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Two new rove beetle species from China (Coleoptera, Staphylinidae)

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Abstract

Two new rove beetle species from China are described: *Stenus yintiaolingus* Huang, Tang & Li, **sp. nov.** from Chongqing and *Parabolitobius zhejiangensis* Huang, Tang & Li, **sp. nov.** from Zhejiang. And the diagnostic characters of both new species are illustrated.

Key words: Steninae, Mycetoporinae, Chongqing, Zhejiang, new species

Introduction

Stenus Latreille, 1797 is a species-rich genus of subfamily Steninae. Currently, there are a total of 581 species that have been documented from China, but only five species are known from Chongqing. Recently, we have acquired specimens from the Yintiaoling Natural Reserve in Chongqing. Among these specimens, we have recognized a new brachypterous species that is definitely classified under the *Stenus cephalotes* group. This paper will designate it as the 88th Chinese species within the group.

Another new species described in this paper belongs to *Parabolitobius* Li, Zhao & Sakai, 2000, which is a small genus of subfamily Mycetoporinae (Yamamoto, 2017). Before this study, *Parabolitobius sinensis* Yin & Li, 2019, gathered in Henan, was the sole species reliably documented from China. Here, a new *Parabolitobius* species is described from Jiulong Wetland Park in Zhejiang Province.

Material and methods

The specimens examined in this study were collected by sifting leaf litter in broad leaf forests and euthanized using ethyl acetate. To investigate the genitalia, the last three abdominal segments were detached from the body after a process of softening in hot water. The aedeagi or spermathecae, together with other dissected remains, were glued back on plastic slides using Euparal (Chroma Gesellschaft Schmidt, Koengen, Germany). Photographs of sexual characteristics were captured with a Canon G9 camera connected to an Olympus SZX 16 stereoscope. Habitual photographs were acquired using a Canon macro lens MP-E 65 mm attached to a Canon EOS7D camera and stacked and combined using Zerene Stacker software (http://www.zerenesystems.com/cms/stacker).

The type specimens treated in this study are deposited in the following public or private collections:

SHNU Department of Biology, Shanghai Normal University, P. R. China

IOZ Institute of Zoology Chinese Academy of Sciences

The measurements of proportions are abbreviated as follows:

BL body length, measured from the anterior margin of the clypeus to the posterior margin of abdominal tergite X

FL forebody length, measured from the anterior margin of the clypeus to the apex of the elytra (apicolateral angle)

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HW	width of head including eyes
PW	width of pronotum
EW	width of elytra
HL	length of from anterior margin of clypeus to base
PL	length of pronotum
EL	length of elytra, measured from humeral angle
SL	length of elytral suture

