Rec. zool. Surv. India, **89**(1-4) : 53-69. 1991.

NOTES ON A COLLECTION OF DERMAPTERA (INSECTA) FROM SABAH, MALAYSIA PRESERVED IN THE NATIONAL MUSEUM OF NATURAL HISTORY, WASHINGTON, D.C. (U.S.A.)

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The present study is based on a small collection of Dermaptera from Sabah, Malaysia brought by Mr. Garry F. Hevel and Mr. Warren E. Steiner which comprises 16 species (including I identified up to generic level, since represented by a only) and these include four species new to science, *viz., Cranopygia steineri ; Displatys heveli, Chaetospania lamellata* and *Cordax cornutus.*

The fauna of Borneo appears not to have been adequately explored. Our knowledge is largely based on works of Burr (1900) ; Borelli (1932, 1932a) and Brindle (1980).

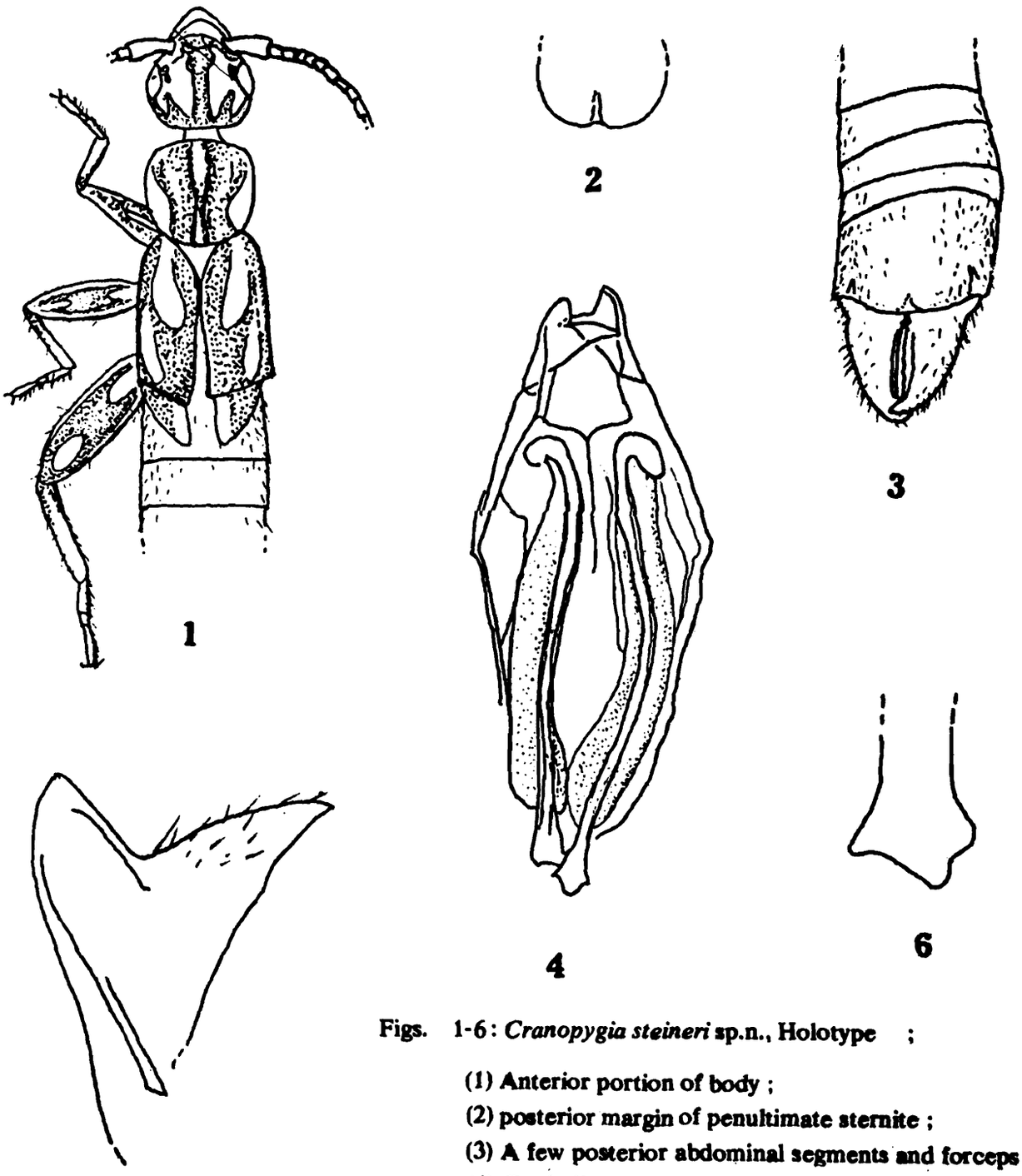
PYGIDICRANOIDEA
PYGIDICRANIDAE
PYGIDICRANINAE

Cranopygia steineri sp. n.
(Figs. 1-6)

♂ : Yellowish, head dark brown on all sides and with a median stripe of some colour and another on post-ocular area ; antennal segments except basal one light brown ; pronotum with dark brown, broad longitudinal stirpes, seperated by a median yellow streak ; elytra dark brown with an oblong spot extending from shoulder to middle and another smaller one in apical half ; legs with femora dark brown with a yellow spot basally and apically, tibia in apical 2/3 and whole of tarsi yellow ; abdomen and forceps dark blackish brown. Abdomen and forceps covered with fine yellow pubescence ; head, pronotum elytra, wings and legs covered with short and long stiff hairs.

Head weakly convex, longer than broad, hind margin feebly emarginate. Eyes longer than the post-oculr lenght. Antennae partly broken (right side with 22 segments and left with 31 segments remaining), basal segment stout, about as long as the distance between bases of anetnnae ; 2nd about as long a broad ; 3rd long and slender, 1½ times longer than broad ; 4th and 5th transverse; 6th slightly longer than broad, remaining gradually increasing in length and thinning. Pronotum slightly longer than broad, anteriorly and sides lightly convex, posterior margin truncate, median sulcus distinct, prozona raised and metazona weakly depressed. Elytra and wings well developed, former with inner basal angle rounded off to

show a triangular scutellum. Abdomen convex, smooth, gradually enlarging posteriorly. Penultimate sternite narrowed posteriorly, hind margin rounded with slight emargination in the middle, a fine, median groove in apical half present. Ultimate tergite slightly longer than broad, convex above, sloping backwards, in the middle posteriorly close to hind margin a glabrous, triangular area present, hind margin truncate, laterally oblique and emarginate, angles slightly projecting. laterally depressed. Forceps depressed, contiguous, tapering apically with tip



Figs. 1-6: *Cranopygia steineri* sp.n., Holotype ;

(1) Anterior portion of body ;
(2) posterior margin of penultimate sternite ;
(3) A few posterior abdominal segments and forceps ;
(4) Genitalia ;
(5) Paramare, enlarged ;
(6) Apex of virga, enlarged ;

gently hooked, inner margin ventrally at base dentate, afterwards dentation fine. Genitalia with parameres internally armed with a triangular tooth and apical external angle produced into a pointed lobe ; virga stout with tip trilobate, laterally furnished with membranous flange, almost throughout the entire lenght.

