The genus Menimus Sharp (Coleoptera: Tenebrionidae: Gnathidiini) in India, with descriptions of two new species 1

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The genus *Menimus* Sharp (Coleoptera: Tenebrionidae: Gnathidiini) in India, with descriptions of two new species[1]

Wolfgang Schawaller

Abstract

The species of the tenebrionid genus *Menimus* Sharp, 1876 (Gnathidiini Gebien, 1921, Diaperinae) from India are revised, and an identification key for the species is compiled. New species: *M. gairibansicus* **n. sp.** (Darjeeling), *M. hunlicus* **n. sp.** (Arunachal Pradesh). New synonym: *M. indicus* Gebien, 1925 **n. syn.** of *M. ovalis* (Allard, 1894). Lectotypes are designated for *M. caraboides* (Allard, 1894) and *M. ovalis* (Allard, 1894).

Keywords: Coleoptera, Tenebrionidae, Diaperinae, Gnathidiini, *Menimus*, new species, new synonym, India.

Zusammenfassung

Die Arten der Tenebrioniden-Gattung *Menimus* Sharp, 1876 (Gnathidiini Gebien, 1921, Diaperinae) aus Indien werden revidiert, ein Bestimmungsschlüssel für die Arten wird erstellt. Neue Arten: *M. gairibansicus* **n. sp.** (Darjeeling), *M. hunlicus* **n. sp.** (Arunachal Pradesh). Neues Synonym: *M. indicus* Gebien, 1925 **n. syn.** von *M. ovalis* (Allard, 1894). Lectotypen werden designiert für *M. caraboides* (Allard, 1894) und *M. ovalis* (Allard, 1894).

Contents

1 Introduction 191
2 New species of *Menimus* from India 192
3 Known species of *Menimus* from India and adjacent Burma 194
4 Key to the species of *Menimus* from India and adjacent Burma 195
5 References 195

1 Introduction

The tenebrionid genus *Menimus* Sharp, 1876 (Gnathidiini Gebien, 1921, Diaperinae) contains more than 70 species, distributed in the Oriental, Papuan and Pacific regions with a few species reaching the southern areas of the Palaearctic region in Japan, Sikkim (Kaszab 1982) and Yunnan (Medvedev 2007). Medvedev (2007) described the first three species from China (Yunnan), listed the species composition of the complete genus with full references, synonymised *Neomenimus* Kaszab, 1939, and discussed some particular morphological features. Schawaller (2009) added two further species from Yunnan, one of them being completely blind.

Our knowledge about *Menimus* in India is quite poor. Allard (1894a) described two species under *Chariotheca*, and (1894b) a third one also under *Chariotheca*, all from southern India (Tamil Nadu). The latter, however is not a tenebrionid based on the re-examination of the type series by the author. Gebien (1925) transferred Allard's species to *Menimus*, but without study of Allard's types, and described a further species from southern India. Kaszab (1982) presented an additional species from Sikkim, figured by Schawaller (2009). Newly collected material of this genus from north-eastern India, representing two species new to science, induced me to deal with the Indian *Menimus* in a comprehensive way. Added is also the first record of *Menimus belousovi* from adjacent northern Burma, originally described from Yunnan by Medvedev (2007). The two known species from adjacent Sri Lanka (Kaszab 1980) are not included in this paper.

The species of *Menimus* have an epigean way of life in mature forests. Nearly all congeners occur only in small areas, and the species treated herein live either in southern India (two species), or disjunct in north-eastern India and adjacent Burma (four species). One of the herein described species (*M. gairibansicus* n. sp.) has completely reduced wings, whereas the other described species (*M. hunlicus* n. sp.) has fully developed wings. Additionally, both species have a distinctly different shape of the aedeagus (compare Figs. 8, 11). Although the reduction of characters is of less phylogenetic value, the other differences mainly in the articulation of the antennomeres suggest that *Menimus* in the present scope may not be monophyletic.

[1] Contributions to Tenebrionidae, no. 134. – For no. 133 see: Annals of the Ditsong National Museum of Natural History Pretoria 6 (2016).

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Acronyms of depositories

HNHM	Hungarian Natural History Museum, Budapest, Hungary
MNHN	Muséum National d'Histoire Naturelle, Paris, France
NHMB	Naturhistorisches Museum, Basel, Switzerland
SMNS	Staatliches Museum für Naturkunde, Stuttgart, Germany
ZFMK	Zoologisches Forschungsmuseum Koenig, Bonn, Germany

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2 New species of *Menimus* from India

Menimus gairibansicus n. sp.
(Figs. 2, 8)

Holotype (♂): NE India, West Bengal, Darjeeling Distr., Gairibans, 2600 m, 4.–6.VI.2006, leg. E. Kučera, SMNS.

