

# Records of the Zoological Survey of India

Revision of Indian *Blechnus* Leach  
(Coleoptera : Staphylinidae)

D. N. Biswas  
T. Sengupta

Zoological Survey of India

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( Coleoptera : Staphylinidae )**

*BY*

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REVISION OF INDIAN *BLEDIUS* LEACH  
( COLEOPTERA : STAPHYLINIDAE )

BY

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INTRODUCTION

Eight new species viz., *Bledius* (s. str.) *marusthanicus*, *B. (Pucerus) suravius*, *B. (P.) totius*, *B. (P.) ranglicus*, *B. (P.) torsius*, *B. (P.) teestaius*, *B. (P.) hali*, *B. (Hesperophilus) baltus* are described and three species viz., *B. (P.) niloticus* Erichson, *B. (H.) birmanus* Cameron and *B. (H.) helferi* Fauvel are recorded for the first time from India and its affinities with other known species from India are discussed. A key to subgenera and species, and distributional data are presented.

*Bledius* is a cosmopolitan genus and commonly known as rove beetle, they usually burrow into moist soil near river beds, near ponds and lakes, and moist forest floor. They often are attracted at light and feed on interstitial diatoms and algae.

The genus *Bledius* was established by Leach (1819) on the European species *Bledius armatus* (Panzer) which is the junior synonym of *Bledius tricornis* Herbst. In 1911, 229 species were listed by Bernhauer and Schubert (in the Junk Catalogue). By 1933, Scheerpeltz (in the Junk Catalogue) listed an additional 95 species to raise the total number of species 324; he also recorded some synonyms. Recently, Herman (1970, 1972 and 1976) mentioned that the genus included about 450 species. Cameron (1930) in Fauna of British India dealt with 22 species from India (including Pakistan, Sri Lanka and Burma).

Herman (1970) has given a list of 524 world species of *Bledius* but he did not indicate which species are from India.

Herman (1972 and 1976) revised the genus *Bledius* and related genera of the New World, where he mentioned the genus *Bledius* may be divided into many species groups and he divided the new world species of the genus *Bledius* into 7 groups viz., *Aequatorialis*, *Annularis*, *Armatus*, *Basalis*, *Mandibularis*, *Melanocephalus* and *Semiferrugineus*. Cameron (1930) classified the Indian genus *Bledius* into 3 subgenera viz., *Bledius* (s. str.), *Pucerus* and *Hesperophilus*.

*Bledius* belongs to the subfamily Oxytelinae by the absence of a ventral keel at the base of the abdomen. The Oxytelini of Cameron (1930) is equivalent to Oxytelinae of Herman (1970) which he has divided into two tribes coprophilini and Oxytelini. The tribe Oxytelini can be recognised by the absence of the procoxal fissure, mesocoxae distinctly separated by the metasternal process, 3 segmented tarsi and the presence of basolateral ridges on the abdominal terga, whereas the tribe Coprophilini which includes the genus *Bledius* can be distinguished by the presence of the procoxal fissure, mesocoxae normally contiguous, mesosternal process is prominent and has a carinate apex and the metasternal process is absent or, if present, is only very narrow carina. The genus *Bledius* readily recognised by subcylindrical form, geniculate antennae, presence of procoxal fissure and spinous tibiae.

The genus *Bledius* is related to the genera *Microbledius* Herman, *Psamathobledius* Herman and *Neobledius* Abdulla and Qadri. *Bledius* can be easily separated from *Microbledius* and *Psamathobledius* by its tarsal formula being 4-4-4 and it differs from *Neobledius* by its paraglossae being well developed, labial palpi with segment 1 very thick, segment 2 narrower and segment 3 oval, front tibiae with two rows of spines.

### Genus *Bledius* Leach

Type species : *Bledius armatus* (Panzer)

Form subcylindrical, moderately long 1.90 mm. to 7.50 mm. in length, body covered with sparse to dense pubescence, usually dark brown to testaceous, exposed part of head as broad as long, epistomal suture straight or curve. Antennal ridge normal, sometimes very prominent and well developed. Gular suture fused except behind, where they are sharply divergent, labrum transverse, front margin truncate or median notch or broadly and shallowly emarginate or bilobed. Maxillary palpi 4 segmented, segment 1 small, segment 2 strongly curved, segment 3 longer than segment 2, segment 4 subulate. Labial palpi 3 segmented. Mandible denticulate or endentate. Antennae geniculate. Prothorax usually broader than long, procoxal fissure present and open or closed, protrochantin concealed or exposed, prosternal process present or absent, when present, elongate and slender and extending completely between coxae. Scutellum not concealed by the pronotum. Elytral epipleural ridge present or absent, when present, ridge complete or incomplete. Mesosternum well developed in front, its process pointed and extending about a third of the length of the coxae, mesocoxae contiguo-

us. Metasternum long, slightly emarginate behind in front of coxae and without process. Protibiae and mesotibiae with longitudinal row of weakly developed spinules. Tarsal formula 4-4-4, basal segment 1-3 short, segment 4 elongate, slender and apically incrassate. Abdomen with segments 2-6 each with two pairs of laterosternites, segment 7 with posterior margin fimbriate, segment 8 with posterior margin emarginate. Aedeagus trilobed, parameres of variable size and shape, median lobe bulbous at base, more or less slender apically. Spermatheca variable.

#### KEY TO THE SUBGENERA OF INDIAN *BLEDIUS*

1. Prosternum with small, well-defined, setigerous pit anterior to procoxa (Figs 122 and 124) ... .. *Bledius*, s. str. ...
- Prosternum without small, setigerous pit ill-defined depression anterior to procoxa (Figs. 125 and 126) ... .. 2
2. Procoxal fissure open, protrochantin widely exposed and large (Fig. 128); clypeus dentate or tuberculate (Figs. 26, 31 & 34) ... *Pucerus* Mulsant and Rey
- Procoxal fissure closed or slightly open, protrochantin concealed (Fig. 127) or narrowly exposed and small (Fig. 133); clypeus devoid of any dentate or tuberculate (Figs. 100, 108 & III) ... .. *Hesperophilus* Mulsant and Rey

#### KEY TO THE INDIAN SPECIES OF *BLEDIUS*, S. STR.

1. Lateral margins of pronotum straight (Figs. 10 and 18) ... .. 2
- Lateral margins of pronotum sinuate across middle (Figs. 2 and 21) ... .. 4
2. Antennal segment 10 distinctly transverse; Prothorax as long as broad ... .. *quadricornis* Bernhauer
- Antennal segment 10 slightly transverse; Prothorax transverse ... .. 3
3. Supra antennal horns armed with a pair of additional horn at its base (Fig. 8); mandible tridentate (Fig. 11); labrum, spermatheca and aedeagus as figured (Figs. 12, 9 and 7) ... .. *brunnipennis* (Fabricius)
- Supra antennal horns different and as figured (Fig. 16); mandible bidentate (Fig. 17); labrum, spermatheca and aedeagus different (Figs. 19, 14 and 15) ... .. *hoplites* Fauvel
4. Supra antennal horns being converging and its apex rather pointed (Fig. 20); mandible bidentate, basal tooth large and closely situated to apical tooth (Fig. 22); spermatheca and aedeagus as figured (Figs. 24 and 25) ... .. *bison* Cameron
- Supra antennal horns well-developed and plate like and its apical margin broad and notched in middle (Fig. 1); mandible bidentate, basal tooth small and widely separated from apical tooth (Fig. 4); spermatheca and aedeagus different (Figs. 6 and 3) ... .. *marusthanicus*, sp. nov.

1. *Bledius* (s. str.) *marusthanicus*, sp. nov. (Figs. 1-6)

This new species is closely related to *Bledius* (s. str.) *bison* Cameron but can be easily separated from the latter species by the following characters; Supra antennal horns well-developed and plate like and its apical margin broad and notched in middle (Fig. 1): mandible bidentate, basal tooth small and widely separated from apical tooth (Fig. 4): spermatheca and aedeagus different (Figs. 6 & 3).

General appearance yellowish-brown, rather cylindrical and dorsal surface shining.

Head small and transverse, brownish-black, dorsal surface of head covered with dense microgranulate ground sculpture, basal part of head transversely depressed (Fig. 1), supra antennal horns well developed and plate like, its lateral margin compressed and apical margin broad and notched in middle (Fig. 1). Front and lateral margins of clypeus rather elevated and formed a trapezium depressed area and its angles are rounded and surface of clypeus densely granulated. Antennae short and reddish brown, segment 1 moderately long and its apex broadly emarginate, segment 2 almost equal and broader than segment 3, segment 4 slightly longer than broad, segment 5 almost as long as broad, segments 6-10 transverse and segment 11 long. Eyes large and prominent (Fig. 1). Labrum with anterior margin produced and median portion slightly emarginate (Fig. 5). Mandibles bidentate and its basal tooth small (Fig. 4). Prothorax (Fig. 2) slightly transverse, front angles angulate, front margin devoid of any spine and slightly sinuate near angles, lateral margins slightly sinuate across middle, posterior angles broadly obtuse, a basal one fifth slightly neck like narrowed posteriorly, disc of pronotum with a distinct impressed median line extending to anterior margin, pronotum covered with moderately large and sparse setiferous punctures. Scutellum brownish, elongate and densely punctured. Elytra slightly longer than pronotum, yellowish red and sutural line blackish, posterior margin without membranous lobe, dorsal surface densely and finely covered with setiferous punctures. Abdomen yellowish brown, posterior margin of segments 1-6 with a transverse blackish line. Legs yellowish red. Aedeagus and spermatheca as figured (Figs. 3 & 6).

*Measurements of holotype*: Total length 4.30 mm; width of head across eyes 0.80 mm; length of prothorax 0.90 mm and width of prothorax 1.10 mm; length of elytra 1.10 mm and width of elytra 1.10 mm.

*Holotype* ♂ and *paratypes* 13 exs., INDIA : RAJASTHAN : Phulera, 18. v. 1958, T. G. Vazirani Coll. 11 specimens also recorded from Rajasthan : Gudha, 9 exs. 25. iv. 1958, T. G. Vezirani, Kotsina, 1 ex., 18. V, 1958. T.G. Vazirani Coll., Sambhar Lake, 1 ex., 11.vii.1958, A. K. Mukherjee Coll. (In the collection of Zoological Survey of India, Calcutta).

*Distribution* : INDIA (Rajasthan).

## 2. *Bledius* (s. str.) *brunnipennis* (Fabricius) (Figs 7-13)

*Staphylinus brunnipennis* Fabricius, 1801, *Syst. Eleuth.*, 2 : 596, Erichson, 1839-40. *Gen. Spec. Staph.*, 779, Kraatz, 1859, *Arch. Naturgesch.*, 25 (1) : 168 (note), Fauvel, 1903, *Rev. d' Ent.*, 12 : 151. *Staphylinus productus* Walker, 1858, *Ann. Mag. nat. Hist.*, 3 (2) : 205 (*oxytelus*)

*Staphylinus rudis* walker, *ibid.* : 208 (*Oxytelus*)

This species is closely related to *Bledius* (s. str.) *hoplites* Fauvel but can be easily separated from the latter species by its dorsum of head rugose and granulated, vertex broadly and deeply depressed which divided longitudinally by broad ridge (Fig. 8), mandibles tridentate (Fig. 11), labrum as figured (Fig. 12), supra antennal horns normal and its apex rather pointed, near base of supra antennal horn with a pair of additional horns (Fig. 8), eyes moderately large (Fig. 8), front margin slightly concave (Fig. 10), posterior margin of elytra with membranous lobe (Fig. 13), aedeagus and spermatheca as figured (Figs. 7 & 9).

*Specimens examined* : 2 exs., Cotype, SRILANKA (Brist, Mus. Nat. Hist.): INDIA : WEST BENGAL, Eden Garden, Calcutta, 6 ♂ ♂ + 7 ♀ ♀, 16.x.1911, F.H. Gravely Coll. : ORISSA, Chilka Lake, Barkuda Island, Puri District, 14 ♀ ♀, .Viii.1922. F. H. Gravely Coll. : WEST BENGAL, Sagar Island, South 24 Parganas District, 22 ♂ ♂ + 35 ♀ ♀, 15. v. 1977, R. C. Basu Coll. : TAMIL NADU, Cannanore, Madras, 2 exs., 15.xi.1933; E. A. Glennie Coll. at light.

*Distribution* : INDIA (Orissa, Tamil Nadu, Maharashtra); SRI LANKA and BURMA.

## 3. *Bledius* (s. str.) *hoplites* Fauvel (Figs. 14-19)

*Bledius hoplites* Fauvel, 1886, *Rev. d' Ent.*, 5 : 146

Species robust, head greasy, thorax black, elytra red, scutellum and anterior two-third of elytra triangularly blackish. abdomen black, posterior margin of six abdominal segment broadly reddish and seven and eight segments reddish. Head small and narrower than pronotum, dorsal

surface of head densely granulated except basal part, supra antennal horns well developed diverging in front ( Fig. 16), eyes large and prominent (Fig. 16), labrum transverse, front margin slightly wavy and its shape as figured (Fig. 19), mandibles bidentate, dorsal (basal) tooth closely situated to the apical tooth (Fig. 17). Prothorax (Fig. 18) slightly transverse and strongly convex, front margin of pronotum of males with median horn-like projection in front which is ventrally recurved, lateral margins somewhat parallel-sided, front angles broadly rounded, pronotum densely and strongly granulated with setiferous punctures, mid-longitudinal groove well developed and extending upto the apex of pronotal horn. Scutellum, elytral suture and median anterior two-third of elytra triangularly blackish, rest red, elytra covered with densely setiferous punctures, posterior margin of elytron with membranous lobe. Aedeagus and spermatheca as figured (Figs. 15 & 14).

*Specimens examined* : INDIA : ORISSA, Chilka Lake, Puri District, 5 ♂ + 7 ♀, 24.vii.1922, N. Annandale Coll. : WEST BENGAL, Sagar Island, Bamankahli nr. research Station, South 24 Parganas District, 9 ♂ + 15 ♀, 16.vii.1977, R. C. Basu Coll. ex at light.

*Distribution* : INDIA (Orissa, West Bengal) : SIAM and PHILIPPINES

In the present study this species is recorded for the first time from West Bengal.

#### 4. *Bledius* (s. str.) *bison* Cameron (Figs. 20-25)

*Bledius* (s. str.) *bison* Cameron, 1930, *Fauna British India* (Coleoptera : Staphylinidae), 1 : 273.

This species is closely related to *Bledius* (s. str.) *hoplites* Fauvel and *Bledius* (s. str.) *marusthanicus*, sp. nov. but can be separated from the latter species by its supra antennal horns being converging and its apex rather pointed (Fig. 20), dorsal surface of head impunctate, eyes small and prominent (Fig. 20), basal tooth of mandible large (Fig. 22), front margin of pronotum with median anterior horn and posterior angles of pronotum obtuse (Fig. 21). It differs from *Bledius* (s. str.) *hoplites* Fauvel by its apex of median horn of pronotum with a bunch of long hairs (Fig. 21), lateral margins of pronotum sinuate at the middle and front angles angulate (Fig. 21), aedeagus and spermatheca different and as figured (Figs. 25 & 24).

*Specimens examined* : 1 ex. (Holotype), INDIA ; SRI LANKA, Palutapana, Ham District, 1 ♂ + 1 ♀, 10-12.viii. 1972, K. V. Krombeiu and P. B. Karunaratne Coll., (British Mus. Nat. Hist.).

*Distribution* : INDIA ; SRILANKA.

5. **Bledius (s. str.) quadricornis** Bernhauer

*Bledius quadricornis* Bernhauer, 1915, *W. Z. B.*, 65 : 135

This species is recognised by the following characters : Pitch-black, elytra red, antennae and palpi reddish-yellow and legs pale yellow. Head much smaller than the thorax, shining, impunctate, supra antennal horn towards the apex sabre-shaped and curved backwards, behind in the middle, with a third horn small and erect, over which the long, slender, decurved fourth horn arising from the anterior margin of the thorax extends. Antennal segment 10 distinctly transverse. Thorax as broad as long and sides rather straight. Elytra rather finely and closely punctured. Length 4.50 mm.

*Specimen examined* : Material not studied.

*Distribution* : INDIA (Tamil-Nadu).

