

NEW SPECIES AND NEW RECORDS OF DERMAPTERA (INSECTA) FROM ANDAMAN AND NICOBAR ISLANDS, INDIA

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INTRODUCTION

The present paper deals with three species new to science viz., *Circolabia bhatiai* from North and South Andaman; *Chaetolabia sahai* and *Hamaxas chandrai* both from Great Nicobar.

Besides, three other species, namely, *Cranopygia similis* (Zacher, 1910) from South Andaman; *Nesogaster minusculus* Rehn, 1946 and *Circolabia dubronyi* (Hebard, 1922) from Great Nicobar are reported for the first time within Indian limits.

Family Nesogastrinae, well represent in other parts of Oriental & Australian regions, is now reported from Great Nicobar Isls. It exhibits the presence of Indo-Malayan element in the area.

It along with *Cranopygia similis* and *Circolabia dubronyi* exhibits the presence of derivatives from the Indo-Malayan & Australian fauna, in the area especially Great Nicobar Isls.

PYGIDICRANOIDEA

PYGIDICRANIDAE

PYGIDICRANINAE

Cranopygia similis (Zacher)

(Figs. 1-2)

Material Examined : India : Andaman Isls, South Andaman, Wandoor, 1 Male (genitalia mounted between two coverslips and attached to the pin of specimen), 15.6.1982, at light (*R. N. Sharma* coll).

Distribution : Malay Peninsula, Sumatra, Java and India (Andaman Islands).

Remarks : This species is very close to *Pygidicrana siamensis* (Dohrn, 1863) from Thailand but differs by the slight differences in the shape of parameres.

FORFICULOIDEA

SPONGIPHORIDAE

NESOGASTRINAE

Nesogaster minusculus Rehn

(Figs. 3-7)

Material Examined : India : Great Nicobar Isl, near Galathea, 40 kmp on N. S. Road, 1 Male, 2 Females, 4 nymphs, 30.7.1994; South Bay, 4 km from N. S. Road, 2 Males (brachylabic and

macrolabic), 1 Female, 1 nymph, 6.8.1984; South Bay, 45 km of N. S. Road, 1 Male (macrolabic), 10.8.1984; Pygmalion Point, 1 Female, 1 nymph, 18.8.1984, all under bark of rotten logs (*S. S. Saha* coll.); Paulo Baha Coast, 1 Male (macrolabic), 5 Females, 21.8.1984; Cambell Bay, 24 Kmp from Cambell Bay, 1 Female, 1.12.1978, ex bark of log; Cambell Bay, near Lakshman Beach, 2 Males, 1 nymph, 4.12.1978 (*B. Nandi* coll.).

Distribution : Sumatra : Mentawai Isls and India : Great Nicobar Islands.

Remarks : Some variation in the body colour and in the length of male forceps were noted in the material from Nicobar Islands present in the Zoological Survey of India.

LABIINAE

Circolabia dubronyi (Hebard)

(Figs. 8–10)

Material Examined : India : Great Nicobar Island, Pygmalion Point, 2 Males, 4 Females, 18.7.1984, under the bark of a dead rotting giant tree; Near Galathea, 40 Kmp on N. S. Road, 3 Males, 1 Female, 1 nymph, under bark of dead rotten tree, 30.7.1984 (*S. S. Saha* coll.).

