



## A new species of the genus *Menimus* Sharp, 1876 (Coleoptera: Tenebrionidae: Diaperinae) from Mêdog, Xizang, China

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### Abstract

The Chinese species of the genus *Menimus* Sharp, 1876 are summarized. Nine species are reported in this study, including a new species, *M. (M.) medogensis* **sp. nov.**, from Xizang. The new species differs from its congeners most notably by the male parameres being strongly emarginate medially on lateral sides, and its larger body size. Habitus and characters of the new species are illustrated. All Chinese species of the genus are listed and keyed.

**Key words:** darkling beetles, Gnathidiini, Oriental Region

### Introduction

The darkling beetle genus *Menimus* Sharp, 1876 belongs to the tribe Gnathidiini Gebien, 1921 of the subfamily Diaperinae Latreille, 1802 (Bouchard *et al.* 2021). Up to date, nearly 100 known species are distributed in the Oriental, Papuan, Australian, Pacific, and southern areas of the Palearctic Regions (Schawaller & Bigalk 2021; Schawaller & Bellersheim 2024). Among them, eight species are reported from Yunnan (Medvedev 2007; Schawaller 2009), Xizang (Schawaller 2016; Schawaller & Bellersheim 2024) and Taiwan (Ando 2018), China.

When studying some tenebrionid material from Mêdog County, Xizang Autonomous Region, China, we found a few uncommon specimens and identified them as a species of *Menimus*. In the following text, this species is described as new to science.

### Material and Methods

The specimens were examined and dissected under a Nikon SMZ1500 microscope. The photographs were taken using Canon EOS 5D Mark III (Canon Inc., Tokyo, Japan) connected to a Laowa FF 100 mm F2.8 CA-Dreamer Macro 2× or Laowa FF 25 mm F2.8 Ultra Macro 2.5–5× (Anhui Changgeng Optics Technology Co., Hefei, China). Images were illuminated with either an LED ring light attached to the end of the microscope column, with incident light filtered to reduce glare, or by a gooseneck illuminator with bifurcating fiberoptics. Photographs were taken using the WeMacro track. Multiple images were stacked through Helicon Focus v. 7.6.1 to build the final image. Montaged images were edited using Adobe Photoshop v. 24.0.0 to form the final figure plates. A single slash (/) separates data of different lines on a label, a double slash (//) separates data of different labels. Specimens examined in this study are deposited in Museum of Hebei University, Baoding, China (MHBUS).

## Taxonomy

### Description of new species

#### *Menimus (Menimus) medogensis* sp. nov.

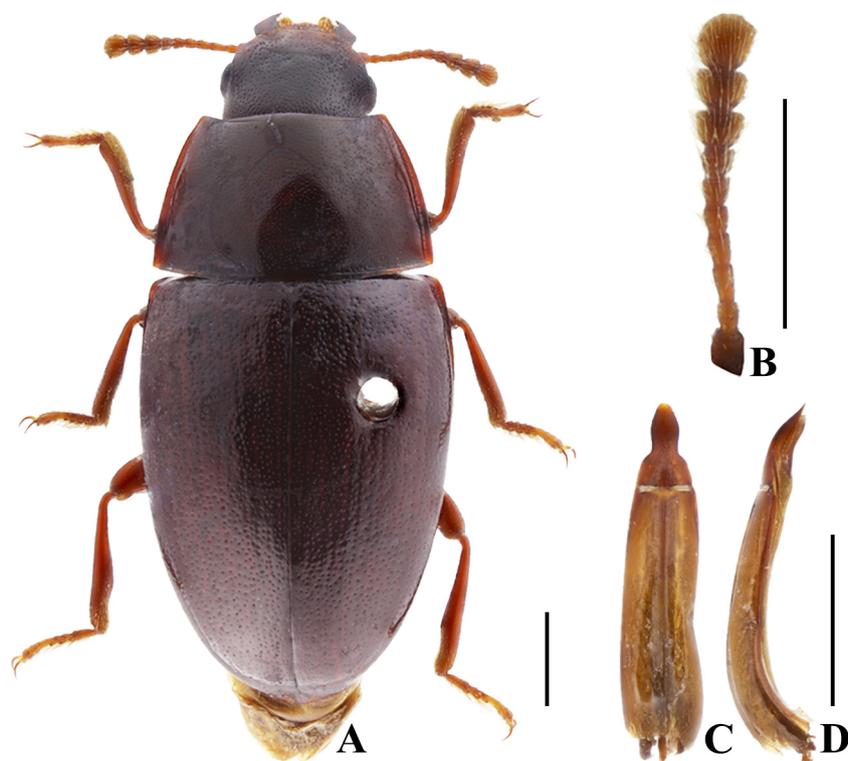
(Fig. 1)

**Type material. HOLOTYPE:** CHINA: ♂, CHINA, Tibet, Mêdog / Baibung, Hanmi / On trail, head lamp / 29.36637°N, 95.12770°E // 2120 m, 2006.8.11 N / Liang H.B., Bai M. / Institute of Zoology, / Chinese Acad. Sciences. **PARATYPES:** CHINA: 4 ♂♂, 2 ♀♀, same data as holotype.