KEY TO THE INDIAN SPECIES OF THE SUBGENUS *PUCERUS*

- |  |  |
|--|--|
| 1. First segment of antennae markedly long (Figs. 26, 31, 34 & 42).....  | 2  |
| First segment of antennae normal (Figs. 48, 54 & 56) .....   | 8  |
| 2. Front margin of clypeus with a median tooth (Figs. 70, 79 & 84).....  | 12   |
| Front margin of clypeus with two widely separated teeth (Figs. 31, 34 & 42) .....  | 3  |
| 3. Elytra completely black or brown (Fig. 30)  | <i>Verres</i> Erichson var. <i>monachus</i><br>Bernhauer |
| Elytra at least a part yellowish (Figs. 32, 36 & 40)   | 4  |
| 4. Elytra markedly longer than prothorax (Figs. 32, 36 & 40).....  | 5  |
| Elytra slightly longer than prothorax (Figs. 43 & 46) .....  | 7  |
| 5. Elytra dark-brown and densely punctured, large yellowish marking occupying the postero-lateral area (Fig. 32).  | <i>transversus</i> Cameron                               |
| Elytra yellowish and sparsely punctured, marking on elytra different (Figs. 36 & 40)   | 6  |
| 6. Mandibles bidentate (Fig. 37), base and suture of elytra narrowly dark-brown (Fig. 36)  | <i>rhinoceros</i> Cameron                                |
| Mandibles tridentate, base and suture of elytra broadly dark-brown (Fig. 40)   | <i>gracilicornis</i> Kraatz                              |
| 7. Mandibles tridentate (Fig. 77), pronotum densely and finely microgranulate with ground sculpturing, antennal segment 1 markedly long (Fig. 42), elytra as long as pronotum and its base and suture broadly yellowish, surface densely and coarsely punctured (Fig. 43)                          | <i>suravius</i> , sp. nov.                               |
| Mandibles bidentate (Fig. 75), pronotum densely and coarsely microgranulate with ground sculpturing ; antennal segment 1 moderately long (Fig. 45), elytra more distinctly longer than pronotum and its base and suture triangularly yellowish, surface not densely but finely punctured (Fig. 46) | <i>tuberculatus</i> (Fabricius)                          |

8. Mandibles tridentate (Figs. 49 & 57) 9  
 Mandibles bidentate (Figs. 53 & 66) 11
9. Species large (2.50 mm.), elytra unicoloured, eyes large (Figs. 56 & 61) 10  
 Species smaller (1.90 mm.), elytra bicoloured (Fig. 51), eyes small (Fig. 48)  
 totius, sp. nov
10. Elytra reddish brown, eyes large and slightly projected (Fig. 56), sternite 6 of  
 abdomen deeply emarginate in the middle of posterior margin, sternite 5 with a  
 complete, median and broad impression, sternite 4 slightly impressed (Fig. 58)  
*ranglicus*, sp. nov.  
 Elytra black, eyes large, prominent and more distinctly projected (Fig. 61),  
 sternite 6 of abdomen feebly emarginate in the middle of posterior margin,  
 sternites 4 and 5 devoid of any impression *bispinus* Kraatz
11. Elytra with membranous lobe on posterior margin (Fig. 69), vertex of head with  
 a median longitudinal groove (Fig. 65), eyes small (Fig. 64), shape of pronotum  
 as figured and its anterior angles not prominent (Fig. 65) *torsius*, sp. nov.  
 Elytra devoid of any membranous lobe on posterior margin (Fig. 55), vertex of  
 head devoid of any groove (Fig. 54), eyes large, shape of pronotum as figured  
 and its anterior angles prominent (Fig. 54) *hindustanus* Cameron
12. Species small (3.50), front margin of clypeus with single simple tooth (Fig. 70),  
 antennal segment 7 slightly transverse, posterior margin of sternite 6 of male  
 rather broadly emarginate on each side of middle line forming a median lobe  
 (Fig. 73) *niloticus* Erichson  
 Species large (4.50 mm), apex of median tooth of front margin of clypeus dis-  
 tinctly dentate (Figs. 79 & 14), antennal segment 7 slightly longer than broad,  
 median lobe of posterior margin of sternite 6 of male broad and its apex trun-  
 cated (Fig. 82)..... 13
13. Clypeal tooth broad and apical dentation more prominent and distinctly bifurca-  
 ted (Fig. 84), elytra yellow, its sutural line and base narrowly reddish, abdo-  
 minal segments 1-5 yellow and 6-7 reddish, posterior margin of sternite 7 of  
 male straight with a median small and rather pointed lobe (Fig. 87), aedeagus  
 as figured (Fig. 86)... .. *bali*, sp. nov.  
 Clypeal tooth narrow and small and its apical dentate slightly bifurcated (Fig. 79),  
 elytra yellowish, abdominal segments 1-7 brownish, posterior margin of ster-  
 nite 7 of male broadly emarginate on each side of median lobe (Fig. 83),  
 aedeagus different and as figured (Fig. 80)..... *teestaius*, sp. nov.

6. **Bledius (Pucerus) verres var. monachus** Bernhauer (Figs 26-30)

*Bledius verres* Erichson, 1840, *Gen. Spec. Staph.* : 776 ; Kraatz, 1856-58, *Natn. Inst. Dt*, 2:819 ; Jacq., 1858, *Gen. Col. d'Eur.*, 20 : 100 ; Fauvel, 1872, *Fauna Gallo-Rhen*, 3 : 196 ; Mulsant and Rey, 1879, *Col. Fr. Brevip.* : 212.

*Bledius cinctus* Motschulsky, 1860, *Bull. Soc. Nat. Moscou*, 33(2) : 555

Head as long as broad, surface granulate and impunctate. Antennal horns distinctly elevated (Fig. 26). Clypeus with two small teeth

closely situated and impressed at base. Eyes large. Antennal segment 1 markedly long (Fig. 26). Mandibles bidentate (Fig. 29). Prothorax slightly transverse, lateral margins of pronotum parallel-sided, superficially and moderately closely punctured (Fig. 26). Elytra distinctly longer than prothorax, surface moderately closely and finely punctured, posterior margin without membranous lobe (Fig. 30). Aedeagus as figured (Figs. 27 & 28).

*Specimens examined* : INDIA : UTTAR PRADESH, Dehra Dun, 2 exs., 27.ii.1921, M. Cameron Coll.

*Distribution* : INDIA (Uttar Pradesh).

### 7. *Bledius (Pucerus) transversus* Cameron (Figs. 31-33).

*Bledius (P.) transversus* Cameron, 1930, *Fauna British India* (Coleoptera : Staphylinidae), 1 : 277-278.

This species is closely related to *Bledius (P.) rhinoceros* Cameron but can be easily separated from the latter species by its elytra being dark-brown with posterior half yellowish and its apical margin obliquely truncated, puncturation dense and setiferous (Fig. 32); clypeal teeth prominent; lateral margins of pronotum almost-straight, antennal segment 1 comparatively shorter (Fig. 31).

*Specimen examined* : Holotype, INDIA : UTTAR PRADESH, Dehra Dun (British Mus, Nat. Hist.).

*Distribution* : INDIA (Uttar Pradesh).

### 8. *Bledius (Pucerus) rhinoceros* Cameron (Figs 34-37),

*Bledius (P.) rhinoceros* Cameron, 1930, *Fauna British India* (Coleoptera : Staphylinidae), 1 : 277.

Black, shining, elytra yellowish, base and suture narrowly dark-brown, antennae reddish except segments 1-3 yellowish, legs yellowish. Head small and strongly transverse, dorsal surface granular and impunctate, front margin of clypeus with two small teeth distantly situated. Mandibles bidentate (Fig. 37). Eyes large and prominent (Fig. 34). Prothorax with lateral margins sinuate at the middle, densely and finely punctured (Fig. 34). Elytra yellowish, base and suture narrowly dark-brown, strongly but not densely punctured (Fig. 36). Abdomen with posterior margin of segments 1-3 strongly and rest of the segments finely punctured. Aedeagus as figured (Fig. 35).

*Specimens examined* : ♂ (cotypæ), INDIA : ASSAM VALLEY (British Mus, Nat. Hist.).

*Distribution* : INDIA (Assam) ; BURMA.

**9. *Bledius (Pucerus) gracilicornis* Kraatz (Figs. 38-41)**

*Bledius (P.) gracilicornis* Kraatz, 1859, *Arch. Naturgesch.*, **25** (1) : 169.

This species is closely related to *Bledius (P.) rhinoceros* Cameron but can be easily separated from the latter species by its mandibles being tridentate, front margin of clypeus with two small closely situated teeth, elytra yellowish, the base and suture broadly dark-brown (Fig. 40), aedeagus and spermatheca as figured (Figs. 38, 29 and 41).

*Specimens examined* : INDIA : TAMIL NADU, Madras, Annamalai Hills, Pres d' Aliyar Dam, 300 m, 17.xi.1972, 23 exs., Mussard, Besuchet and Lobl Coll. ; SRI LANKA, Southern, Tissamaharana, 23. i. 1970, 7 exs., Mussard, Besuchet and Lobl Coll. ; NORTH CENTRAL, Alut Oya, 3.ii.1970, 1 ex., Mussard, Besuchet and Lobl Coll.

*Distribution* : INDIA (Tamil Nadu) ; SRI LANKA.

**10. *Bledius (Pucerus) suravius*, sp. nov. (Figs. 42-44, 77-78).**

This species is closely related to *Bledius (P.) tuberculatus* Fauvel but can be easily distinguishable by the latter species by its mandibles being tridentate (Fig. 77), pronotum densely and finely microgranulate ground sculpturing, elytra shorter, base and suture broadly dark-brown, densely and coarsely punctured (Fig. 43), aedeagus different (Fig. 78), small in size.

General appearance black, shining, elytra yellowish, base and suture broadly dark-brown (Fig. 43), antennae, legs and last segment of abdomen yellowish and mandibles reddish brown.

Head (Fig. 42) small and strongly transverse, interocular space broadly impressed, dorsal surface of head distinctly dense microgranulate ground sculpturing and sparingly pubescence and vertex with a punctiform groove. Antennal horns well developed and robust (Fig. 42). Anterior margin of clypeus with closely situated two small teeth and their apices slightly projected outwardly (Fig. 42). Eyes moderately large (Fig. 42). Labium with front margin slightly curved and with a median narrow distinct groove (Fig. 44). Antennae long and slender, segment 1 markedly long and its apex broadly emarginate, segment 2 one and half times longer than segment 3, segments 3-4 distinctly longer than broad, segment 5 slightly longer than broad, segment 6 as long as broad, seg-

ments 7-10 slightly transverse. Mandibles tridentate with basal tooth very small and distantly situated from middle tooth (Fig. 77). Prothorax slightly transverse, pronotum distinctly convex, densely granulated and covered with moderately densely and finely setiferous punctures, anterior two-third of lateral margins parallel-sided and then gradually retracted to the posteriorly, mid-longitudinal line impressed (Fig. 42). Elytral base and suture broadly dark brown, surface covered with densely and finely setiferous punctures, posterior margin of elytra without membranous lobe (Fig. 43). Abdomen sparingly and finely punctured, sternite 7 a little produced in the middle and its apex rounded. Aedeagus as figured (Fig. 78).

*Measurements of holotype* : Total length 2.50 mm ; width of head across eyes 0.60 mm ; length of prothorax 0.40 mm and width of prothorax 0.50 mm ; length of elytra 0.60 mm and width of elytra 0.70 mm.

*Holotype* ♂, INDIA : WEST BENGAL, Suravisthan, Badkulla, Nadia District, 23. vi. 1976, D. N. Biswas Coll. ; Paratypes ♂ & ♀ : TAMIL-NADU : Coimbatore Circuit House, Coimbatore District, ♂. 19. xii. 1975, D. N. Biswas Coll. (on slide) ; ex at light ; SIKKIM : Rangpo, Teesta River bed, ♀, 19. xii. 1980, D. N. Biswas Coll. (In the collection of Zoological Survey of India, Calcutta).

*Distribution* : INDIA (West Bengal, Tamil-Nadu, Sikkim).

#### 11. *Bledius (Pucerus) tuberculatus* (Fabricius) (Figs. 45-47, 75-76)

*Staphylinus tuberculatus* Fabricius, 1778, *Ent. Syst., Supp.* : 181 ; Kraatz, 1859, *Arch. Naturgesch.*, 25(1) : 168 ; Fauvel, 1903, *Rev. d' Ent.*, 22 : 151.

This species is closely related to *Bledius (Pucerus) suravius*, sp. nov, but can be easily separated from the latter species by the following characters : Mandible bidentate (Fig. 75) ; pronotum densely and coarsely microgranulate ground sculpturing ; labrum different and as figured (Fig. 47) ; antennal segment 1 shorter (Fig. 45) ; elytra distinctly longer than pronotum, elytral base and suture narrowly dark-brown and surface not densely punctured (Fig. 46) ; aedeagus different and as figured (Fig. 76) ; length 4.75 mm.

*Specimens examined* : INDIA : ORISSA, Barkuda Island, Chilka Lake, Puri District, 4 exs., 26.x.1919, N. Annandale Coll ; Chilka Lake, 2 exs., 19. x. 1911, N. Annandale Coll., Chilka Lake, 23 exs., 24. vii. 1932, N. Annandale Coll. ; Chilka Lake, 2 exs., -vii.1919, F. H. Gravely Coll. ex at light, UTTAR PRADESH, Pindar River, Garhwal, 1 ex., 6. vi. 1937, J. C. M. Gardner Coll.

*Distribution* : INDIA (Orissa, Uttar Pradesh) and SRI LANKA.

12. *Bledius (Pucerus) totius*, sp. nov. (Figs. 48-52).

This species can be easily separated from other species by small in size, vertex of head broadly and deeply depressed, depression bi impressed and divided longitudinally by broad ridge (Fig. 48), aedeagus different and as figured (Fig. 50).

General appearance rather cylindrical, shining, blackish brown, elytra yellow, base narrowly and sutural line dark brown (Fig. 51); antennae, legs, apical part of mandibles and last segment of abdomen yellowish brown.

Head as broad as prothorax, dorsal surface densely and finely granulated and with some additional fine sparse setiferous punctures near inner margin of eyes, base of head more or less impunctate, inter-ocular space depressed and vertex broadly and deeply depressed, depression bi impressed and divided longitudinally by broad ridge (Fig. 48). Antennal horns normal. Clypeus densely granulated and front margin with two small teeth situated near lateral margins (Fig. 48). Eyes moderately large and prominent (Fig. 48). Antennae short and stout, segment 1 moderately long, segment 2 about twice as long as segment 3, segments 4-5 as long as broad, segments 6-10 slightly transverse. Labrum with median portion of front margin deeply and broadly emarginate and median longitudinal groove present (Fig. 52). Mandibles tridentate, dorsal (basal) tooth minute, middle tooth moderately large and widely separated from the apical tooth (Fig. 49). Prothorax slightly transverse, lateral margins parallel-sided, front angles angulate, pronotum strongly convex, deeply and finely granulated with sparse setiferous punctures, median impressed line extending from base to apex. Scutellum tongue shaped, finely punctured and apex impunctate and shiny. Elytral base narrowly and sutural line dark brown, surface covered with finely and densely setiferous punctures, posterior margin of elytra without membranous lobe (Fig. 51). Abdomen with basal part of segments 1-6 with transverse ridge, posterior half of segments 1-5 covered with moderately fine setiferous punctures. Sternite 7 rather deeply and broadly emarginate on each side of middle line and median forming a pointed lobe. Aedeagus as figured (Fig. 50).

*Measurements of holotype* : Total length 1.90 mm ; width of head across eyes 0.40 mm ; length of prothorax 0.30 mm and width of prothorax 0.40 mm ; length of elytra 0.50 mm and width of elytra 0.60 mm.

*Holotype* ♂, INDIA : WEST BENGAL, Rajabhatkhawa, Jalpaiguri District, 4.xii.1974, T. Sengupta Coll. ; Paratypes 48 exs.: Rajabhatkhawa, Jalpaiguri District, 32 exs., 4.xii.1974, D. N. Biswas Coll. (1 ex. on slide), ex under the sand of Teesta River ; UTTAR PRADESH, Dehra Dun, 16 exs. ; 8. iii. 1933, G. D. Bhasin Coll. (In the Collection of Zoological Survey of India, Calcutta).

*Distribution* : INDIA (West Bengal and Uttar Pradesh).

**13 *Bledius (Pucerus) ranglicus*, sp. nov. (Figs. 56-60)**

This species is closely related to *Bledius (P.) bispinus* Kraatz but can be easily separated from the latter species by its elytra being reddish-brown, sternite 6 of male deeply emarginate in the middle of the posterior margin, sternite 5 of male broadly impressed in the middle which extending to front margin, impression on sternite 4 less distinct and short, eyes large but less prominent, aedeagus different.

General appearance rather cylindrical, shining, black, antennae, mandibles, legs and last segment of abdomen pale reddish brown, elytra reddish-brown.

Head slightly narrower than prothorax, dorsal surface of head dull, densely microgranulate ground sculpturing and sparsely pubescent. Supra antennal horns normal (Fig. 56). Clypeus with dense microgranulate ground sculpturing and sparsely pubescent, front margin with two small teeth distantly situated near lateral margins (Fig. 56). Eyes moderately large (Fig. 56). Antennae short and stout, segment 1 moderately long, segment 2 slightly longer than segment 3, segment 4 as long as broad, segments 5-10 slightly transverse. Mandibles tridentate, basal and middle tooth rather minute (Fig. 57). Prothorax slightly transverse, lateral margins slightly narrowed in front and more prominent posteriorly and widest at the middle (Fig. 56), pronotum strongly convex, densely microgranulate ground sculpturing and puncturation sparse with pubescence, disc with a faint impressed line. Scutellum elongate and densely punctured. Elytra covered with dense and short pubescence, puncturation not clearly visible, which are serrate and dense, posterior margin of elytra without membranous lobe. Abdomen with sparse setiferous punctures. Median impression on sternite 4 of male short and slightly distinguishable, sternite 5 of male broadly impressed which extending entire length of segment, sternite 6 of male with deep and arcuate emargination in the middle of the posterior margin (Fig. 58), in front of emargination of sternite 6 impressed as in sternite 5 and its median space smooth,

posterior margin of sternite 7 forming a median lobe (Fig. 58), Aedeagus and spermatheca as figured (Figs. 59 & 60).

*Measurements of holotype* : Total length 2.50 mm. ; width of head across eyes 0.60 mm , length of prothorax 0.40 mm and width of prothorax 0.50 mm ; length of elytra 0.60 mm and width of elytra 0.70 mm.

*Holotype* ♂ , INDIA : SIKKIM, Rangli, 23.xii.1975, G. K. Srivastava Coll. ; *Paratype* ♀ , Collection date same as holotype (In the collection of Zoological Survey of India, Calcutta).

*Distribution* : INDIA (Sikkim).

#### 14. *Bledius (Pucerus) bispinus* Kraatz (Figs. 61-63).

*Bledius bispinus* Kraatz, 1859, *Arch. Naturgesch* , 25(1) : 169.

Head slightly narrower than prothorax, dorsal surface of head distinctly granular and with few obsolete punctures. Prothorax (Fig. 61) slightly transverse, pronotum covered with numerous moderately large superficial punctures. Elytra (Fig. 62) distinctly longer than prothorax and surface covered with rather closely and moderately coarse setiferous punctures. Sternite 6 of male with rather broadly and feebly emarginate in the middle of the posterior margin, with a strong slightly incurved spine on each side of emargination, sternite 7 of male produced and rounded in the middle, slightly emarginate on each side and formed a lobe. Aedeagus as figured (Fig. 63).

*Specimen examined* : 1 ♂ , INDIA : UTTAR PRADESH, Tanakpur, Kumaon, H. G. C. (British Mus. Nat. Hist.) det. by Bernhauer.