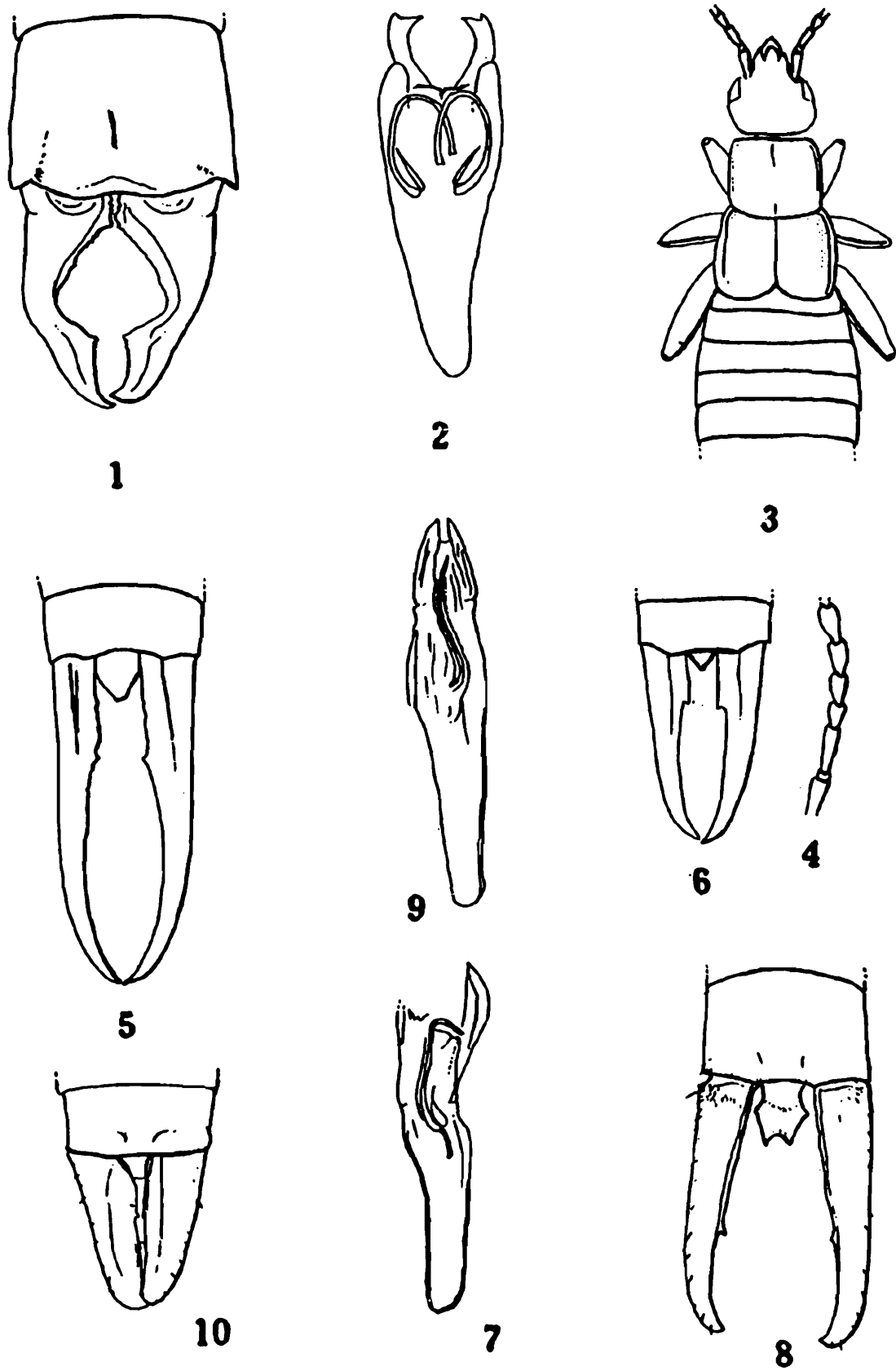
Distribution : Hawaii, Micronesia (Hebard, 1992) and India (Great Nicobar Islands).

Circolabia bhatiai sp. n.