Measurements.—(in mm)	Holotype ♂
Length of body	18.5
Length of forceps	2.0

♀ : Unknown.

Material examined.—MALAYSIA : Sabah, 20 km E. Telupid, Holotype o (genitalia mounted between two coverslips and pinned with the specimen), 14 August 1983, deposited at National Museum of Natural History, Washington, D.C., U.S.A.

Remarks.—This species resembles closely in external features with *Cranopygia curtula* Hincks, from Borneo but differs in being slightly shorter in size and having distinctive genitalia especially the shape of parameres with external apical angle pointed ; virga with membranous flange more pronounced, extending up to a little before the apex and tip tri-lobed.

DIPLATYINAE

Diplatys jacobsoni Burr

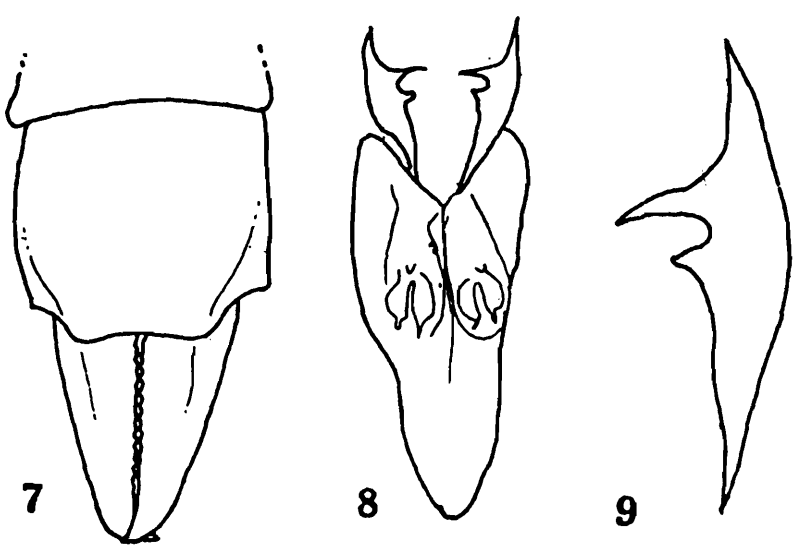
(Figs. 7-9)

1911. *Diplatys jacobsoni* Burr, *Trs.R.ent.Soc.Lond.*, 1911 28; 40, pl. 8, Fig. 23 a-b (♂ ; Java, Batavia).

Material examined.- MALAYSIA : Sabah ; Kinabalu National Park, Poring, el. 570 m. 1 ♂ (genitalia mounted between two coverslips and attached with the specimen), 8 sept 1983.

Distribution.—Java and Sabah (present reocrd).

Remarks.—The forceps represent the microlabic phase.



Diplatys jacobsoni Burr,

(7) Ultimate tergite and forceps ;
(8) Genitalia ;
(9) Paramere, enlarged.

Diplaty heveli sp.n.
(Figs. 10-14)

♂ : General colour blackish brown ; antennae with 3rd, 4th and 5th in basal half only, pronotum laterally and posteriorly, elytra on shoulders, legs with knee joints, apical part of tibia and whole of tarsai and forceps yellowish brown. Finely pubescent ; a few stiff hairs present on legs and margins of pronotum.

Head slightly longer than broad, frons raised, occiput depressed, post-ocular carina extending from eye to hind margin, median suture marked by a fine groove, transverse suture obsolete, hind margin slightly thickened and broadly emarginate. Eyes whitish, prominent, about twice as long as the post-ocular distance. Antennae partly broken, only 14 segments remaining on both sides ; 1st stout, slightly shorter than the distance between antennal bases ; 2nd about as long as broad ; 3rd long and slender, 4th slightly shorter than the preceding and 5th almost equal to 3rd, remaining gradually increasing in length. Pronotum rounded, narrowed posteriorly, hind margin subtruncate, prozona convex and well differentiated from depressed metazona, median sulcus distinct. Elytra and wings well developed, former with inner basal angle rounded off to show a small scutellum. Leg typical for the genus. Abdomen convex, gradually enlarging posteriorly. Penultimate sternite with hind margin broadly emarginate, feebly depressed in posterior half with a fine median groove. Ultimate tergite about as long as broad, disc above convex, gently sloping backwards with a slight depression in middle, hind margin trisinuate, laterally oblique. Forceps with branches contiguous, depressed, tapering apically with tip gently hooked, inner margin finely serrated. Genitalia with parameres narrowed apically to a fine point, internally armed with a hooked tooth at apical 1/3, followed by an emargination and with another minute tooth ; distal lobes with virga stout, median unpaired portion short, arms of bifuarcated portion strongly narrowed apically, a chitinous, denticulated rod also present.

♀ : Agrees with males in most characters except that the general colour darker, forceps simple and straight.

Measurements.—(in mm)