**Description.** Body oblong-oval, dorsal side convex, surface dark brown, shiny, antennae, palpi and leg light brown.

**Male. Head.** Dorsal surface relatively flat. Mandibles relatively broad and large, right mandible with a tooth-like process at base of inner margin. Clypeus with anterior margin weakly concave, sides arcuately curved, surface flat, sparse, finely punctate. Frontoclypeal suture fine. Genae barely elevated, emargination of outer margins of head above antennal base shallowly concave. Frons flat, sparse, finely punctate, slightly larger than those on clypeus. Eyes small and protruding beyond contour of head. Distance between anterior margin of temples represents the greatest width of head. Antennae 10-segmented, extending posteriorly almost to middle of pronotum, antennomeres 8–10 distinctly transversely widened and club-shaped.

**Prothorax.** Pronotum subtrapezoidal, widest at base; disc convex, finely punctate, punctures smaller than those on head, denser at base and laterally, sparser apically; anterior margin emarginate, nearly straight medially, finely edged laterally; lateral margins evenly narrowed from base forward, broadly edged, lateral sides weakly depressed along lateral margins; posterior margin arcuately projecting backward, unedged; anterior and posterior angles nearly rectangular; prothoracic hypomera matte, shallowly punctate and sparsely wrinkled. Prosternum shallow and sparsely punctate, slightly denser on lateral sides; prosternal process extends posteriorly beyond posterior margin of procoxae, distal part expanded, apex round and blunt in lateral view.



**FIGURE 1.** Habitus and characters of *Menimus (Menimus) medogensis* sp. nov. **A.** Habitus (male, holotype). **B.** Antenna. **C,** **D.** Aedeagus in dorsal and lateral view. Scale bars: 1 mm.

*Pterothorax*. Elytra elongate-oval, convex, widest at basal 1/4; lateral margins visible at basal 1/4 in dorsal view; humeral angles well developed, nearly rectangular; disc with shallow and dense punctures, larger than those on head, not arranged in rows; epipleura narrow, sparsely and shallowly punctate. Scutellum triangular. Meso- and metasternum shallowly and sparsely punctate, slightly denser on lateral sides.

*Abdomen*. Abdominal ventrites smooth, finely, sparsely, shallowly punctate, membranes present between 3–4 and 4–5 ventrites; terminal ventrite with sparse golden-yellow long setae near posterior margin.

*Legs*. Short and robust. Femora claviform, pro- and mesofemora subequal in length, metafemora longest. Protibiae straight externally, gradually widened from base to apex internally, apical half with golden-yellow hairy brush on inner side. Meso- and metatibiae straight externally, apex emarginate on the inner side, with golden-yellow hairy brush. Tarsi with golden-yellow long hairy brush ventrally, dense on protarsi, sparse on meso- and metatarsi; terminal tarsomere subequal in length to the combined length of preceding tarsomeres; claws slender and long.

*Aedeagus*. Length approximately 2.0 mm. Parameres length approximately 0.5 mm, widest at base and narrowing toward apex, lateral sides strongly emarginate in middle, with the apex slightly expanded in dorsal view, distal part curved to ventral side in lateral view.

Female. Antennae slightly shorter; pro- and mesotibiae nearly straight, without emargination on inner side of apex.

**Measurements.** Body length: 7.0–7.2 mm; body width: 3.1–3.3 mm.

**Etymology.** The species name is derived from the type locality, Mêdog, which is a treasure trove of biodiversity.

**Distribution.** China: Xizang.

**Diagnosis.** The new species differs from its congeners most notably by: (1) the male parameres being strongly emarginate medially on lateral sides (whereas in other species, without emarginate, weakly emarginate, or weakly expanded); and (2) its larger body size, measuring 7.0–7.2 mm in length (the maximum for other congeners being 5.5 mm).

## List of Chinese species

### 1. *Menimus (Menimus) arunachalus* Schawaller & Bellersheim, 2024

错那莫颚菌甲

*Menimus (Menimus) arunachalus* Schawaller & Bellersheim, 2024: 597 (type locality: China, Xizang, Cona, 11 km SSE Tenga, Eagles Nest Sanctuary, 27°06'23" N, 92°26'02" E; figs 1–3).

**Distribution.** China: Xizang. [The type locality is wrongly positioned as India in the original text]

### 2. *Menimus (Menimus) belousovi* Medvedev, 2007

光亮莫颚菌甲

*Menimus (Menimus) belousovi* Medvedev, 2007: 868 (type locality: China, Yunnan, N of Baoshan; figs 2–19); Schawaller 2009: 363 (figs 4–5); Schawaller 2016: 194 (NE Burma, Kambaiti; figs 1, 6), 195 (in key); Iwan *et al.* 2020: 405 (in catalogue).