*Distribution* : INDIA ( Uttar Pradesh ) and SRI LANKA.

#### 15. *Bledius (Pucerus) torsius*, sp. nov. (Figs. 64-69).

This species is closely related to *Bledius (P.) hindustanus* Cameron but can be easily separated from the latter species by its posterior margin of elytra with a membranous lobe (Fig. 69), vertex of head with a short punctiform longitudinal groove (Fig. 65), eyes small (Fig. 64) and shape of pronotum different and as figured ( Figs. 64 and 65).

General appearance subcylindrical, shining, brownish black, elytra, antennae, palpi and abdomen reddish brown, posterior margin of tergum six reddish yellow.

Head transverse and slightly broader than pronotum, dorsal surface densely microgranulate ground sculpturing and fine setiferous punctures present near eyes, vertex with a punctiform longitudinal groove (Fig. 65). Antennal horns normal (Fig. 65). Clypeus densely granulated and anterior margin with moderately well-developed widely situated teeth (Fig. 65). Eyes small but projecting and prominent (Fig. 64). Labrum with anterior margin strongly produced at the middle forming a median lobe which is bifurcated at apex (Fig. 67). Mandibles bidentate (Fig. 66). Antennae long and stout, segment 1 moderately large and its apex broadly emarginate, segment 2 slightly longer than segment 3, segments 3 and 4 distinctly and segment 5 slightly longer than broad, segment 6 as long as broad and segments 7-10 slightly transverse. Prothorax slightly transverse, somewhat triangular, lateral margins gradually narrowed posteriorly, pronotum moderately convex and anterior one-fourth of pronotum with fine microgranulate ground sculpturing and covered with dense moderately coarse setiferous punctures, disc with longitudinal impressed line, pubescence moderately long and directed towards median line. Elytra one and half times longer than prothorax, covered with strongly and rather closely setiferous punctures, posterior margin of elytra with a membranous lobe (Fig. 69). Abdomen with segment 6 distinctly and segment 7 shallowly emarginate. Spermatheca as figured (Fig. 68).

*Measurements of holotype* : Total length 4.00 mm ; width of head across eyes 0.90 mm ; width of prothorax 0.80 mm and length of prothorax 0.70 mm ; width of elytra 1.10 mm and length of elytra 1.00 mm.

*Holotype* ♀, INDIA : WEST BENGAL, Hasimara, Jalpaiguri District, 4. xii. 1974, T. Sengupta Coll. ; Paratypes 2 ♀ ♀ Collection date same as holotype (1 ex. on slide) (In the collection of Zoological Survey of India, Calcutta).

*Distribution* : INDIA (West Bengal).

16. ***Bledius (Pucerus) hindustanus*** Cameron (Figs. 53-55).

*Bledius (P.) hindustanus* Cameron, 1942, *Proc. R. ent. Soc. Lond.*, 11(B) : 108.

This species is closely related to *Bledius (P.) torsius*, sp. nov. but differs from *torsius* by its posterior margin of elytra devoid of membranous lobe (Fig. 55), shape of pronotum different, eyes large, vertex without longitudinal groove, elytral colour brownish yellow.

*Specimen examined* : 1 ex (Holotype), INDIA : UTTAR PRADESH, Ferrapore (British Mus. Nat. Hist.).

*Distribution* : INDIA (Uttar Pradesh).17. *Bledius (Pucerus) niloticus* Erichson (Figs. 70-74).

*Bledius (P.) niloticus* Erichson, 1939-40 (1940), *Gen. Spec. Staph.* : 776 ; Fauvel, 1902, *Rev. d' Ent.*, 21 : 71.

General appearance rather cylindrical, small, shining, brown, elytra, antennae and legs reddish yellow.

Head small and strongly transverse, inter-ocular space broadly elevated, vertex with punctiform groove (Fig. 70), dorsal surface of head finely coriaceous and impunctate. Antennal horns well-developed (Fig. 70). Front margin of clypeus with a small median tooth (Fig. 70). Eyes small but projecting and prominent (Fig. 70). Antennae short and slender, segment 1 moderately large, segments 2-4 distinctly longer than broad, segment 5 slightly longer than broad, segment 6 as long as broad, segments 7-10 slightly transverse. Prothorax (Fig. 70) transverse, anterior half of lateral margin almost parallel-sided, posterior half narrowed posteriorly, pronotum moderately dense but finely punctured and coriaceous. Elytra one and half times longer than prothorax, surface densely and finely punctured. Abdomen slightly punctate. Posterior margin of sternites 6 and 7 of male rather broadly emarginate on each side of median lobe and forming a narrow median lobe (Figs. 73 and 74). Aedeagus as figured (Fig. 72). Length 3.50 mm.

*Specimens examined* : INDIA : PUNJAB, Rhotak, 7 exs., 22.iv.1964, S. K. Mitra Coll. ; PUNJAB, Dehar, Gurgaon, 11 exs., 27.ix.1963. R. K. Bhatnagar ; WEST BENGAL, Suravisthan, Badkulla, Nadia District, 13 exs., 23.vi.1976, D.N. Biswas Coll.; BIHAR, Madhupur, 1 ex., 13.x.1909, C. A. Paiva Coll., ex at light. ZSI Regd. No. 4721/16, det by Andrews on 11.7.1923 ; SIKKIM, Rangpo, Teesta River bed, 3exs., 19.xii.1980, D. N. Biswas Coll.

*Remark* : This species is recorded for the first time from India.

*Distribution* : INDIA (Punjab, West Bengal, Bihar and Sikkim).

18. *Bledius (Pucerus) teestaius*, sp. nov. (Figs. 79-83).

This species is closely related to *Bledius (P.) verres* Erichson var. *monachus* Bernhauer but can be easily separated from the latter species by its vertex of head superficially punctures, antennal segment 7 slightly longer than broad and segment 8 as long as broad, pronotum and elytra distinctly punctured, posterior margin of sternite 6 of male produced in

the middle and its apex truncated (Fig. 82), posterior margin of sternite 7 of male a little produced and its apex somewhat rounded (Fig. 83), aedeagus different and as figured (Fig. 80).

General appearance rather cylindrical, shining, head black, pronotum and abdomen (except last segment) brownish, elytra, antennae, mandibles, legs and last segment of abdomen yellowish.

Head little narrower than prothorax, antennal horns much elevated and its apex smooth and yellowish red, clypeus impunctate with bidentate tooth, dorsal surface of head distinctly coriaceous and finely punctured. Eyes moderately large and prominent. Antennae long and slender, segment 1 markedly long, segments 2-5 distinctly longer than broad, segments 6-7 slightly longer than broad, segment 8 as long as broad, segments 9-10 slightly transverse. Prothorax distinctly transverse, anterior two-thirds of lateral margins more or less parallel-sided, posterior one-third narrowed behind (Fig. 79), disc distinctly sulcate throughout, pronotum finely coriaceous and distinctly punctured. Elytra distinctly longer than prothorax, surface densely and strongly punctured and covered with yellow pubescence. Abdomen with posterior margin finely punctured.

*Measurements of holotype* : Total length 4.50 mm; width of head across eyes 0.85 mm; length of prothorax 0.80 mm and width of prothorax 0.95 mm; length of elytra 1.15 mm and width of elytra 1.30 mm.

*Holotype* ♂, INDIA : SIKKIM, Rangpo Teesta River bed, 26.xii. 1980, D. N. Biswas Coll. ; Paratypes, 13 exs., Collection data same as holotype, ex under sand of Teesta river bed (In the collection of Zoological Survey of India, Calcutta).

*Distribution* : INDIA (Sikkim).

19. *Bledius (Pucerus) bali*, sp. nov. (Figs. 84-87).

This species is closely related to *Bledius (P.) teestaius*, sp. nov. but differs from the latter species by the following characters : General appearance shorter in length, clypeal tooth more prominent and distinctly and widely bifurcated (Fig. 84), head, prothorax, elytral base narrowly and sutural line and abdominal segments 6-7 red, elytra, abdominal segments 1-5 and 8 and legs yellow, antennae dark brown (except segments 1-4 yellow) puncturation on pronotum and elytra superficial but not distinct, mid-longitudinal line on pronotum less distinct, posterior margin of sternite 7 of male straight with a median small lobe (Fig. 87), aedeagus different and as figured (Fig. 86).

*Measurements of holotype* : Total length 4.50 mm ; width of head across eyes 0.90 mm. ; length of prothorax 0.85 mm and width of prothorax 1.00 mm ; length of elytra 1.15 mm and width of elytra 1.30 mm.

*Holotype* ♂, INDIA : SIKKIM, Rangpo Teesta River bed, 19.xii. 1980, D. N. Biswas Coll. ; *Paratypes* 11 exs., Collection data same as holotype, ex under sand of Teesta River bed (In the collection of Zoological Survey of India, Calcutta).

*Distribution* : INDIA (Sikkim).

#### KEY TO THE INDIAN SPECIES OF THE SUBGENUS *HESPEROPHILUS*

1. Lateral Margin of mandibles in male near base distinctly produced apically (Fig. 131)..... *helferi* Fauvel  
Lateral margin of mandibles in male near base normal (Figs. 89 and 102)..... 2
2. Procoxal fissure closed (Fig. 127) ; elytral epipleural ridge present only one-third length of elytron (Figs. 90, 117 & 121)..... 3  
Procoxal fissure open (Fig. 133) ; elytral epipleural ridge present along the entire length of elytron (Figs. 101, 105, 109 and 112)..... 5
3. Anterior margin of pronotum slightly narrowed in front and posterior half broadly rounded, front angles of pronotum angulate (Fig. 120) ; posterior margin of elytra without membranous lobe, surface of elytra densely and finely punctured (Fig. 121)..... *indicus* Cameron  
Anterior half of lateral margins of pronotum sinuate at the middle and posterior half distinctly narrowed, front angles of pronotum broadly rounded (Figs. 88, 113) ; posterior margin of elytra with membranous lobe, surface of elytra not densely but coarsely punctured (Figs. 90, 117) 4
4. Species large (4.00 mm) ; antennal horns moderately developed (Fig 88) ; dorsal surface of head impunctate ; elytra unicolour. ; eyes large and prominent (Fig.98) *lucidus* Sharp  
Species small (2.20 mm) ; antennal horns well-developed and pointed (Fig. 113) ; head densely punctured ; elytra bicolour (Fig. 117) ; eyes large but not prominent (Fig 113) *baltus*, sp. nov.
5. Anterior angles of clypeus angulate ; on each side of vertex of head with an elongated arcuate impressed line (Figs. 100 and 103) ; species small (2.75 mm) 6  
Anterior angles of clypeus not angulate ; on each side of vertex of head devoid of any arcuate impressed line (Figs.104,108 and 111) ; species large (3.75 mm) 7
6. Lateral margins of pronotum more or less parallel-sided, hind angles rounded (Fig. 100) ; eyes large (Fig. 100) ; elytra bicolour (Fig. 101) *dilutipennis* Motschulsky  
Lateral margins of pronotum narrowed in front, hind angles truncated (Fig.103) ; eyes small (Fig. 103) ; elytra unicolour *beesoni* Cameron
7. Front angles of clypeus produced and forming tooth-like structure (Figs. 94 and 98) 8

Front angles of clypeus not projected and tooth-like, rather broadly rounded (Figs. 104, 108 and 111) 9

8. Inner margin of mandible irregularly dentate (Fig. 96); inner margin of antennal segments 3-10 fringed with long hairs and segment 3 longer than segment 2 (Fig. 95); dorsal surface of head and pronotum distinctly granulate; antennae dark-brown with segments 2-4 reddish brown *fuscicornis* Cameron

Mandible bidentate (Fig. 99); inner margin of antennal segments 3-10 devoid of any long hairs and segment 3 shorter than segment 2 (Fig. 97); dorsal surface of head and pronotum finely granulate; antennae dark brown with segments 1, 2 and 11 reddish brown *championi* Bernhauer

9. Lateral margins of pronotum parallel-sided and front angles angulate (Fig. 104); eyes small (Fig. 104); antennal segment 1 large (Fig. 104); posterior margin of elytra broadly yellowish and surface not densely punctures (Fig. 105) *pulchellus* Kraatz

Lateral margins of pronotum narrowed in front and front angles more or less rounded (Figs. 108 and 111); antennal segment 1 small (Figs. 108 and 111) colour pattern of elytra different and surface densely punctures (Figs. 109 and 112) 10

10. Lateral margin of pronotum explanate (Fig. 108); mandible tridentate (Fig. 110); elytra distinctly longer than pronotum, elytra dark-brown, with posterior margin narrowly and posterior part broadly yellowish (Fig. 109) *birmanus* Cameron  
Lateral margin of pronotum not explanate (Fig. 111); mandible bidentate; elytra slightly longer than pronotum, elytra yellowish, with base and suture narrowly brownish (Fig. 112) *maindroni* Fauvel

## 20. *Bledius (Hesperophilus) lucidus* sharp (Figs. 88-93)

*Bledius (H.) lucidus* Sharp, 1874, *Trans. ent. Soc. Lond.*, 90.

*Bledius (H.) capitalis* Fauvel, 1877, *Ann. Mus. Civ. Stor. Nat. Genova*, 10 : 204.

*Bledius (H.) fischeri* Bernhauer, 1903, *Stettin. ent. Ztg.*, 64 : 35.

This species can be recognised by the following characters: Head small, dorsal surface of head covered with superficial and closely setiferous punctures, mid-longitudinal groove present (Fig. 88). Supra antennal horns moderately developed (Fig. 88). Clypeus with anterior margin broadly rounded (Fig. 88). Pronotum slightly transverse, distinctly convex and densely punctured, anterior half of lateral margins slightly sinuate. Elytra distinctly longer than pronotum and covered with densely setiferous punctures, posterior margin with membranous lobe (Fig. 90). Aedeagus and spermatheca as figured (Figs. 93 and 92).

*Specimens examined*: INDIA: PUNJAB, Rohtak, 1 ♂, 1 ♀, 22.iv.1964, S. K. Mitra Coll.; BIHAR, Bhogaon, Purneah District. 1 ♂, 22.ii.1909, C. A. Paiva Coll., Katihar, 1 ♀, 25.iii.1909, C. A. Paiva Coll.; TAMIL NADU, Nilambur, Madras District, 2 exs., 6.vi.1924, S. K.

Pillai Coll. ; MEGHALAYA, Shillong, 1 ex., -vi.1927, M. Bose Coll. ; PAKISTAN, Karachi, 1 ex., Bell Coll. : MADYA PRADESH, Motinale R., S. Mandle, 1 ex., 25. vi. 1927, N. C. Chatterjee Coll. ; UTTAR PRADESH, Dehra Dun, 1 ex., iii.1939, Sher Bahadur Coll. ; KARNATAKA, Mysore, Anantapur, 1 ex., 17.x.1933, E. A. Glennie Coll.

*Distribution* : INDIA (Bihar, Punjab, Karnataka, Uttar Pradesh) ; PAKISTAN ; JAPAN ; CHINA ; SINGAPUR ; JAVA ; SUMATRA ; AUSTRALIA ; MADAGASCAR and CONGO. In the present study this species is recored for the first time from Bihar, Punjab and Uttar Pradesh.

21. ***Bledius (Hesperophilus) pulchellus* Kraatz (Figs. 104-107).**

*Bledius (H.) pulchellus* Kraatz, 1859, *Arch. Naturgesch.*, 25(1) : 169.

Head covered with densely and moderate deeply setiferous punctures, median longitudinal elevation present. Supra antennal horns normal (Fig. 104). Mandibles simple (Fig. 107). Prothorax with lateral margins parallel-sided and front angles prominent and somewhat acute (Fig. 104), pronotum convex and covered with finely setiferous punctures. Elytra with dorsal surface less closely and finely punctures, posterior margin broadly yellowish (Fig. 105). Spermatheca as figured (Fig. 106).

*Specimens examined* : INDIA : ORISSA, Chilka Lake, Barkuda Island, Puri District, 2 ♀ ♀, 24.xii.1922, N. Annandale Coll., at light.

*Distribution* : INDIA (Tamil-Nadu, Orissa) ; SRI LANKA, New records from Orissa.

22. ***Bledius (Hesperophilus) birmanus* Cameron (Figs. 108-110).**

*Bledius (H.) birmanus* Cameron, 1930, *Fauna British India (Coleoptera : Staphylinidae)*, 1 : 283.

This species can be recognised by the following characters : Species densely covered with yellow pubescence. Head small, narrower than pronotum, dorsal surface densely and moderate strongly granulate and punctured. Eyes moderate large and prominent (Fig. 101). Mandibles tridentate (Fig. 110). Prothorax (Fig. 108) transverse, lateral margins parallel and distinctly explanate, pronotum densely and finely granulate and superficially punctured. Elytra (Fig. 109) densely and finely punctured, dark-brown, posterior margin of elytra narrowly and postero-lateral part broadly yellowish. Abdomen rather impunctate.

*Specimen examined* : INDIA : KERALA, Cochin, 1 ex., 11.xi.1933, E. A. Glennie Coll.

*Distribution* : INDIA (Kerala) ; BURMA. In the present study this species is recorded for the first time from India.

23. ***Bledius (Hesperophilus) maindroni*** Fauvel (Figs. 111-112)

*Bledius maindroni* Fauvel, 1903, *Rev. d'Ent.*, 22 : 151.

This species is closely related to *Bledius (H.) birmanus* Cameron but can be easily separated from the latter species by its lateral margins of pronotum not explanate (Fig. 111), mandibles bidentate, elytra shorter and yellowish, base and suture of elytra narrowly brown, surface densely punctures (Fig. 112).

*Specimens examined* : INDIA : TAMIL NADU, Tuticorin, 3 exs. (British Mus. Nat. Hist.).

*Distribution* : INDIA (Tamil-Nadu).

24. ***Bledius (Hesperophilus) indicus*** Cameron (Figs. 120-121).

*Bledius (H.) indicus* Cameron, 1930, *Fauna British India* (Coleoptera : Staphylinidae), 1 : 282.

