

Bittacidae from Burma, Collected by R. Malaise (Mecoptera)

By BO TJEDER

Zoological Institute, S-223 62 Lund, Sweden

Abstract

TJEDER, BO. Bittacidae from Burma, collected by R. Malaise (Mecoptera). — Ent. Tidskr. 94: 188—193, 1973.

Three specimens of the family Bittacidae were collected in 1934 by Dr. René Malaise during his expedition to Burma. They represent two hitherto unknown species of the genus *Bittacus* Latr. described in this paper.

Fam. Bittacidae Enderlein, 1910 Gen. *Bittacus* Latreille, 1805

1. *Bittacus burmanus* n. sp. (Figs. 1—13)

Locus typicus: Kambaiti, Burma. — Type: a male in the collections of the Riksmuseum, Stockholm.

Note

In order to demonstrate the terminology of the genital pattern in the genus a sketch of the ♂ of this species was published by the author in the Taxonomist's Glossary of Genitalia in Insects, fig. 99, 1956, and fig. 121, 1970, but no description was hitherto given.

Description

Available material: 1 ♂, 1 ♀.

Holotype ♂ (pinned; rather teneral with somewhat folded wings).

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Size: length of body about 16 mm, of forewing 18 mm, of hindwing 16 mm.

Head reddish brown; rostrum somewhat darker laterally; vertex black around the ocelli. Palpi and antennae reddish brown.

Thorax and legs ochraceous, without dark markings. Outer spur of fore and middle legs half as long as metatarsus, of the hindlegs almost as long as metatarsus. Spines of tibiae and tarsi very short, black. Comb along the under margin of the 3rd and 5th tarsal segments black; its dents very short and closely situated. Spurs and claws ochraceous. Tarsi very slender, those of the hindlegs very little stouter than those of the other legs.

Wings unspotted, with faintly subacute apex. Venation testaceous. Membrane with a faint yellowish tinge. Pterostigma elongate, a little darker than the membrane.

Abdomen ochraceous, without dark markings; its hairiness short and pale, of ordinary density. Tergite 8 with very narrow central dorsal portion, divided by a dark line, probably a strengthening apodeme (fig. 8); in lateral view the tergite appears shaped as shown in fig. 2. Segment 9 disscleritous, its tergite and sternite separated as illustrated. Paired processes of tergite 9 (epiandrium) large, forked apically into a pair of prongs (fig. 2) and with teeth and processes pointed inwards as shown in figs. 4—6. Gonocoxites fused, elongate and prolonged apically into

