

INSECTA : DERMAPTERA

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(With 19 Figures)

INTRODUCTION

The present paper is based on a small collection of Dermaptera from Namdapha National Park in Tirap Dist. It comprises 14 species (including two identified up to generic level since represented either by ♀ or nymphs only) belonging to 12 genera. Of these, two species viz., *Anisolabis deplanata* and *Adiathetus metallicus* are described as new to science. Besides, *Proreus weisi* (Burr), hitherto known from Vietnam and South China is reported for the first time from India, giving some additional information since the original description is brief.

SYSTEMATIC ACCOUNT

PYGIDICRANIDAE

PYGIDICRANINAE

Cranopygia sp.

Material examined : INDIA : Arunachal Pradesh, Tirap Dist., Namdapha Camp, 1 ♀, 21.iv.1981 ; Firmbase, 1 nymph, 19.iv.1981 ; Zero Camp, 3 km. N of Deban Miao, 2 nymphs, 19.iv.1981.

ECHINOSOMATINAE

Echinosoma convolutum Hincks

Echinosoma convolutum Hincks, 1959, *Syst. mono. Dermaptera*, 2 : 152 (♂, ♀ ; Burma and Tonkin (Vietnam)).

Material examined : INDIA : Arunachal Pradesh, Tirap Dist., Hornbill, 2 ♂♂, 14.iv.1983, Miao, 1 nymph, 4.iv.1983 ; Gibbon Lands, 2 ♀♀, 1 nymph, 3.v.1981.

Distribution : India, Burma and Vietnam.

Echinosoma dentiferum Borelli

Echinosoma dentiferum Borelli, 1912, *Bull. Mus. Hist. nat. Paris.*, 18 : 223 (♂ ; Bhutan).

Material examined : INDIA : Arunachal Pradesh, Tirap Dist., Gibbon Lands, 1 ♀, 3.v.1981.

Distribution : Bhutan.

CARCINOPHORIDAE

CARCINOPHORINAE

Aborolabis pervicina (Burr)

Anisolabis pervicina Burr, 1913, *Rec. Indian Mus.*, 8 (2) : 137 (♂, ♀ ; India, Assam).

Aborolabis pervicina : Srivastava, 1969, *Entomologists Rec. J. Var.*, 81 : 246.

Material examined : INDIA : Arunachal Pradesh, Tirap Dist., Deban, 24 km. from Miao, 1 ♀, 7.iv.1981 ; Hornbill, 1 ♂, 1 ♀, 11.iv.1981.

Distribution : N. E. Himalayas in India, Nepal and Bhutan.

Paralabis aborensis (Burr)

Euborellia aborensis Burr, 1913, *Rec. Indian Mus.*, 8 (2) : 137 (♂, ♀ ; Assam).

Paralabis aborensis : Srivastava, 1968, *Entomologists Rec. J. Var.*, 80 : 289 ; Srivastava, 1971, *Entomologists Rec. J. Var.*, 83 : 22 ; Srivastava and Roychowdhury, 1975, *Newsl. zool. Surv. India*, 1 (2) : 22.

Material examined : INDIA : Arunachal Pradesh, Tirap Dist., Hornbill, 1 ♂, 2 ♀ ♀, 14.iv.1981 ; Firmbase, 1 ♂, 2 ♀ ♀, 19.iv.1981 ; Namdapha Camp, 3 ♀ ♀, 22.iv.1981.

Remarks : So far recorded only from N.E. Himalayas, India.