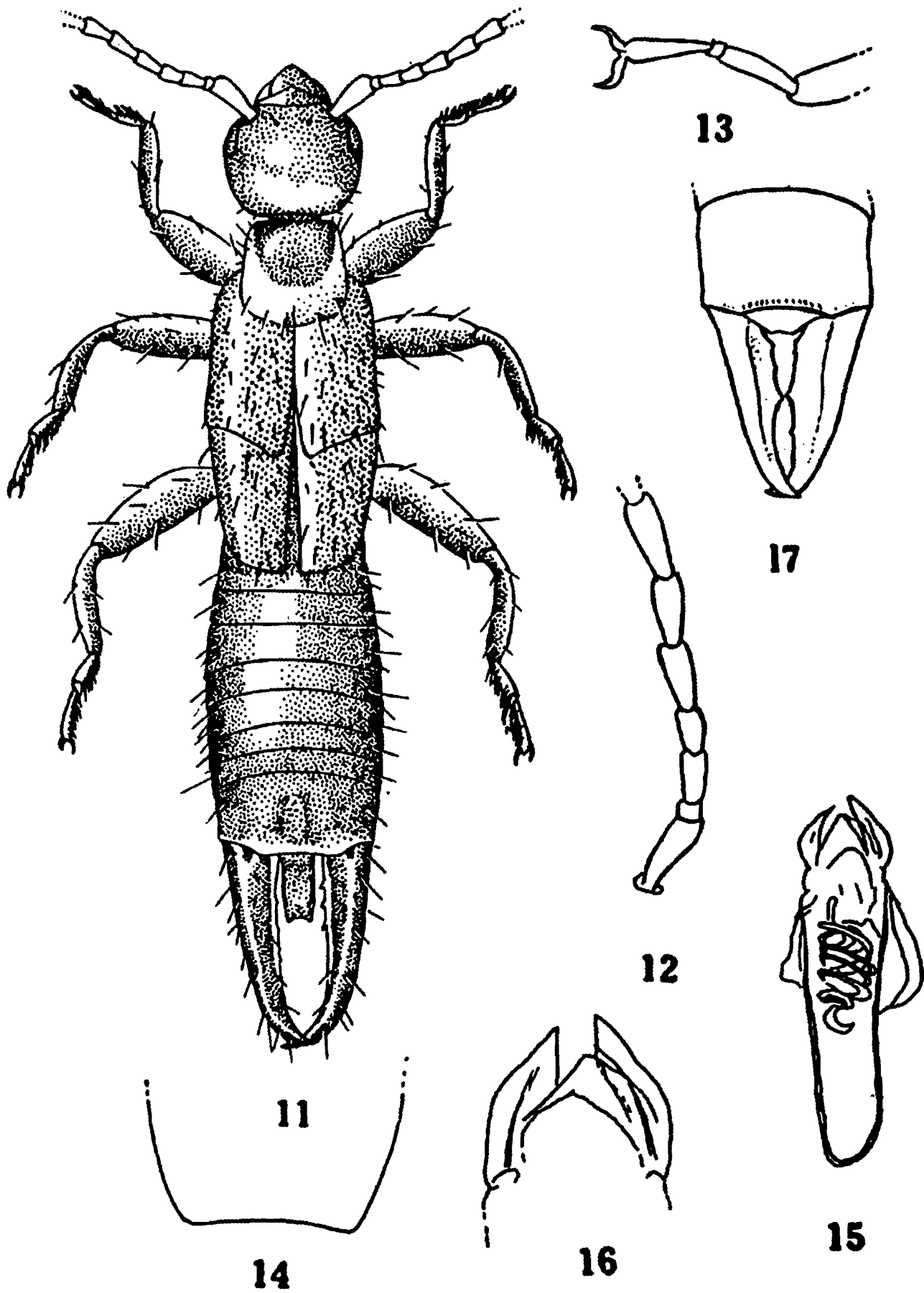
(Figs. 11–17)

General colour blackish brown; antennae light brown; posterior half of pronotum, tibia & tarsi yellow; some of the abdominal tergites, pygidium and forceps light brown; ultimate tergite dark. Body sparsely pubescent, with oily lusture.