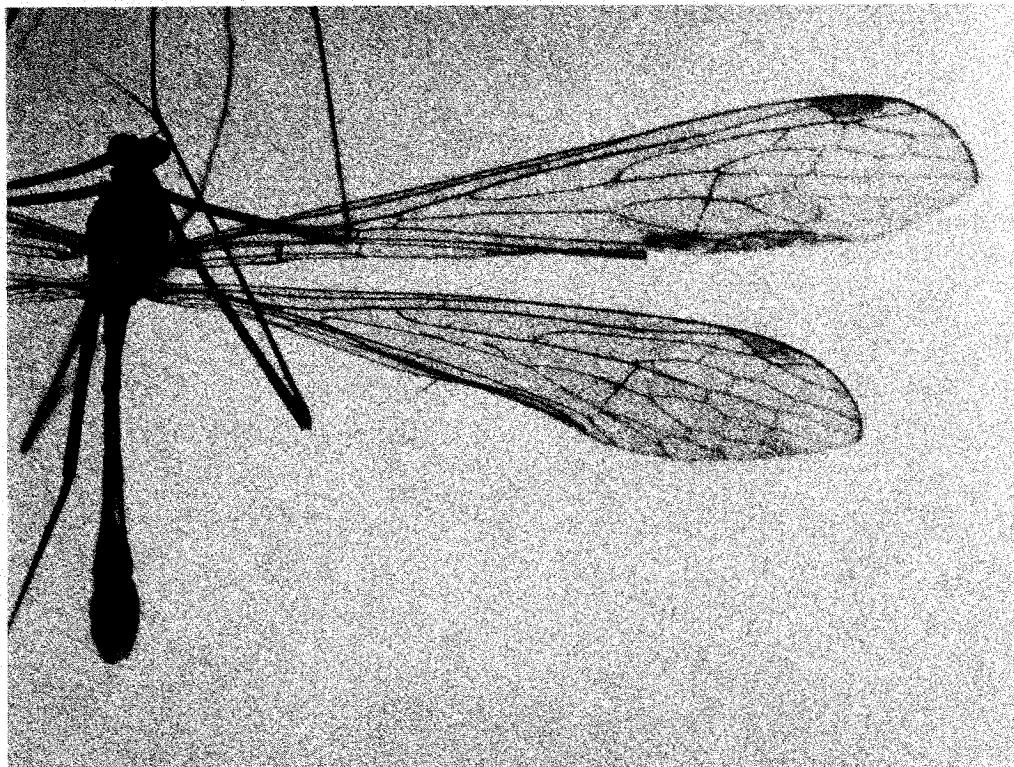


Fig. 1. *Bittacus burmanus* n. sp. (paratype ♀).

a pair of smoothly curved slender processes (figs. 2—3). Styli relatively long and slender, narrow in lateral view (fig. 2), with a short process on the inner surface (fig. 3); stylocavernula small, situated ventrally near the base. Penis as in fig. 3, with a long and coiled penisfilum. Anal segment (fig. 7) large; cerci long, densely pilose, with many trichobothria; supraanale developed as a huge appendix dorsalis, long and projecting upwards between the epiandrial prongs as shown in fig. 2; its apex acute and haired; subanale much shorter than the supraanale, curved downwards, pilose dorsally at base (fig. 7).

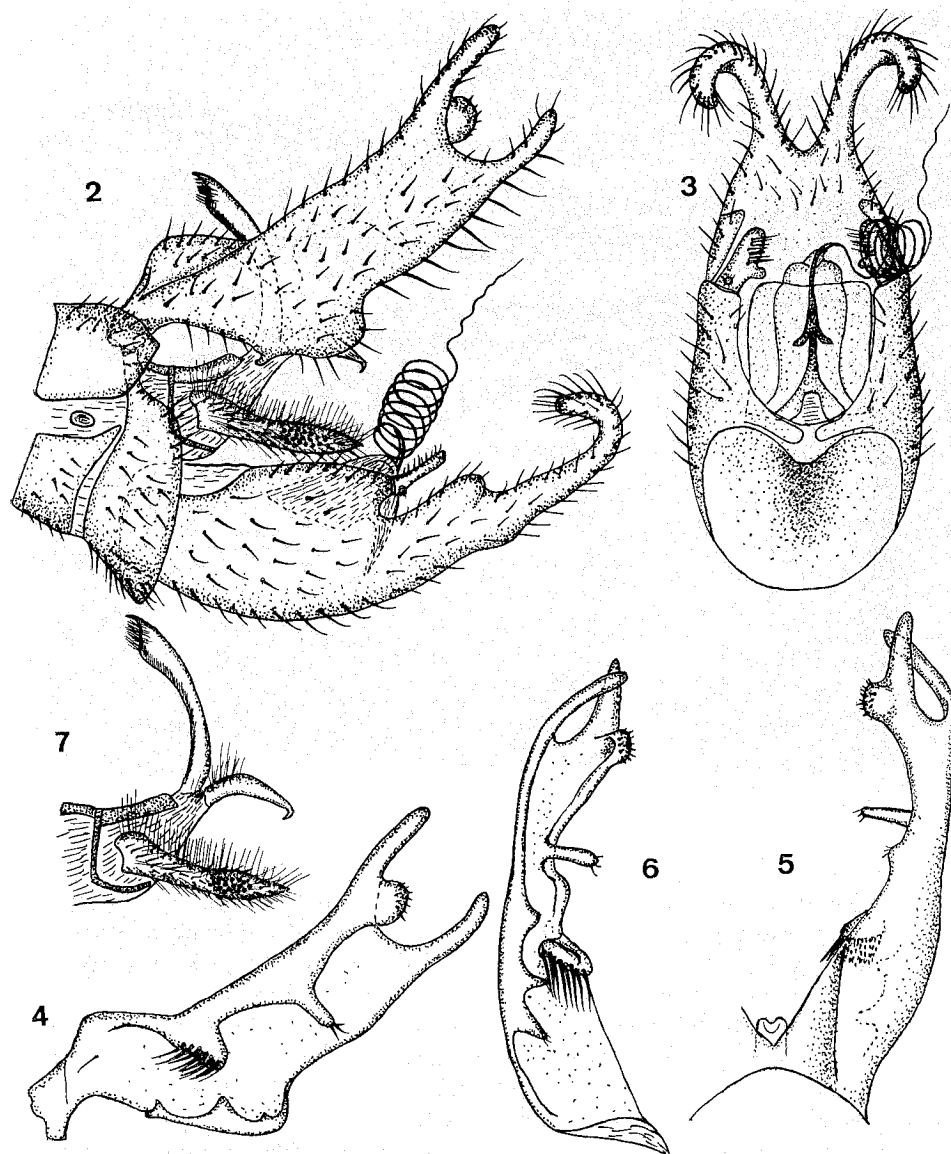
I hope I am right by associating with the above ♂ the ♀ described below.

