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● New record and first male report of *Miwacrepidius rubriventris* Han & Park, 2013 from China (Coleoptera: Elateridae: Dendrometrinae)

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Abstract: *Miwacrepidius rubriventris* Han and Park, 2013 is newly recorded from China (Liaoning, Sichuan, and Shaanxi). The male of this species is dissected and illustrated for the first time.

Keywords: China, click beetles, morphology, new record, taxonomy

● 红腹隆盾叩甲之中国新纪录及雄虫首次报导（鞘翅目：叩甲科：山叩甲亚科）

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摘要：本研究报导了我国叩甲科一新记录种——红腹隆盾叩甲 *Miwacrepidius rubriventris* Han & Park, 2013（记录于辽宁、四川和陕西三省），并首次解剖和图示该种的雄虫。

关键词：中国，叩甲，形态学，新记录，分类学

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Introduction

Miwacrepidius is a small genus currently comprising three species: *Miwacrepidius sichuanensis* Platia & Pulvirenti, 2022 (China), *Miwacrepidius subcyaneus* (Motschulsky, 1866) (Japan and Russia), and *Miwacrepidius rubriventris* Han & Park, 2013 (South Korea) (Han *et al.* 2013; Platia & Pulvirenti 2022). Initially treated as an independent genus (Ôhira 1962), *Miwacrepidius* was subsequently regarded as a subgenus under *Hemicrepidius* (Kishii 1987; Han *et al.* 2013). Etzler (2020) considered *Miwacrepidius* a synonym of *Hemicrepidius* based on *COI* barcode analysis. However, in the most recent work by Platia & Pulvirenti (2022), it was stated that *Miwacrepidius* possesses several distinct characters that differentiate it from *Hemicrepidius*, leading to its recovery as an independent genus. They also described the first Chinese species, *Miwacrepidius sichuanensis*, from “Quincheng Shan [actually Qingchenghoushan/青城后山 according to the original information]”, Sichuan.

Miwacrepidius rubriventris was originally described based on three females from Korea (Han *et al.* 2013), and since then, no additional specimens have been discovered. Here, I report this species from China for the first time and illustrate the male genital characteristics. This discovery significantly extends the distribution range of this species from the Korean Peninsula to northern Sichuan, China.

Material and methods

The examined specimens are deposited in the Invertebrate Collection of Mianyang Normal University, Mianyang, Sichuan, China (MYNU) and College of Life Sciences, China West Normal University, Nanchong, Sichuan, China (CWNU). Habitus images were photographed using a Canon® EOS RP with a Laowa® Mini FFII 85 mm F5.6 Macro 2:1 lens. Character images were photographed using a Canon® EOS RP + Mount Adapter EF-EOS R plus a Laowa® 25 mm F2.8 2.5-5× Ultra Macro Lens (for Canon EF). All figures were modified in Adobe Photoshop® CC 2019. The collecting data is quoted verbatim (in Chinese), slashes (/) are used between text on different lines on a label. English translation of the data, as well as additional information, is given in square brackets.

Taxonomy

Miwacrepidius rubriventris Han & Park, 2013 红腹隆盾叩甲

Figs 1–2

Hemicrepidius (*Miwacrepidius*) *rubriventris* Han & Park, 2013 in Han *et al.* 2013: 382 (original).

Hemicrepidius rubriventris: Etzler 2020: 24 (checklist).

Miwacrepidius rubriventris: Platia & Pulvirenti 2022: 226 (key).

New material examined. 1 male (CWNU), 2012-VII-18/ 川 平武县 老河沟/ 李云春 赖永平采 [Laohegou N.R., Pingwu County, Mianyang City, Sichuan Province, 18.VII.2021, Yun-Chun Li & Yong-Ping Lai leg.]; 1 male (MYNU), 辽宁抚顺市新宾县/ 榆树乡罗圈村 600m/ 2022.VII-VIII/ local [Luoquan Village, Yushu Township, Xinbing County, Fushun City, Liaoning Province, 600m, VII-VIII.2022, local leg.]; 1 female (MYNU), 陕西宝鸡太白县/ 潘家湾林场 1300m/ 7.VII.2018/ 邱见玥 & 许浩 [Panjiawan Forest Farm, Taibai County, Baoji City, Shaanxi Province, 1300m, 7.VII.2018, Jian-Yue Qiu & Hao Xu leg.].