This species is closely related to *Bledius (H.) baltus*, sp. nov. and *Bledius (H.) lucidus* Sharp but can be separated from the both species by the following characters : Species black, antennal horns normal and its apex not pointed, eyes large and prominent, anterior half of lateral margins of pronotum converging in front and posterior half broadly rounded, front angles angulate (Fig. 120), elytra densely and finely punctured and its posterior margin without membranous lobe (Fig. 121).

*Specimen examined* : 1 ex. (Cotype), INDIA : UTTAR PRADESH, Kumaon, Haldwani District, H.G.C. (British Mus. Nat. Hist.).

*Distribution* : INDIA (Uttar Pradesh).

25. ***Bledius (Hesperophilus) baltus***, sp. nov. (Figs. 113-119).

This species is closely related to *Bledius (H.) lucidus* Sharp but can be easily separated from the latter species by its small size (2.20 mm), dorsal surface of head densely punctured, labrum different and as figured (Fig. 115), antennal horns well developed and its apex pointed (Fig. 113), elytra pale reddish brown, suture and posterior margin broadly dark brown (Fig. 117), surface not densely but coarsely punctures, aedeagus different and as figured (Fig. 116).

General appearance rather cylindrical, shining, reddish brown, head and clypeus pitchy red, antennae, mandibles, legs, elytra and abdomen pale reddish brown.

Head (Fig. 113) transverse, dorsum of head densely microgranulate ground sculpturing and covered with moderately close setiferous punctures, punctiform longitudinal groove present. Supra antennal horns well developed, its apex produced and pointed triangularly. Clypeus on lower plane than head, surface microgranulate ground sculpturing and covered with a few setiferous punctures near margin. Labrum with front margin slightly produced (Fig. 115). Antennae short and stout, segment 1 moderately long, segment 2 one and half times longer than segment 3, segments 3-5 longer than broad and unequal, segments 9-10 slightly transverse, segments 7-11 densely pubescent. Eyes large (Fig. 113). Mandibles bidentate, basal tooth large and prominent (Fig. 114). Prothorax transverse, anterior half of lateral margin parallel and sinuate at middle, front angles broadly rounded (Fig. 113), pronotum convex, anterior half covered with dense microgranulate ground sculpturing, whereas posterior half sculpturing is sparse, setiferous punctures close and dense, disc sulcate throughout. Elytra slightly longer than broad, surface covered with moderately strong but sparse setiferous punctures, posterior margin of elytron with a membranous lobe (Fig. 117). Abdomen finely punctured and with a few long-erect setae. Aedeagus as figured (Fig. 116).

*Measurements of holotype* : Total length 2.20 mm ; width of head across eyes 0.50 mm ; length of pronotum 0.40 mm and width of pronotum 0.50 mm ; length of elytra 0.60 mm and width of elytra 0.50 mm.

*Holotype* ♂, INDIA : WEST BENGAL : Nadia District, Badkulla, 10 km from Krishnagar City, Suravisthan, 11.vi.1976, D.N. Biswas Coll.; Paratypes 19 exs., Collection data same as holotype. The specimens were collected at light (In the collection of Zoological Survey of India, Calcutta).

*Distribution* : INDIA (West Bengal).

26. ***Bledius (Hesperophilus) dilutipennis*** Motschulsky (Figs. 100-102)

*Bledius dilutipennis* Motschulsky, 1857, *Bull. Soc. Nat. Moscou.*, 30(4): 507 ; Kraatz, 1859, *Arch. Naturgesch.*, 25(1): 170.

*Bledius (H.) dilutipennis* : Cameron, 1930, *Fauna British India* (Coleoptera Staphylinidae), 1 : 284-285.

This species is closely related to *Bledius (H.) beelsoni* Cameron but differs from the latter species by its elytra being bright yellow and its base and suture broadly dark brown (Fig. 101), lateral margins of prothorax somewhat parallel-sided (Fig. 100), eyes large (Fig. 100), antennae dark brown, mandibles bidentate (Fig. 102).

*Specimens examined* : INDIA : UTTAR PRADESH, R. Song, Dehra Dun, 1 ex., 19.iv.1931, M. Bose Coll.; Dehra Dun, Mothronwala, 1 ex., 24.ii.1922, M. Cameron Coll.; PUNJAB, Dehar, Gurgaon, 14 exs., 27.ix.1963, R. K. Bhatnagar Coll.

*Distribution* : INDIA (Uttar Pradesh, Punjab).

**27. *Bledius (Hesperophilus) beelsoni* Cameron (Fig. 103).**

*Bledius (H.) beelsoni* Cameron, 1930, *Fauna British India* (Coleoptera : Staphylinidae), 1 : 285,

Head slightly narrower than prothorax, dorsal surface covered with deep and moderately close setiferous punctures, either side of vertex broadly depressed, forming a median indistinct ridge (Fig. 103). Labrum with anterior margin broadly emarginate and with a median longitudinal groove. Eyes small (Fig. 103). Mandibles bidentate. Prothorax slightly transverse, anterior two-third of lateral margins slightly narrowed in front (Fig. 103). Elytra densely pubescent, finely and closely punctured, posterior margin without membranous lobe.

*Specimen examined* : INDIA : UTTAR PRADESH, Gorja, Nainital District, 1 ex., 21.xi.1976, T. Sen Gupta Coll., Under stone ; UTTAR PRADESH, Kheri Rau, Siwaliks District, 2 exs., 23.x.1921, M. Cameron Coll.

*Distribution* : INDIA (Uttar Pradesh).

**28. *Bledius (Hesperophilus) fuscicornis* Cameron (Figs. 94-96).**

*Bledius (H.) fuscicornis* Cameron, 1930, *Fauna British India* (Coleoptera : Staphylinidae), 1 : 280-281.

This species is closely related to *Bledius (H.) championi* Bernhauer but can be easily separated from the latter species by its mandibles irregularly dentate (Fig. 96), antennae (Fig. 95) dark brown with segments 2-4 reddish brown, segment 3 longer than segment 2, penultimate segment distinctly transverse, segments 3-10 internally fringed with hairs, eyes large and prominent (Fig. 94), sternite 6 of male deeply arcuately emarginate, with a strong spine on each side, the entire length of segment impressed in front of emargination.

*Specimens examined* : INDIA : UTTAR PRADESH, Dhauri Ganga, 6800 feet, Almora ♂ & ♀, 22.vii.1923, R. N. Parker Coll., det. by M. Cameron (In F. R. I., Dehra Dun).

*Distribution* : INDIA (Uttar Pradesh).

29. **Bledius (Hesperophilus) championi** Bernhauer (Figs. 97-99)

*Bledius (H.) championi* Bernhauer, 1926, *Wien. ent. Ztg.*, 43 : 23

This species can be recognised by its antennae being dark brown with segments 1, 2 and 11 reddish brown, head narrower than prothorax, finely and closely granulated and superficially punctured, antennae short and stout, segment 3 shorter than segment 2 (Fig 97), mandibles bidentate (Fig. 99), prothorax transverse, pronotum finely and closely granulated and superficially punctured and disc opaque. Elytra reddish brown, its surface densely and finely punctured.

*Specimen examined* : INDIA : UTTAR PRADESH, Nun Nadi, Dehra Dun, 1 ex., M. Cameron Coll. & det. (In F.R.I., Dehra Dun).

*Distribution* : INDIA (Uttar Pradesh).

30. **Bledius (Hesperophilus) helferi** Fauvel (Figs. 129-133)

*Bledius helferi* Fauvel, 1904. *Rev. d' Ent.*, 23 : 112.

The male of *Bledius (H.) helferi* Fauvel can easily be separated from the others male species of this subgenus by its lateral margin of mandibles near base distinctly produced apically (Fig. 131). Pitchy, shining, head black, palpi, antennal segments 1-3 and legs reddish yellow, mandibles and antennal segments 4-11 reddish, elytra yellow, base of elytra broadly brownish and suture triangularly reddish marking (Fig.132), head, prothorax and elytra covered with yellow pubescence and finely punctured. Aedeagus and Spermatheca as figured (Figs.129 and 130).

*Specimens examined* : INDIA : WEST BENGAL, Sagar Island, South 24-Parganas District, 43 exs., 24.viii.1983, T. K. Podder Coll., ex. sandy river bed.

*Distribution* : INDIA (West Bengal); BURMA. In the present study this species is recorded for the first time from India.

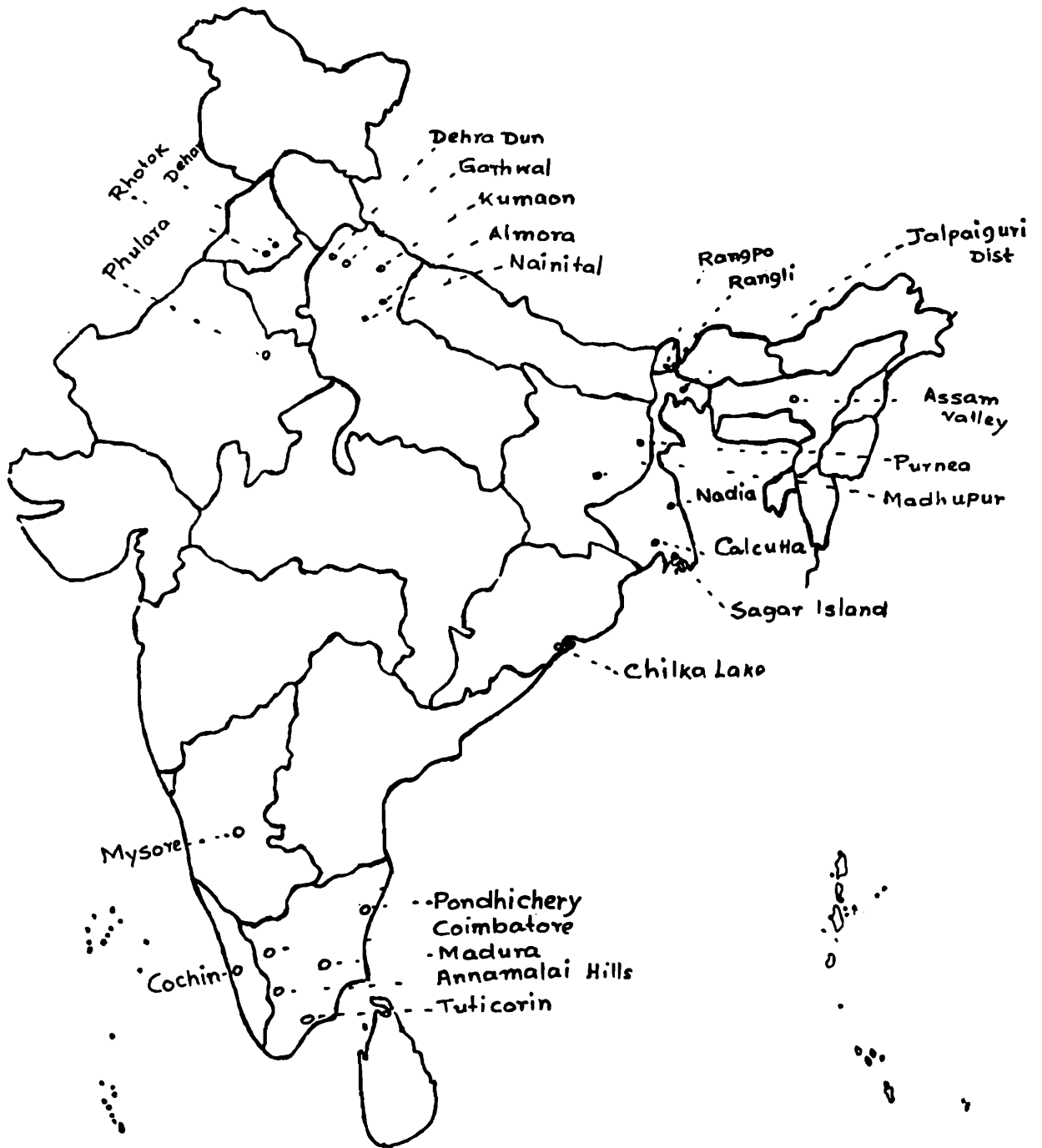
#### ACKNOWLEDGEMENTS.

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Dr. P. M. Hammond, and Forest Research Institute, Dehra Dun, by the courtesy of Dr. P. K. Sen Sharma, and among others who helped us for this work by providing their valuable publications on the genus *Bledius* and allied genera are Dr. Lee H. Herman, Jr., Department of Entomology, the American Museum of Natural History, New York and Dr. H. Coiffait, Laboratoire de Zoologie, Toulouse Cedex, France.

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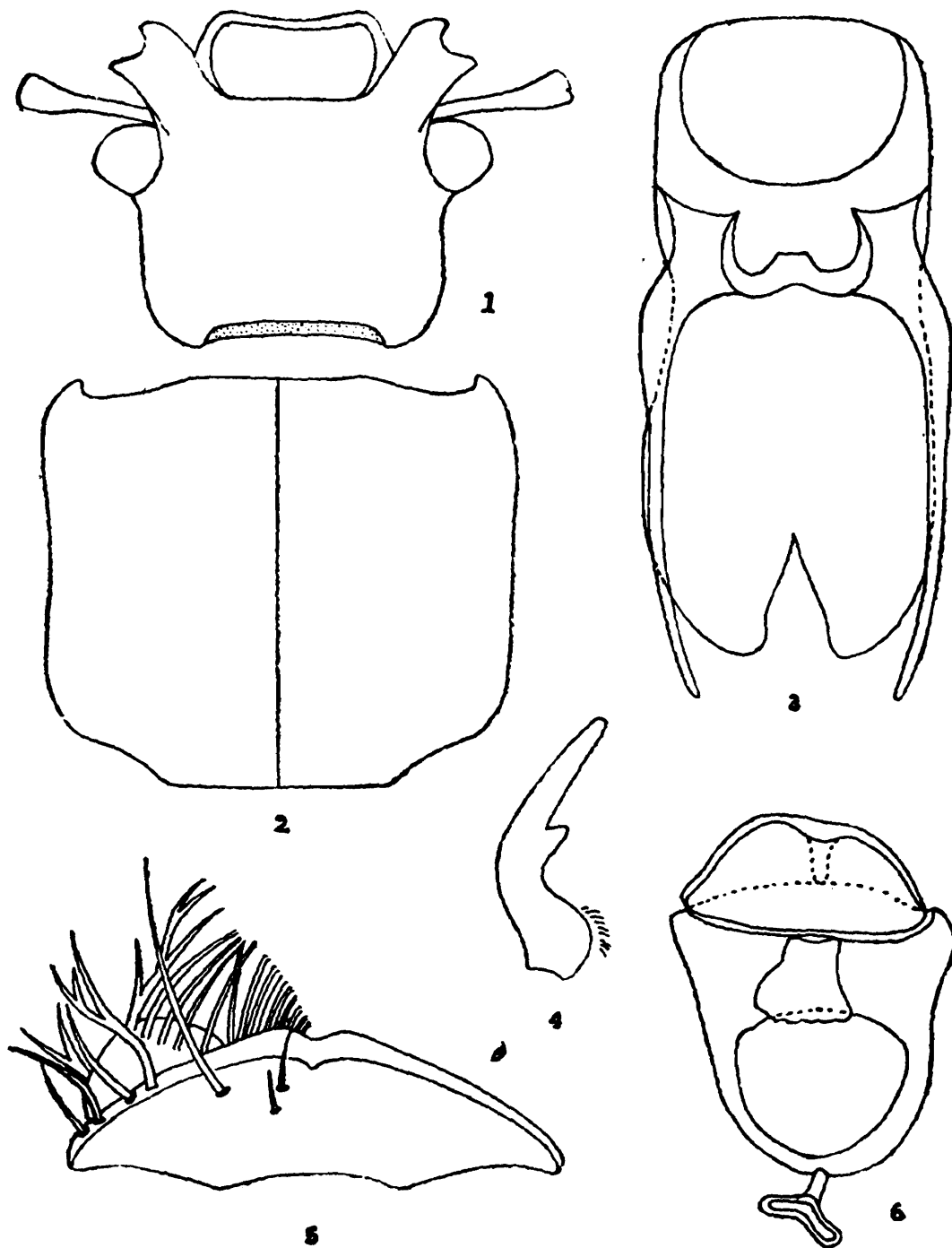
Collection places of Indian Bledius Leach