Head smooth, slightly longer than broad, frons convex, sutures obsolete, hind margin hardly emarginate in middle. Antennae with 12(+) segmented, first segment stout, gently expanded apically, slightly shorter than the distance between antennal bases; 2nd short, about as long as broad; 3rd long, slender; 4th a little shorter than preceding, stouter, gently expanded apically; 5th about as long as the 3rd but gently narrowed at base, remaining gradually increasing in length and each narrowed at base. Pronotum a trifle longer than broad, smooth, anteriorly about as broad as head, sides straight, depressed, gently widened posteriorly, postero-lateral angles and margin rounded, median sulcus, fine but distinct, prozona tumid, well differentiated from flat metazona. Elytra and wings well developed, former with hind margin obliquely truncate, almost of equal length, sparsely pubescent, smooth. Legs short, femora swollen, hind tarsi with 1st segment slightly shorter than the 3rd; 2nd short, about as long as broad; claw without an arolium. Abdomen fusiform, tergites convex, smooth, lateral folds on 3rd & 4th tergites almost obsolete. Penultimate sternite transverse, smooth, hind margin lightly concave, postero-lateral angles distinct. Ultimate tergite transverse, smooth, disc weakly convex, in middle posteriorly with a shallow depression, gently narrowed posteriorly, hind margin in middle, subtruncate, oblique & concave laterally above base of forceps. Pygidium a little over twice longer



Figs. 1-10. *Cranopygia similis* Zacher, Male, 1. Ultimate tergite and forceps; 2. Genitalia; *Nesogaster minusculus* Rehn, Male; 3. Anterior portion of body; 4. A few basal antennal segments; 5. Ultimate tergite & forceps (macrolabic); 6. Ultimate tergite and forceps (microlabic); 7. Genitalia (right paramere missing); *Circolabia dubronyi* Rehn, Male; 8. Ultimate tergite and forceps; 9. Genitalia; Female; 10. Ultimate tergite and forceps.



Figs. 11-17. *Circolabia bhatiai* sp. n., Holotype Male; 11. Dorsal view; 12. A few basal antennal segments—enlarged; 15. Genitalia; 16. Parameres—enlarged; Paratype Female; 17. Ultimate tergite and forceps.

than broad, at base subvertical, afterwards horizontal, sides lightly convex, hind margin emarginate, postero-lateral angles acute. Forceps remote, stout at base, afterwards gradually tapering, cylindrical, almost straight, in apical 1/3 gently incurved, apices hooked & pointed, internal margin differentiated in to dorsal & ventral borders, ventral border with a few fine teeth in basal 1/2. Genitalia with paramere narrowed apically, virga with concentric coils.

Female : Agrees with male in most characters except that the penultimate sternite obtuse in middle posteriorly; ultimate tergite weakly transverse; pygidium vertical, transverse, narrowed apically with slight emargination in middle; forceps simple & straight, inner margin with fine teeth and in middle with a distinct tooth.

Measurements : (in mm)

	Holotype	Paratypes	
	Male	Males	Females
Length of body	4.4	4.2–4.3	4.0–5.2
Length of forceps	1.1	1.1–1.15	0.9–1.0

Material Examined : India : North Andaman, Holotype Male (genitalia mounted between two coverslips and attached to the pin of specimen; penultimate sternite mounted on a card attached with the specimen, *Canarium euphyllum*, RRD 917, BCR 334; Cage 511, 18.1.1929; Andaman Islands, Paratype 1 Female, R & D 88, BCR 44, Cage GX, Ex unknown wood bark 29.11.1930; Paratype 1 Male (genitalia mounted between two coverslips and attached to the pin of specimen and penultimate sternite mounted on a card attached with the specimen), RRD 88, BCR 42, Cage GZ, Ex *Rhizophora mucronata* bark, 24.IV.1930; Paratypes 1 Male, 1 Female, RRD 88, BCR 37, Cage 716, Ex *Sideroxylon longepetiolatum*, 17.VIII.1930; Paratype 1 Female, 12.IX.1930, Paratype 1 Female, 14.IX.1930, Paratype 1 Female, 21.XI.1930 and Paratype 1 Female 3.01.1931, all RRD 88, BCR 37, Cage 716, Ex *Sideroxylon longipetiolatum*, ex FRI Dehra Dun coll. (all *C. F. C. Beeson* coll.); South Andaman, Burmanala, Paratype 1 Female, ex under bark of dead decaying tree trunk, 22.1.2000 (*G. K. Srivastava* coll.); deposited in the National Zoological Collection at the Zoological Survey of India, Calcutta.