**Distribution.** China: Yunnan; Myanmar.

### 3. *Menimus (Menimus) formosanus* Ando, 2018

台湾莫颚菌甲

*Menimus (Menimus) formosanus* Ando, 2018: 129 (type locality: China, Taiwan, Lan-yu Is., Rong-Meng Br.; figs 1–9); Iwan *et al.* 2020: 405 (in catalogue).

**Distribution.** China: Taiwan.

**4. *Menimus (Menimus) hunlicus* Schawaller, 2016**

察隅莫颚菌甲

*Menimus (Menimus) hunlicus* Schawaller, 2016: 192 (type locality: China, Xizang, Zayü, Hunli [28°19.19' N, 95°57.71' E]; figs 5, 11); Iwan *et al.* 2020: 405 (in catalogue).

**Distribution.** China: Xizang; India. [The type locality is wrongly positioned as India in the original text]

**5. *Menimus (Menimus) medogensis* sp. nov.**

墨脱莫颚菌甲

**Distribution.** China: Xizang.

**6. *Menimus (Menimus) medvedevi* Schawaller, 2009**

梅氏莫颚菌甲

*Menimus (Menimus) medvedevi* Schawaller, 2009: 364 (type locality: China, Yunnan, SE Tengchong; figs 1, 3–5, plate XIV fig. c); Iwan *et al.* 2020: 405 (in catalogue).

**Distribution.** China: Yunnan.

**7. *Menimus (Menimus) puetzi* Schawaller, 2009**

普茨莫颚菌甲

*Menimus (Menimus) puetzi* Schawaller, 2009: 364 (type locality: China, Yunnan, SE Tengchong; figs 2, 4–5, plate XIV fig. a); Iwan *et al.* 2020: 405 (in catalogue).

**Distribution.** China: Yunnan.

**8. *Menimus (Menimus) yunnanus* Medvedev, 2007**

云南莫颚菌甲

*Menimus (Menimus) yunnanus* Medvedev, 2007: 870 (type locality: China, Yunnan, SSW of Liuku; figs 20–32); Schawaller 2009: 365 (figs 4–5); Iwan *et al.* 2020: 405 (in catalogue).

**Distribution.** China: Yunnan.

**9. *Menimus (Sinomenimus) kabaki* Medvedev, 2007**

卡巴莫颚菌甲

*Menimus (Sinomenimus) kabaki* Medvedev, 2007: 875 (type locality: China, W Yunnan, SSW of Liuku; figs 33–55); Schawaller 2009: 363 (China, Yunnan, NW Liuku; figs 4–5, plate XIV fig. d); Iwan *et al.* 2020: 405 (in catalogue; in subgenus *Menimus*).

**Distribution.** China: Yunnan.

## Key to Chinese species

1. Eyes absent (subgenus *Sinomenimus*) . . . . . *M. kabaki*
- Eyes present (subgenus *Menimus*) . . . . . 2
2. Antenna with 4-segmented club . . . . . 3
- Antenna with 3-segmented club . . . . . 4
3. Body smaller (2.3–2.4 mm), light chestnut brown; pronotum widest at basal third; Taiwan Province of China . . . . . *M. formosanus*
- Body larger (3.0–3.7 mm), blackish; pronotum widest in middle; Xizang Autonomous Region of China, and India . . . . . *M. hunlicus*
4. Body narrower and longer; pronotum widest at anterior third . . . . . *M. puetzi*
- Body wider and rounder; pronotum widest at base or basal third, or widest in middle and slightly wider than at base . . . . . 5
5. Elytra with punctuation not arranged in rows . . . . . 6
- Elytra with punctuation irregularly arranged in rows . . . . . 7
6. Body larger (7.0–7.2 mm); pronotum widest at base, significantly wider than in middle . . . . . *M. medogensis* sp. nov.
- Body smaller (4.5–5.5 mm); pronotum widest in middle, slightly wider than at base . . . . . *M. belousovi*
7. Body smaller (3.2–3.7 mm); pronotum with punctuation distinctly finer and sparser than on head . . . . . *M. medvedevi*
- Body larger (4.0–5.9 mm); pronotum with punctuation similar as on head . . . . . 8
8. Body almost regularly oval, dark brown; pronotum wider (1.8 times as wide as long), widest at base . . . . . *M. yunnanus*
- Body shape oval, brown; pronotum narrower (1.5 times as wide as long), widest in middle . . . . . *M. arunachalus*

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# 西藏墨脱莫颚菌甲属 *Menimus* 一新种 (鞘翅目: 拟步甲科: 菌甲亚科)

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**摘要:** 总结了我国莫颚菌甲属 *Menimus* 物种, 共报道9种; 包含西藏1新种, 即墨脱莫颚菌甲 *M. medogensis* sp. nov.。新种与同属的其他物种最明显的区别在于阳基侧突两侧中部强烈溢缩和体大型; 提供了新种整体和特征图, 以及我国莫颚菌甲属物种名录和检索表。

**关键词:** 拟步甲; 颚菌甲族; 东洋区