Etymology: Named after the village Gairibans, where the type was collected.

Description: Body length 5.5 mm, body shape ovate, highly convex. Dorsal side dark ferrugineous without colour pattern, without metallic shine, surface shining and without distinct setation, even without microsetae in punctures, antennae and legs lighter. Head with punctation larger than on pronotum. Eyes small, not prominent. Antennae (Fig. 2) with antennomeres 8–10 forming a 3-segmented club and with antennomeres 9 and 10 fused; antennomeres 3–7 wider than long. Pronotum widest behind middle, anterior corners slightly protruding, posterior corners rectangular, lateral margins rounded, basal and distal margins unbordered in the middle; surface shining with punctation distinctly finer and sparser than on head, disc convex without any impressions; propleura scattered with similar punctation as pronotum, surface feebly wrinkled and shagreened; prosternal apophysis prominent, pointing posteriorly. Wings completely reduced. Elytra short ovate, 1.2 times as wide as long, widest in the middle, complete elytra with irregular, not confluent punctuation, without traces of punctural rows, punctures larger than pronotal punctures; lateral margin visible in dorsal view only in the anterior quarter, humeral angles pronounced, lateral margin with extremely fine dentation; epipleura diminishing somewhat before apex, with small scattered punctures, punctures smaller than those on metaventrite. Abdominal ventrites with punctation, medial punctures as small as on pronotum, lateral ones somewhat larger, last ventrite 5 unbordered and without modifications. Legs without specific characters, tibiae rounded in cross section and without keel. Aedeagus (Fig. 8) with broad apicale with rounded apex, basale straight in lateral view and with weakly hooked base.

Diagnosis: *Menimus gairibansicus* n. sp. is quite similar to *M. wittmeri* Kaszab, 1982 from Sikkim, both share a similar body size and high convex shape, the irregular elytral punctation, the shape of the antennae with antennomeres 8–10 forming a 3-segmented club and with antennomeres 9 and 10 fused, and the shape of the aedeagus. Both can be separated by the shape of the pronotum: pronotum widest at base with lateral margins parallel in basal part in *M. wittmeri*, pronotum widest before base and lateral margins rounded in basal part in *M. gairibansicus* n. sp. (Fig. 3). *M. belousovi* Medvedev, 2007 from Yunnan and north-eastern Burma (see below), also belongs to the same group, also with a 3-segmented antennal club, but without fused antennomeres 9 and 10 (Fig. 1).

Menimus hunlicus n. sp.
(Figs. 5, 11)

Holotype (♂): NE India, Arunachal Pradesh, Lower Dibang Valley Distr., Hunli, 1300 m, 26.V.–1.VI.2012, leg. L. Dembický, ZFMK.

Paratypes: Same data as holotype, 70 ex. ZFMK, 4 ex. HNHM, 4 ex. SMNS. – NE India, Arunachal Pradesh, Roing, 500 m, 23.–28.V.2007, leg. P. Pacholátko, 1 ex. NHMB.

Etymology: Named after the village Hunli, where the largest part of the type series was collected.

Description: Body length 3.0–3.7 mm, body shape elongate parallel. Dorsal side blackish without colour pattern, without metallic shine, surface shining and without distinct setation, only with a few microsetae, antennae and legs lighter. Head with punctation slightly larger than on pronotum. Eyes small, not prominent. Antennae (Fig. 5) with 4-segmented club (antennomeres 7–10), all antennomeres separated and not fused, antennomeres 3–6 wider than long. Pronotum widest in the middle, anterior corners slightly protruding, posterior corners rectangular, lateral margins rounded, basal margin completely bordered, distal margin unbordered in the middle; surface shining, with punctation distinctly finer and sparser than on head, disc convex, without any impressions; propleura scattered with similar punctation as pronotum, surface feebly wrinkled and shagreened; prosternal apophysis not prominent, bent down. Wings completely developed. Elytra elongate parallel, 1.6 times as wide as long, widest at base, elytra with irregular, not confluent punctural rows, punctures larger than pronotal punctures, intervals with a row of sparser and somewhat smaller punctures; lateral margin