Taxonomy

***Stenus yintiaolingus* Huang, Tang & Li, sp. nov.**
Figs 1–7

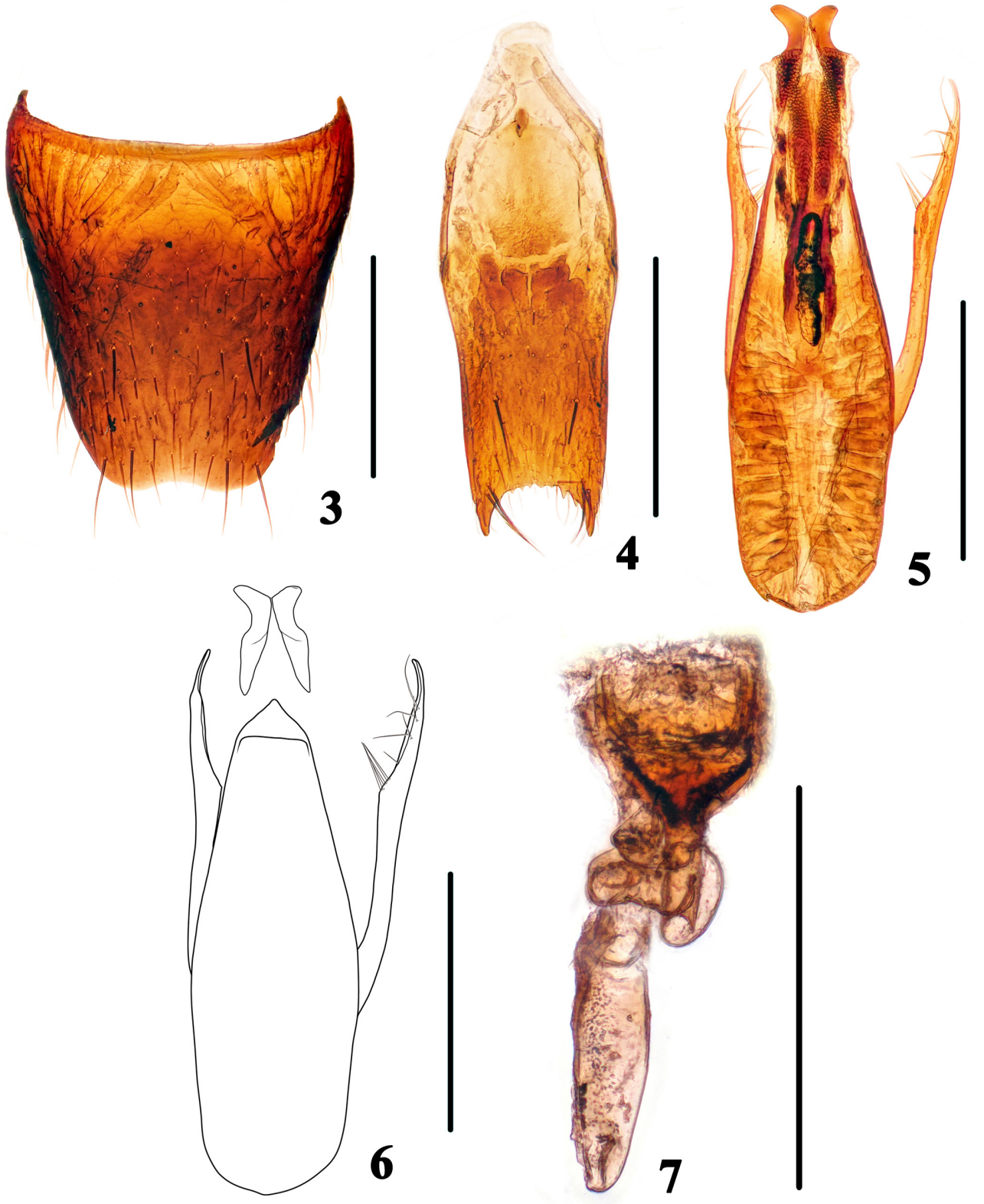
Type material. Holotype. China: Chongqing: ♂, glued on a card with labels as follows: "China: Chongqing: Wuxi County, Yintiaoling Nature Reserve, 31°32'15.2"N, 109°41'49.8"E, alt. 2147m, Zhang, Wang, Luo, Tan, Ren, Lu, Zhou, Ma leg." "Holotype / *Stenus yintiaolingus* / Huang, Tang & Li" [red handwritten label] (SHNU). **Paratypes.** 1♀, same data as for the holotype (SHNU).

Description. Brachypterous. Head blackish with clypeus and labrum reddish brown, pronotum reddish brown, elytra light reddish brown, abdomen reddish brown and gradually darken apicad. Antennae yellowish brown with club slightly infuscate, maxillary palpi yellowish and legs light reddish brown.

FIGURES 1, 2. Habitus of *Stenus yintiaolingus*. **1** dorsal view; **2** ventral view. Scale bar: 1.0 mm.

BL: 3.3–3.4 mm, FL: 1.6 mm. HW: 0.68–0.70 mm, PL: 0.50–0.56 mm, PW: 0.53–0.56 mm, EL: 0.56–0.59 mm, EW: 0.67–0.71 mm, SL: 0.44–0.48 mm.

Head 0.96–1.04 times as wide as elytra; interocular area with two deep longitudinal furrows, median portion convex, reaching level of inner eye margins; punctures round to slightly elliptic, mostly well delimited, slightly confluent on median portion, similar in size, diameter of punctures narrower than apical cross section of antennal segment II; interstices smooth, distinctly narrower than to as wide as half diameter of punctures except those along midline of posterior half of median portion, which may be as wide as diameter of punctures. Paraglossa oval.



FIGURES 3–7. *Stenus yintiaolingus*. **3** male sternite VIII; **4** male sternite IX; **5, 6** aedeagus; **7** spermatheca. Scale bars: 0.25 mm.

Pronotum 0.95–1.00 times as long as wide; disk slightly uneven, with broad median longitudinal furrow; punctures mostly confluent and different in size, larger punctures as large as those of head; interstices reticulated and more or less rugae-like, mostly narrower than half of diameter of punctures except those at actual middle of longitudinal furrow, which may be slightly wider.

Elytra about 0.83 times as long as wide; disk relatively even, humeral impression indistinct; punctures and interstices similar to those of pronotum except reticulation indistinct.

Legs with tarsomeres IV deeply bilobed.

