

SILVANIDAE (COLEOPTERA : CLAVICORNIA) FROM  
SOUTHERN INDIA AND SRI LANKA IN MUSEUM  
D' HISTOIRE NATURELLE DE GENÈVE

*By*

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(With 21 Text-figures)

Family : SILVANIDAE

Subfamily : SILVANINAE

**1. *Silvanoprus cephalotes* (Reitter)**

(Text-figs. 1, 2)

*Silvanus cephalotes* Reitter, 1876, *Col. Hefte* 15 : 62 (Japan).

*Silvanoprus cephalotes* (Reitter) : Grouvelle, 1912, *Annls Soc. ent. Fr.* 81 : 343.

This species (Text-fig. 1) can be distinguished by its very short temple, lateral margin of prothorax slightly rounded and anterior spine of prothorax minute ; aedeagus (Text-fig. 2) with median lobe slightly tapered at apex, each paramere with a pair of long and short setae. Length 2.20-2.42 mm.

*Specimen examined* : INDIA : TAMIL NADU, Coimbatore, 420 m., 1 ex., ii. 1970, T. R. S. Nathan.

*Distribution* : India ; Bhutan ; Sri Lanka ; Indonesia (Java) ; Japan ; China.

**2. *Silvanoprus longicollis* (Reitter)**

(Text-figs. 3, 4)

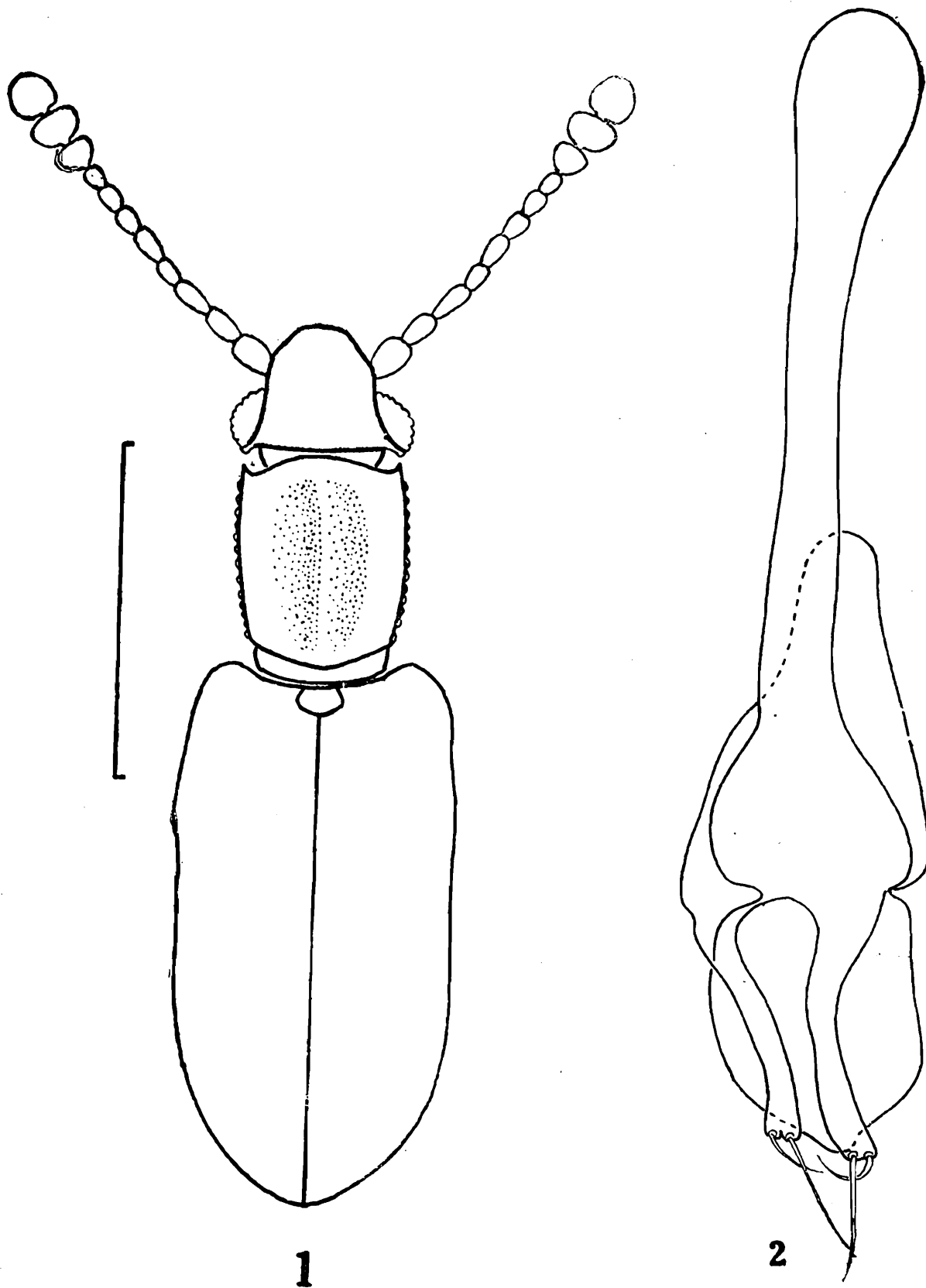
*Silvanus longicollis* Reitter, 1876, *Col. Hefte* 15 : 60 (Sri Lanka)