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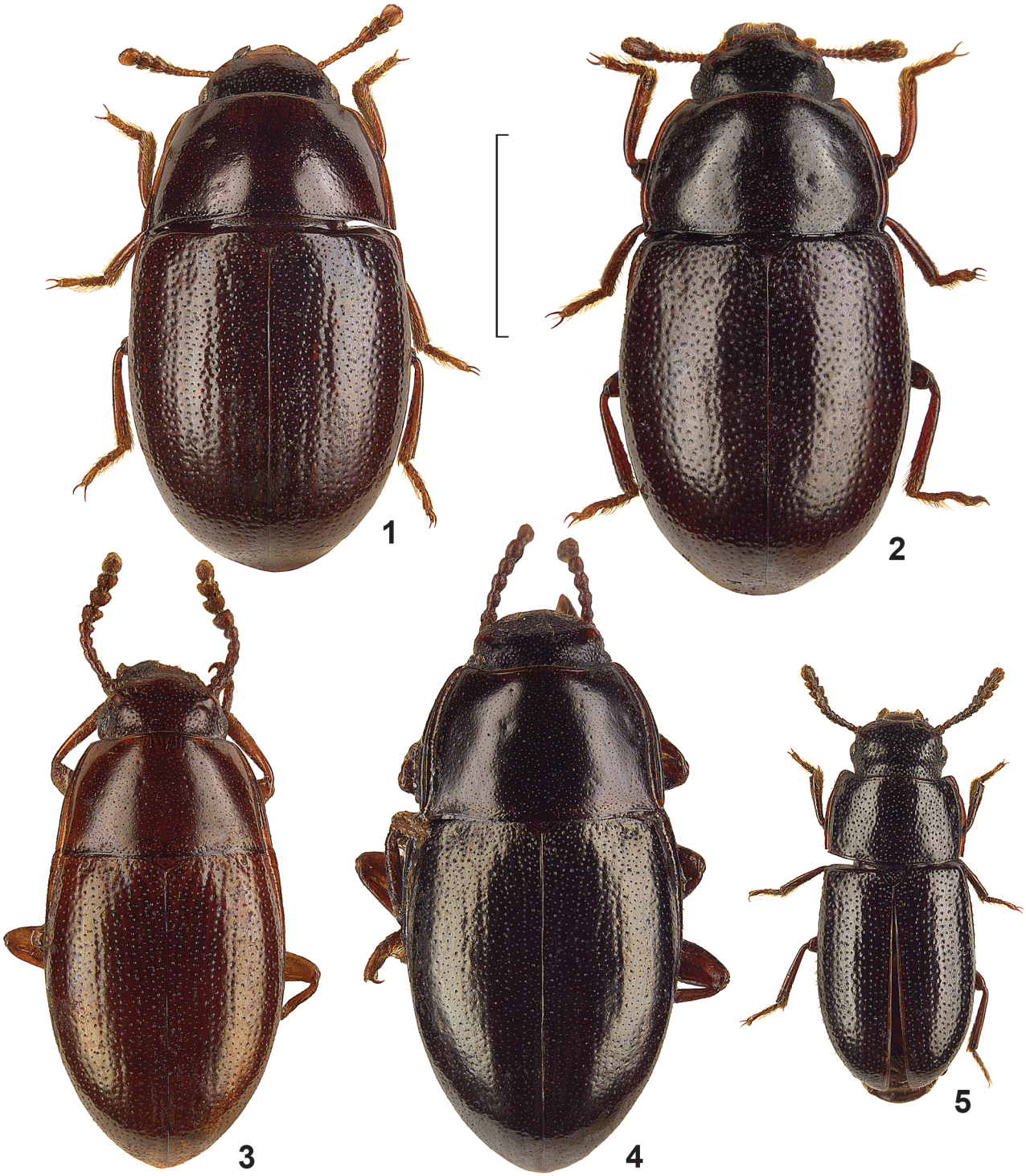
visible in dorsal view nearly throughout whole length, humeral angles pronounced, lateral margin with fine dentation; epipleura diminishing somewhat before apex, scattered with small punctures, punctures smaller than those on metaventrite. Abdominal ventrites with punctation, medial punctures as small as on pronotum, lateral ones somewhat larger, last ventrite 5 unbordered and without modifications. Legs without specific characters,



Figs. 1–5. *Menimus* spp., dorsal view. – **1**. *M. belousovi*, ♂ non-type Burma, SMNS. **2**. *M. gairibansicus* n. sp., ♂ holotype SMNS. **3**. *M. ovalis*, ♂ lectotype MNHN. **4**. *M. caraboides*, ♂ lectotype MNHN. **5**. *M. hunlicus* n. sp., ♂ holotype ZFMK. – Scale: 2 mm.