Paratype ♀ (fig. 1), (pinned; in good condition but wings partly besmeared by exudations).

Size: length of body about 15 mm, of forewing 19 mm, of hindwing 17.5 mm; width of forewing 4 mm, of hindwing 3.5 mm.

Head with appendages, thorax and legs as in the holotype. Wings also as in the holotype but membrane slightly darker yellowish tinged, and pterostigma darker, reddish yellow.

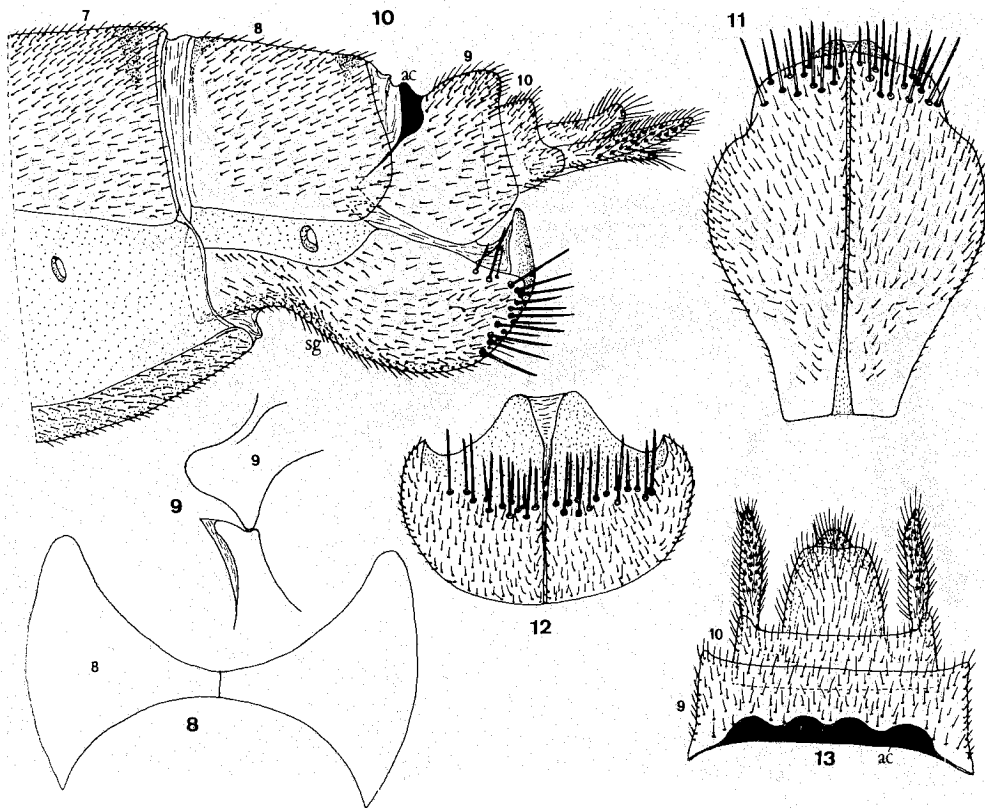
Abdomen reddish ochraceous dorsally with narrow black hindmargins of tergites 2 and 3; venter slightly paler ochraceous. Hairiness short and rather dense. Apex of abdomen cf. figs. 10—13. Tergite 7 with a greyish spot close to hindmargin dorsally. Tergite 8 also with a spot close to hindmargin and a similar spot close to foremargin. Sternite 7 very narrow, a little darker than the tergite 7. Tergite 9 with a broad but short black antecosta, shaped as illustrated in figs. 10 and 13. Tergite 10 with projecting lower