*Silvanoprus longicollis* (Reitter) : Grouvelle, 1912, *Annls Soc. ent. Fr.* 81 : 341.

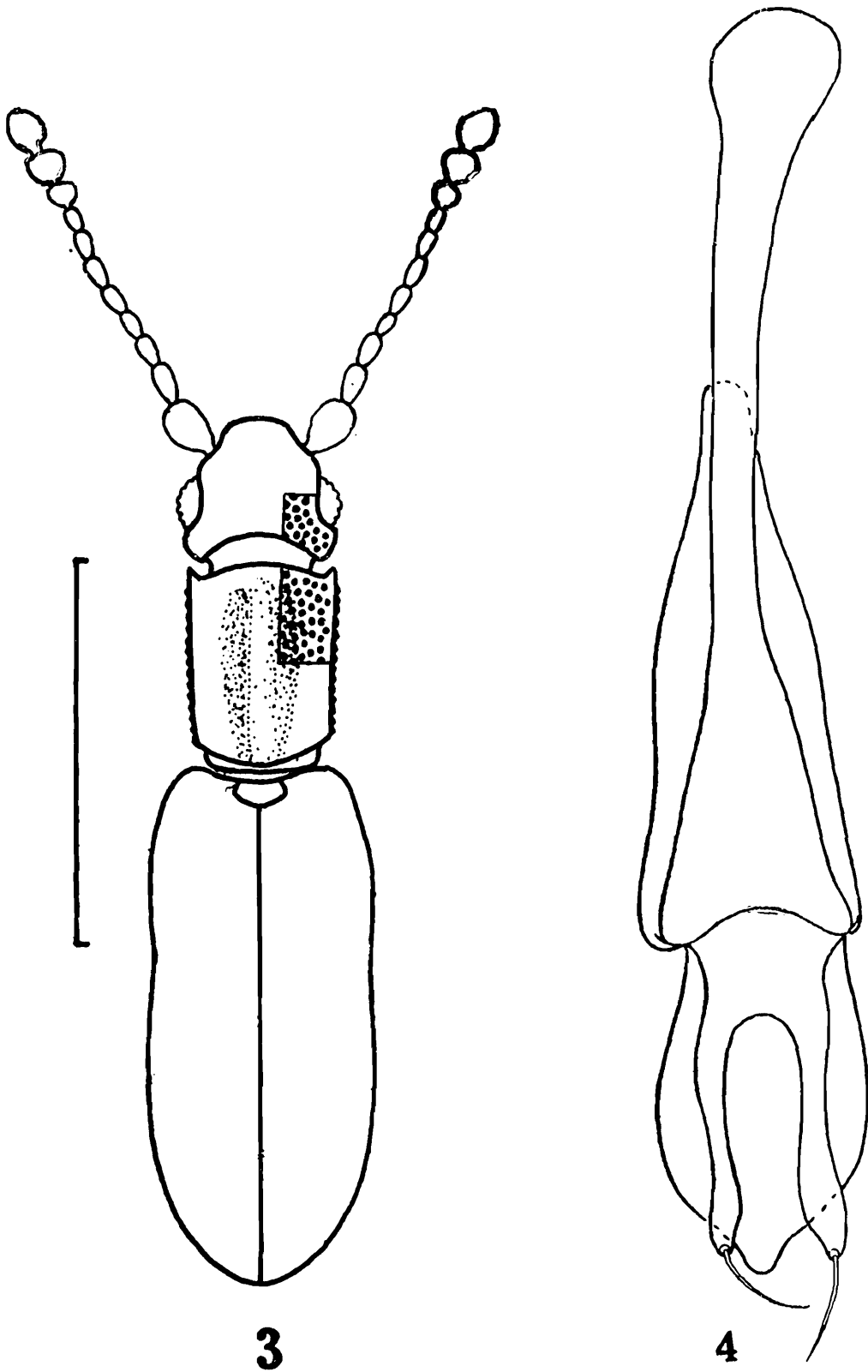
This species (Text-fig. 3) is characterized by its long temple, large antennal scape, and ocellate punctures of head and prothorax ; aedeagus (Text-fig. 4) with median lobe slightly tapered at apex, each paramere with a long apical seta.