	Halotype ♂	♀
Length of body	12.6	9.4
Lenght of forceps	0.9	1.1

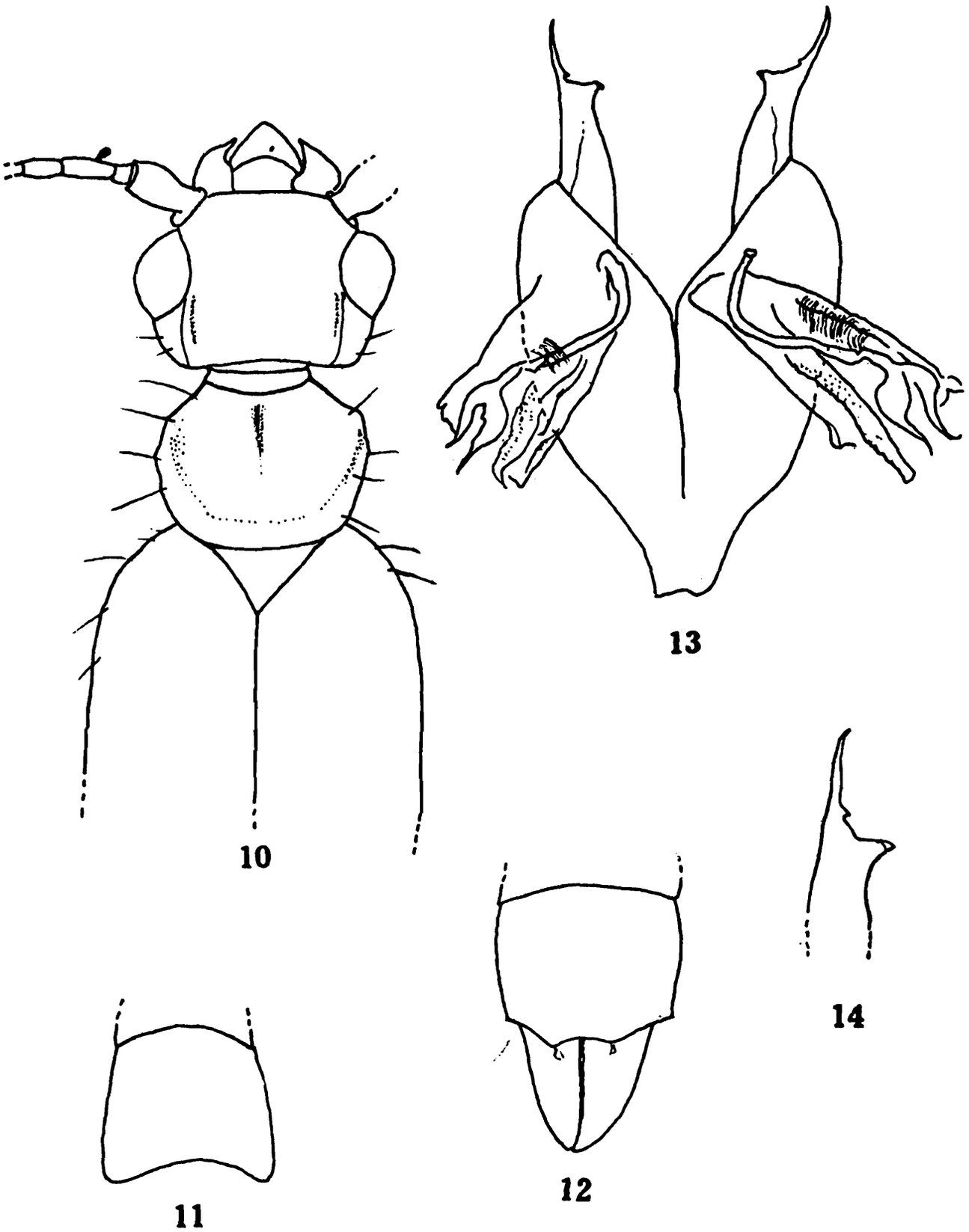
Material examined.—MALAYASIA : Sabah ; 1 km S. Kundasang, el. 1530 m, Holotype ♂ (genitalia mounted between two coverslips and pinned with the specimen), 28 Aug 1983, Malaise trap ; deposited at National Museum of Natural History, Washington, D.C., U.S.A.

1 ♀ and 1 nympth with same date as the Holotype except the date of collection, i.e., 24 Aug 1983 and 21 Aug, 1983, respectively.

Remarks.- This species comes very close *Diplatys nakasoni* Nishikawa, from South Vietnam but differs by the shape of penultimate sternite in having a depression in posterior half, with a median fine groove and posterior margin broadly concave ; parameres with two teeth internally, larger one at apical 1/3

and smaller minute one a little beyond it ; distal lobes with virga short and stout, apical protion of bifurcated protion strongly narrowed, and with a denticulated chitinous rod.

The 1 ♀ and 1 nymph are referred here since they were collected from the same locality as the Holotype but on different dates. Their identification should be treated with some reserve.



Figs. 10-14 : *Diplatys heveli* sp.n., Holotype ; (10) Anterior portion of body ; (11) Penultimate sternite ; (12) Ultimate tergite and forceps ; (13) Genitalia ; (14) Paramere enlarged ;

ECHINOSOMATINAE

Echinosoma horridum Dohrn

1863. *Echinosoma horridum* Dohrn, Stettin ent.Ztg.,24 : 66 (♂ Java).

Material examined. — MALAYASIA : Sabah ; 1 km S. Kundasang, el. 1530 m, 1 ♂ (genitalia mounted between two coverslips and pinned with the specimen), 22 August 1983.

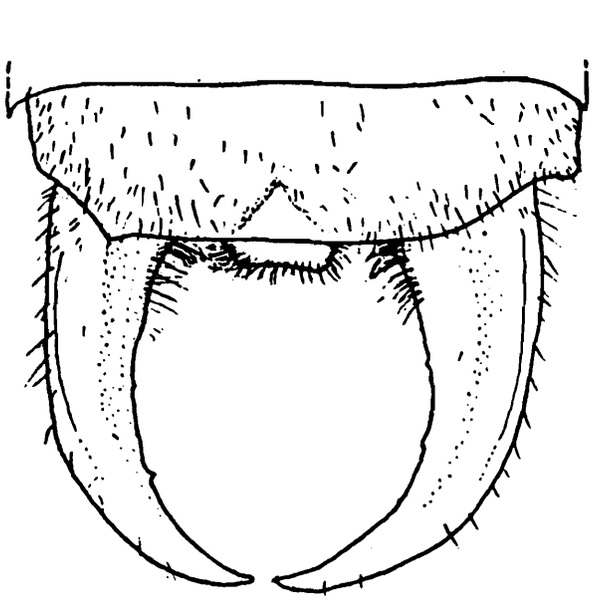
Distribution. — Sumatra, Mentawei Is ; Java and Borneo.

Echinosoma sumatranum (Haan)
(Figs. 15-17)

1842. *forficula (Echinosoma) sumatranum* Haan, *Verh. nat.Gesch.Nerl.Overz. Bezitt.*, 1842 : 241 (♂ ♀ ; Sumatra).

Material examined. — MALAYSIA : Sabah ; Telipok, 1 ♂ (genetalia mounted between two coverslips and pinned with the specimen), 12 August 1983.

Distribution. — China, Malay Peninsula, Vietnam, Sumatra, Java and Borneo.



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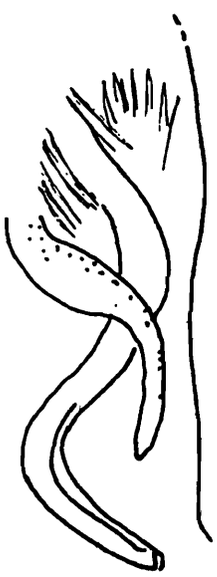

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Echinosoma sumatranum (Haan), ; 15) Ultimate tergite and forceps ; (16) Genitalia; (17) A portion of distal lobe, enlarged.

Echinosoma sp.

Material examined. — MALAYSIA : Sabah ; Kula Penya, 1 ♀, 10 August 1983, at black light.