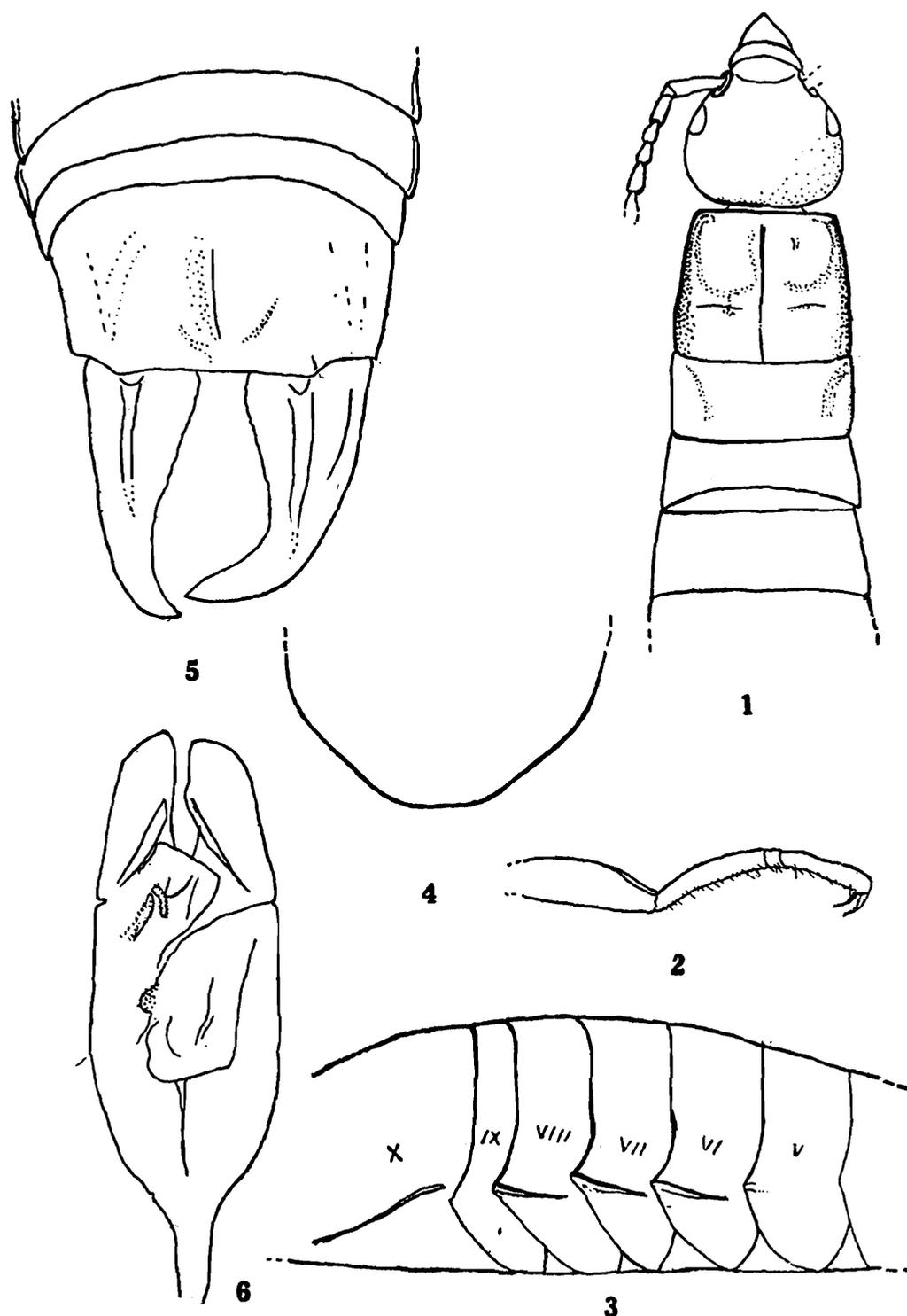
Anisolabis deplanata sp. n.

(Figs. 1-6)

♂ : General colour brownish black. Antennae brownish black but lighter than the body colour, 2nd yellowish, apical 4 or 5 segments dirty white. Pronotum yellow laterally along the border. Legs yellow, femora banded with brownish black in basal half. Posterior margin of abdominal tergites lighter in colour.

Head cordiform, smooth, slightly longer than broad, feebly narrowed posteriorly behind eyes, hind margin almost straight, frons convex, sutures obsolete. Eyes small, about half as long as the post-ocular length. Antennae 13-segmented, 1st stout, expanded apically, about as long as the distance between antennal bases ; 2nd about as long as broad ; 3rd long and slender ; 4th and 5th subequal, shorter than 3rd ; 6th onwards gradually increasing in length but stouter and expanded apically, a few apical segments shorter and almost globular. Pronotum smooth, about as long as broad, gently widened posteriorly, all margins straight, sides feebly reflexed, median sulcus faint, prozona moderately raised and metazona depressed. Meso- and metanotum transverse,

smooth, former posteriorly truncate and latter broadly concave. Thoracic sternites typical for the genus, mesosternum with hind margin lightly convex and metasternum posteriorly truncate. Legs typical for the genus, hind tarsi with 1st segment slightly longer than the third,