Diagnosis. Body smooth and robust (Fig. 1A–B). Length 12.5–19.9 mm, width 3.6–5.7 mm (Measurements were derived from the current study and the data from Han *et al.* (2013)). Dorsal surface predominantly black, with reddish-brown areas on antennae, distal half of head, margins of pronotum (including hind angles), and basal portion of elytra; these reddish-brown regions may blend with darker tones. Ventral side yellowish-brown to reddish-brown; hypomeron, prosternum, mesoventrite, and metaventrite often fused with darker colors, particularly in the middle of prosternum. Legs yellowish-brown to reddish-brown. Antenna reaching base of hind angle, serrated from third antennomere. Antennomere II shortest. Pronotum longer than wide, widest posterior to the middle; hind angles robust and carinated. Scutellar shield ridged medially. Tarsi lobed from tarsomeres 1 to 3.

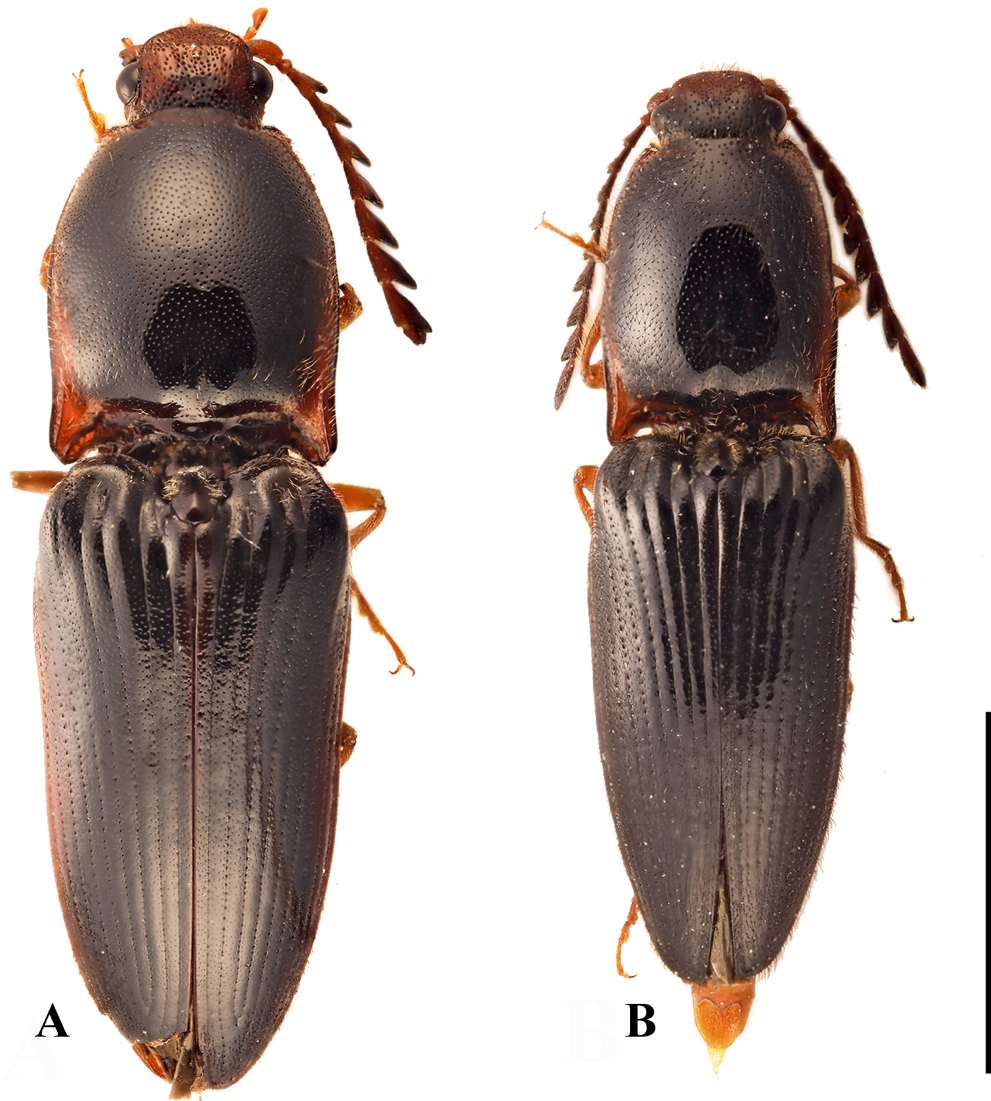


FIGURE 1. *Miwacrepidius rubriventris*, dorsal view: **A** male from Liaoning **B** female from Shaanxi. Scale bar = 5mm.