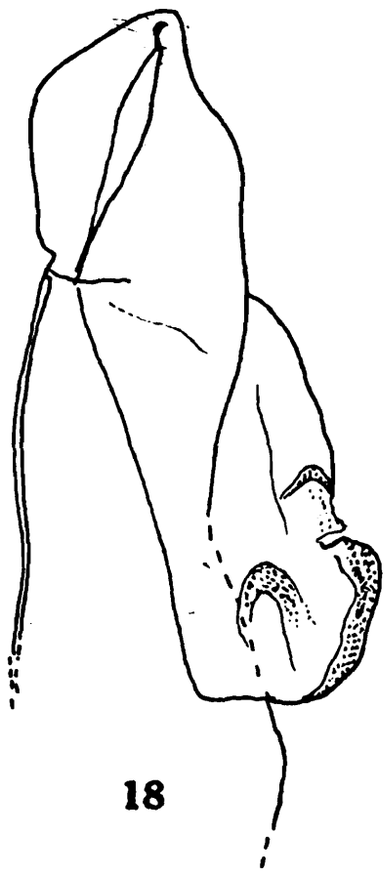
Remarks. — On the basis of size (Length ; body—5.3 ; forceps—0.8 mm) and general colouration it comes close to *E. parvalum* Dohrn, but in the absence of a ♂ it is not possible to identify with certainity up to specific level.

Euborellia plebeja (Dohrn)
(Fig. 18)

1863. *Labidura plebeja* Dohrn, *Stettin ent.Ztg.*, **24** : 322 (♀, Java).

Material examined. — MALAYSIA : Sabah : 25 km E. Telupid, 2 ♂♂ (1 ex with genitalia mounted between two coverslips and pinned with the specimen), 3 ♀♀ , 17 August 1983, at blacklight.

Distribution. — Widely distributed in the Oriental Region.



Euborellia plebeja (Dohrn), ;

18) A portion of genitalia ;

LABIDURIDAE

NALINAE

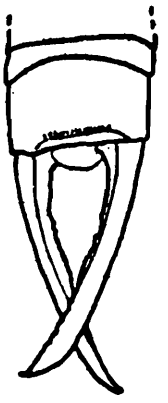
Nala ornata Borelli
(Figs. 19-20)

1932. *Nala ornata* Borelli, *J.fed.Malay St. Mus.*, **17** : 182, Figs. 1&2 (borneo : 1 ♂ Rock Ro, 1 ♀ Baran Riv.).

Material examined. — MALAYSIA : Sabah ; Ranau, 1 ♂ (genitalia mounted between two coverslips and pinned with the specimen), 13 Aug 1983, at blacklight.

Distribution. — Borneo.

Remarks. — This male specimen agrees with the original description of the species except for some minor variations in the inner dentation of forceps. The ♂ genitalia is figured here for the first time.



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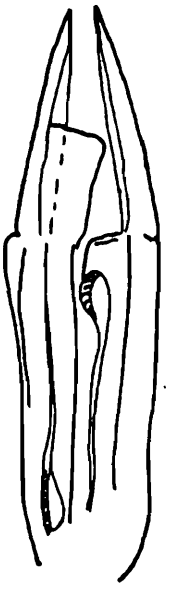

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Nala ornata Borelli, (19) Ultimate tergite forceps ; (20) Genitalia :

LABIDURINAE

Labidura riparia (Pallas)

1773. *Forficula riparia* Pallas, *Reise Russ. Reichs*, **2** : 727 (sex ; Shores of Irtysch River, Western Siberia).

Material examined. — MALAYSIA : Sabah ; 1 km S Kundasang, el. 1503 m, 1 ♂ 6 Aug, 1983.

Distribution. — World wide.

Forcipula abbreviata Srivastava

Figs. 21-23

1986. *Forcipula abbreviata* Srivastava, *Rec.zool.Surv.India occ.pap.*, **89** : 10, Figs. 5 & 8 (♀, ♂; India : Arunachal Pradesh ; Sikkim and West Bengal (Darjeeling Dist.).

Material examined. — MALAYSIA : Sabah ; 17 km S. Keningau, 1 ♂ (genitalia mounted between two coverslips and pinned with the specimen), 1 ♀ , 11 Aug. 1983.

Distribution. — India and Malaysia : Sabah (Present record).

Remarks. — The above material agrees with Indian material in most characters except that the sides of abdominal 3 to 5 provided with a hooked spine passing into the ride below which is feebly developed, representing a vestige of ventral tubercle. In addition a very small tooth is also present on the sides of abdominal segments 2 and 6 also. On a closer examination of Indian material it has been found that such variation in the development of abdominal spines do exist and in males with minor development of fordeps it is common.

FORFICULOIDEA

SPONGIPHORIDAE

SPONGIPHORINAE

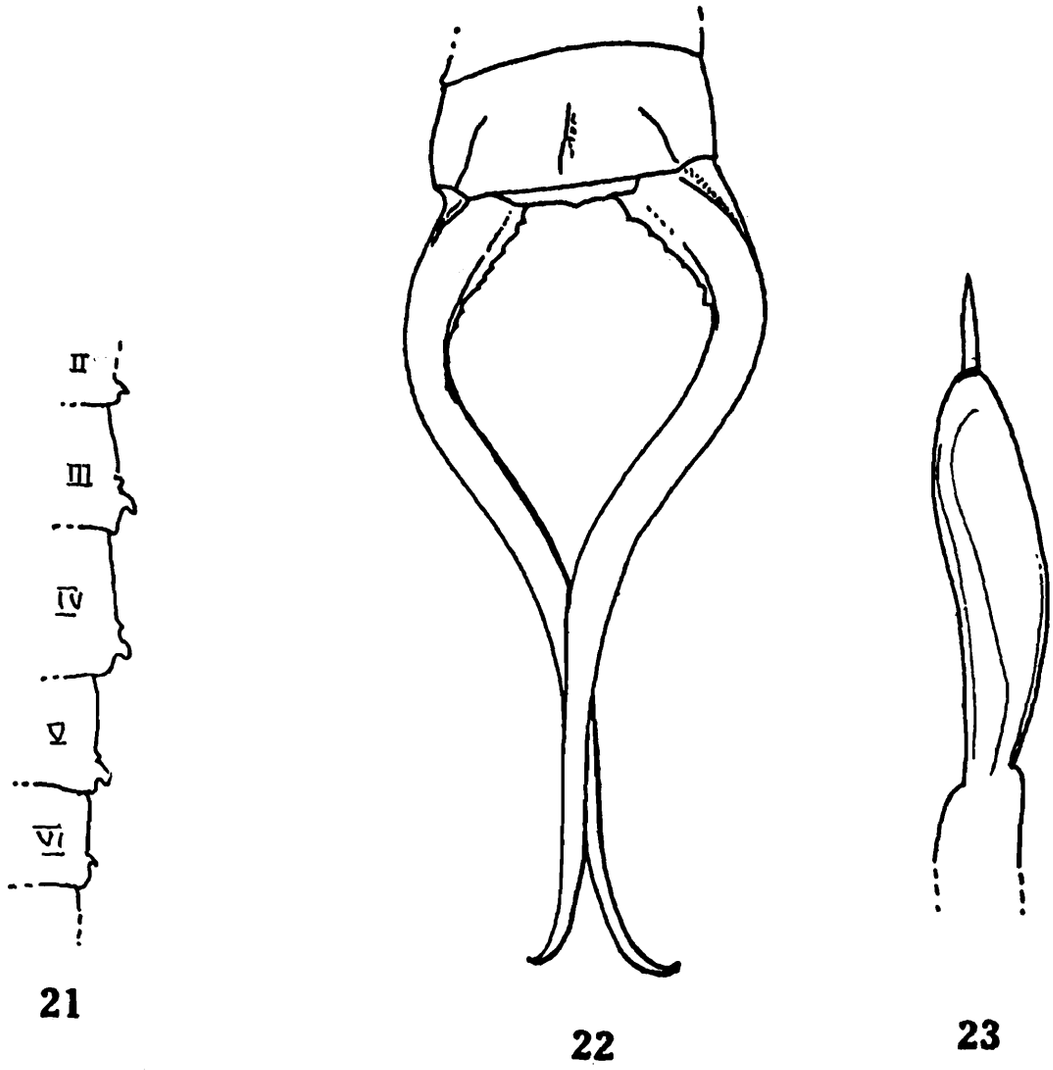
Spongovostox semiflavus (Bormans)

