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New species and records of *Masuria* CAMERON from Nepal and China (Coleoptera: Staphylinidae, Aleocharinae)

V. ASSING

A b s t r a c t : *Masuria* (s.str.) *annapurnae* sp.n. (Nepal), *M.* (s.str.) *daliensis* sp.n. (China: Yunnan),and *M.* (*Oncosomechusa*) *yunnanica* sp.n. (China: N-Yunnan) are described and illustrated. Additional records of several Himalayan species are reported. The genus now comprises 20 species.

K e y w o r d s : Coleoptera, Staphylinidae, Aleocharinae, *Masuria,* Palaearctic region, China, Nepal, Himalaya, taxonomy, new species, new records.

1. Introduction

The genus *Masuria* CAMERON previously comprised 17 species, 13 of them in the nominal subgenus and 4 in *Oncosomechusa* PACE. With the exception of *M.* (*Oncosomechusa*) *chinensis* PACE, which was described from the Chinese province Gansu, all the species had become known only from the Indian and Nepalese parts of the Himalaya (PACE 1989, 1998; ASSING 1998). In recent years, more material has become available for examination, including three new species, among them the first representative of Masuria s.str. and the second representative of the subgenus *Oncosomechusa* from China, and various additional records from Nepal. The genus now includes 20 species.

2. Material and measurements

The material referred to in this study is deposited in the following public institutions and private collections:

MHNG ..... Muséum d'histoire naturelle Genève (G. Cuccodoro, I. Löbl)
OÖLML ..... Oberösterreichisches Landesmuseum Linz
SNSD ..... Staatliche Naturhistorische Sammlungen Dresden (O. Jäger)
cAss ..... author's private collection
cHir ..... private collection G. Hirthe, Rostock
cSch ..... private collection M. Schülke, Berlin

Head length was measured from the anterior margin of the clypeus to the posterior margin of the head, elytral length at suture from the apex of the scutellum to the posterior margin of the elytra.

3. New records and new species

Masuria (s.str.) *smetanai* PACE

Material examined: Nepal: 14 exs., Khandbari District, Forest S Mansingma, 2300m, 13.IV.1984, leg. Smetana & Löbl; 94 ex., same data, but 2200m, 11.IV.1984; 1 ex., same data, but 2200-2600m, 11.-13.IV.1984; 9 exs., Khandbari District, 2 km E Mangsingma, 1900m, 19.IV.1984, leg. Löbl & Smetana; 16 exs., Khandbari District, Forest NE Kuwapani, 2350-2400m, 5.IV.1984, leg. Smetana & Löbl; 10 exs., same data, but 2250m, 24.IV.1984; 3exs., same data, but 2400m, 24.IV.1984; 2 exs., Khandbari District, Pass NE Mangmaya, 2300m, 6.IV.1984, leg. Smetana & Löbl; 7 exs., Khandbari District, Induwa Khola Valley, 2100-2150m, 18.IV.1984, leg. Smetana & Löbl; 1 ex., same data, but 2100m, 17.IV.1984 (MHNG, cAss).

The species has become known from the Khandbari and the Bagmati Districts in Nepal (PACE 1989).

Masuria (s.str.) *loebli* PACE

Material examined: Nepal: 4 exs., Prov. Bagmati, below Thare Pati, 3300m, 11.IV.1981, leg. Löbl & Smetana; 2 exs., same data, but 3500m, 12.IV.1981; 2 exs., Nuwakot District, between Ghopte and Thare Pati, 3100m, 24.IV.1985, leg. Smetana; 1 ex., same data, but 3200m, 23.IV.1985 (MHNG, cAss).

One of the examined specimens is distinctly darker than is usually the case, with almost the whole body brownish black.

Masuria (s.str.) *rugosepunctata* ASSING

Material examined: Nepal: 25 exs., Khandbari District, Induwa Khola Valley, 2000-2050 m, 16.IV.1984, leg. Smetana & Löbl; 1 ex., same data, but 18.IV.1984 (MHNG, cAss).

The known distribution of the species is confined to the Induwa Khola Valley (ASSING 1998).

Masuria (s.str.) *longicornis* ASSING

Material examined: Nepal: 9 exs., Khandbari District, Induwa Khola Valley, 2050 m, 16.IV.1984, leg. Smetana & Löbl (MHNG, cAss).