Figs. 2—7. *Bittacus burmanus* n. sp. (holotype ♂). — 2. Apex of abdomen, lateral. — 3. Gonocoxites and penis, dorsal. — 4. Right prong of epiandrium, lateral (inside). — 5. Left prong of ditto and base of tergite 9, dorsal. — 6. Ditto, ventral.

lateral border. Supraanale large, broad with almost transverse hindmargin in dorsal view (fig. 13). Subanale a little longer than the supraanale, its apex subacute. Cerci long, densely pilose, with many trichobothria. Subgenitale with narrow base and wide central

portion, shaped as shown in figs. 10—12; its apex directed upwards, hairless. Otherwise the subgenitale is densely short-haired and has on each side before the apex several strong, pale spines. It is for its whole length narrowly split in the ventral middle-line as



Figs. 8—13. *Bittacus burmanus* n. sp. — 8—9: holotype ♂; 10—13: paratype ♀. — 8. Tergite 8, dorsal. — 9. Lower apex of tergite 9 and upper apex of sternite 9, lateral. — 10. Apex of abdomen, lateral. — 11. Subgenitale, ventral. — 12. Ditto, caudal. — 13. Tergites 9—10 and anal segment, dorsal.

ac=antecosta; sg=subgenitale.

shown in fig. 11. Also the tip is split, the width of the split increasing towards the very apex as shown in fig. 12. Spermatheca small, greyish, very faintly sclerotized and shrivelled.

Geographical distribution

N. E. Burma: Kambaiti, holotype ♂, 18.v.1934, and paratype ♀, 17.vi.1934, leg. R. Malaise; in the collections of the Riksmuseum, Stockholm. — The ♂ was collected at an altitude of 2,000 ft, the ♀ at 1,500 ft.

Note

The ♂ of this species is similar to *Bittacus appendiculatus* Esben-Petersen, 1927 (Notu-

lae Ent. 7: 14, figs. 3—4) from Yunnan, a Chinese province adjoining N.E. Burma on the East. This species has also huge but otherwise shaped prongs of the epiandrium, and its subgenitale has also a pair of distal prongs, still longer than those of *B. burmanus* n.sp. Its colour is described as brown, and its tibiae as having "a narrow blackish brown band at apex" (tibiae in *burmanus* with pale apex).

2. *Bittacus malaisei* n. sp. (Figs. 14—18)

Locus typicus: Kambaiti, Burma. — Type: a female in the collections of the Riksmuseum, Stockholm.