1. Map showing Collecting localities of *Bledius* Leach.

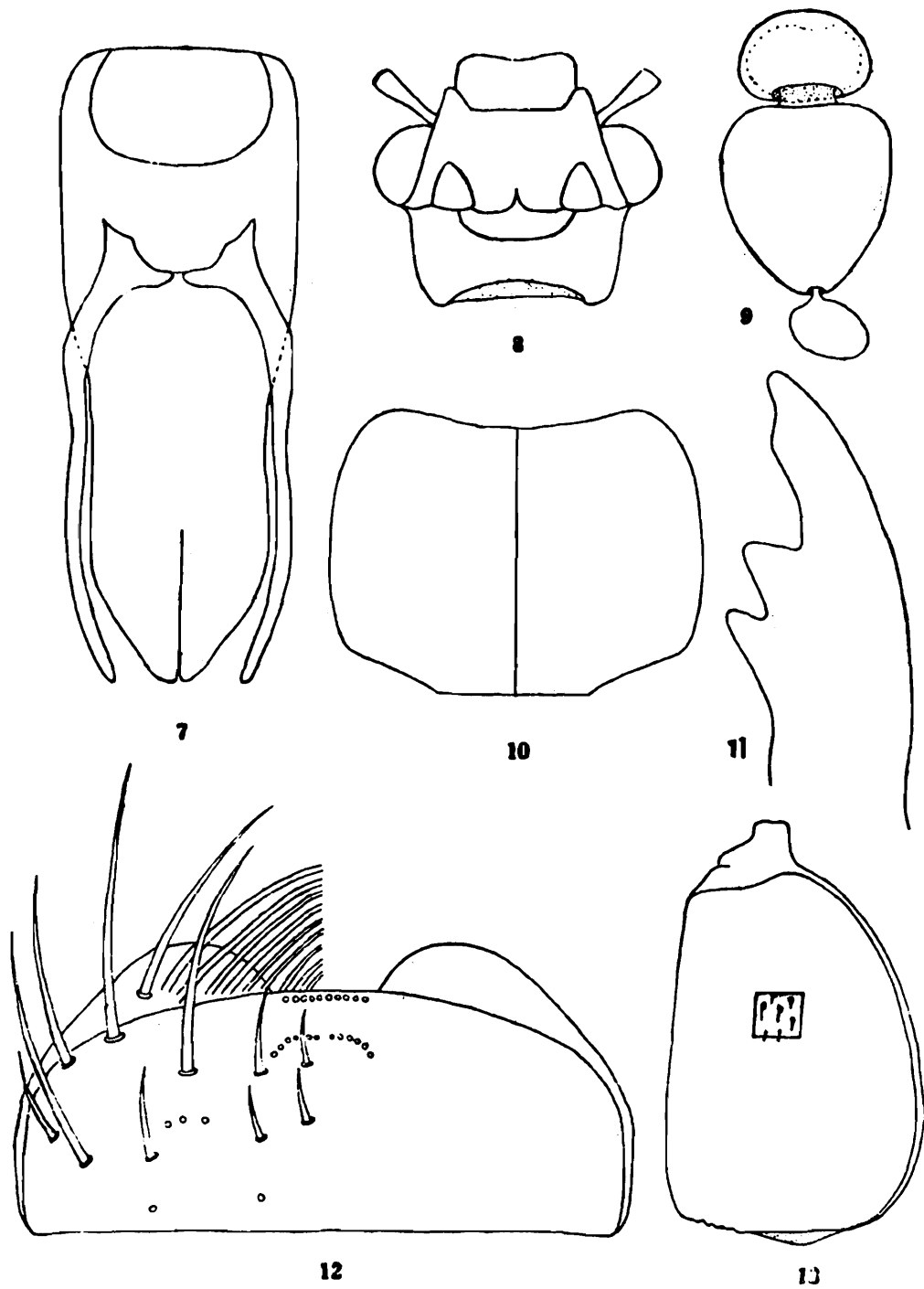
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# FIGURES

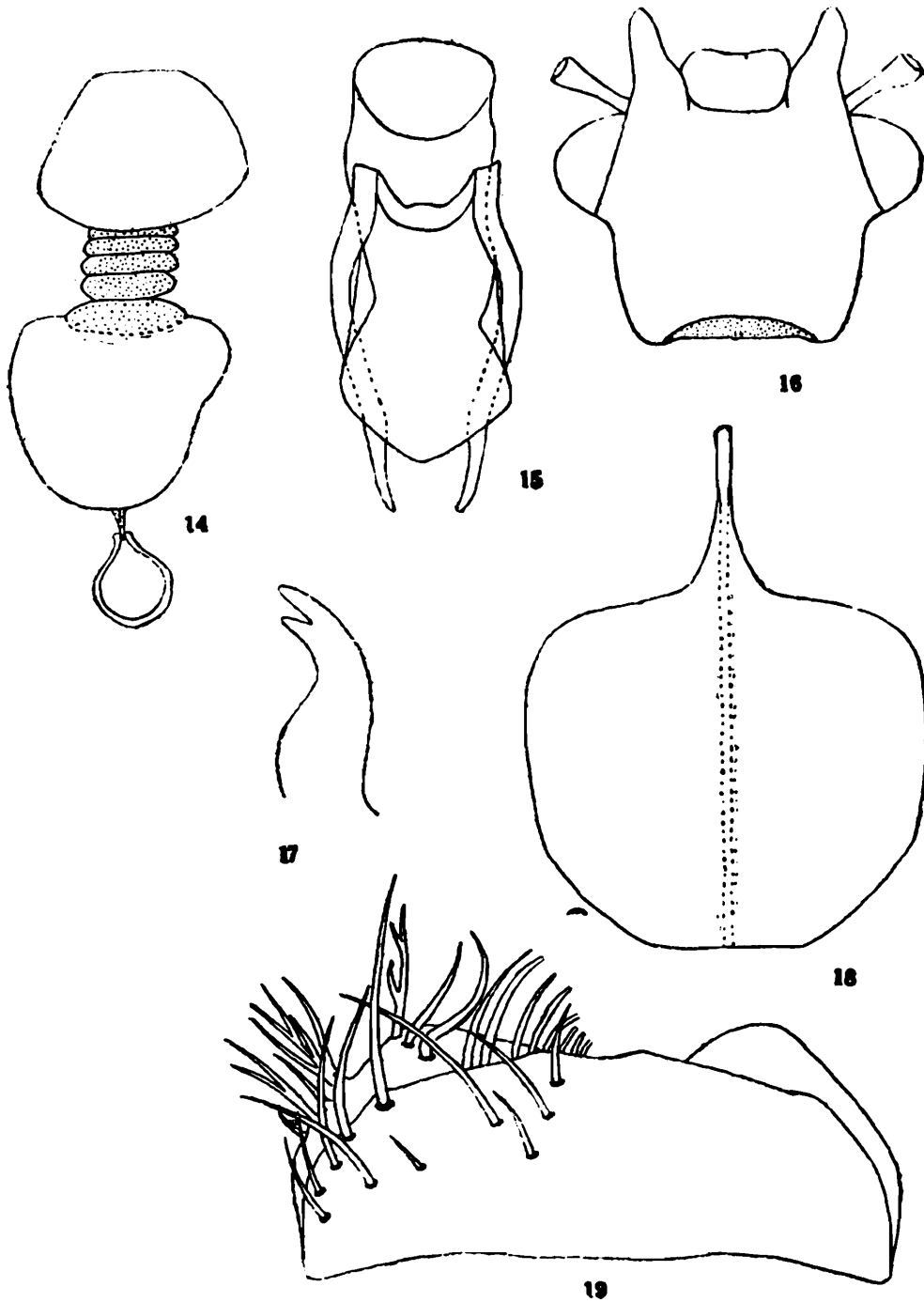
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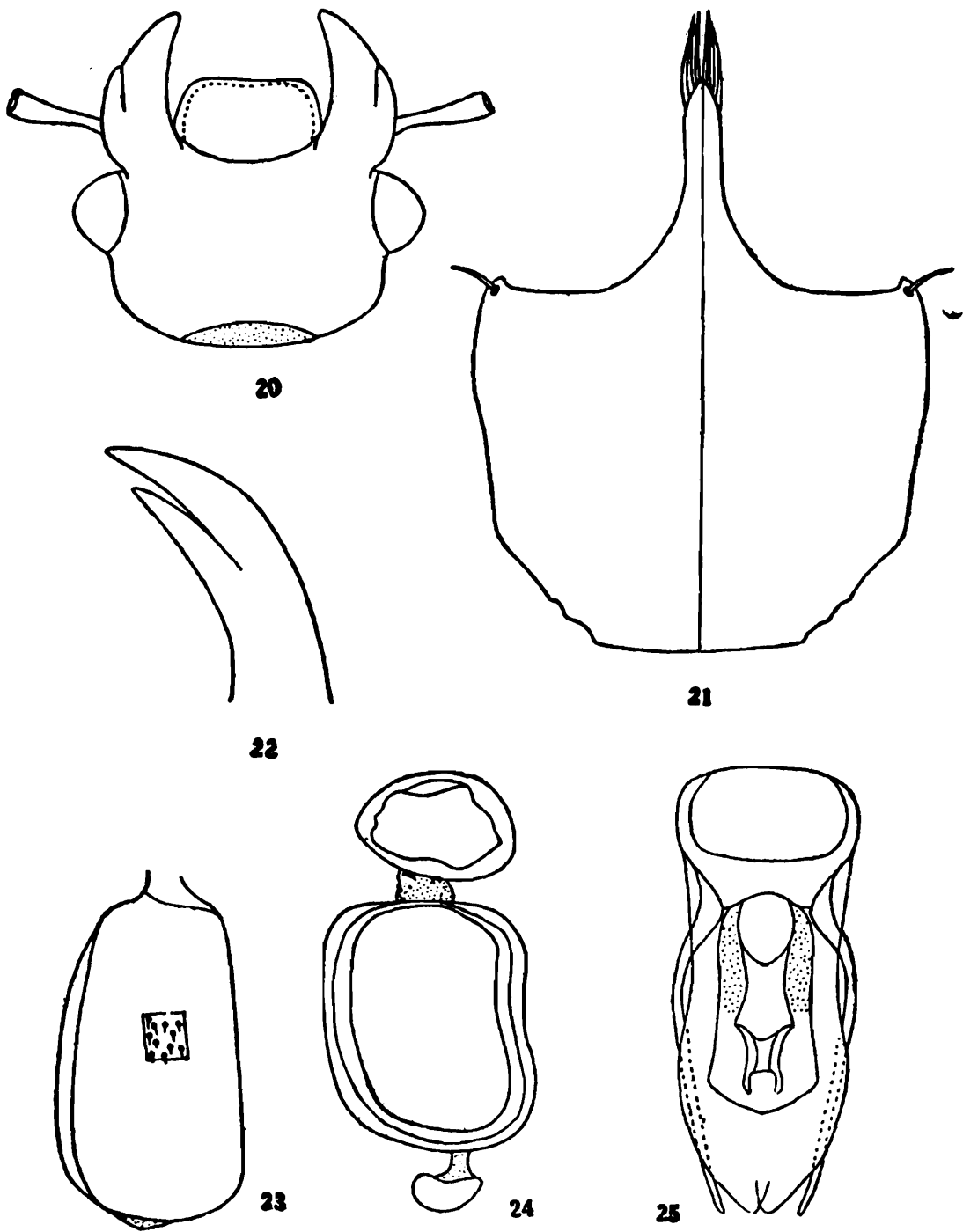
Figs. 1-6 *Bledius* (s. str.) *marusthanicus*, sp. nov. ; 1, Head, dorsal view ; 2, Prothorax, dorsal view ; 3, Aedeagus, ventral view ; 4, Mandible, dorsal view ; 5, Labrum, dorsal view ; 6, Spermatheca.



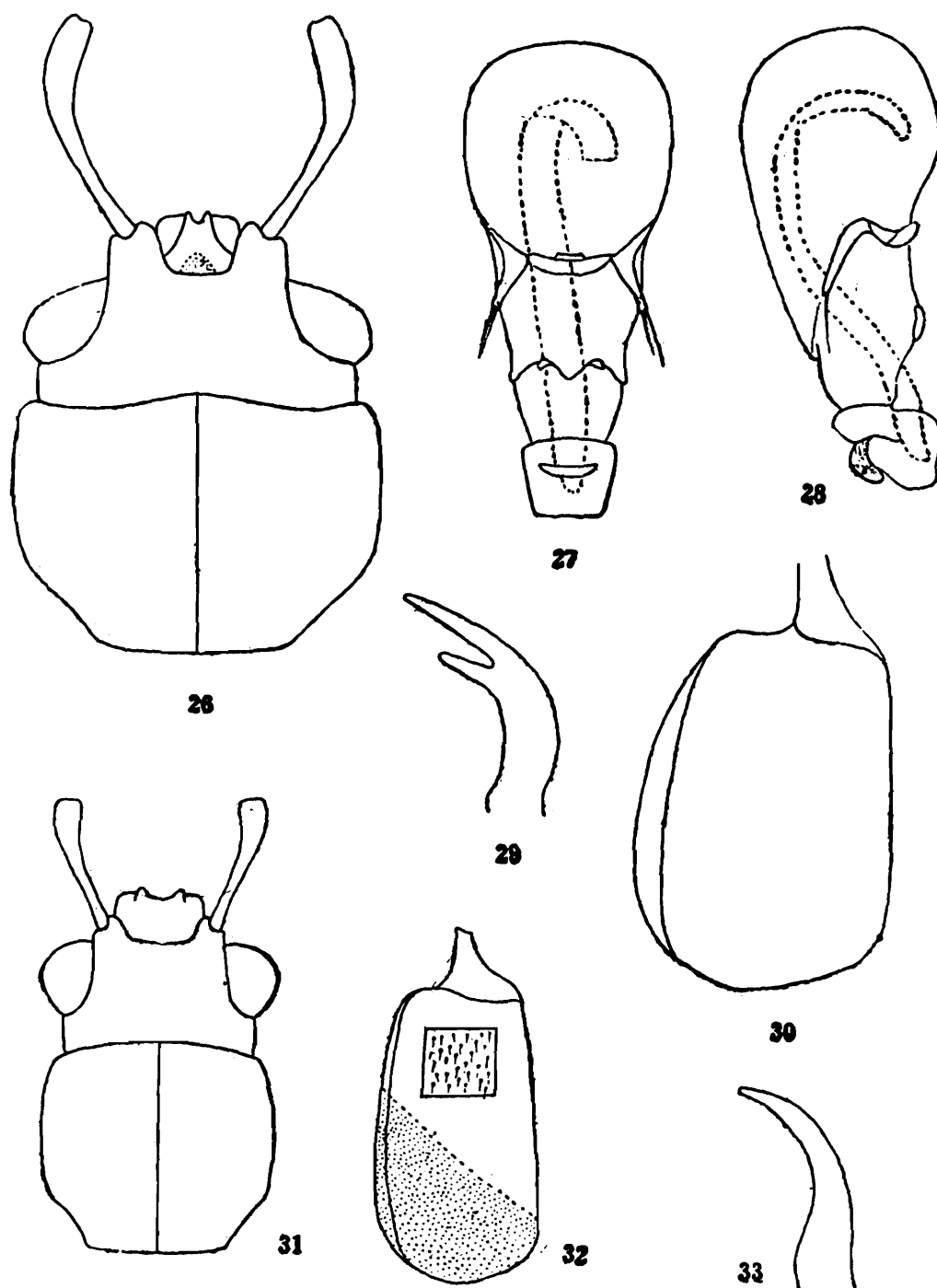
Figs 7-13. *Bledius* (s. str.) *brunnipennis* (Fabricius) : 7, Aedeagus, ventral view ; 8, Head, dorsal view ; 9, Spermatheca ; 10, Prothorax, dorsal view ; 11, Mandible, dorsal view ; 12, Labrum, dorsal view ; 13, Elytra, dorsal view.



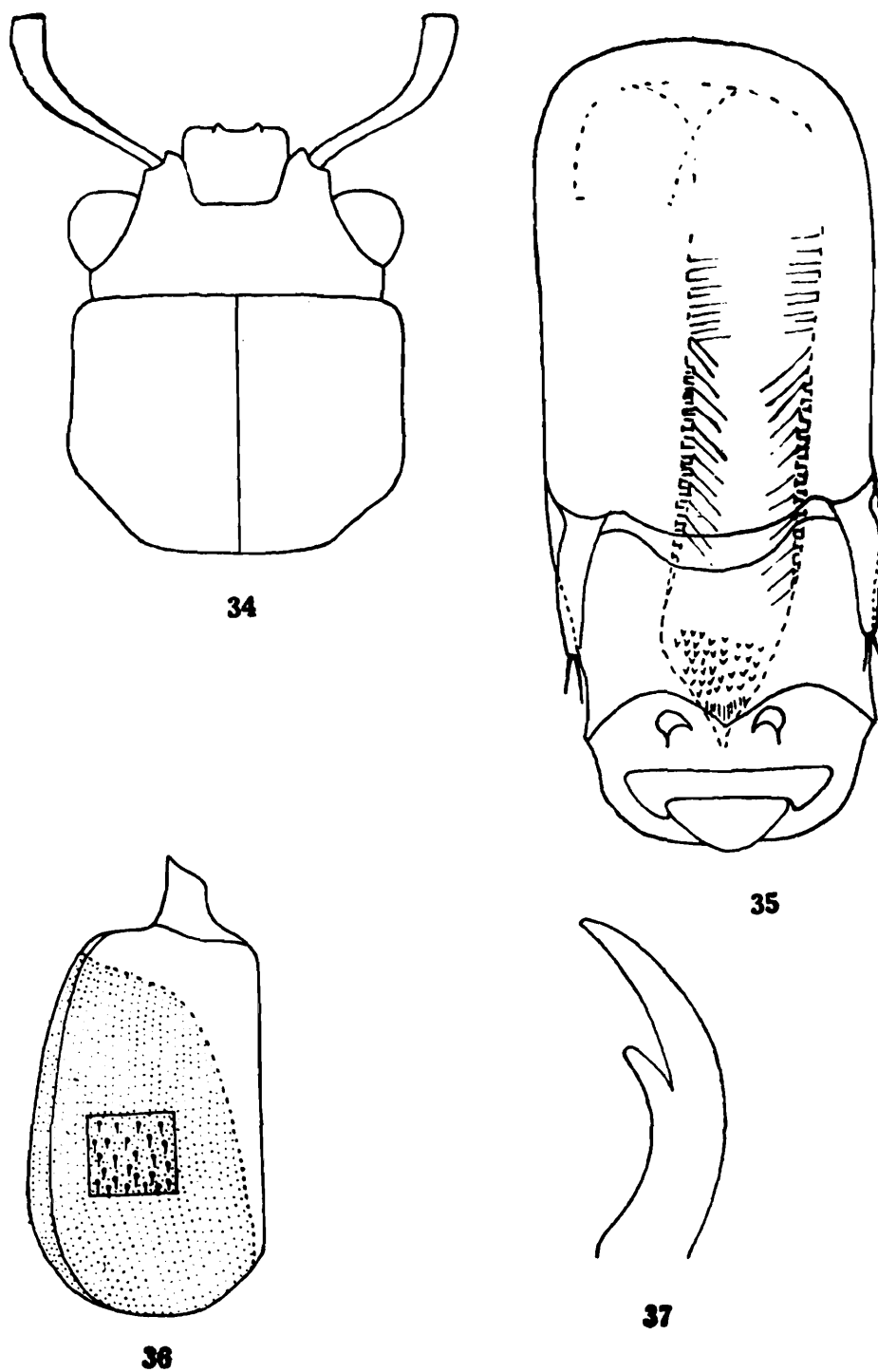
Figs. 14-19. *Bledius* (s. str.) *hoplites* Fauvel : 14, Spermatheca; 15, Aedeagus, ventral view ; 16, Head, dorsal view ; 17, Mandible, dorsal view ; 18, Prothorax, dorsal view ; 19, Labrum, dorsal view.