The known distribution of the species is confined to the Induwa Khola Valley (ASSING 1998).

Masuria (s.str.) *ancoriformis* ASSING

Material examined: Nepal: 1 ex., Rasuwa District, Langtang Khola Valley, 2.5 km E Syabru, 1720 m, 14.IV.1985, leg. Smetana; 1 ex., Rasuwa District, Langtang Khola Valley, Forest Camp, 1950 m, 13.IV.1985, leg. Smetana (MHNG, cAss).

The species is known only from the Langtang Khola Valley (ASSING 1998).

Masuria (s.str.) *kali* PACE 1989

Types examined: Holotype ♂: Nepal, Khandbari District / above Tashigaon, 3100 m, 8.IV.1982, A. & Z. Smetana / Holotypus *Masuria kali* det. R. Pace 1988 / *Masuria kali* sp.n. det. R. Pace 1988 (MHNG). Paratypes: 1♂, 1♀, same data as holotype (MHNG).

Additional material examined: Nepal: 2♂♂: Kosi, Crète S. Mangsingma, 2800 m, 7.IV.84, leg. Löbl & Smetana; 1 ex., Khandbari Distr. ridge S Mangsingma, 2800 m, 7.IV.84, Smetana & Löbl; 2♂♂, 1♀, 1 ex., Kosi, Ridge NE Mangmaya, 2800 m, 7.IV.84, leg. Löbl & Smetana; 2 exs., Khandbari Distr. Induwa Khola Valley, 2800 m, 15.IV.84, leg. Smetana & Löbl (MHNG, cAss).

The species was previously known only from the type locality.

Masuria (s.str.) *annapurnae* sp.n. (Figs. 1-8)

Holotype ♂ [slightly damaged]: Nepal, Annapurna Region, Marsyandi Khola Tal, Temang-Thanchauk, 25-2700m, 18.4.1999, leg. Hirthe, C. Krüger / Holotypus ♂ *Masuria annapurnae* sp.n. det. V. Assing 2004 (SNSD). Paratypes: 2♀♀: same data as holotype (cHir, cAss).

Description: 3.0-4.2 mm. Of similar external appearance as *M. longicornis* (Fig. 1). Dark brown to blackish, with the abdominal slightly lighter; legs dark brown; antennae dark brown, with the basal antennomeres slightly lighter.

Head with relatively fine and moderately dense puncturation, interstices partly as wide as punctures or nearly so; microsculpture indistinct or absent; eyes prominent, approximately as long as temples in dorsal view; antennae of similar morphology as in *M. longicornis*.

Pronotum 1.15-1.20 times as wide as long and 1.15-1.20 times as wide as head (Fig. 1); posterior half of lateral margins at most indistinctly concave in dorsal view; puncturation similar to that of head; microsculpture absent.

Elytra approximately 1.25 times as wide and at suture almost as long as pronotum (Fig. 1); puncturation slightly coarser and less dense than that of head and pronotum; microsculpture absent. Hind wings fully developed.

Abdomen more finely and more sparsely punctured than forebody, interstices in posterior halves of terga distinctly wider than punctures; microsculpture absent.

♂: tergite VIII posteriorly almost truncate (Fig. 2); sternite VIII distinctly more elongate than tergite VIII, its posterior margin broadly convex (Fig. 3); aedeagus relatively large, ventral process of median lobe in ventral view broad, flagellum relatively long and basally acute (Figs. 6-7).

♀: posterior margin of tergite VIII indistinctly pointed in the middle (Fig. 4); sternite VIII only slightly longer than tergite VIII, much shorter than ♂ sternite VIII, posterior margin broadly convex and with weakly modified marginal setae (Fig. 5); spermatheca as in Fig. 8.

Etymology: The name (adj.) refers to the mountain range where the type locality is situated.