1894. *Spongophora semiflava* Bormans, *Annali Mus.civ.Stor.nat. Giacomo Doria*, (2) **14** : 385 (♂, ♀; Burma).

1911. *Spongovostox semiflavus* ; Burr, *Genera Insect*, 122 : 52.

Distribution. — Widely distributed in the Oriental Region and Bismark Is.

Material examined. — MALAYSIA : Sabah ; Telipok, 3 , 12 Aug. 1983.



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Forcipula abbreviata Srivastava. 21) Sides of abdominal tergites 2nd to 6th showing the lateral spines ; (22) Ultimate tergite and forceps ; (23) Paramere, enlarged.

Remarks. — Although only females are represented these are referred here without any hasitation since they agree well with a large series from India, present in the collections of the Zoological Survey of India, Calcutta.

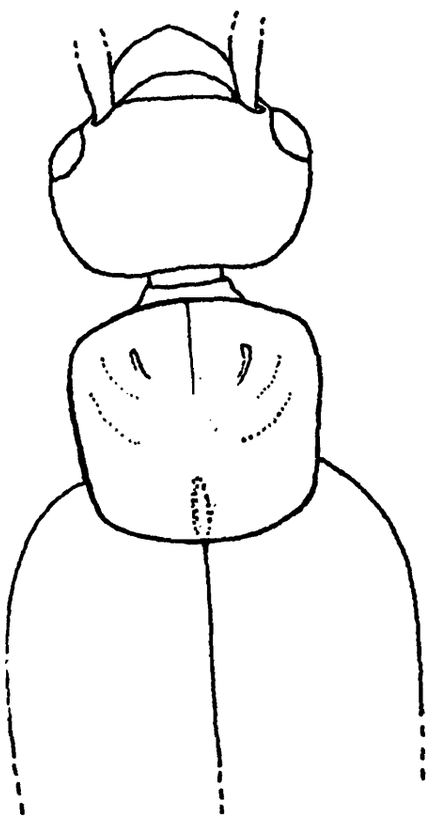
LABIINAE

Chaetospania lamellata sp.n.

(Figs. 24-30)

♂ : General colour dark brownish black ; a few apical antennal segments, knee joint, apical 1/3 of tibia and whole tarsi of fore—leg yellowish brown. Finely pubescent, large pubescence present on certain body parts and forceps.

Head cordiform, slightly longer than broad, smooth, frons feebly depressed, sutures obsolete, hind margin emarginate in middle. Eyes reddish brown, about half as long as the post-ocular length. Antennae partly broken, 9 segments on the left side and 12 on the right present, basal segment narrowed at base, about as long as the distance between antennal bases ; 2nd short, about as long as broad ; 3rd



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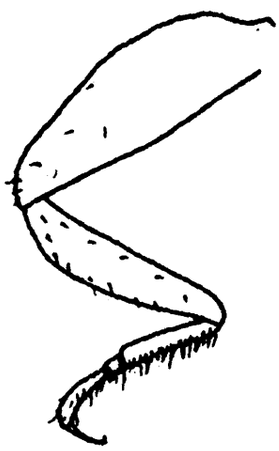

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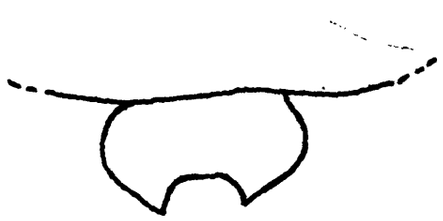

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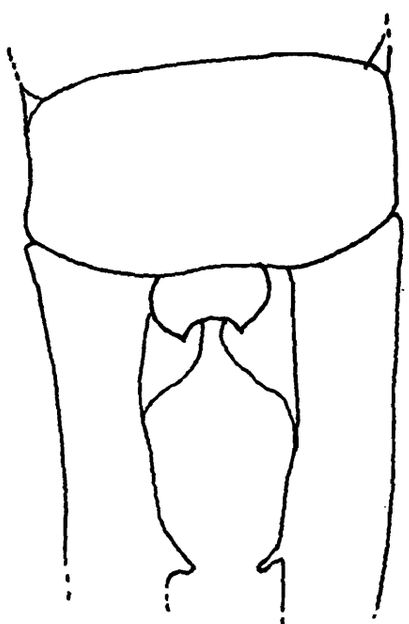

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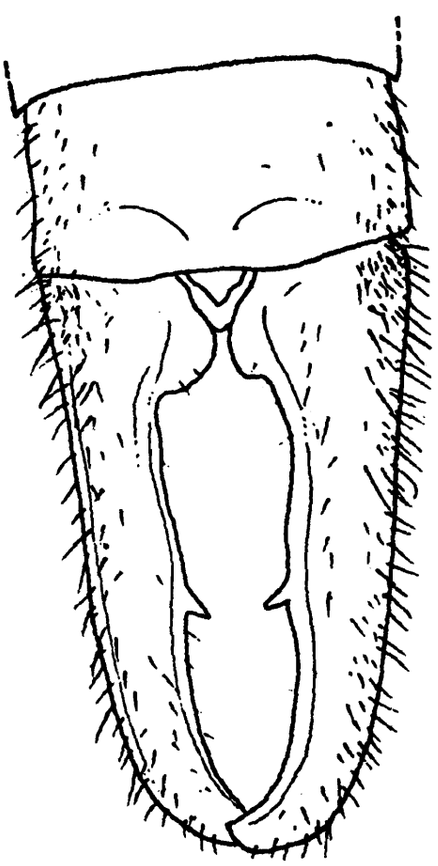

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Figs. 24-30 : *Chaetospania lamellata* sp.n., Holotype ♂; 24) Anterior portion of body ; 25) A few antennal segments ; (26) Hind leg ; (27) Ultimate tergite and forceps ; (28) Penultimate sternite, pygidium and a portion of forceps ; (29) Pygidium, enlarged, in ventral view ; (30) Genitalia.