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tibiae rounded in cross section and without keel. Aedeagus (Fig. 11) with broad finger-like apicale distinctly bent downwards in lateral view, basale nearly straight in lateral view and without hooked base.

Diagnosis: *Menimus hunlicus* n. sp. can be recognised among the Indian congeners by small body size less than 4 mm (all other species around 5 mm), by elongate parallel-sided body (all other ovate), by the antennae with 4-segmented club, and by a completely different shape of the aedeagus (compare Figs. 1–11).

3 Known species of *Menimus* from India and adjacent Burma

Menimus belousovi Medvedev, 2007
(Figs. 1, 6)

Examined material: NE Burma, Kambaiti, 7000 ft. (2100 m), IV.1934, leg. R. Malaise, 8 ex. NHMB, 3 ex. SMNS, 2 ex. HNHM.

Remarks: This species was described in detail (Medvedev 2007) from south-western Yunnan (Baoshan), and I have no doubts that the above listed series from the closely adjacent north-eastern Burma belongs to the same species. *M. belousovi* is similar to *M. wittmeri* and *M. gairibansicus* n. sp., both from India, in body shape and size, irregular elytral punctation, and in similar antennae with a 3-segmented antennal club. However, in *M. belousovi* all 3 antennomeres 8–10 of the club are separated, whereas in both Indian species the terminal antennomeres 9–10 are fused. For aedeagi see Figs. 6, 8, 10.

Distribution: SW Yunnan and adjacent NE Burma (Myanmar), so far unknown in India.

Menimus caraboides (Allard, 1894)
(Figs. 4, 7)

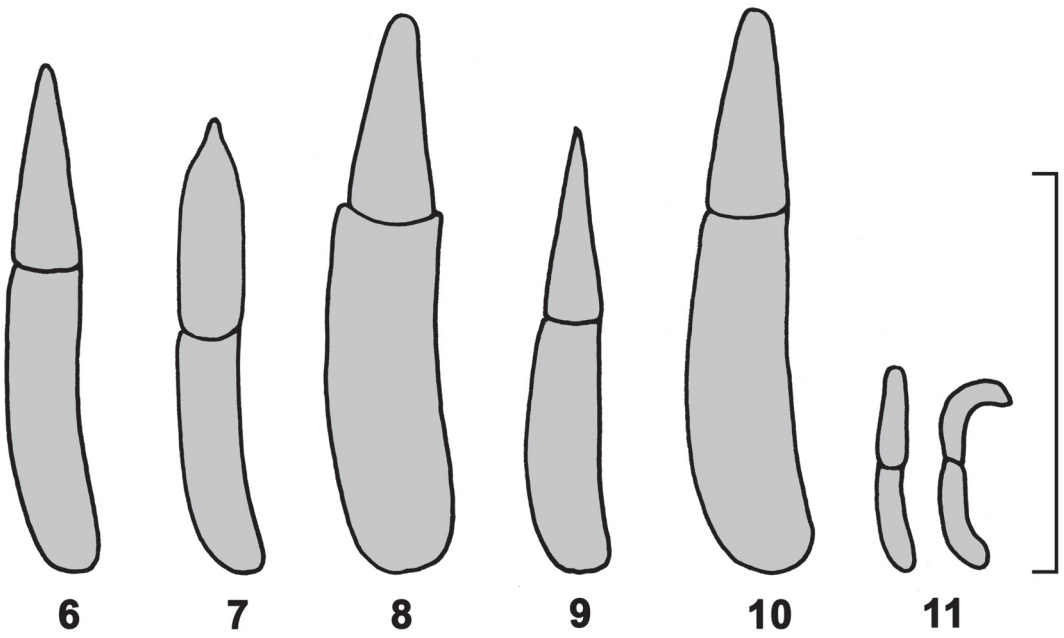
Chariotheca caraboides Allard, 1894.

Examined type specimens: India, Maduré (= Madurai), without further data, 2 syntypes MNHN (coll. Allard), 1 ♂ designated herewith as lectotype.

Examined material: India, Madras, Kodaikanal, 2100 m, 11.XI.1972, leg. C. Besuchet, I. Löbl, R. Mussard, 5 ex. HNHM, 1 ex. SMNS.