Figs. 1-6. *Anisolabis deplanata* sp. n., Holotype ♂ ; 1. Anterior portion of body ; 2. Hind tarsi, 3. Sides of abdominal segments, 4. Posterior margin of penultimate sternite. 5. Ultimate tergite and forceps and 6. Genitalia.

claws without arolium. Abdomen covered with fine, short pubescence, spindle shaped, moderately convex, tergites finely punctulate, sides of segments 5th to 9th acute posteriorly, rugosely punctulate and with

an oblique ridge on segments 6th to 8th whereas a faint tubercle only present on segments 4th and 5th posteriorly. Penultimate sternite transverse, obscurely punctulate, posteriorly in middle truncate; manubrium slightly over three times longer than the length of the sternite, apex forming a narrow elongated loope. Ultimate tergite transverse, obscurely punctulate, shining, disc in middle feebly depressed with a short median sulcus, hind margin straight between the branches of forceps and laterally oblique. Forceps with branches subcontiguous and trigonal in basal one third; the upper ridge distinct in basal one third, afterwards depressed and tapering apically, incurved in apical one third, right branch more strongly curved, apices pointed. Genitalia with parameres about half as long as pro-parameres and three times longer than broad; distal lobes with small denticulated pads (fig. 6).

♀ : Unknown.

Measurements : (in mm)

	Holotype	Paratypes
	♂	♂ ♂
Length of body	7.5	6.9 – 7.2
Length of forceps	1.0	0.9 – 0.7

Material examined : INDIA : Arunachal Pradesh, Tirap Dist., Namdapha, Hornbill, Holotype ♂ (genitalia mounted between two coverslips and pinned with the specimen), Paratype 1 ♂, same data 11.iv.1981, S. Biswas; West Bengal, Darjeeling Dist., Sivoke, Paratype 1 ♂ (genitalia mounted between two coverslips and pinned with the specimen), ex sweeping over wild vegetation, 10.iv.1978, A. R. Bhowmik; deposited in the National Zoological Collections at the Zoological Survey of India, Calcutta.

Remarks : In India genus *Anisolabis* Fieber is recorded by *A. gaudens* Burr (1904); *A. maritima* (Bonelli) (Burr, 1914 and Steinmann, 1981).

Although *A. gaudens* was recorded on a ♂ but it was later found to be a ♀ (Burr, 1910). Subsequently, Biswas *et al* (1973) recorded this species from Meghalaya on male and females. The material referred to by them was examined and is represented by nymphs only which in the absence of adult ♂ is difficult to place accurately. For this reason its taxonomic position remains still doubtful.

The material referred to by Burr (1914) doubtfully and Steinmann (1981) under *A. maritima* from South India is represented by a female and two nymphs, respectively which perhaps belong to any of the species of *Epilabis* Burr, from the area.

The described species on the basis of males, can be easily discriminated from the other known Oriental species of the genus by being smaller in size (7.8-8.5 mm including length of forceps); in having sides of abdominal 4th to 9th acute angled, with a median oblique carina on segments 6th to 9th only and a vestige of carina at extreme posterior angle on 4th and 5th and characteristic genitalia.

LABIDURIDAE

LABIDURINAE

Labidura riparia (Pallas)

Labidura riparia Pallas, 1973, *Reise Russ. Reichs.*, 2 : 727 (Shores of Irtysh River, Western Siberia).

Material examined : INDIA : Arunachal Pradesh, Tirap Dist., Deban, 1 nymph, 2.iv.1981 ; Miao, 1 ♀ , 5.v.1981.

LABIIDAE

LABIINAE

Labia lutea (Bormans)

Spongophora lutea Bormans, 1894, *Annali Mus. Civ. Stor. nat. Giacomo Doria*, 2 (14) : 386 (♂, ♀ ; Burma).

Labia lutea : Srivastava, 1975, *Newsl. zool. Surv. India*, 1(4) : 80.

Material examined : INDIA : Arunachal Pradesh, Tirap Dist., Hornbill, 2 ♂♂ , 11.iv.1981.

Labia curvicauda (Motschulsky)

Labia curvicauda Motschulsky, 1863, *Bull. Soc. Imp. Nat. Moscou*, 34(2) : 2, pl. 1, fig. 1 (♂, ♀ ; Nura Ellia Mountains, Ceylon).

Material examined : INDIA : Tirap Dist., Miao, 1 ♂ , 1 nymph, 4.iv.1981 ; 2 ♀♀ , 21.iv.1981 ; Deban North, 1 ♂ , 28.iv.1981 ; Gibbon Lands, 1 ♂ , 1 ♀ and 1 nymph, 3.v.1981.