Remarks : The described species comes very close to *Circolabia emarginata* (Srivastava, 1978) from Philippines in general body colour & shape of male genitalia especially virga with concentric coils but differs by it shorter (maximum length 6.2 mm, including forceps) body size (*vs* 7.8 mm, including forceps in *C. emarginata*) and male pygidium narrow, a little over twice as long as broad with hind margin faintly concave (*vs* broad, flattened, only slightly longer than broad with hind margin deeply emarginate in middle).

***Chaetolabia sahai* sp. n.**

(Figs. 18–23)

Male : General colour dark brown with shades of blackish brown on certain body parts; mouth parts, pronotum and legs slightly lighter in colour.

Head smooth, about as long as broad, convex, sutures obliterated, hind margin emarginate. Eyes small, much shorter than post-ocular area. Antennae multi-segmented (partly damaged, 7 segments on the left and 12 on the right remaining), basal segment stout, narrowed basally, about as long as the distance between antennal bases; 2nd short, about as long as broad; 3rd long & cylindrical; 4th stouter, slightly shorter than preceding, distinctly narrowed basally; 5th about as long as 3rd but a little stouter; 6th onwards gradually increasing in length but one or two apical ones shorter and globular. Pronotum longer than broad, anteriorly about as broad as head, sides straight, gently reflexed, scarcely widened posteriorly, hind margin rounded, median sulcus distinct, prozona convex and well differentiated from flat metazona. Elytra smooth, well developed, finely pubescent, shoulders weak, hind margin straight, oblique. Wings of same texture as the elytra, projecting beyond elytra as narrow lateral, ovate flaps. Legs typical of the genus, hind tarsi with first segment about equal to third; second about as long as broad, on underside thick hairs present. Abdomen cylindrical, narrowed at base, gradually enlarging posteriorly, tergites convex, smooth, sides of segments broadly convex, finely pubescent. Penultimate sternite transverse, hind margin rounded with a faint emargination in middle; manubarium about as long as broad, narrowed apically. Ultimate tergite weakly convex, smooth, with an oily lustre, transverse, feebly sloping backwards, hind margin in middle straight, laterally above the base of forceps oblique & faintly emarginate. Pygidium distinct, at base narrow, declivent, apically broader, postero-lateral angles markedly projecting, hind margin faintly & broadly emarginate. Forceps covered with short & long pubescence, branches remote at base to accommodate pygidium, depressed above, almost straight, narrowed apically with tip gently incurved, internal margin with a faint flange terminating into a small, sharp posteriorly directed tooth at apical 1/3. Genitalia with parameres narrowed apically, tip acute, gently incurved; virga thick tubular.

Female : Unknown.

Measurements (in mm).

	Holotype
	Male
Length of body	6.5
Length of forceps	2.0

Material Examined : India : Great Nicobar Island, Paulo Baha, West Coast, Holotype Male (genitalia mounted between two coverslips and pinned with the specimen), 21.8.1984 (*S. S. Saha* coll.); deposited in the National collection at the Zoological Survey of India, Calcutta.

Remarks : This species can be easily separated from all the known species of the genus by the shape of male pygidium.

It comes close to *Chaetospania borellii* Srivastava, from Philippine Is, in having some what similar male pygidium but differs by the pronotum being longer than broad; pygidium with postero-lateral angles more strongly projecting and the inner flange of forceps weakly marked and the parameres acute apically.