*Specimen examined* : INDIA : TAMIL NADU, Coimbatore, 420 m.,  
1 ex., ii. 1970, T. R. S. Nathan.

*Distribution* : India ; Sri Lanka ; Malaysia ; Indonesia (Java) ;  
China ; Japan ; Madagascar ; East Africa.



Text-figs. 1-2. 1. *Silvanoprus cephalotes* (Reitter), Dorsal view (scale=1 mm.).  
2. Aedeagus of *Silvanoprus cephalotes* (Reitter), Dorsal view.



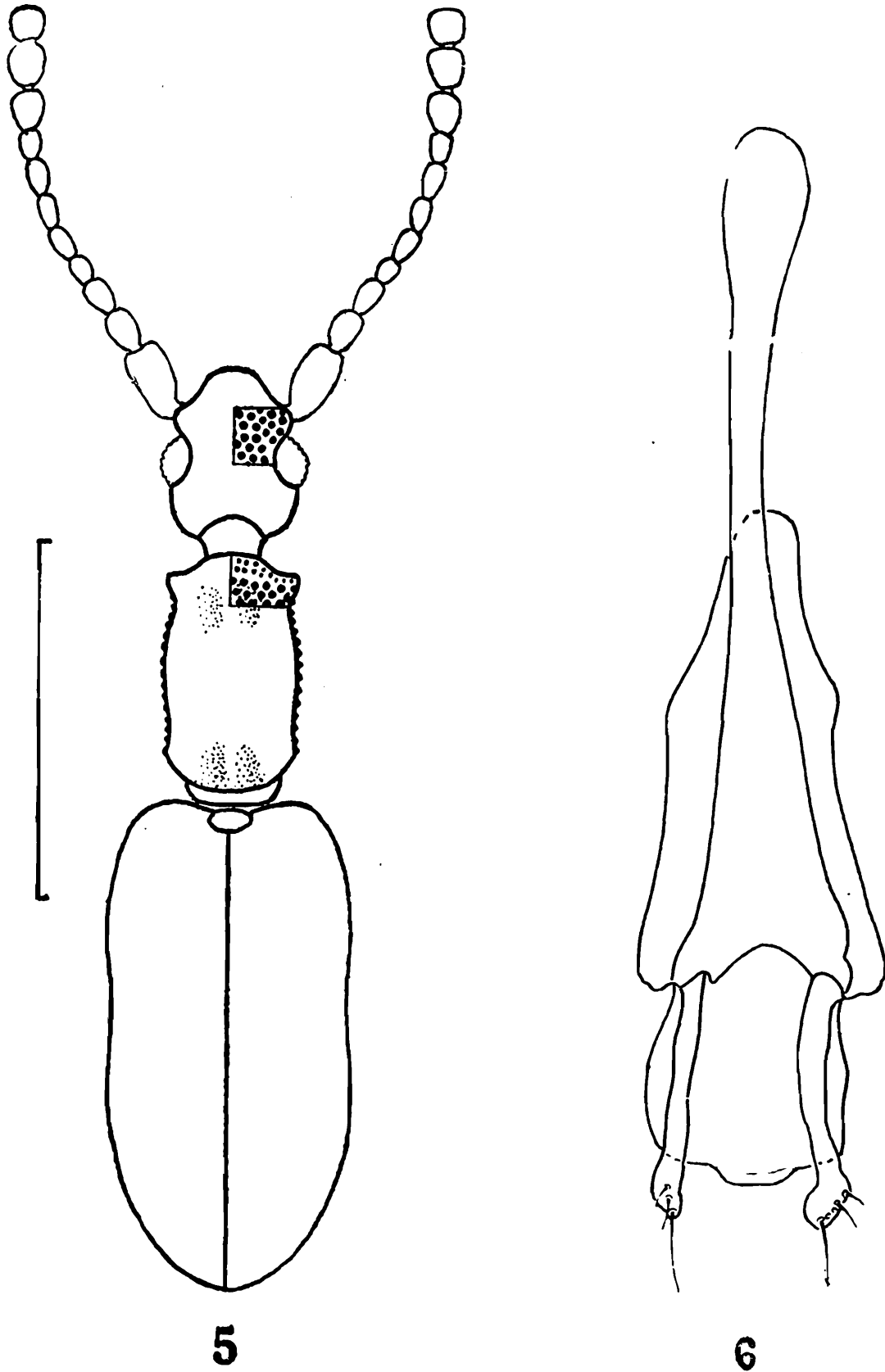
Text-figs. 3-4. 3. *Silvanoprus longicollis* (Reitter), Dorsal view (scale=1 mm.).