Remarks : Almost world wide in distribution.

CHELISOCHIDAE

CHELISOCHINAE

Chelisoches brevipennis Borelli

Chelisoches brevipennis Borelli, 1923, *Boll. Musei zool. Anat. Comp. R. Uniu. Torino*, 38 (13) : 12.

Material examined : INDIA : Arunachal Pradesh, Tirap Dist., Near

34th mile on M. B. Road, 1 ♂, 1 ♀ 23.iv.1981 ; Namdapha Camp, 55 km. from Miao, 1 ♂, 21.iv.1981.

Remarks : This species was reported from India for the first time by Srivastava (1977).

Proreus weisi (Burr)

(Figs. 7-13)

Mecomera weisi Burr, 1904, *Trans. R. ent. Soc. Lond.*, 1904 : 302 (1 ♂ ; Tonkin, Central environs de Tuyen-Quan).

Proreus weisi : Burr, 1911, *Gen. Insec.*, 122 : 64.

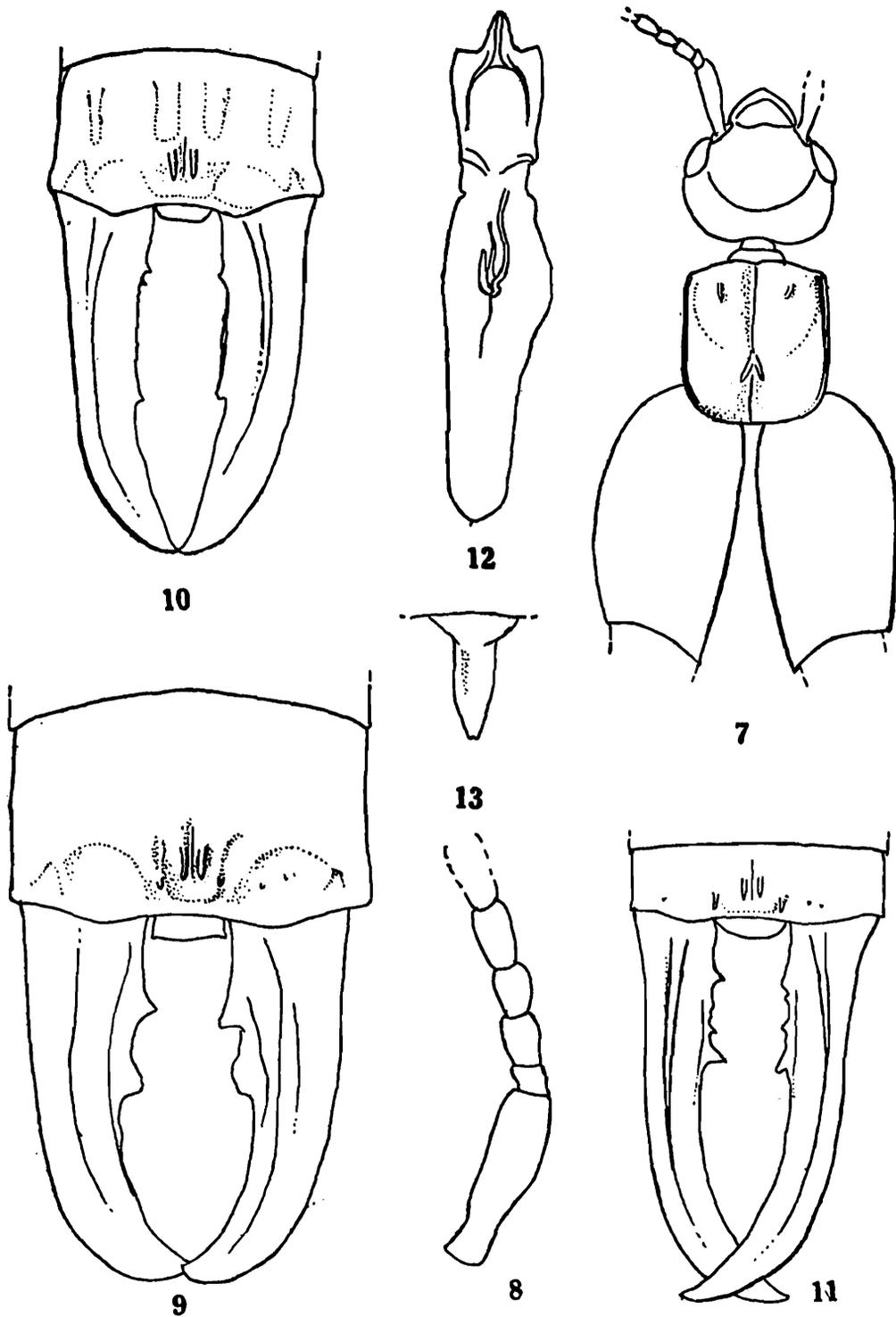
Material examined : INDIA : Arunachal Pradesh, Tirap Dist., Hornbill, 2 ♂ ♂ (genitalia mounted between two coverslips and pinned with the specimen), 1 ♂, 16.iv.1981.