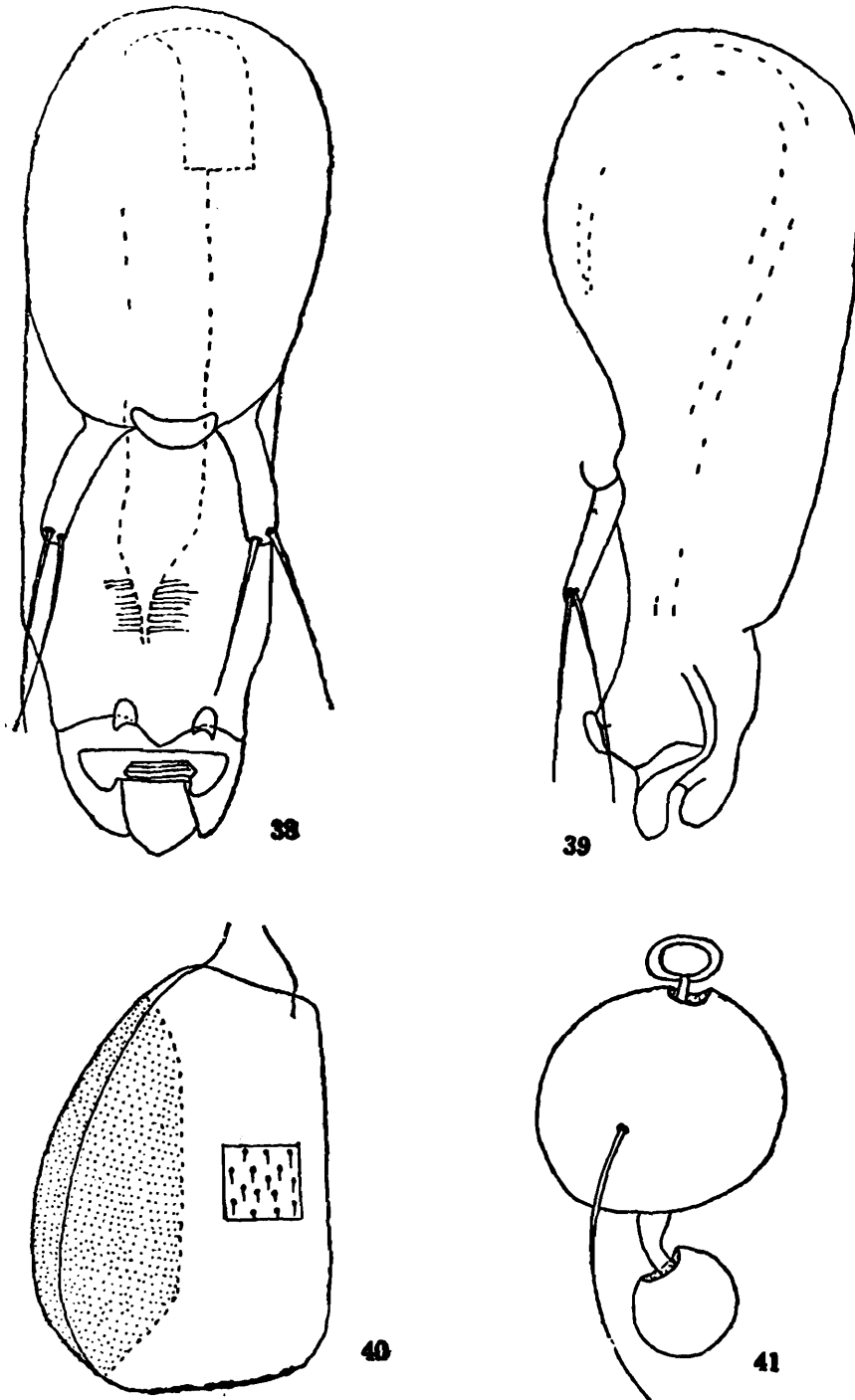
Figs. 20-25. *Bledius* (s. str.) *bison* Cameron : 20, Head, dorsal view ; 21, Prothorax, dorsal view ; 22, Mandible, dorsal view ; 23, Elytra, dorsal view ; 24, Spermatheca ; 25, Aedeagus, ventral view.



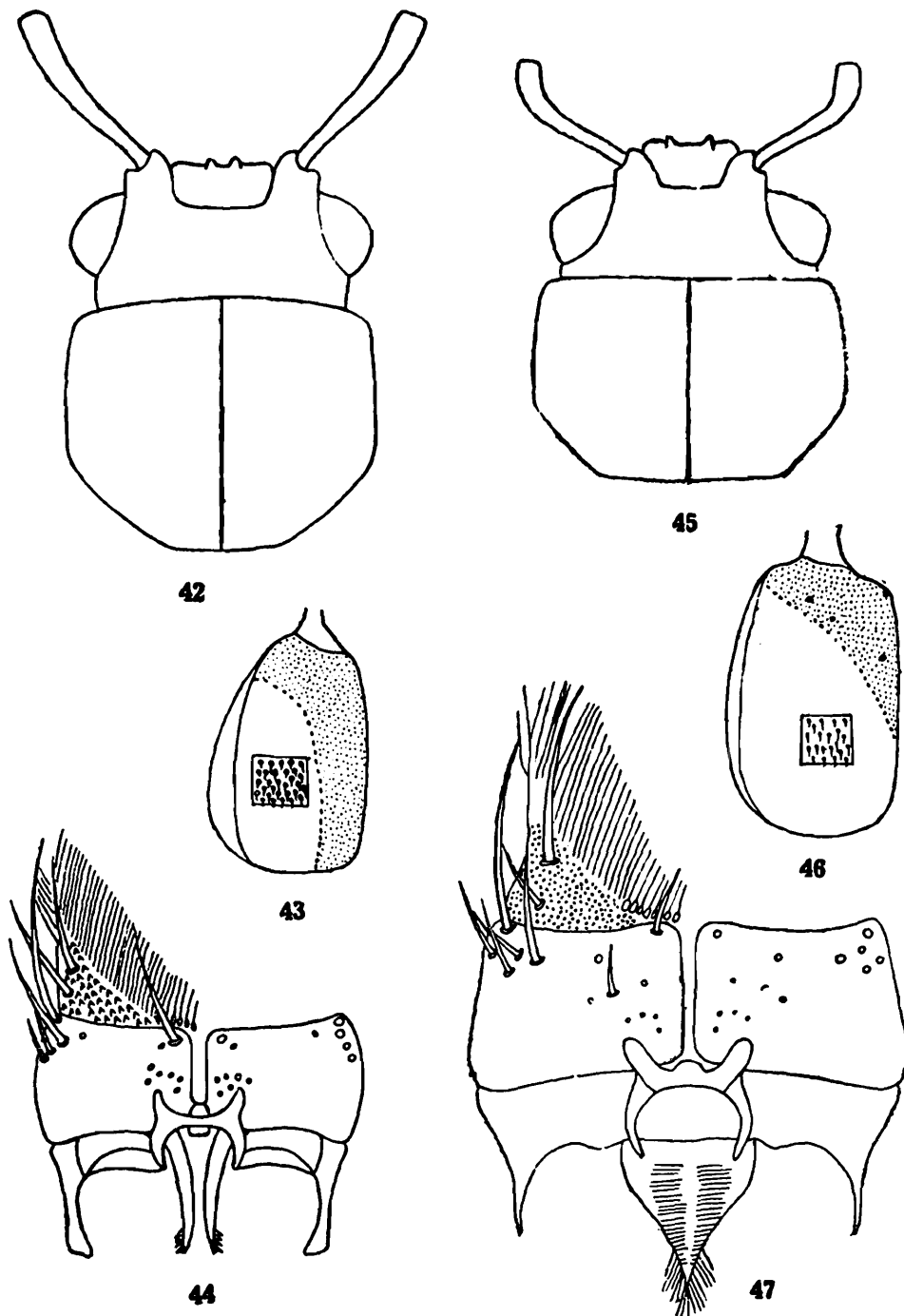
Figs. 26-33. *Bledius (Pucerus) verres* var. *monachus* Bernhauer : 26, Head and Prothorax, dorsal view ; 27, Aedeagus, ventral view ; 28, Aedeagus, lateral view ; 29, Mandible, dorsal view ; *Bledius (Pucerus) transversus* Cameron : 31, Head and Prothorax, dorsal view ; 32, Elytra, dorsal view ; 33, Mandible, dorsal view.



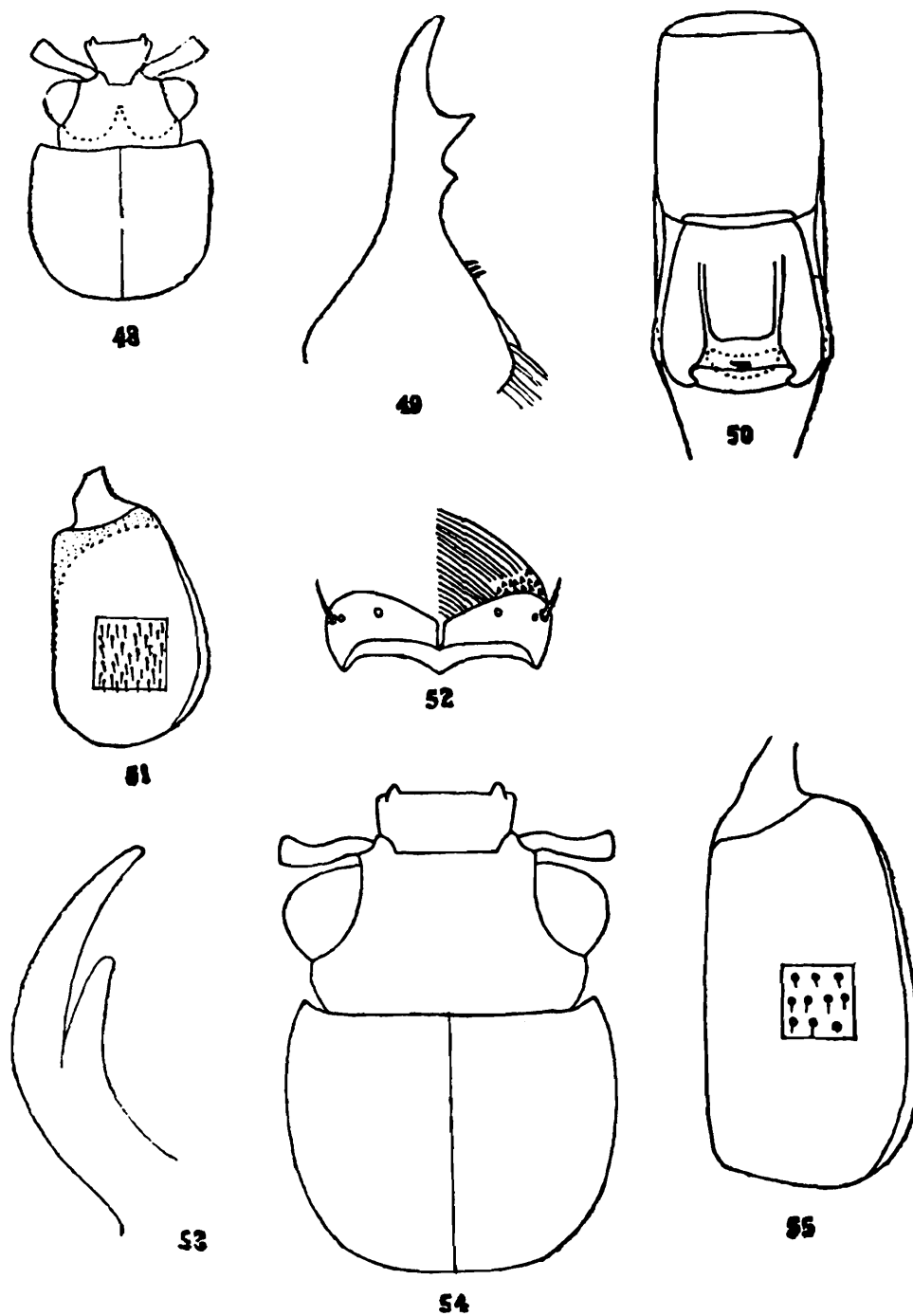
**Figs. 34-37.** *Bledius (Pucerus) rhinoceros* Cameron : 34, Head and Prothorax, dorsal view ; 35, Aedeagus, ventral view ; 36, Elytra, dorsal view ; 37, Mandible, dorsal view.



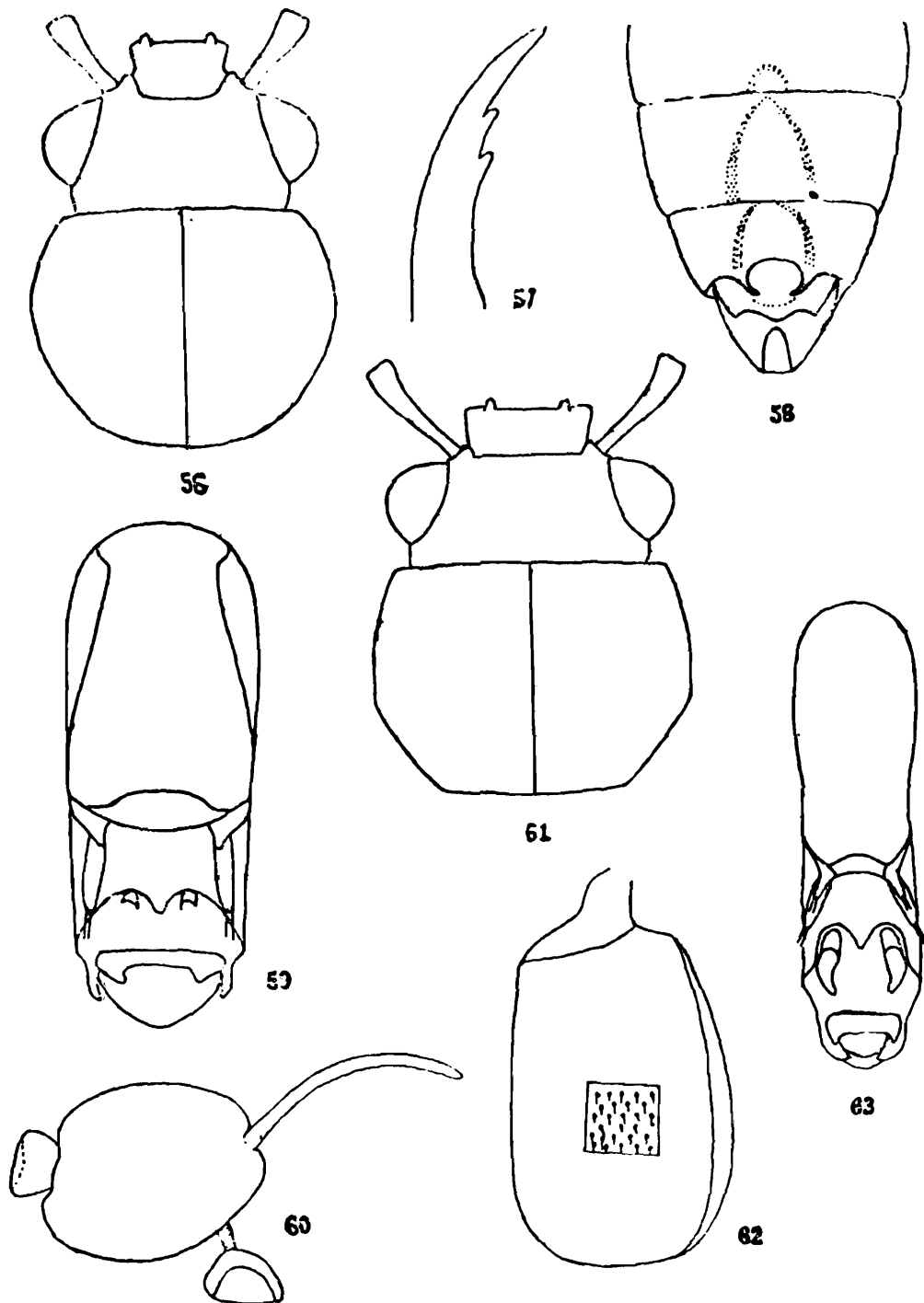
Figs. 38-41. *Bledius (Pucerus) gracilicornis* Kraatz :  
 38, Aedeagus, ventral view ; 39, Aedeagus, lateral view ; 40, Elytra, dorsal view ; 41, Spermatheca.



