sides of fore and mid femora straight. Fore femur 4.8 times, mid femur 5 times as long as wide. Hind femur 3.9 times as long as wide. First tarsal segment of hind leg



Figs 5–9. *Xistra cambodia* sp. n. (5–8 – holotype; 9 – paratype). 5 – female head, frontal view; 6 – female head and anterior part of pronotum, dorsal view; 7 – ovipositor, lateral view; 8 – female apex of abdomen, ventral view; 9 – male head, frontal view. Scale = 1 mm.

as long as 3rd segment (without claws); ventral side of 1st segment with 3 subequal and distinctly pointed pads. Epiproct triangular, with pointed apex. Subgenital plate subsquare; posterior side of plate strongly triangular near middle. Cerci conical, with pointed apices. Valves of ovipositor narrow, dentate; length of upper valve 4.3 times its maximum width; length of lower valve 5 times its maximum width.

General coloration of body blackish brown with light brown marks. Face brown. Antennae brown. Disc of pronotum blackish brown; lower part of lateral lobes of pronotum light brown. Visible part of tegmina blackish with light brown veinlets. Anterior margin of hind wings black. Fore and mid femora black with small light marks. Fore and middle tibiae black with pale apical rings. Hind femur blackish with light brown marks. Hind tibia blackish, with 2 light brown rings. First tarsal segment of hind leg pale brown, 2nd segment and apex of 3rd segment black. Sternal plate and sternites black; subgenital plate black with light brown apex. Ovipositor light brown.

Male. Similar to female but smaller. Antennae filiform, 13-segmented, 1.9 times as long as fore femur; middle segments (7–9th) 7.2–7.4 times as long as wide. One eye from above 1.3 times as wide as vertex. Frontal ridge near the base of antennae considerably narrower than width of the 1st antennal segment. Visible part of tegmen 2.6 times as long as wide and 1.3 times as wide as mid femur. Fore femur 5.2 times, mid femur 5.3 times, and hind femur 4.1 times as long as wide. First Tarsal segments of hind leg as in female. Subgenital plate conical.

General coloration of body as in female but face black. Sternal plate, sternites and subgenital plate shiny black.

MEASUREMENTS (in mm). Length body: ♀ 7.6, ♂ 7.1; antenna: ♀ 4.4, ♂ 4.0; pronotum: ♀ 15.3, ♂ 12.1; tegmen: ♀ 1.9, ♂ 1.3; fore femur: ♀ 2.4, ♂ 2.1; mid femur: ♀ 2.5, ♂ 2.1; hind femur: ♀ 6.6, ♂ 5.7; ovipositor 1.4 mm.

DIAGNOSIS. New species is most similar to *X. angusta* and *X. strictivertex* in the shape of pronotum, very narrow frontal ridge, and V-shaped vertex, but differs from both by parallel prozonal carinae and slender hind femur (in *X. angusta*, the prozonal carinae constricted inwards and hind femur 2.8 times as long as wide; in *X. strictivertex*, carinae constricted backward and hind femur 3.5 times as long as wide).

DISTRIBUTION. Cambodia: Elephant Mountains (= Dâmrei Mountains).

ETYMOLOGY. The new species is named after the type locality.

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REFERENCES

Blackith, R.E. 1992. *Tetrigidae (Insecta: Orthoptera) of South-East Asia: Annotated catalogue with partial translated keys and bibliography*. Ashford Co., Ireland: JAPAGA, Rock-bottom. 248 p.

- Bolívar, I. 1887. Acridiens de la tribu des Tetrigidae. *Annales de la Société Entomologique de Belgique*, 31: 175–313.
- Cigliano, M.M., Braun, H., Eades, D.C., & Otte, D. 2018. *Orthoptera Species File Online. Version 5.0/5.0*. Available from: <http://Orthoptera.SpeciesFile.org>. (Accessed: 15 February 2021).
- Ingrisch, S. 2001. Orthoptera of the Nepal expeditions of Prof. J. Martens (Mainz) (Insecta, Orthoptera). *Senckenbergiana biologica*, 81(1/2): 149–186.
- Li, X., Deng, W.A., Zheng, Z., Lin, M. & Lu, C.W. 2014. Two new species of the genus *Xistra* Bolívar (Orthoptera: Tetrigidae) from China. *Neotropical Entomology*, 43(3): 209–217. DOI: <https://doi.org/10.1007/s13744-014-0197-x>
- Liang, G.Q. & Chen, Y.Q. 2010. Two new species of the genus *Xistra* (Orthoptera: Metrodoridae) from Yunnan, China. *Entomotaxonomia*, 32(1):13–17.
- Storozhenko, S.Yu. 2018. To the knowledge of pygmy grasshoppers (Orthoptera: Tetrigidae) from Cambodia. *Far Eastern Entomologist*, 362: 17–20. DOI: <https://doi.org/10.25221/fee.362.3>
- Storozhenko, S.Yu. 2019. A new species of the genus *Teredorus* (Orthoptera: Tetrigidae) from Cambodia. *Far Eastern Entomologist*, 375: 1–6. DOI: <https://doi.org/10.25221/fee.375.1>
- Tumbrinck, J. 2014. Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia and from Australia, with general remarks to the classification and morphology of the Tetrigidae and descriptions of new genera and species from New Guinea and New Caledonia. P. 345–396, pls 64–91. *In: Telnov, D. (Ed.) Biodiversity, biogeography and nature conservation in Wallacea and New Guinea. Volume II*. Riga, the Entomological Society of Latvia. 458 p.
- Zheng, Z.M. 2005. *Fauna of Tetrigoidea from Western China*. Science Press, Beijing. 501 p. [In Chinese with English summary]
- Zheng, Z.M. 2009. Taxonomic review of the genus *Xistra* Bolívar (Orthoptera: Metrodoridae) from China with description of a new species. *Acta Entomologica Sinica*, 52(3): 296–300.
- Zheng, Z.M. & Ou, X.H. 2010. A survey of Tetrigoidea from Yuanjiang nature reserve, Yunnan Province, China (Orthoptera). *Journal of Shaanxi Normal University (Natural Science Edition)*, 38(6): 60–70.
- Zheng, Z.M. & Shi, F.M. 2009. Five new species of Tetrigoidea from Jiangxi Province (Orthoptera). *Acta Zootaxonomica Sinica*, 34(3): 572–577.
- Zheng, Z.M. & Zeng, H.H. 2011. A review of the genus *Xistra* Bolívar 1887 (Orthoptera: Tetrigidae) with description of two new species. *Journal of Natural History*, 45(31–32): 1895–1904.