Abdomen cylindrical; abdominal segment III with paratergites complete, narrow, and punctate, segments IV–VI with tergites and sternites entirely fused, tergite VII with indistinct apical membranous fringe; punctures more or less elliptic, becoming slightly smaller posteriad; interstices of tergites III–V partially and indistinctly reticulated, interstices of rest tergites shallowly reticulated.

Male. Sternite VII with posteriomedian portion flattened, posterior margin of flattened portion indistinctly emarginated; sternite VIII (Fig. 3) roundly emarginated at middle of posterior margin; sternite IX (Fig. 4) with long apicolateral projections, posterior margin slightly serrate. Aedeagus (Figs 5, 6) slender; apical sclerotized area of median lobe relatively short with round tip; expulsion clasps large, strongly sclerotized; parameres longer than median lobe, each paramere with 5 subapical setae and 4–5 basal setae on apico-internal margins.

Female. Sternite VIII slightly prominent at middle of posterior margin; spermatheca (Fig. 7) with basal porch sclerotized, spermathecal duct with complicated bends and capsule large.

Distribution. China (Chongqing).

Remarks. Considering the similarity of appearance and sexual characters, the new species is related to *Stenus wujiei* Lv, Zhao & Zhou, 2018 described from Shennongjia in Hubei province which is about 50 km away from Yintiaoling. But the new species can be distinguished from the latter by more regular punctation of elytra and different sexual characters.

Etymology. The specific name is derived from "Yintiaoling", the type locality of this species.

Parabolitobius zhejiangensis Huang, Tang & Li, sp. nov.

Figs 8–11

Type material. Holotype. China: Zhejiang: ♂, glued on a card with labels as follows: "China: Zhejiang, Lishui, Bihu, Jiulong Wetland, headlamp, 28°38'48"N, 119°82'47"E, alt. 57.7m, 31.XII.2022, Liang H.-B. & Qin Y.-Y. leg." "Holotype / *Parabolitobius zhejiangensis* / Huang, Tang & Li" [red handwritten label] (IOZ).

Description. Head reddish brown with mouthparts paler, antennae reddish with antennomeres 3–10 darker, pronotum reddish brown, elytra light reddish brown, abdomen reddish brown with tip paler, legs light reddish brown.

BL:10.4 mm, FL: 4.0 mm. HL: 0.89mm, HW: 0.89 mm, PL: 1.28 mm, PW: 1.67 mm, EL: 1.95 mm, EW: 1.83 mm, SL: 1.61 mm. Head 0.48 times as wide as elytra, pronotum 0.77 times as long as wide, elytra 1.06 times as long as wide.

Head with dorsal surface indistinctly punctate, interstices smooth; eyes large, about twice as long as tempora, long ocular seta situated near inner posterior margin of each eye; antennae elongate, length 2.61 mm; antennomeres 1–3 more sparsely setose; antennomeres 4–11 densely and finely pubescent and slightly compressed; antennomere 10 about 1.25 times as long as wide; lengths of antennomeres 1–11 (mm): 0.39 : 0.19 : 0.31 : 0.22 : 0.22 : 0.21 : 0.19 : 0.20 : 0.19 : 0.17 : 0.25.

Pronotum spherical, widest at basal 1/3, posterolateral corners roundly angulate; disc with punctures as those of head, without microsculpture; anterior, lateral, and basal margins each with four, three, and four coarse punctures; preapical punctures separated from anterior margin, located at apical 1/4; each puncture bearing one long, suberect seta. Scutellum small, subtriangular and impunctate, with transverse microsculpture.

Elytra with lateral sides slightly divergent posteriorly, anterolateral corners broadly rounded; surface clothed with fine punctures and evenly pubescent; metathoracic wings fully developed.

Legs elongate and slender; apical spines of meso- and metatibiae sub-equal in length; metatibiae 0.56 times as long as metatarsi; lengths of metatarsomeres 1–5 (mm): 0.72 : 0.50 : 0.39 : 0.28 : 0.28.

FIGURE 8. Habitus of *Parabolitobius zhejiangensis*. Scale bar: 1.0 mm.

Abdomen elongate, gradually tapering from base to apex; surface densely punctate and pubescent; punctures moderately coarse; pubescence long and gradually becoming longer posteriorly; microsculpture absent; apical margin of tergites III–VII bearing 4–5 pairs of long bristles, tergite VII with distinct membranous fringe in middle of apical margin.