The original description being brief following additional information will be useful in recognising the species :

General colour black. Legs with tarsi brownish black. Some of the abdominal tergites posteriorly, ultimate tergite and forceps reddish but shaded with black in parts. Form depressed. Head micro-reticulate. Pronotum finely punctulate in posterlor half only. Elytre and wings punctulate, finely pubescent. Abdomen strongly punctate, punctures coalescing. Ultimate tergite with longitudinal stripes of smooth and punctate areas alternating.

Head with occiput weakly raised and sutures marked by faint depression, hind margin emarginate in middle. Antennae 18-segmented, 1st stout, slightly longer than the distance between antennal bases ; 3rd slender ; 4th stout, slightly shorter than the preceding ; 5th onwards segments gradually increasing in length and thinning. Pronotum slightly longer than broad, hind margin rounded, sides straight. Elytra and wings well developed, former with external margin convex in middle and hind margin concave posteriorly. Legs typical, tibia sulcate in apical half, hind tarsi with 1st segment slightly longer than the 3rd which is compressed. Penultimate sternite broadly convex posteriorly with a faint concavity in middle. Ultimate tergite transverse, posteriorly in middle with a rectangular depression bearing a pair of compressed tubercles, area corresponding base of forceps with low tumid, rugose elevations. Pygidium vertical, quadrate, convex above, hind margin almost straight, postero-lateral angle with minute point. Forceps punctate and striate in f. brachylabia short, stout, internal margin ventrally with two triangular tubercles roughly in middle ; in f.

macrolabio forceps more elongated and internal margin in basal half crenulate. Genitalia as seen in fig. 12.



Figs. 7-13. *Proreus weisi* (Burr) ♂ ; 7. Anterior portion of body, 8. A few basal antennal segments, 9-11. Forceps showing micro-, meso- and macrolabio forms 12. Genitalia ; *Adiaethetus glaucopterus* (Bormans) ♀. 13. Pygidium.

Measurements : (in mm)

		♂ ♂
Length of body	—	8.0—11.0
Length of forceps	—	2.5—4.0

Distribution : Hitherto known from Vietnam and S. China the present record is new to India. Besides, Borelli (1916) refers to 1 ♀ doubtfully under this species from Philippines.

Remarks : On the basis of male genitalia this species comes close to *Proreus dentatus* Srivastava (1976) from Philippines but differs in having more heavily punctuate abdominal tergites ; ultimate tergite with inner pair of compressed tubercles in posterior depression more closely placed ; forceps with different inner armature and parameres with external angle broader and narrowed apical portion more elongated.