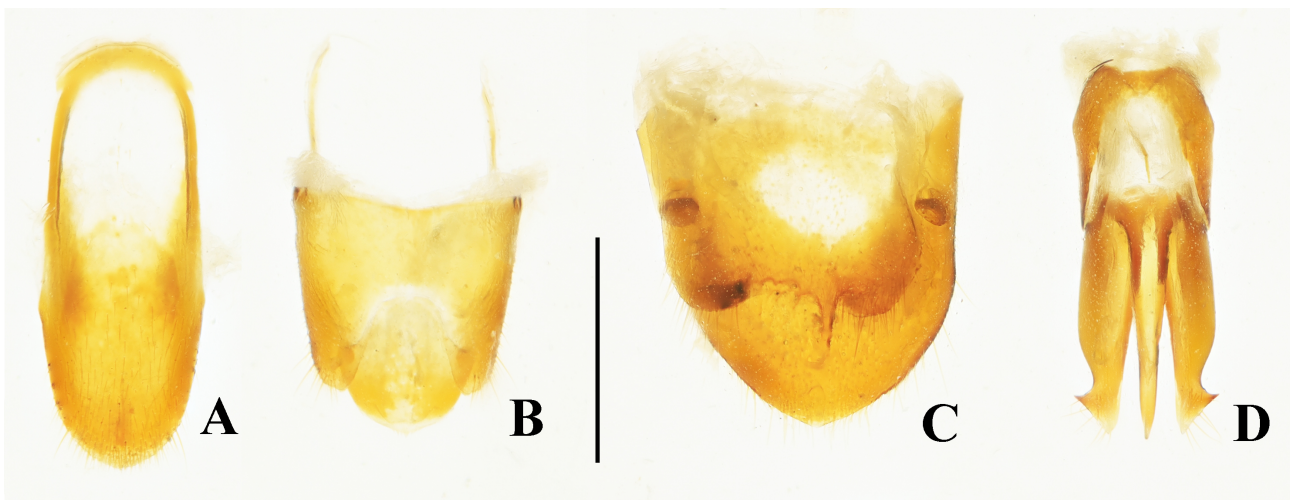


FIGURE 2. Male characters of *Miwacrepidius rubriventris*: **A** sternite IX, ventral view **B** tergite IX–X, dorsal view **C** tergite and sternite VIII, ventral view **D** aedeagus, ventral view. Scale bar = 1 mm.

Supplementary description of male. Tergite VIII sub-triangular, with slightly arched sides and slightly pointed apex (Fig. 2C). Sternite VIII small and transverse, featuring two rounded protrusions apically (Fig. 2C). Tergite IX with hind margin slightly concave; distal portion exhibiting two protruding lobes that have rounded apices and broadly concave middle (Fig. 2B). Tergite X stout and tongue-shaped, with blunt apex (Fig. 2B). Sternite IX elongate, with transparent basal portion medially; distal portion setose, with subparallel sides and rounded apex (Fig. 2A). Genitalia (Fig. 2D): median lobe slightly surpassing paramere, tapered towards apex. Paramere robust, with widened basal portion and parallel sides; distal portion abruptly concaved at outer margin. Subapical hook present, triangularly sharp and pointing laterally. Apical portion triangularly sharp, adorned with several long setae.

Distribution. China (**new record**): Sichuan, Shaanxi, Liaoning; South Korea.

Remarks. This species was previously known only from South Korea. Recording this species in Northeast China (Liaoning) is unsurprising, given its proximity to the Korean Peninsula. However, its occurrence in Shaanxi and Sichuan is unexpected, suggesting that this species may have a broader distribution, extending from the Korean Peninsula into central China.

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Additional information

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