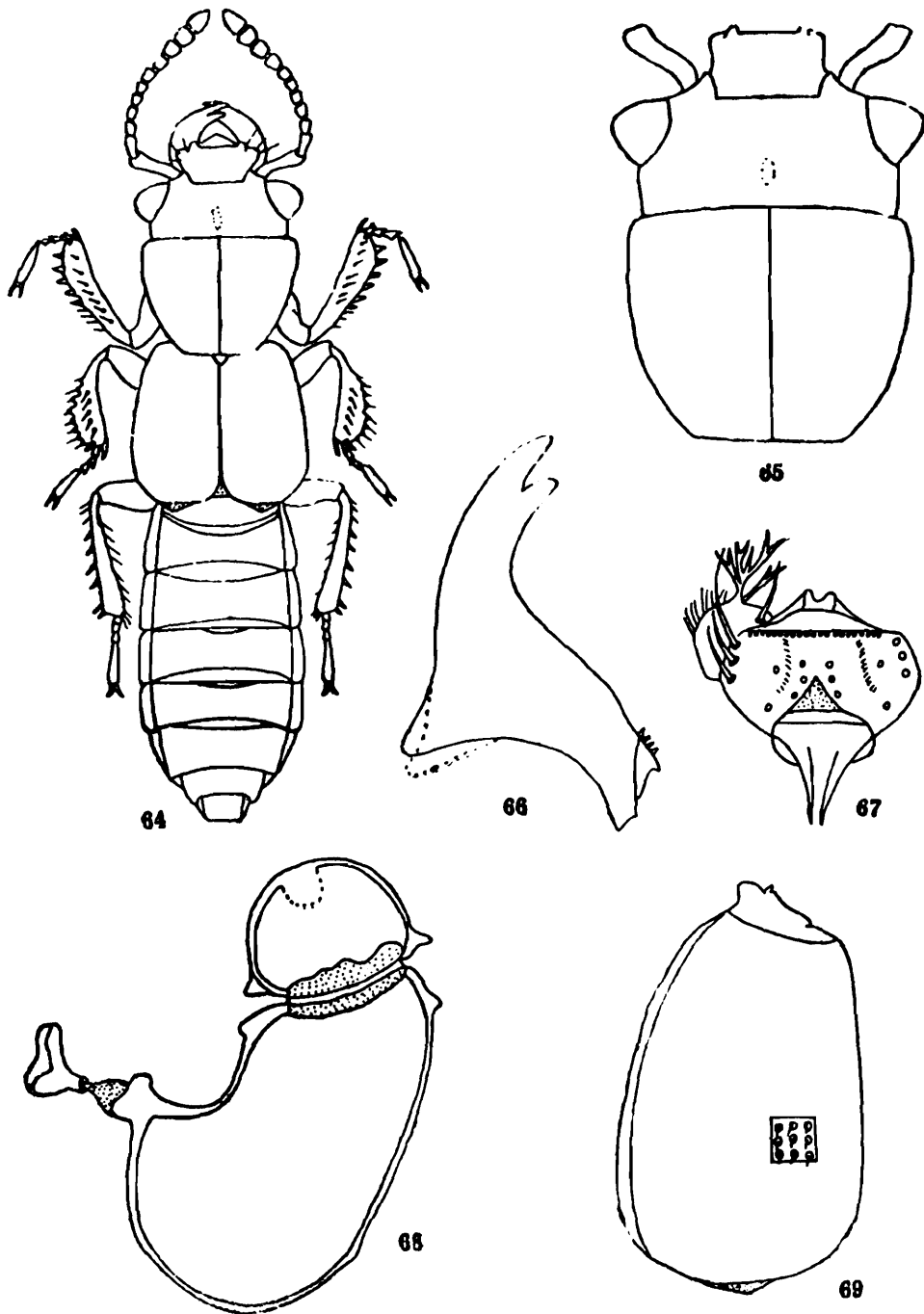
Figs. 42-47. *Bledius (Pucerus) suravius* sp. nov. : 42, Head and Prothorax, dorsal view ; 43, Elytra, dorsal view ; 44, Labrum, dorsal view ; *Bledius (Pucerus) tuberculatus* (Fabricius) ; 45, Head and Prothorax, dorsal view ; 46, Elytra, dorsal view ; 47, Labrum, dorsal view.



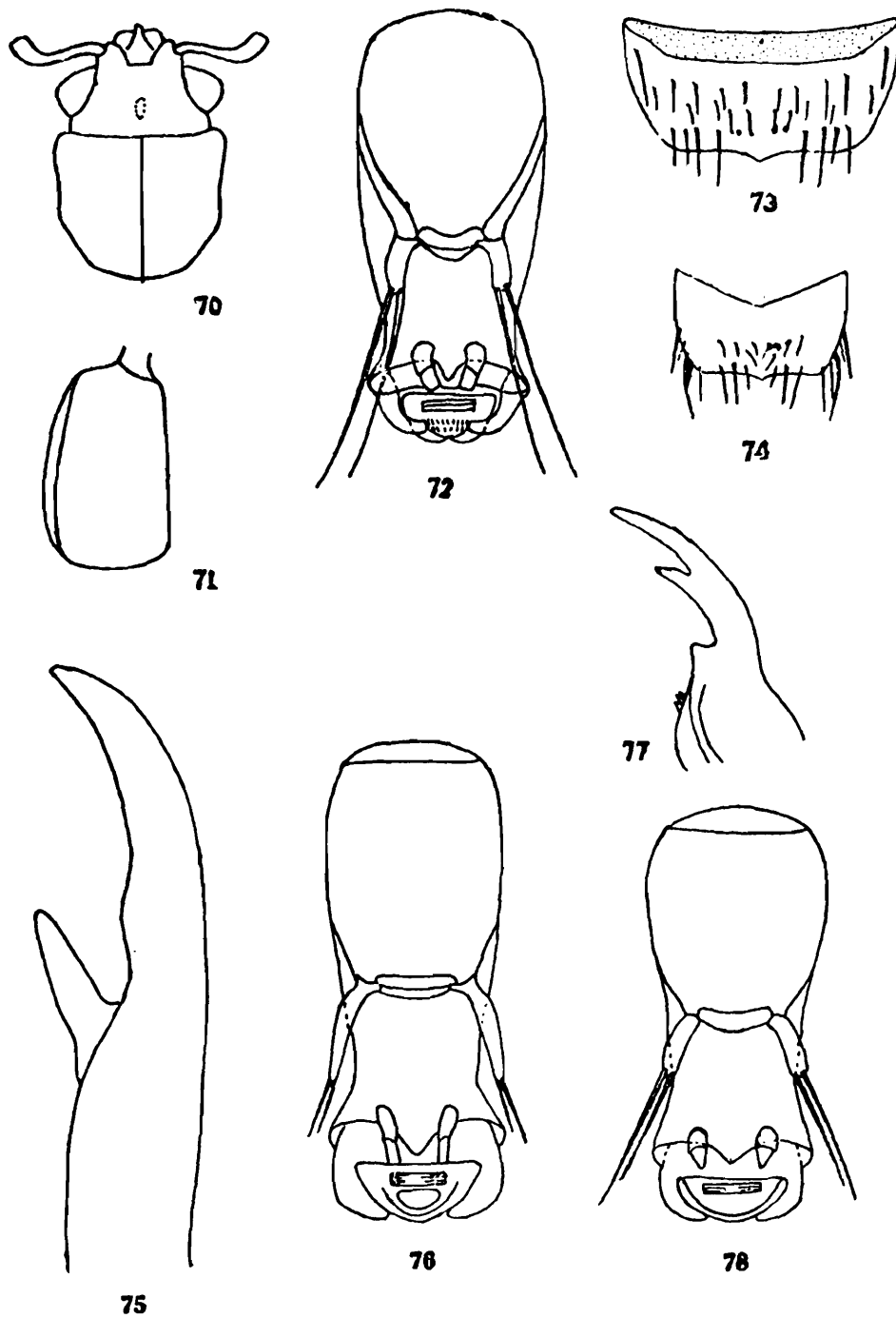
Figs 48-55. *Bledius (Pucerus) totius* sp. nov. : 48, Head and Prothorax, dorsal view ; 49, Mandible, dorsal view ; 50, Aedeagus, ventral view ; 51, Elytra, dorsal view ; 52, Labrum, dorsal view ; *Bledius (Pucerus) hindustanus* Cameron : 53, Mandible, dorsal view ; 54, Head and Prothorax, dorsal view ; 55, Elytra, dorsal view.



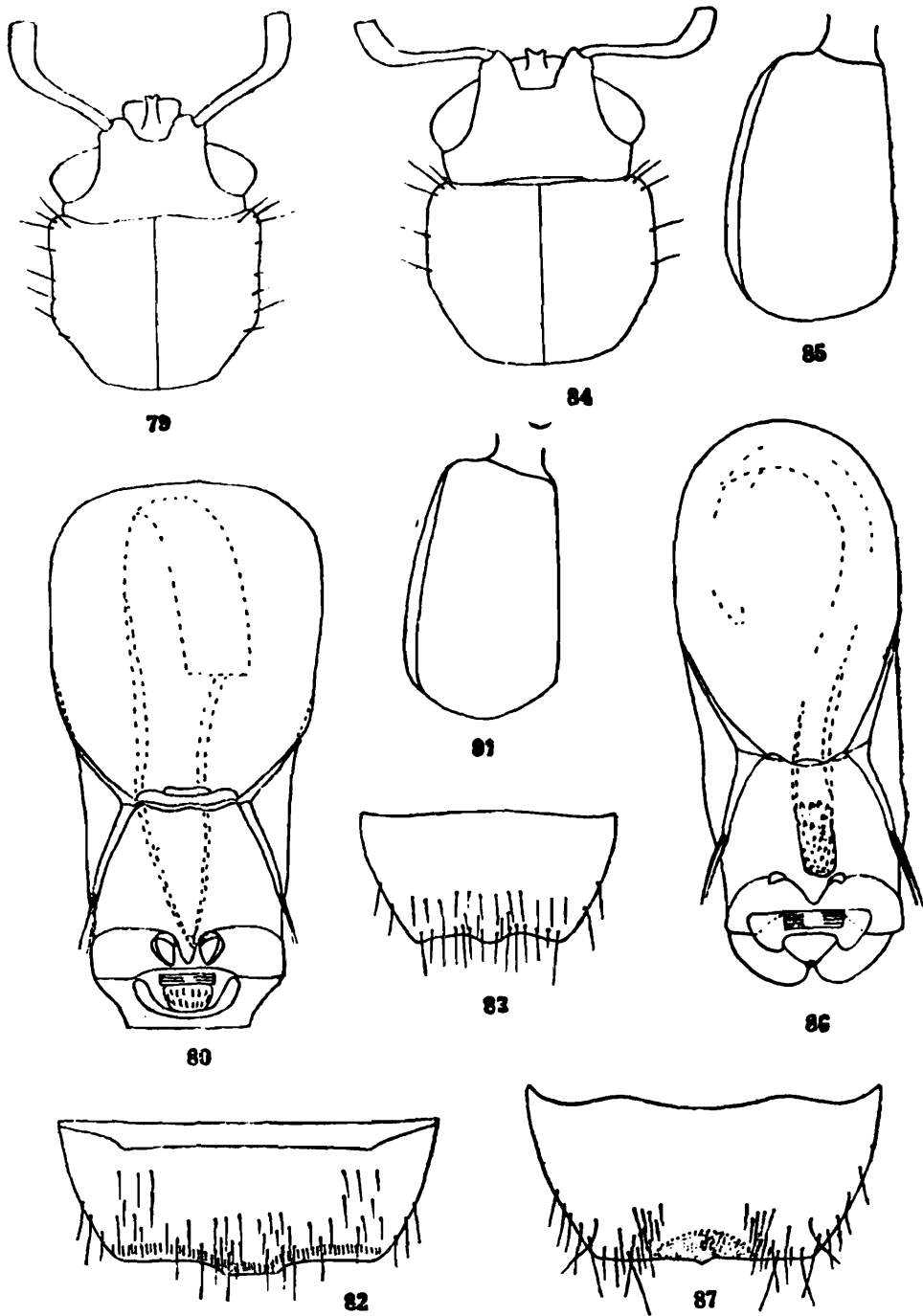
Figs. 56-63. *Bledius (Pucerus) ranglicus* sp. nov. : 56, Head and Prothorax, dorsal view ; 57, Mandible, dorsal view ; 58, Abdomen, ventral view ; 59, Aedeagus, ventral view ; 60, Sparmatheca ; *Bledius (Pucerus) bispinus* Kraatz ; 61, Head and Prothorax, dorsal view ; 62, Elytra, dorsal view ; 63, Elytra, ventral view.



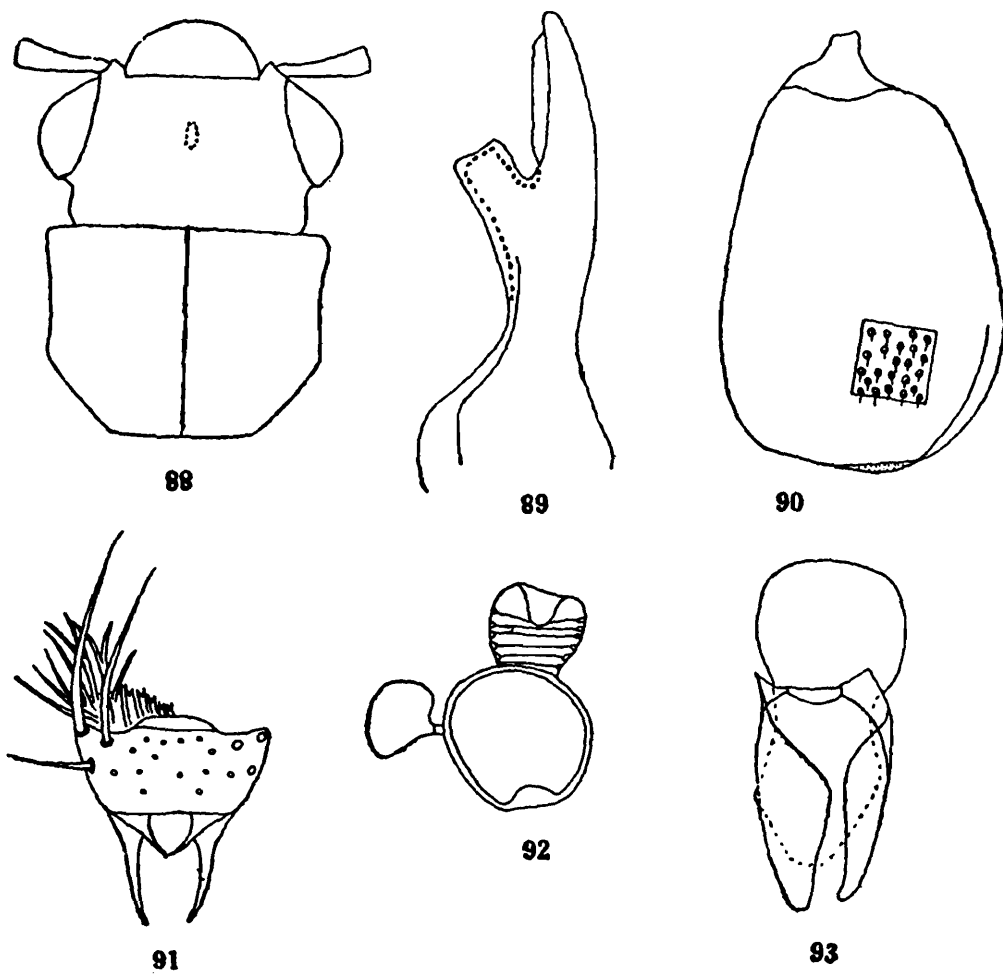
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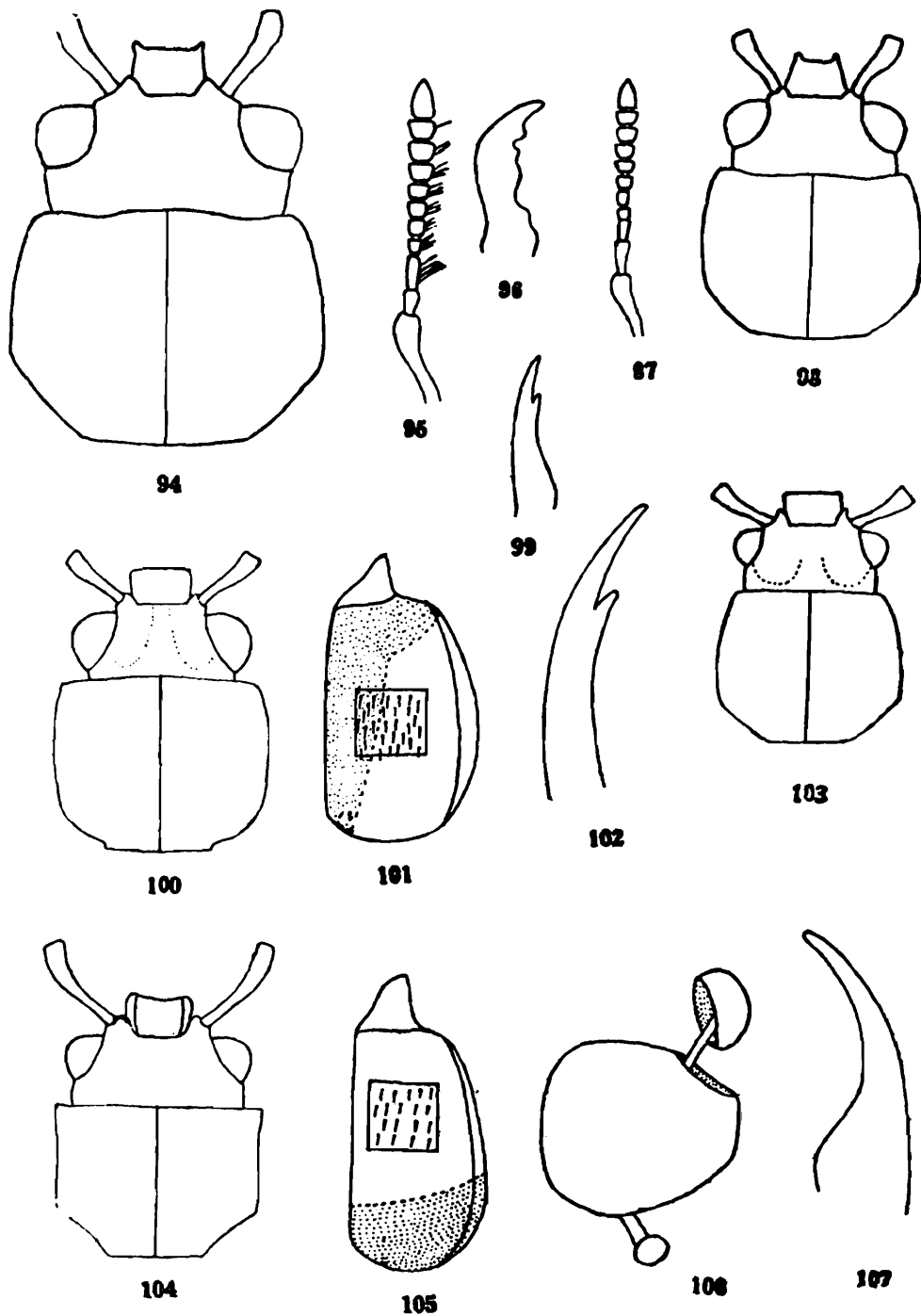
Figs. 70-78. *Bledius (Pucerus) niloticus* Erichson : 70, Head and Prothorax, dorsal view ; 71, Elytra, dorsal view ; 72, Aedeagus, Ventral view ; 73, Sternite six, male ; 74, Sternite seven, male ; *Bledius (Pucerus) tuberculatus* (Fabricius) : 75, Mandible, dorsal view ; 76, Aedeagus, ventral view ; *Bledius (Pucerus) suravius* sp. nov. ; 77, Mandible, dorsal view ; 78, Aedeagus, ventral view.