Remarks: Unfortunately, both types are in bad condition, and distal parts of all antennae are missing. Without dissection of the male genitalia, alone by body size and shape, and by dorsal punctation, this species is difficult to distinguish from *M. ovalis*. The available specimens of *M. caraboides* are slightly larger, and the lateral margins of the pronotum are somewhat rounded, but straight conical in *M. ovalis* (Allard, 1894). However, the shapes of the aedeagal apicales are quite different (Figs. 7, 9).

Distribution: South India (Tamil Nadu).



Figs. 6–11. *Menimus* spp., aedeagi. – **6**. *M. belousovi*, ♂ non-type Burma, SMNS. **7**. *M. caraboides*, ♂ lectotype MNHN. **8**. *M. gairibansicus* n. sp., ♂ holotype SMNS. **9**. *M. ovalis*, ♂ lectotype MNHN. **10**. *M. wittmeri*, ♂ paratype SMNS. **11**. *M. hunlicus* n. sp., dorsal view left, lateral view right, ♂ holotype ZFMK. – Scale: 1 mm.

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Menimus ovalis (Allard, 1894)
(Figs. 3, 9)

Chariotheca ovalis Allard, 1894.
Menimus indicus Gebien, 1925 **n. syn.**

Examined type specimens: India, Maduré (= Madurai), without further data, 4 syntypes of *Chariotheca ovalis* MNHN (coll. Allard), 1 ♂ designated herewith as lectotype. – India, Madras (= Chennai), ♂ holotype of *Menimus indicus* NHMB (coll. Frey).

Examined material: India, Madras, without further data, 2 ex. SMNS. – India, Madurai, Shembagamur, without further data, 4 ex. SMNS, 3 ex. HNHM. – India, Tamil Nadu, Ootakamund, 2100 m, 20.–21.VIII.1989, leg. A. Riedel, 25 ex. SMNS. – India, Tamil Nadu, Kodaikanal, Munnar, 2300 m, 26.–27.VIII.1989, leg. A. Riedel, 4 ex. SMNS. – India, Madras, Kodaikanal, 1750–2300 m, 11.–13.XI.1972, leg. C. Besuchet, I. Löbl, R. Mussard, 3 ex. HNHM. – India, Madras, Berijam Lake, 2150 m, 14.XI.1972, leg. C. Besuchet, I. Löbl, R. Mussard, 1 ex. HNHM.

Synonymy: Gebien (1925), when describing *M. indicus*, did not study Allard's types. The holotype of *M. indicus* shows no specific differences to the type series of *C. ovalis*, including shape of aedeagus, thus both names represent the same species with *M. indicus* as a junior synonym.

Distribution: South India (Tamil Nadu).

Menimus wittmeri Kaszab, 1982
(Fig. 10)

Examined type specimens: India, Sikkim, Dzongri, 3000 m, 17.X.1977, leg. B. Bhakta, holotype and 10 paratypes NHMB, 8 paratypes HNHM, 4 paratypes SMNS.

Remarks: Treated and figured by Schawaller (2009), aedeagus firstly figured herein (Fig. 10).

Distribution: North India (Sikkim).

4 Key to the species of *Menimus* from India and adjacent Burma

1 Last 3 antennomeres (8–10) forming separate club, complete elytra with irregular punctation, and without traces of punctural rows. **2**
– Last 4–5 antennomeres (6 or 7–10 forming separate club, at least elytral disc with irregular punctural rows. **4**
2 Last 3 antennomeres (8–10) separated and not fused, one species from Yunnan and adjacent Burma. – Figs. 1, 6. ..... ***M. belousovi***
– Last 2 antennomeres (9–10) fused, two species from northeastern India. **3**
3 Pronotum widest at base, with lateral margins parallel in basal part. – Aedeagus as in Fig. 10; dorsal view see Schawaller (2009: pl. XIV, fig. e). ..... ***M. wittmeri***
– Pronotum widest before base, lateral margins rounded in basal part. – Figs. 2, 8. ..... ***M. gairibansicus* n. sp.**
4 Body length less than 4 mm, body elongate parallel, last 4 antennomeres 7–10 forming a separate club, one species from northern India. – Figs. 5, 11. ..... ***M. hunlicus* n. sp.**
– Body length around 5 mm, body ovate, last 5 antennomeres (6–10) forming a separate club, two similar species from southern India. **5**
5 Pronotum with somewhat rounded lateral margins, apicale of aedeagus broad with laterally excavated tip. – Figs. 4, 7. ..... ***M. caraboides***
– Pronotum with straight conical lateral margins, apicale of aedeagus narrow triangular with acute tip. – Figs. 3, 9. ..... ***M. ovalis***

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