CHELISOCHIDAE

CHELISOCHINAE

Hamaxas chandrai sp. n.

(Figs. 24–30)

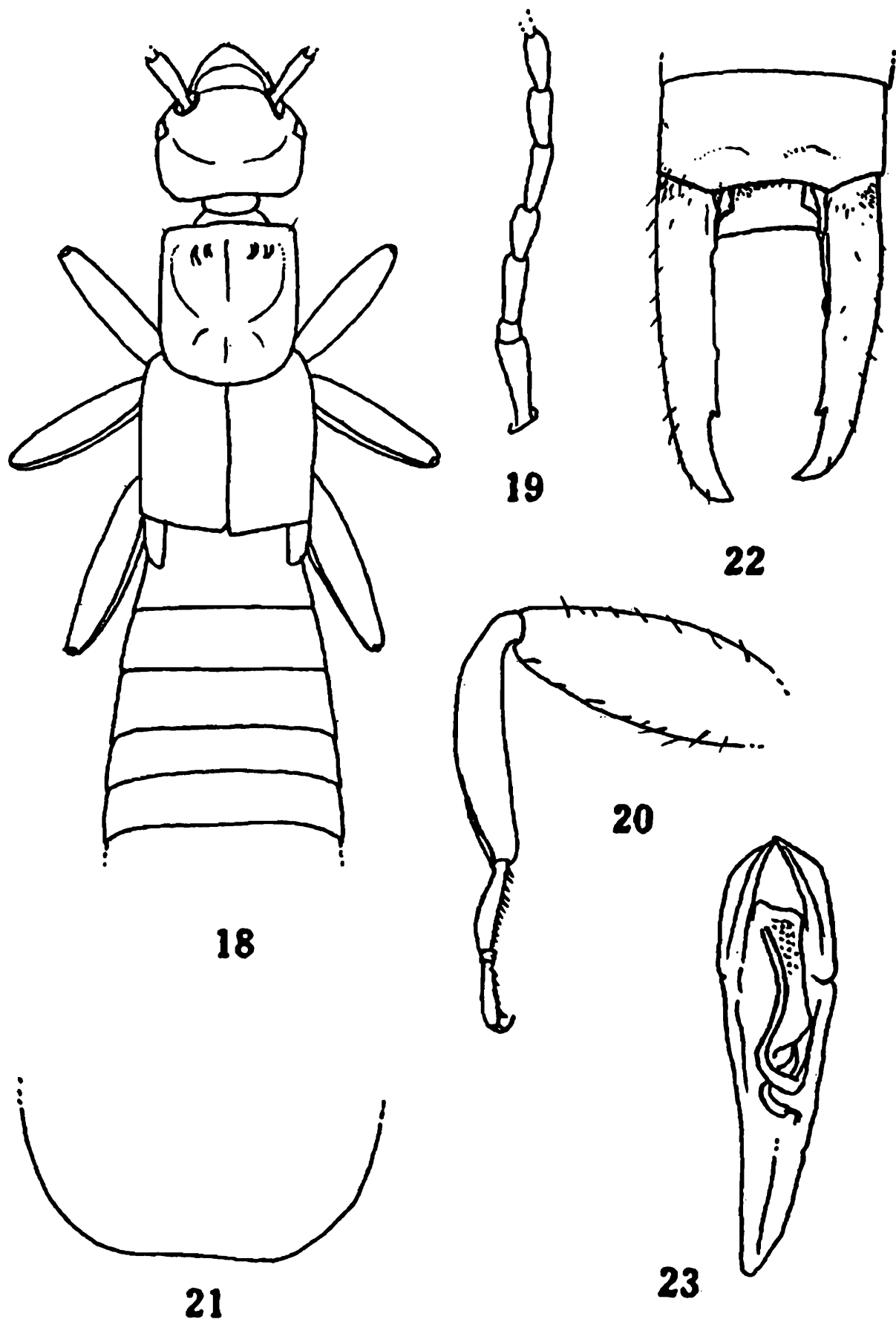
Male : Head, antennae, elytra and wings brownish black but one or two apical segments of antennae and sides of pronotum yellowish brown; legs brownish yellow; abdominal tergites & forceps reddish brown with shades of black on certain parts. Body pubescent, especially wings and elytra.