Comparative notes: From all its congeners, *M. annapurnae* is distinguished especially by the male primary and secondary sexual characters. In the similar *M. longicornis*, the puncturation of the forebody is coarser, the pronotum is more slender, the tarsi (especially the metatarsi) are longer and have a longer basal tarsomere, the ♂

tergite VIII is less elongate, and the median lobe of the aedeagus is much more slender in ventral view. *Masuria loebli*, in which the median lobe is of similar shape, has a lighter coloration, a more slender pronotum, and the flagellum in the internal sac of the aedeagus is of different shape. In *M. plumbea* CAMERON, the head and pronotum are microsculptured and mat, the abdomen is much more densely punctate, and the aedeagus is smaller. *Masuria kali* is larger, of lighter coloration, has a very densely punctate pronotum and abdomen, and a distinctly larger aedeagus. In *M. picipes* CAMERON, the puncturation of the pronotum and the abdomen is denser, the antennae are shorter, and the aedeagus is much smaller. *Masuria spectata* is larger, the pronotum, elytra, and abdomen are more densely punctate, and the aedeagus is much larger. In *M. ancoriformis*, the pronotum is more transverse, the puncturation is denser, and the flagellum in the internal sac of the aedeagus is of distinctive shape. *Masuria rugosepunctata* and *M. smetanai* are at once distinguished from the new species by their much denser puncturation alone. For illustrations of the genitalia of these species see PACE (1989) and ASSING (1998).

Intraspecific variation: One of the females is distinctly larger than the holotype and has a denser puncturation and more transverse pronotum. As no further distinguishing characters were found and all the types were collected in the same locality, these differences are attributed to intraspecific variation.

Distribution and bionomics: The species is known only from the type locality in the Annapurna range, central Nepal, where it was collected at an elevation of 2500-2700 m.

***Masuria* (s.str.) *daliensis* sp.n.** (Figs. 9-18)

Holotype ♂: China: Yunnan, Dali, Cangshan, 2500 m, stream moss, 10.IV.2003, G. de Rougemont (cAss) / Holotypus ♂ *Masuria daliensis* sp.n. det. V. Assing 2004 (SNSD). Paratypes: 14♂♂, 32♀♀: same data as holotype (MHNG, OÖLML, cAss, cRou, cSch).

Description: 2.9-3.7 mm. Of similar external appearance as *M. longicornis* and *M. plumbea* CAMERON (Fig. 9). Dark brown to blackish, legs dark brown to dark brown, with the femora usually darker than the tibiae and the tarsi; antennae dark brown with the basal 2-3 antennomeres rufous.

Head slightly wider than long; eyes prominent, approximately as long as temples in dorsal view or slightly longer; puncturation distinct and rather dense, interstices much narrower than punctures and without microsculpture. Antennae with antennomeres I-III long, slender, and of subequal length; IV more than 1.5 times as wide as long and distinctly shorter than III; V weakly oblong; VI approximately as long as wide; VII-X gradually increasing in width and increasingly transverse; X approximately 1.5 times as wide as long; XI approximately as long as the combined width of the two preceding antennomeres.

Pronotum 1.25-1.30 times as wide as long and 1.23-1.30 times as wide as head (Fig. 9); posterior half of lateral margins at most indistinctly concave in dorsal view; posterior angles obtuse, but well marked; often somewhat depressed near posterior angles; puncturation similar to that of head; microsculpture absent.

Elytra approximately 1.20-1.25 times as wide and at suture approximately as long as pronotum (Fig. 9); puncturation coarser than that of head and pronotum; microsculpture absent. Hind wings fully developed. Legs moderately long and slender.

Abdomen more finely and more sparsely punctured than forebody, interstices in posterior halves of tergites IV-VII distinctly wider than punctures; microsculpture absent; posterior margin of tergite VII with palisade fringe.

♂: tergite VIII posteriorly convex (Fig. 10); sternite VIII distinctly longer than tergite VIII, its posterior margin broadly convex (Fig. 11); median lobe of aedeagus as in Figs. 14-16, flagellum basally weakly dilated; apical lobe of paramere as in Fig. 17.

♀: posterior margin of tergite VIII indistinctly pointed in the middle (Fig. 12); sternite VIII only slightly longer than tergite VIII, much shorter than ♂ sternite VIII, posterior margin broadly convex and with very short modified marginal setae (Fig. 13); spermatheca as in Fig. 18.

Etymology: The name (adj.) refers to the region where the type locality is situated.

Comparative notes: From all its congeners, *M. daliensis* is distinguished especially by the male primary and secondary sexual characters, especially by the basally weakly dilated flagellum in the internal sac of the aedeagus. The most similar species are *M. longicornis*, *M. plumbea*, *M. picipes*, and *M. annapurnae,* whose known distributions are confined to the Himalaya. These species are additionally distinguished from *M. daliensis* as follows:

Masuria picipes is on average smaller, has a more slender and more convex (cross-section) pronotum, much finer puncturation both of the forebody and the abdomen, and shorter legs.