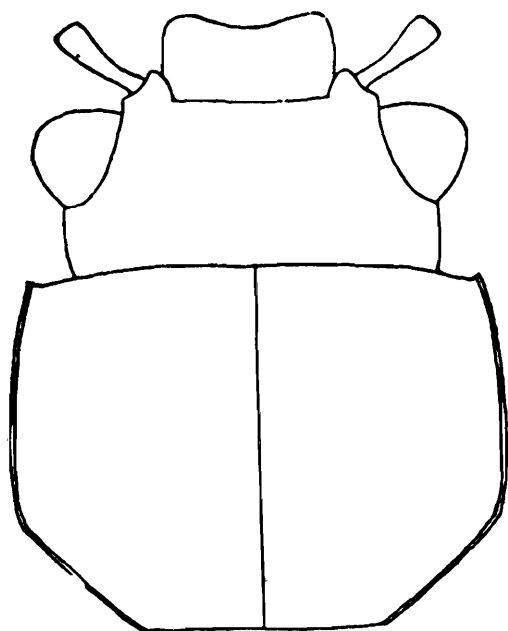
Figs. 79-87. *Bledius (Pucerus) teestaius* sp. nov. : 79, Head and Prothorax, dorsal view : 80, Aedeagus, ventral view : 81, Elytra, dorsal view : 82, Sternite six, male : 83, Sternite seven, male : *Bledius (Pucerus) bali* sp. nov. 84, Head and Prothorax, dorsal view : 85, Elytra, dorsal view : 86, Aedeagus, ventral view ; 87, Sternite seven, male.



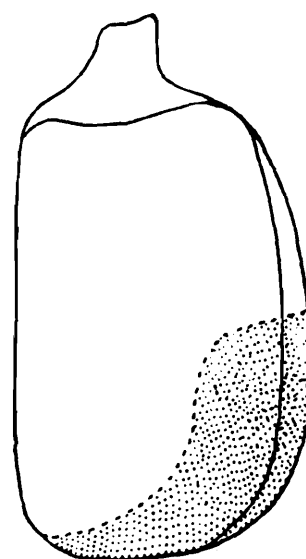
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Figs. 94-107. *Bledius (Hesperophilus) fuscicornis* Cameron : 94, Head and Prothorax, dorsal view : 95, Antenna : 96, Mandible, dorsal view : *Bledius (Hesperophilus) championi* Bernhauer : 97, Antenna ; 98, Head and Prothorax, dorsal view : 99, Mandible, dorsal view : *Bledius (Hesperophilus) dilutipennis* Motschulsky : 100, Head and Prothorax, dorsal view : 101, Elytra, dorsal view : 102, Mandible, dorsal view : *Bledius (Hesperophilus) beesoni* Cameron : 103, Head and Prothorax, dorsal view : *Bledius (Hesperophilus) pulchellus* Kraatz ; 104, Head and Prothorax, dorsal view ; 105, Elytra, dorsal view ; 106, Spermatheca ; 107, Mandible dorsal view.



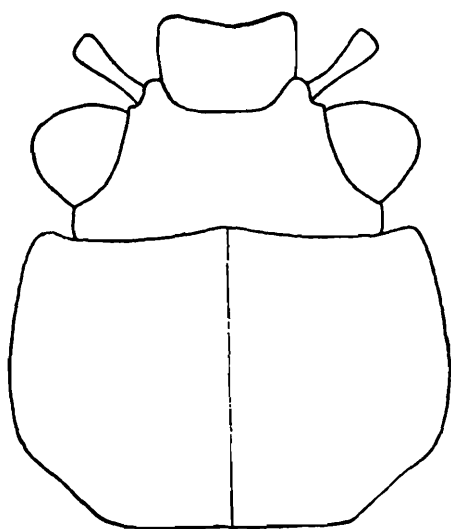
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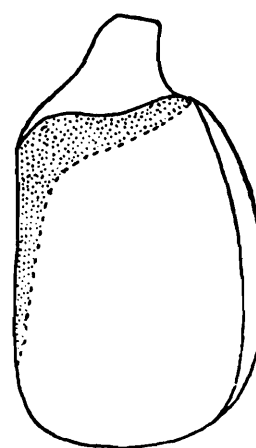
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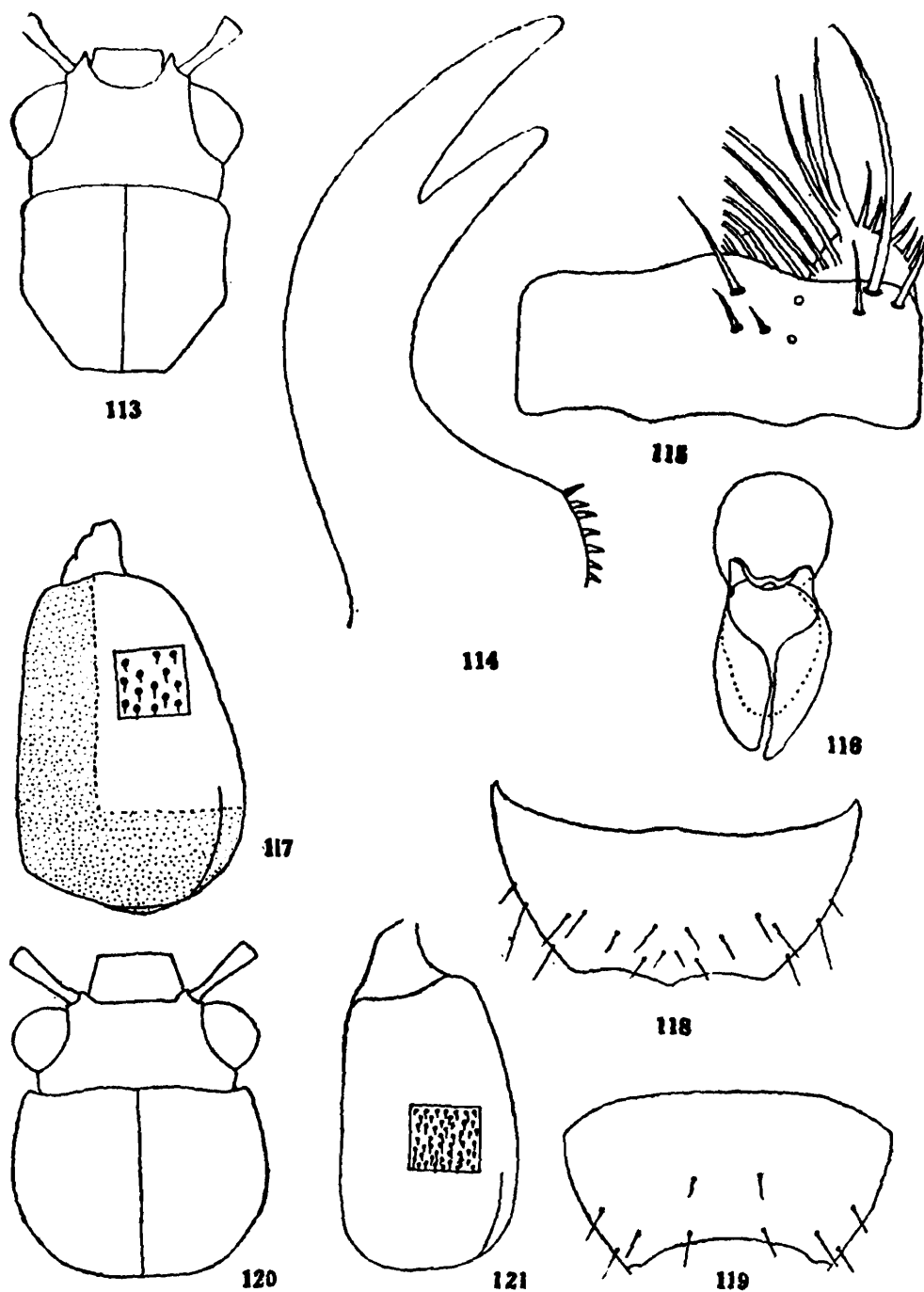


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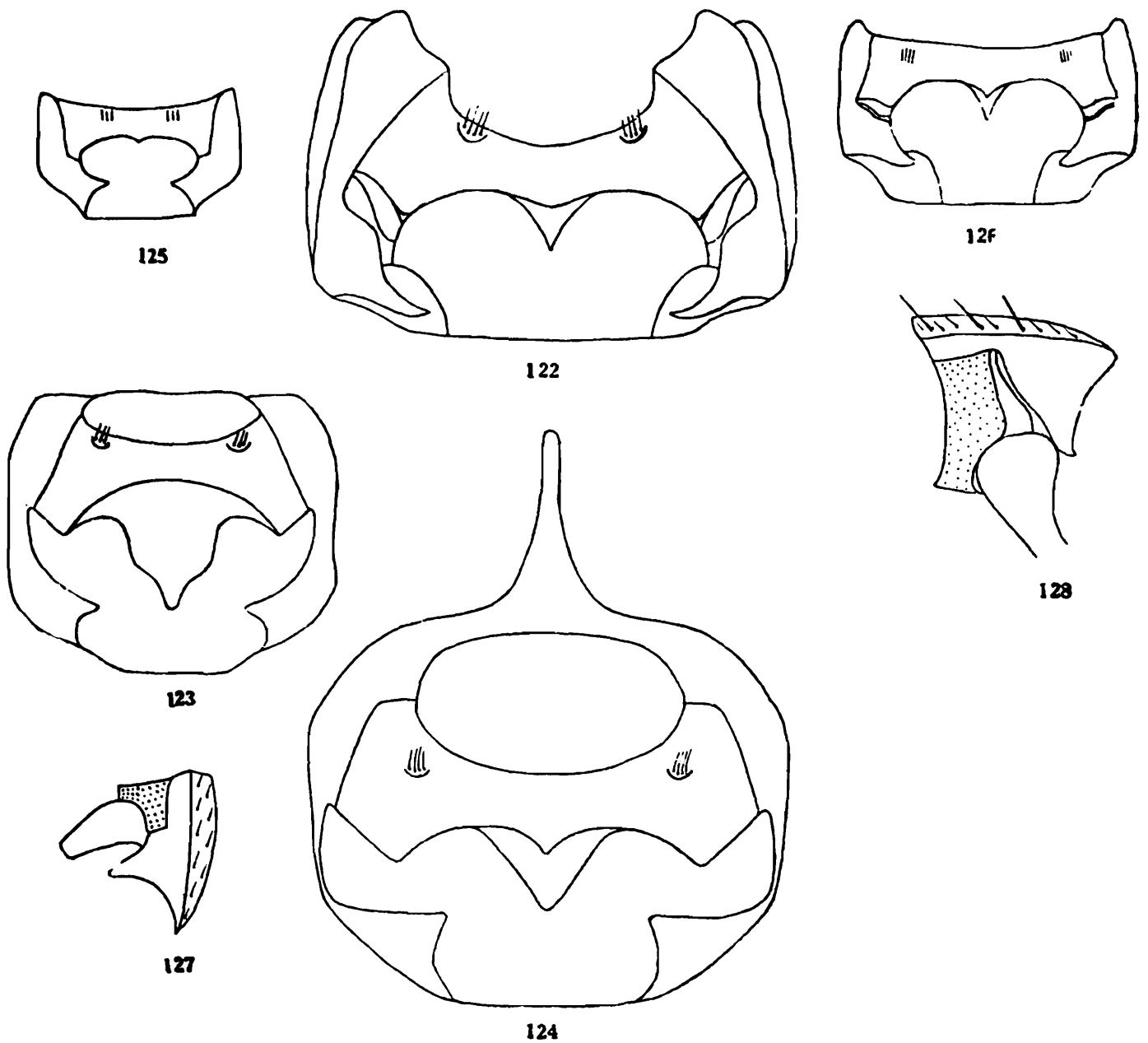


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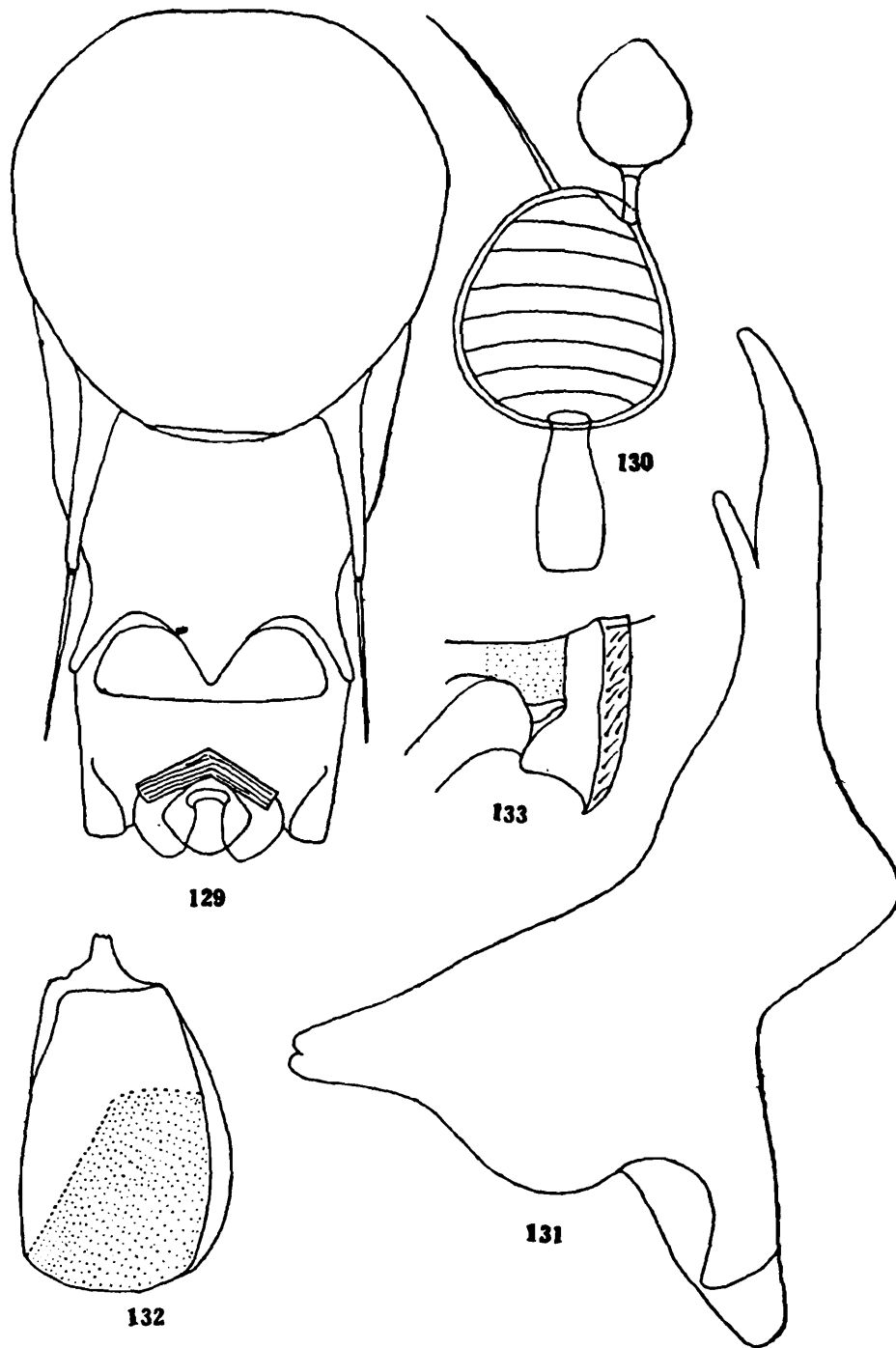
Figs. 108-112. *Bledius (Hesperophilus) birmanus* Cameron : 108, Head and Prothorax, dorsal view : 109, Elytra, dorsal view : 110, Mandible, dorsal view, *Bledius (Hesperophilus) maindroni* Fauvel : 111, Head and Prothorax, dorsal view : 112, Elytra, dorsal view.



Figs. 113-121. *Bledius (Hesperophilus) baltus*, sp. nov. 113, Head and Prothorax, dorsal view; 114, Mandible, dorsal view; 115, Labrum, dorsal view; 116, Aedeagus, ventral view; 117, Elytra, dorsal view; 118, Sternite six, male; 119, Sternite six, male: *Bledius (Hesperophilus) indicus* Cameron: 120, Head and Prothorax, dorsal view; 121, Elytra, dorsal view.



Figs. 122-128. *Bledius* (s. str.) *marusthanicus*, sp. nov. 122, Prothorax, ventral view : *Bledius* (s. str.) *brunnipennis* (Fabricius) : 123, Prothorax, ventral view : *Bledius* (s. str.) *hoplites* Fauvel : 124, Prothorax, ventral view : *Bledius* (*Hesperophilus*) *baltus*, sp. nov. : 125, Prothorax, ventral view : *Bledius* (*Pucerus*) *teestaius*, sp. nov. : 126, Prothorax, ventral view ; *Bledius* (*Hesperophilus*) *baltus*, sp. nov. ; 127, Prothorax, lateral view : *Bledius* (*Pucerus*) *teestaius*, sp. nov. : 128, Prothorax, lateral view.



Figs. 129-133. *Bledius (Hesperophilus) helferi* Fauval :  
 129, Aedeagus, ventral view : 130, Spermatheca ,  
 131, Mandible, ventral view : 132, Elytra, dorsal  
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