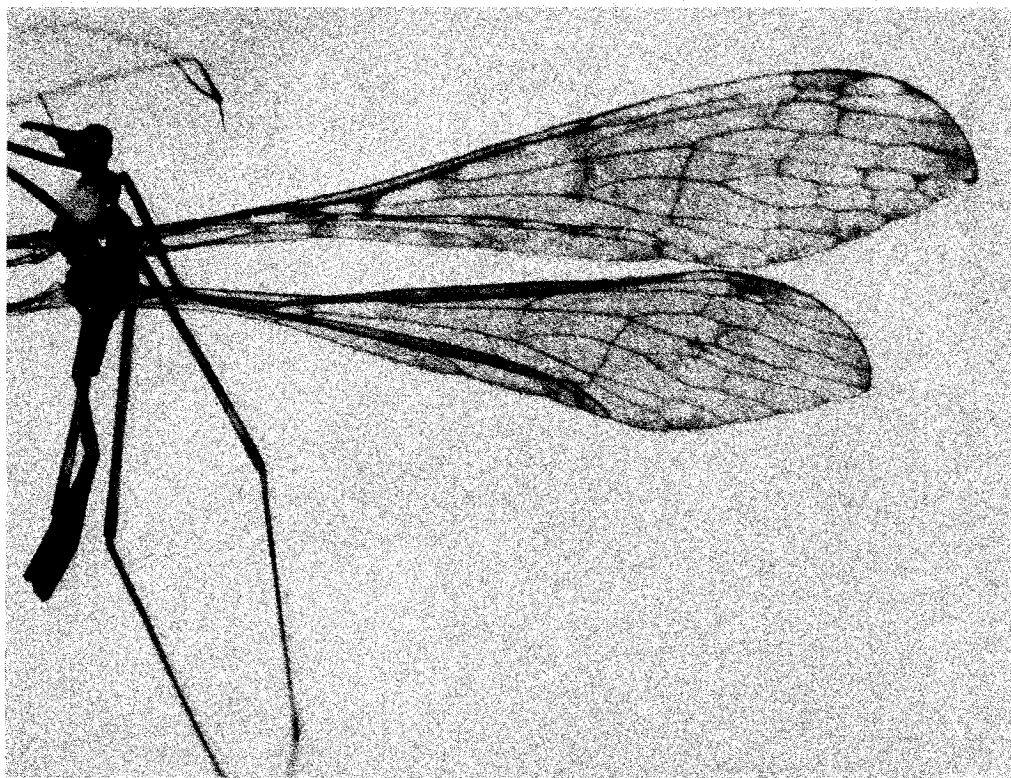


Fig. 14. *Bittacus malaisei* n. sp. (holotype ♀).

Description

Available material: 1 ♀ (pinned).

Holotype ♀ (fig. 14).

Size: length of body about 15 mm, of forewing 20 mm, of hindwing 17.5 mm; width of forewing 4.75 mm, of hindwing 4 mm.

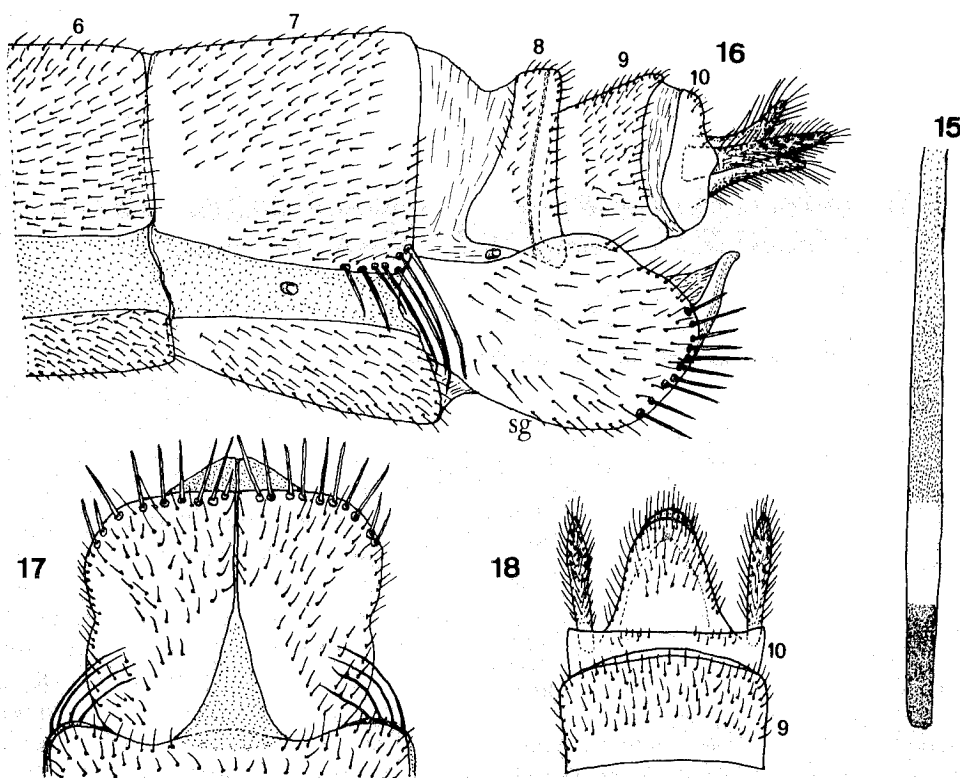
Head piceous with piceous palpi. Antennae broken off and missing.