In *M. plumbea*, the pronotum is more convex in cross-section and has more acute posterior angles, the forebody is microsculpture and only weakly shining,, the abdomen is very densely and finely punctate, and the abdominal pubescence is conspicuously dense.

In *M. longicornis*, the pronotum is more slender and more convex in cross-section, the antennae are more slender (antennomere IV about twice as long as wide, V distinctly oblong), and the tarsi are longer.

In *M. annapurnae* the puncturation of the forebody is much finer and shallower, and the pronotum is more slender.

For illustrations of the genitalia of these species see PACE (1989) and ASSING (1998).

Intraspecific variation: The species is rather variable in size, coloration, and in the shape of the pronotum.

Distribution and bionomics: *Masuria daliensis* is the first representative of the subgenus *Masuria* from China. The type locality is situated in central Yunnan, China. The type specimens were collected stream moss at an altitude of 2500 m, together with various species of *Myllaena*, *Oxypoda*, *Aloconota*, and representatives of other aleocharine genera.

Masuria (*Oncosomechusa*) *martensi* (PACE 1987)

Material examined: Nepal: 1♂, Manaslu Himal, Bara Pokhari Lekh, 2500m, 2.IV.1999, leg. Hirthe & Krüger (cHir); 1 ex., same data, but 2100m, 11.IV.1999 (cAss).

The species was previously known only from the type locality: Chitre, Parbat district (Nepal) (PACE 1989).

***Masuria (Oncosomechusa) yunnanica* sp.n.** (Figs. 19-22)

Holotype ♂: China: N-Yunnan [C03-14], Zhongdian Co., 33 km ESE Zhongdian, creek valley with old mixed forest, dead wood, bamboo, moss, mushrooms, 27°41.5′N, 100°00.7′E, 3200 m, 24.VIII.2003, leg. M. Schülke (cAss).

Description: 3.2 mm. Habitus as in Fig. 19. Head dark brown; pronotum and elytra brown; abdomen blackish with the apex lighter; legs and antennomeres I-III yellowish brown; antennomere IV brown; antennomeres V-XI dark brown.

Head approximately as wide as long; eyes large and prominent, slightly longer than postocular region in dorsal view; puncturation moderately coarse and very dense; interstices much narrower than diameter of punctures and without microsculpture. Antennae with antennomeres I-III of subequal length and distinctly oblong; IV slightly wider than long and distinctly shorter than III; V and VI approximately as long as wide; VII-X gradually increasing in width and increasingly transverse; X approximately 1.5 times as wide as long; XI approximately as long as the combined width of the two preceding antennomeres.

Pronotum approximately 1.35 times as wide as long and 1.35 times as wide as head (Fig. 19); maximal width in anterior half; puncturation similar to that of head; interstices without microsculpture.

Elytra approximately 1.1 times as wide and at suture about 0.70 times as long as pronotum; puncturation similar to that of head and pronotum; microsculpture absent. Hind wings reduced. Legs very long and slender (Fig. 19).

Abdomen approximately as wide as elytra, widest at segments IV/V (Fig. 19); with distinct and rather dense puncturation; punctures slightly finer than that of forebody, sparser on posterior than on anterior segments; microsculpture absent; posterior margin of tergite VII without palisade fringe.

♂: tergite VIII posteriorly broadly convex; sternite VIII not distinctly longer than tergite VIII, its posterior margin broadly convex; median lobe of aedeagus and apical lobe of paramere as in Figs. 20-21.

♀: unknown.

Etymology: The name (adj.) is derived from the name of the province where the type locality is situated.

Comparative notes: From the only other described species of the subgenus known from China, *M. chinensis*, the new species is distinguished by the coarser puncturation of the abdomen and especially of the forebody, the larger and more bulging eyes, the distinctly longer elytra, the not distinctly concave posterior margin of the male tergite VII, the less strongly dilated abdomen (in *M. chinensis* much wider than elytra), the posteriorly less distinctly projecting male sternite VIII, and the shape of the aedeagus. For an illustration of the aedeagus and the habitus of *M. chinensis* see PACE (1998).

Distribution and bionomics: The type locality (Fig. 22) is situated in northern Yunnan, close to the border to Sichuan. The holotype was sifted from the leaf litter of a mixed forest at an altitude of 3200 m.