***Adiathetus metallicus* sp. n.**

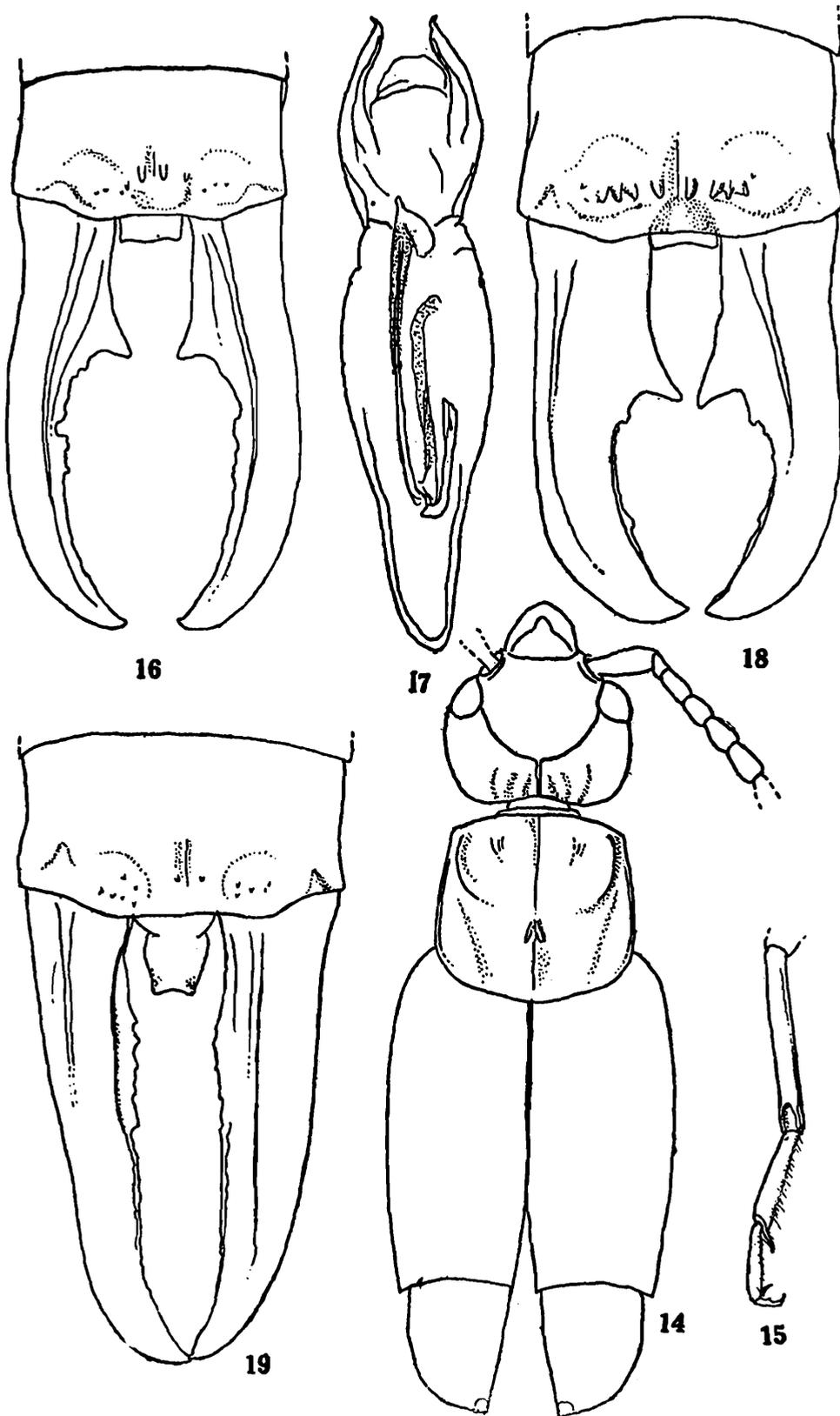
(Figs. 14-19)

Adiathetus glaucopterus (nec Bormans) ; Burr, 1913, *Rec. Indian Mus.*, 8 (2) : 144 (excluding 1 ♂, 1 ♀ from Sadiya, Regd. Nos. 2300-1/19 and 1 ♀ from Rotung Reg. No. 2161/19) ; Srivastava, 1979, *Proc. Sym. zool. Surv. India*, 1 : 63 (excluding fig. 7A).

♂ : Head, antennae, fore legs, tibiae and tarsi of middle and hind legs and ultimate tergite black. Antennae with one or two preapical segments complete or half brown. Pronotum, elytra and wings with a bluish-green metallic sheen. Femora of hind and middle legs and forceps brown. Abdominal tergites brown but shaded with black in parts. Often tarsi of middle and hind legs shaded with brown.

Head smooth, slightly longer than broad, frons and occiput raised, sutures fine but distinct, hind margin emarginate. Eyes not prominent, about half as long as the length behind eyes. Antennae (partly broken) 18-segmented or more, basal segment expanded apically, about as long as the distance between antennal bases ; 2nd small, only slightly longer than broad ; 3rd long and slender ; 4th stouter, slightly shorter than the 3rd and 5th, remaining gradually increasing in length but apical ones thin. Pronotum about as long as broad, smooth, gently widened posteriorly, sides straight, hind angles and margin rounded, median sulcus distinct, prozona convex with faint depression on either side of middle line, metazona depressed. Elytra and wings well developed, smooth, former with humeral angles prominent and hind margin obliquely concave. Legs typical for the genus, tibiae sulcate at extreme apex, hind tarsi with 1st segment almost equal to 3rd. Abdomen almost parallel sided, moderately convex, punctulate, lateral tubercles on 3rd and 4th tergites well marked. Penultimate sternite transverse, broadly rounded posteriorly, scarcely emarginate in middle. Ultimate tergite

transverse, punctate and smooth stripes alternating, disc a little before hind margin raised and the area in the middle with a faint depression, tumid above the bases of forceps and bearing faint compressed tubercles,