Thorax: pro- and meso-thorax piceous; metathorax dark ochraceous. Legs: coxae ochraceous; femurs with dark ochraceous basal half, in the middle portion becoming darker, greyish, followed by a broad white preapical ring and black apex (fig. 15); fore and middle tibiae whitish ochraceous at base, gradually darkening towards the apex which is blackish; hind tibiae whitish ochreous with blackish apex; tarsi and spurs whitish

ochreous; claws brown. Tarsi very slender, those of the hindlegs not stouter than those of the other legs; comb along the under margin black with small and closely situated dents.

Wings subacute; distal part of hindmargin almost straight. Membrane greyish with hyaline spots as shown in fig. 14. Pterostigma slightly darker than membrane but not very prominent. Veins brownish.

Abdomen pale brownish. Tergites 2—4 with a small pale spot dorsally at apex. Hairiness very short, pale. Apex of abdomen cf. figs. 16—18. Tergite 7 with a small number of strong and long hairs in the distal lower hindmargin, directed obliquely downwards and curved inwards as shown in figs. 16 and 17. Tergite 8 very narrow dorsally, broader ventrally, with a dark central vertical



Figs. 15—18. *Bittacus malaisei* n. sp. — 15. Apical part of hind femur. — 16. Apex of abdomen, lateral. — 17. Subgenitale, ventral. — 18. Tergites 9—10 and anal segment, dorsal.
sg=subgenitale.

apodeme. Tergite 9 broader than tergite 8, without black antecosta. Anal segment: tergite 10 narrow; supraanale and subanale of about the same length, both tapering towards the apex which is rounded (fig. 18); cerci narrow and acute, densely haired, with rather few trichobothria. Subgenitale (figs. 16—17) subovate in lateral view; its apex directed upwards and hairless (as in *burmanus* n.sp.). Otherwise the subgenitale is short-haired but rather sparsely so, with hairless areas as shown in figs. 16—17; a number of rather short, strong and pale spines is present close to the hindmargin. It is for its whole length split as shown in fig. 17. Spermatheca small and weak, very faintly sclerotized, shrivelled.

♂ unknown.

Geographical distribution

N. E. Burma: Kambaiti, altitude 2,000 m, holotype ♀, 9.vi.1934, leg. R. Malaise; in the collections of the Riksmuseum, Stockholm.

Note

The female of *B. malaisei* n.sp. is unlike the ♀♀ of the other species of the genus, examined by the author, in having strong and long hairs on the lateral hindcorners of tergite 7, and having extremely short 8th tergite. The unknown ♂ is supposed to be recognizable by the white-spotted dark grey subacute wings and the colour of the femurs, i.e. the broad white ring before the long black apical area.