***Masuria* (*Oncosomechusa*) sp.**

Material examined: China: 1 ♀, N-Yunnan, 55 km N Zhongdian, 28°20'N, 99°46'E, 3800 m, 18.VIII.2003, leg. Wrase (cAss).

The specimen doubtlessly represents an unnamed species, but a description based on a single female is here refrained from.

Acknowledgements

I am most grateful to the colleagues indicated in the material section for the loan of the material which this study is based on. In particular, I would like to thank Guillaume de Rougemont and Michael Schülke for the generous gift of the holotypes of *Masuria daliensis* and *M. yunnanica*, respectively.

Zusammenfassung

Masuria (s.str.) *annapurnae* sp.n. (Nepal), *M.* (s.str.) *daliensis* sp.n. (China: Yunnan) und *M.* (*Oncosomechusa*) *yunnanica* sp.n. (China: N-Yunnan) werden beschrieben; Habitus und Geschlechtsmerkmale werden abgebildet. Für sieben Arten der Gattung werden weitere Nachweise aus Nepal gemeldet. Die Gattung umfasst nunmehr 20 Arten.

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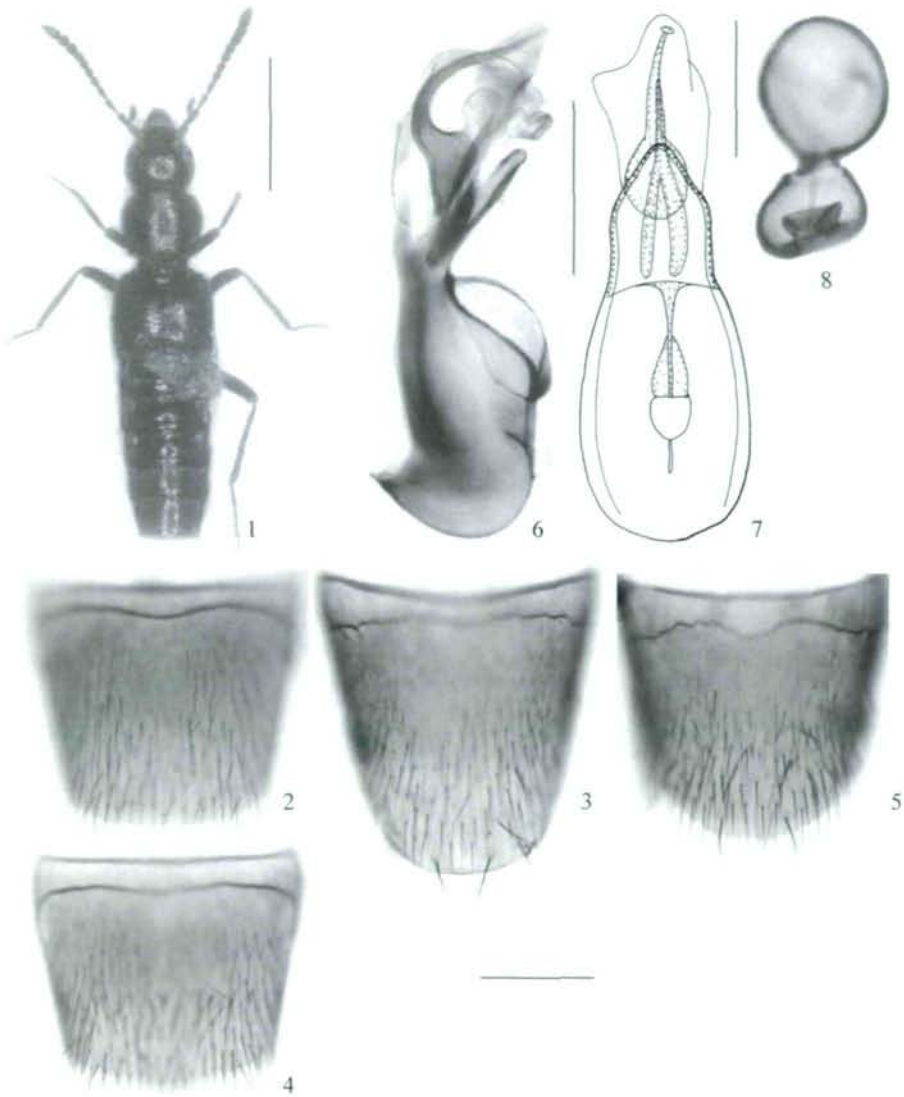
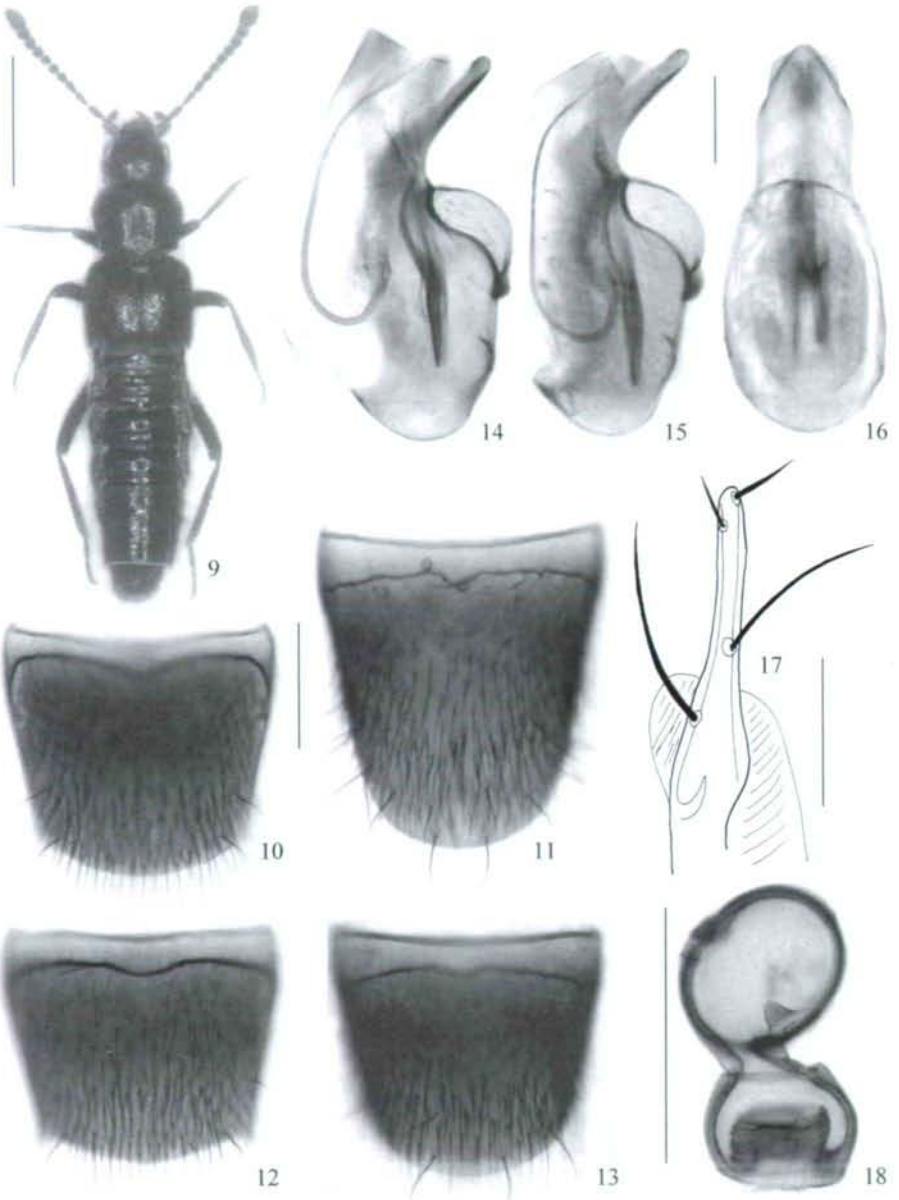
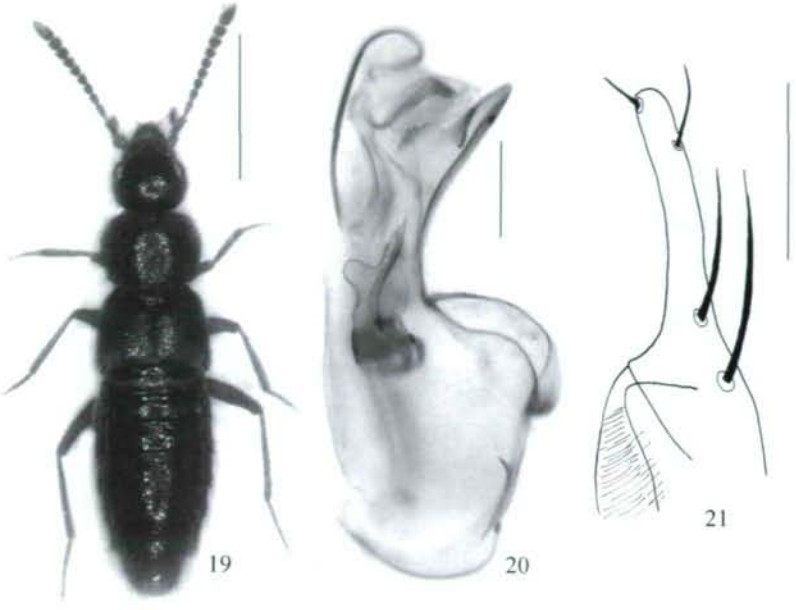