segments, slender ; 4th slightly longer and stouter than preceding ; 5th onwards gradually increasing in length except a few apical ones shorter, each segment narrowed basally. Pronotum quadrate, about as long as broad, sides parallel and deplanate, anteriorly convex, posterior margin and angles rounded, prozona raised and well differentiated from flat metazona, median sulcus distinct. Legs typical for the genus. Elytra and wings well developed, finely punctulate, former with hind margin obliquely truncate. Abdomen narrowed basally, convex, micro-reticulated. Penultimate sternite transverse, hind margin broadly convex with slight emargination in middle. Ultimate tergite transverse, micro-reticulated, moderately depressed, hind margin faintly trisinuate, oblique laterally. Pygidium in dorsal view mostly covered by basal lamellation of forceps, in ventral view transverse, sides convex and hind margin distinctly concave, postero-lateral angles with a minute point. Forceps stout, depressed, straight, tapering apically with tips hooked and pointed, internally at base with a rounded lamellation, at about middle a ventral tooth directed downwards and backwards present, margin wavey, poorly differentiated in dorsal and ventral borders. Male genitalia with parameres narrowed apically, inner margin straight and external margin convex, virga tubular, boardly S-shaped, gently dilated at base, an accessory chitinous structure present.

Measurements. — (in mm)	Holotype ♂
Length of body	9.0
Length of forceps	2.8

♀ : Unknown.

Material examined. — MALAYSIA : Sabah ; 1 km S.Kundasang, el. 1530 m, Holotype ♂ (genitalie mounted between two coverslips and pinned with the specimen), 25 Aug. 1983, deposited at National Museum of National History, Washington D.C., U.S.A.

Remarks. — This species comes close to *Chaetospania feuerborni* Gunther, from Sunda Islands and Sumatra but differs in ♂ by the shape of pygidium being convex laterally and with a deep emargination in middle posteriorly (*vs* Pygidium transverse with posterior margin wavey or slightly longer than broad, narrowed posteriorly with a narrow emargination in middle posteriorly in *C. feuerborni* Gunther) and forceps at base with an inner lamellation convering the pygidium, followed by a sharp, small tooth at about middle (*vs* forceps without any basal lamellation internally, armed internally with minute tooth at basal 1/3 followed by another similar tooth at apical 1/3).

The described species can also be compared with *Chaetospania borneensis* (Dubrony) from Sarawak and Sumatra but differs a by the shape of pygidium and forceps.

CHELISOCHIDAE

CHELISOCHINAE

Adiathetus shelfordi (Burr)

1900. *Chelisoches shelfordi* Burr, *Ann.Mag.nat.Hist.*, (7) 6 : 96, pl. 4, Fig. 4 (♀ not ♂ ; Sarawak).

1900. *Chelisoches hercules* Burr, *Ann.Meg.nat.Hist.*, (7) 6 : 96, pl. 4, Fig. 2 (♂ ; Sarawak).

Material examined. — MALAYSIA : Sabah ; 1 km S. Kundasang, el. 1530m, 1

♀, 26 Aug. 1983.

Distribution. — India (Sikkim), Sumatra and Borneo.

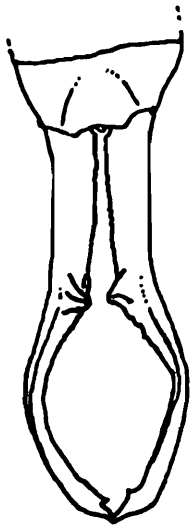
FORFICULIDAE
OPISTHOCOSMIINAE

Eparchus forcipatus (Haan)
(Figs. 31-33)

1842. *Forficula (Opisthocasmia) forcipata* Haan, *verh.nat.Gesch.Nederl.Overz.Bezitt,* 1842 : 243 (♀,♂; Batang, Singalang, Sumatra).

Material examined. — MALAYSIA : Sabah ; 1 km. S. Kundasang, el. 1530m, 1 ♂, 5♀♀, 7 Aug 1983 ; 1 ♀ (genitalia mounted between two coverslips and pinned with the specimen), 28 Aug 1983.

Distribution.—Widely distributed in the Oriental Region.



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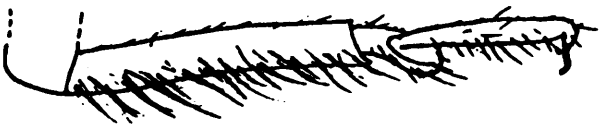

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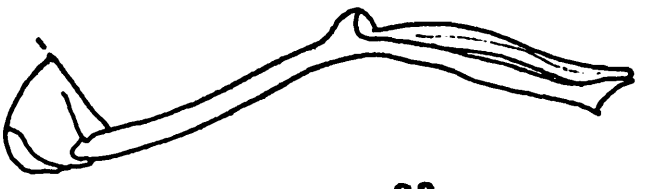

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Figs. 31-33 : *Eparchus forcipatus* (Haan) ; (31) Hind tarsi ; (32) Ultimate tergite and forceps ; (33) Forceps, in profile.

Eparchus dux (Bormans)
(Figs. 34-39)