Head about as long as broad, frons depressed, smooth, occiput moderately raised, median suture distinct, transverse suture marked by depressed area on the border of raised occiput, postero-lateral angles rounded, hind margin emarginate in middle. Antenna 14-segmented, 1st stout, narrowed basally, cylindrical, slightly longer than the distance between antennal bases; 2nd short, about as long as broad; 3rd long & slender; 4th a trifle shorter & stouter than 3rd; 5th slightly longer than 3rd, stouter, narrowed basally, afterwards segments gradually thinning & increasing in length. Eyes small, about 1/3 as long as the post-ocular area. Pronotum longer than broad, anteriorly convex in middle, sides parallel, gently reflexed, hind margin rounded, obscurely punctulated, prozona tumid, well differentiated from flat metazona. Elytra and wings well developed, shallowly punctulated. Legs typical of the genus, hind tibiae feebly sulcate near apex, hind tarsi with 1st segment equal to 3rd; 2nd narrow, produced below the third. Abdomen narrowed at base, moderately convex, tergites densely punctate, lateral folds on 3rd & 4th tergites distinct but former weakly developed, sides of segments convex. Penultimate sternite transverse, obscurely punctate, hind margin rounded with a slight emargination in middle. Ultimate tergite transverse, smooth, weakly convex above, in the middle posteriorly with a faint triangular depression, median sulcus faintly marked, above the base of forceps with a rounded elevation and a small tubercle present above it in the middle close to hind margin, posterior margin straight, oblique above base of forceps. Pygidium vertical, narrowed posteriorly, postero-lateral angles produced into a minute point and hind margin faintly concave. Forceps remote, stout, cylindrical in cross section in basal half, afterwards depressed, tapering apically, bent inwards at base, thence straight, in apical 1/3 gently incurved with apices hooked, internal margin with border sharp & serrations, a posteriorly directed tooth at apical one third, afterwards, unarmed. Genitalia with parameres flat, external apical angle convex, narrowed apically with tip pointed; virga short, tubular, at base with a pair of chitinous plates.