Figs. 1-8: *Masuria annapurnae* sp.n.: (**1**) – habitus (♀ paratype); (**2**) – ♂ tergite VIII; (**3**) – ♂ sternite VIII; (**4**) – ♀ tergite VIII; (**5**) – ♀ sternite VIII; (**6, 7**) – median lobe of aedeagus in lateral and in ventral view; (**8**) – spermatheca. Scales: 1: 1.0 mm; 2-7: 0.2 mm; 8: 0.1 mm.



Figs. 9-18: *Masuria daliensis* sp.n.: **(9)** – habitus (holotype); **(10)** – ♂ tergite VIII; **(11)** – ♂ sternite VIII; **(12)** – ♀ tergite VIII; **(13)** – ♀ sternite VIII; **(14-16)** – median lobe of aedeagus in lateral and in ventral view; **(17)** – apical lobe of paramere; **(18)** – spermatheca. Scales: 9: 1.0 mm; 10-13: 0.2 mm; 14-18: 0.1 mm.



Figs. 19-21: *Masuria yunnanica* sp.n.: **(19)** – habitus (holotype); **(20)** – median lobe of aedeagus in lateral view; **(21)** – apical lobe of paramere. Scales: 19: 1.0 mm; 20-21: 0.1 mm.

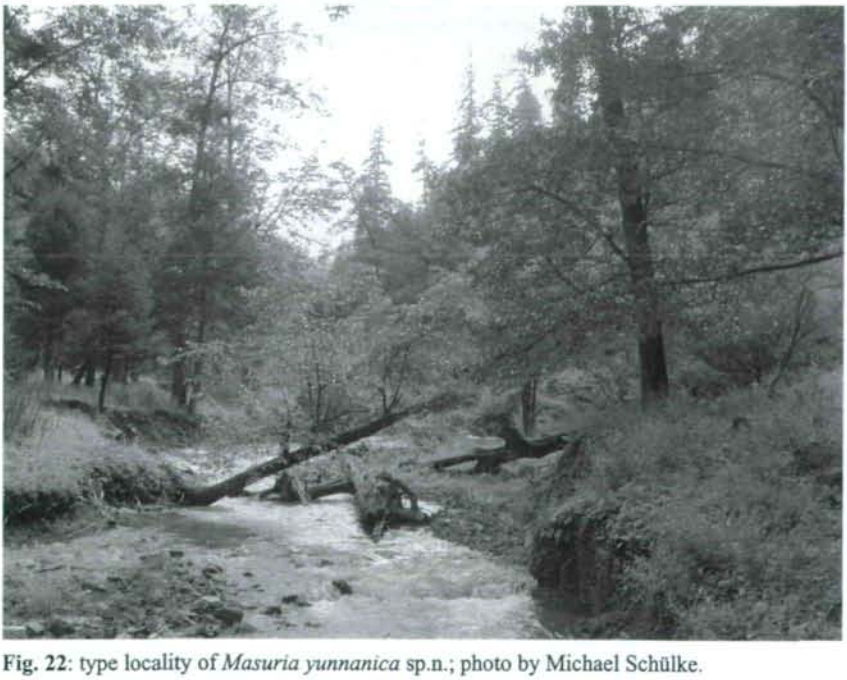


Fig. 22: type locality of *Masuria yunnanica* sp.n.; photo by Michael Schülke.