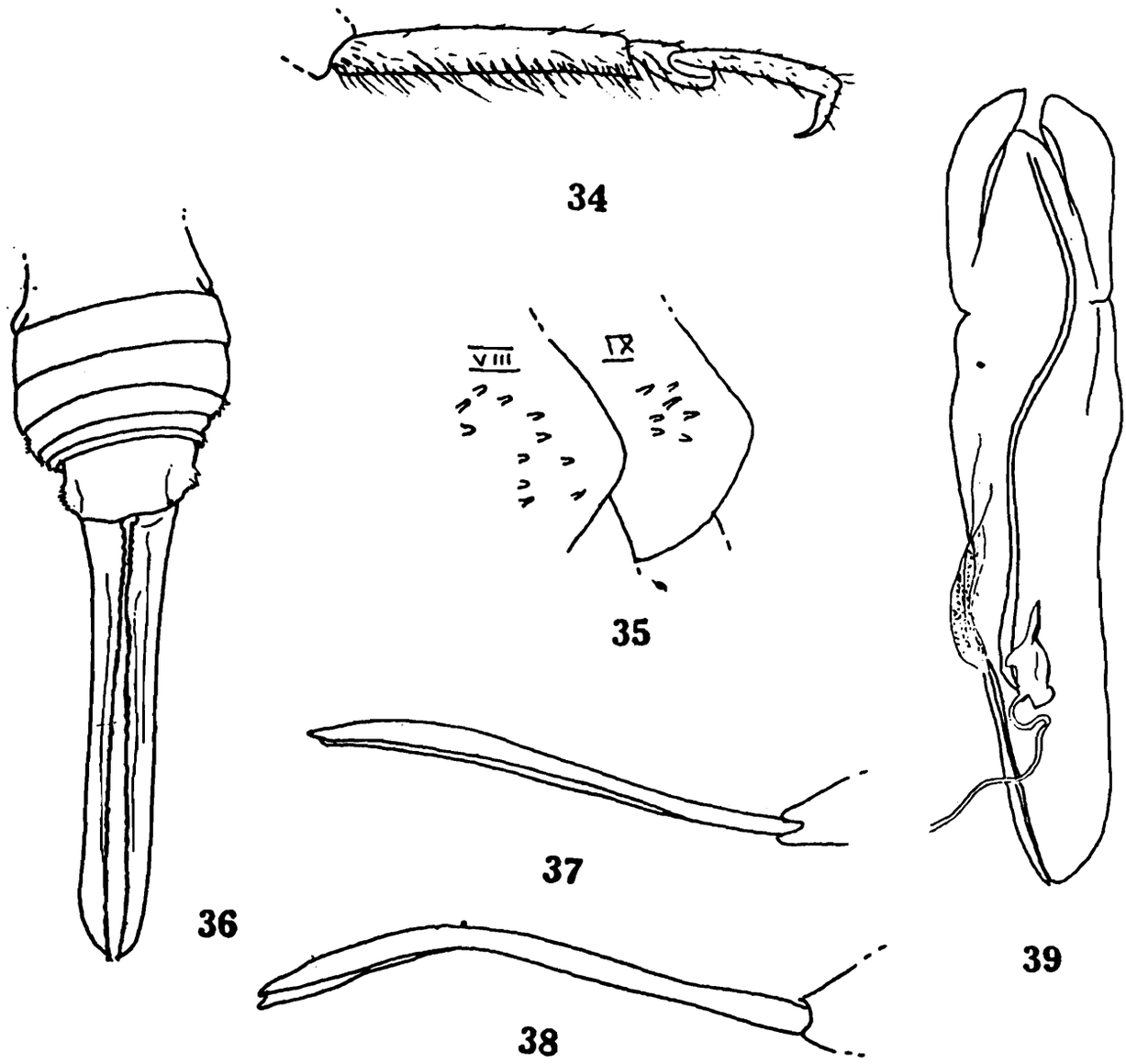
1894. *Opisthocosmia dux* Bormans, *Annali.Mus.Civ.Stor.nat.Giacomo Doria,* (2) **14** : 395 (2 ♂♂; Burma).

1981. *Eparchus dux* ; Srivastava, *Annali.Mus.Civ.Stor.nat.Giacomo Doria,* **83** : 300 (Lectotype and Paralectotypes designated).

Material examined.—MALAYSIA : Subah ; Kinabalu National Park, headquarters area, el. 1560 m, 1♀, 5 Aug, 1983 ; 1♂, 8 Aug, 1983 ; 1 km S. Kundasang, el, 1530 m, 1♀, 7 Aug 1983 ; 1♀, 24 Aug 1983 ; 1♂ (genitalia mounted between two coverslips and pinned with the specimen), 26 Aug 1983 ; 1o 28 Aug 1983.

Distribution.—Burma and Sabah (present record).

Remarks.—The present material agrees with the orginal description of the species and subsequent notes by Srivastava (1981). Sides of abdominal segments 6th to 9th and ultimate tergite are provided with several spiniform tubercles and forceps are straight in basal half, afterwards bent downwards.



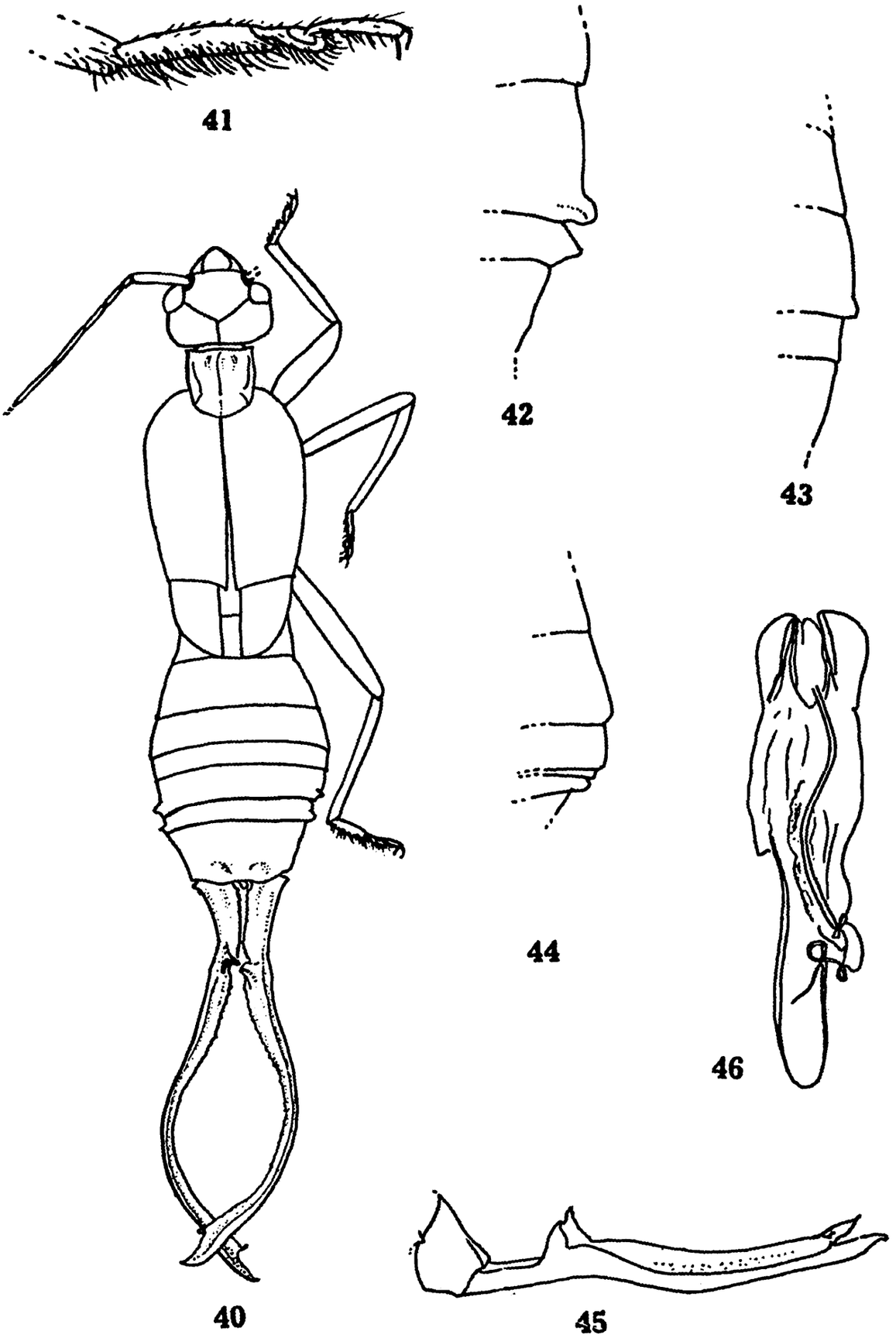
Eparchus dux (Bormans), (34) Hind tarsi ; (35) Sides of abdominal segments VIII and IX showing sipiniform tubercles ; (36) A portion of abdomen and forceps ; (37) and (38) Forceps, in profile ; (39) Genitalia.