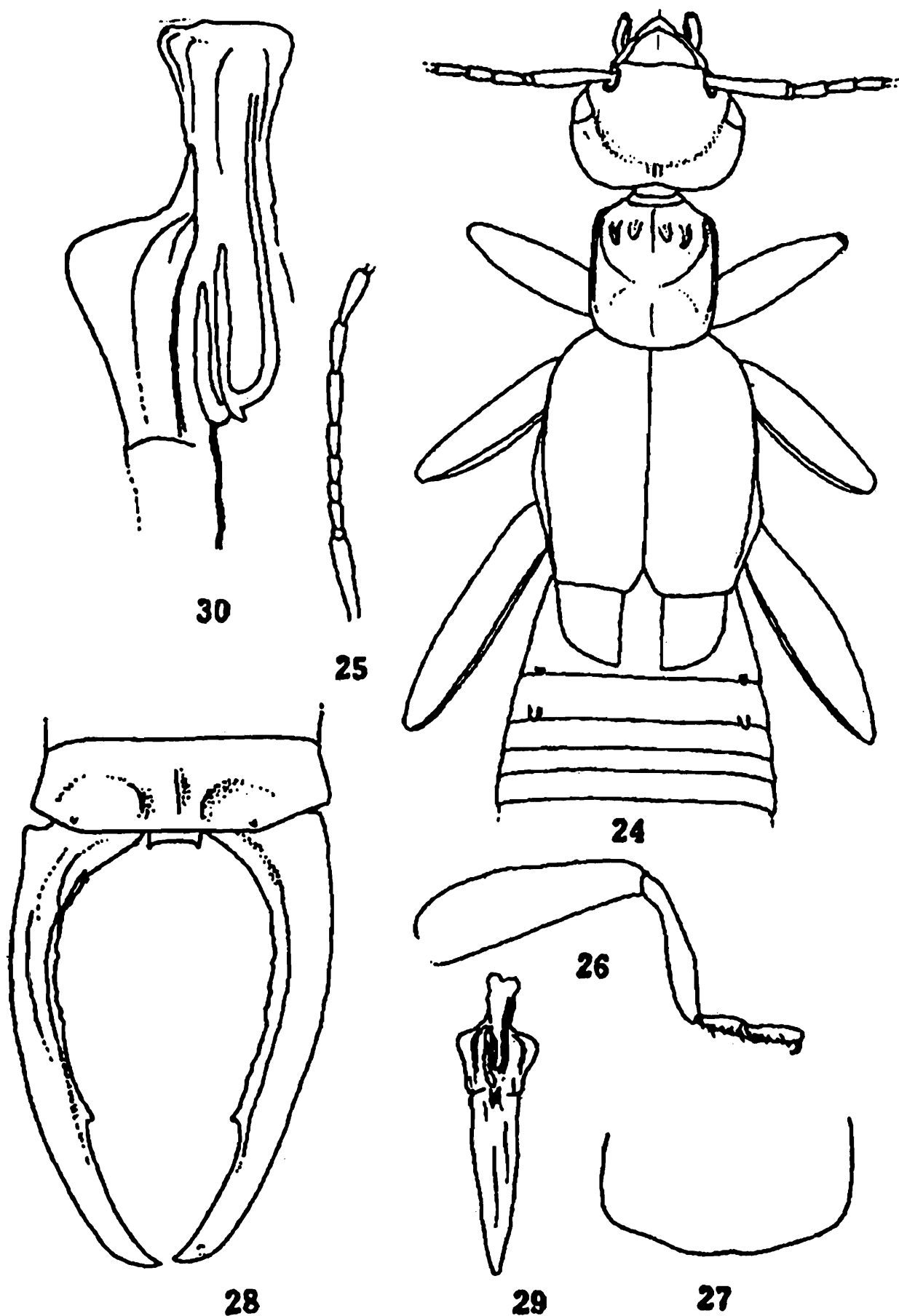
Female : Unknown.

Measurements : (in mm)

	Male
Length of body	7.8
Length of forceps	3.4



Figs. 18-23. *Chaetolabia sahai* sp. n., Holotype Male; 18. Anterior portion of body; 19. A few basal antennal segments; 20. Hind leg; 21. Hind portion of penultimate sternite; 22. Ultimate tergite and forceps; 23. Genitalia.



Figs. 24-30. *Hamaxas chandrai* sp. n., Holotype Male; 24. Anterior portion of body; 25. A few basal antennal segments; 26. Hind leg; 27. Hind portion of penultimate sternite; 28. Ultimate tergite and forceps; 29. Genitalia; 30. Paramere along with a portion of preputical sac—enlarged.

Material Examined : India : Great Nicobar Island, Great Nicobar Biosphere Reserve, 41 km Galathea National Park, 1 Male (genitalia mounted between two coverslips and pinned with the specimen), 18.11.1993, on wings (*K. Chandra* coll.); deposited in the Zoological Survey of India, Calcutta.

Remarks : The described species comes close to *Hamaxas nigrorufus* (Burr), from New Guinea, in general appearance and sigmoid forceps, in males, but differs by the shape of pronotum in being parallel sided (*vs* gently widened posteriorly in *H nigrorufus*); forceps internally differentiated into dorsal and ventral borders with fine serrations and terminating into a short tooth directed posteriorly (*vs* with a short tooth at base above and another slightly larger at apical 1/3 and internal border serrated or smooth) and external apical angle of paramere convex (*vs* angle sharply triangular with tip acute).

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