Figs. 14-19. *Adiatetus metallicus* sp.n., Holotype ♂, 14. Anterior portion of body, 15. Hind tibia and tarsi, 16. Ultimate tergite and forceps, 17. Genitalia, Paratype ♂, 18. Ultimate tergite and forceps, heavier form Paratype ♀, 19. Ultimate tergite and forceps.

on the posterior extremity of posterior median depression, a pair of compressed folds present, separated by a short median sulcus, hind margin trisinate, laterally oblique. Pygidium vertical, trapezoidal, hind margin convex, postero-lateral angle with a minute point. Forceps remote, stout and depressed, in f. macrolabia elongated and regularly curved, internally armed with a sharp triangular tooth at a little before middle, afterwards finely crenulate; in f. cyclolabia internal margin with a strong tooth at about middle, distal portion shortened, stouter and strongly incurved. Genitalia as seen in fig. 17.

♀ : Agrees with male in most characters except that the base and knee joints of middle and hind femora black; lateral tubercles on 3rd and 4th tergites less prominent; ultimate tergite with minute tubercles in the middle of median depression and on prominences corresponding bases of forceps; pygidium basally vertical, afterwards laminate, only slightly longer than broad, sides convex, narrowed posteriorly, hind margin concave with angles prominent; forceps simple and straight, internal margin finely crenulate.

Measurements : (in mm)

	Holotype	Paratypes	
	♂	2 ♂ ♂	1 ♀
Length of body	15.0	17.0-18.0	17.5
Length of forceps	5.0	5.0-5.5	6.0

Material examined.—INDIA : Arunachal Pradesh, Tirap Dist., Hornbill, Holotype ♂ (f. macrolabia; genitalia mounted between two coverslips and attached with the specimen); Paratypes 1 ♂ (f. cyclolabia), 1 ♀, 14.iv.1981; paratype 1 ♂ (f. cyclolabia) same data, 11.iv.1981, S. Biswas and party; deposited in the National Collections at the Zoological Survey of India, Calcutta.

Remarks : This species comes close to *Adiathetus glaucopterus* (Bormans) known from India, Burma and South China, in general external characters but differs by general body colour in having the head, fore legs, basal and apical portion of femore and whole of tibia and tarsi of middle and hind legs black (vs. uniform dark brown in *A. glaucopterus*); forceps stouter (vs. slender); ♀ pygidium with laminate portion only slightly longer than broad and scarcely narrowed posteriorly with sides convex in middle and hind margin concave (vs. about twice as long as broad, lanceolate with hind margin truncate or pointed).

Burr (1913) and Srivastava (1979) confused this species with *A. glaucopterus*.

FORFICULIDAE

ALLODAHLINAE

Allodahlia scabriuscula (Serville)

Forficula scabriuscula Serville, 1839, *Histoire Naturelle des Insectes Orthopteres* : 38(♀).
Allodahlia scabriuscula : Verhoeff, 1902, *Zool. Anz.*, 665 : 194.

Material examined : INDIA : Arunachal Pradesh, Tirap Dist., Ziro Camp 3 ♂♂, 5 ♀♀, 8.iv.1981 ; Firm base, 1 ♂, 19.iv.1981 ; Miao, 1 ♀, 5.v.1981.

Distribution : Occurs in various mountains of the Oriental Region.

OPISTHOCOSMIINAE

Opithocosmia sp.

Material examined : INDIA : Arunachal Pradesh, Tirap Dist., Near 34th mile on M. B. Road, 1 ♀, 23.v.1981.

Remarks : In the absence of a ♂ it not possible to determine it up to specific level.

SUMMARY

Altogether 14 species, including two new to science viz., *Anisolabis deplanata* and *Adiathetus metallicus*, belonging to 10 genera are dealt with from Namdapha Wildlife Sanctuary, Tirap Dist., Arunachal Pradesh, India. *Proreus weisi* (Burr) is recorded for the first time from India.

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