The present record of the species in new to the area

It may be pointed out here that *Narberia tuberculata* Borelli (1921), originally described from Kouy Tcheou, China and subsequently recorded from Borneo (Borelli, 1932) by three varities together with typical form comes very close to this species and may prove to be a synonym.

Cordax cornutus sp.n.
Figs. 40-46

♂ : General colour blackish brown ; legs slightly lighter in colour or brownish yellow especially tarsi ; antennae with whole of 7th or part of 6th and 7th yellowish, sides of pronotum yellowish, elytra and blackish brown, latter with a yellow spot at base close to external margin and inner tip ; abdominal tergites with a black patch medially and laterally with a pair of smooth oblong areas also black or dark brown ; forceps reddish brown, yellow for a short distance at apex.



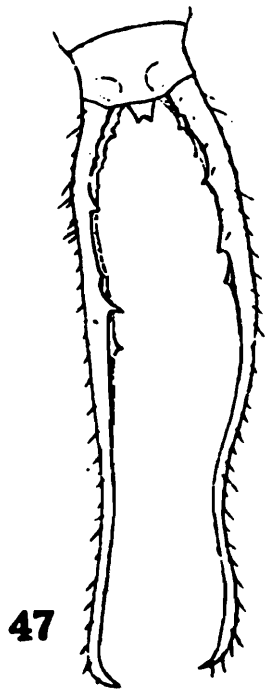
Figs. 40-46 : *Cordax cornutus* sp.n., Holotype ♂ ; (40) Dorsal view, (41) Hind tarsi, enlarged ; (42) to (44) Sides of certain abdominal segments showing the developmentof spines ; (45) Forceps in profile ; (46) Genitalia ;

Head convex, smooth, sutures distinct, hind margin feebly emarginate in middle. Eyes small, distinctly shorter than the post-ocular lenght. Antennae 12-segmented, 1st segment longer than the distance between antennal bases ; long, thin and cylindrical. Pronotum longer than broad, anteriorly narrower than head, lateral angle, a little projecting, sides straight, depressed, gently contracted posteriorly, hind margin rounded, median sulcus distinct. Elytra and wings well developed. Legs long and slender, hind tarsi with 1st segment distinctly longer than 3rd segment ; 2nd enlarged ; fore and middle legs with 1st tarsal segment almost equal to 3rd. Abdomen convex, finely punctulate, gradually enlarging posteriorly, laterally above with a pair of smooth oblong patches on each tergite, lateral tubercles on 3rd tergite weakly and on 4th strongly developed, sides of 8th and 9th abdominal segments posteriorly produced into a triangular lobe, often weakly developed or absent. Penultimate sternite transverse, hind margin rounded with slight emargination in middle. Foreceps contiguous in basal 1/3, cylindrical, provided with a small vertical tooth, often weekly developed, afterwards compressed, gradually separating and broadly incurved to leave an elongated oblong space, narrowed apically with tip pointed and gently hooked, internally armed with numerous small tubercles and a little before apex with a small tooth directed posteriorly and ventrally, in profile gently undulate. Genitalia as seen in fig. 46.

♀ : Agrees with ♂ in most characters but differs in having head less convex sutures obsolete ; often general body colour darker with pronotum uniformly coloured ; ultimate tergite more strongly narrowed posteriorly and foreceps simple and straight.

Measurements—(in mm)

	Halotype	Paratypes	
	♂	♂♂	♀♀
Length of body	12.5	12.0-13.0	12.0-16.0
Length of forceps	8.0	7.0- 7.5	7.0- 7.5



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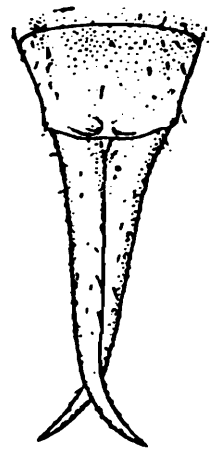
48



49

50

C. politus Burr, ♂ ; (47) Ultimate tergite and forceps ; *C. armatus* (Haan), ♂ ; (48) Ultimate tergite and forceps ; *C. ceylonicus* (Motschulsky), ♂ (49) Ultimate tergite and forceps ; *C. vandermeermohri* Menozzi, ♂ , (50) Ultimate tergite and forceps (after Menozzi, 1933).

Material examined. - MALAYSIA : Sabah, 1 km S. Kundasng, el. 1530 m, Holotype ♂ (genitalia mounted between two coverslips and pinned with the specimen), 28 Aug 1983, Paratypes 1 ♂ (genitalia mounted between two coverslips and pinned with the specimen), 23 Aug 1983 ; 1 ♂ (genitalia mounted between two coverslips and pinned with the the specimen), 4 ♀♀, 28 Aug 1983 ; 1 ♂ 10 Sept 1983 and 1 nymph, 7 Aug 1983.

Remarks.—The inclusion of this species under *Cordax Burr, appears to be* justified on account of its slender build ; head with sutures distinct, frons and occiput raised ; pronotum longer than broad, anteriorly narrower than head and hind tarsi with 1st segment only slightly longer than the 3rd.

At present four species *viz., C. armatus* (Haan), *C. ceylonicus* (Motschulsky), *C. politus* Burr and *C. vandermeermohri* Menozzi, are known from the Oriental Region and can be differentiated by the following key :

(2). Forceps with branches remote at base ; pygidium projecting, with a triangular incision in middle posteriorly and lateral angle produced into a spine (fig. 47) *C. politus* Burr

1 (2). Forceps with branches contiguous or subcontiguous in basal 1/3, pygidium small, not as above.

3 (6). Forceps armed with a vertical tooth above and another tooth internally

4 (5). Head with frons weakly convex, sutures obsolete ; forceps stout, armed with a strong, posteriorly directed, vertical tooth at middle and another horizontal tooth internally at 2/3 of the length (fig. 48) *C. armatus* (Haan)

5 (4). Head with frons and occiput raised, sutures distinct ; forceps long and slender, armed with a vertical tooth, directed internally at basal 1/3, often weakly developed ; and another small tubercle, directed posteriorly a little before apex *C. cornutus* sp.n.

6 (3). Forceps serrated internally, otherwise unarmed

7 (8). Forceps contiguous, almost straight, tapering apically with tips gently hooked (fig. 49) *C. ceylonicus* (Motschulsky)

8 (7). Forceps subcontiguous and feebly dilated at base for some distance, afterwards incurved, internally with convexity at about 2/3 of the length (Fig. 50) *C. Vandermeermohri Menozzi*

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