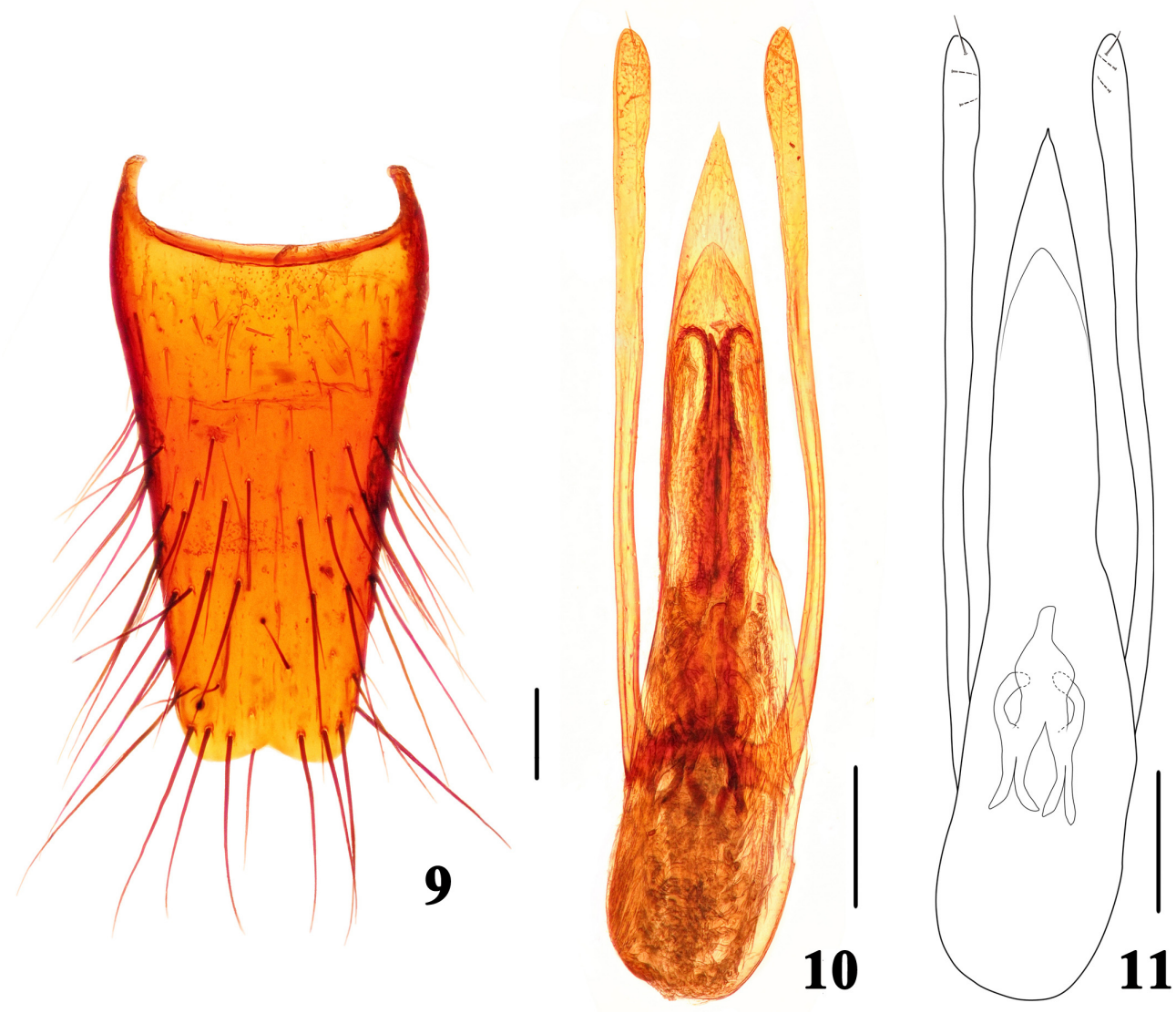
Male. Sternite VIII (Fig. 9) with posterior margin emarginate, bearing seven long bristles near posterior margin. Aedeagus (Figs 10, 11) elongate; median lobe gradually tapering apically with pointed tip; parameres distinctly longer than median lobe, slightly swollen at subapical portion, each paramere bearing one dorsal apical and two ventral preapical short setae; endophallus with sclerites complex.

Female. Unknown.

Distribution. China (Zhejiang).

Remarks. The new species can be distinguished from *Parabolitobius sinensis* Yin & Li, 2019 by larger body size, larger eyes, more slender antennae, longer elytra, fully developed metathoracic wings, presence of membranous fringe in tergite VII and different sexual characters.

Etymology. The specific name is derived from “Zhejiang”, the type locality of this species.



FIGURES 9, 10. *Parabolitobius zhejiangensis*. **9** male sternite VIII; **10, 11** aedeagus in dorsal view. Scale bars: 0.25 mm.

Acknowledgments

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