4. Aedeagus of *Silvanoprus longicollis* (Reitter), Dorsal view.

### 3. *Silvanoprus* sp.

(Text-figs. 5, 6)

This species (Text-fig. 5) is closely related to *Silvanoprus longicollis* (Reitter) but can be easily separated by its antennal scape about two times as long as broad, antennal joints 9 and 10 distinctly elongated



Text-figs. 5-6. 5. *Silvanoprus* sp., Dorsal view (scale=1 mm.).

6. Aedeagus of *Silvanoprus* sp., Dorsal view.

temple slightly longer than length of eye, anterior spines of prothorax situated beneath the level of anterior margin of prothorax, and lateral margins of prothorax distinctly sinuate across anterior one-fourth; aedeagus (Text-fig. 6) with its apical projection of median lobe broad and blunt, apex of each paramere abruptly broadened and with one

long and two shorter apical setae. The detailed description of this species will be published elsewhere.

*Specimens examined* : SRI LANKA : North Central, Medawachiya, 2 ex., 6.ii.1970, Mussard Besuchet Löbl.

#### 4. *Oryzaephilus surinamensis* (Linnaeus)

(Text-figs. 7, 9)

*Dermestes surinamensis* Linnaeus, 1758, *Systema Naturae* ed. 10, 1 : 357 (Surinam, Dutch Guinea).

*Tenebrio cursor* Linnaeus, 1758, *Systema Nature* ed. 10, 1 : 418.

*Tenebrio surinamensis* (Linnaeus) : Degeer, 1775, *Memoires pour Servir a l' Histoire des Insectes* 5 : 54.

*Anobium frumentarium* Fabricius, 1775, *Systema Entomologia* : 62.

*Ips sexdentata* Herbst, 1783, *Archiv der Insectengeschichte* 4 : 31.

*Silpha sexdentata* (Herbst) : Gmelin, 1790, *Systema Nature* 1 (4) : 1619.

*Silpha surinamensis* : Gmelin, 1790, *Systema Naturae* 1 (4) : 1620.

*Ips frumentaria* (Fabricius) : Olivier, 1790, *Entomologie, ou Historie Naturelle des Insectes* 2 (18) *Ips* : 10.

*Scarites cursor* (Linnaeus) : Fabricius, 1792, *Entomologia Systematica* 1 : 96.

*Colydium frumentarium* : Fabricius, 1792, *Entomologia Systematica* 1 : 496.

*Dermestes sexdentatus* Fabricius, 1792, *Entomologia Systematica* 1 : 232.

*Lyctus sexdentatus* (Fabricius) : Kugelann, 1794, *Schneider's Magazine* 1 : 566.

*Colydium sexdentatum* (Fabricius) : Paykull, 1800, *Fauna Suecica, Insecta* 3 : 313.

*Corticaria frumentaria* (Fabricius) : Marsham, 1802, *Coleoptera Britannica* : 107.

*Silvanus sexdentatus* (Fabricius) : Gyllenhal, 1813, *Insecta Suecica Classis, I, Coleoptera sive Eleuterata* 1 (3) : 406.

*Silvanus surinamensis* : Stephens, 1829, *A Systematic Catalogue of British Insects* : 92.

*Silvanus bicornis* Erichson, 1846, *Naturgeschichte der Insecten Deutschlands* 1, *Coleoptera*, 3 : 337.

*Silvanus surinamensis* var. *bicornis* : Reitter, 1890. *Wien. ent. Ztg.* 9 : 255.

*Silvanus (Oryzaephilus) surinamensis* : Ganglbauer, 1899, *Die Käfer von Mitteleuropa* 3 : 584.

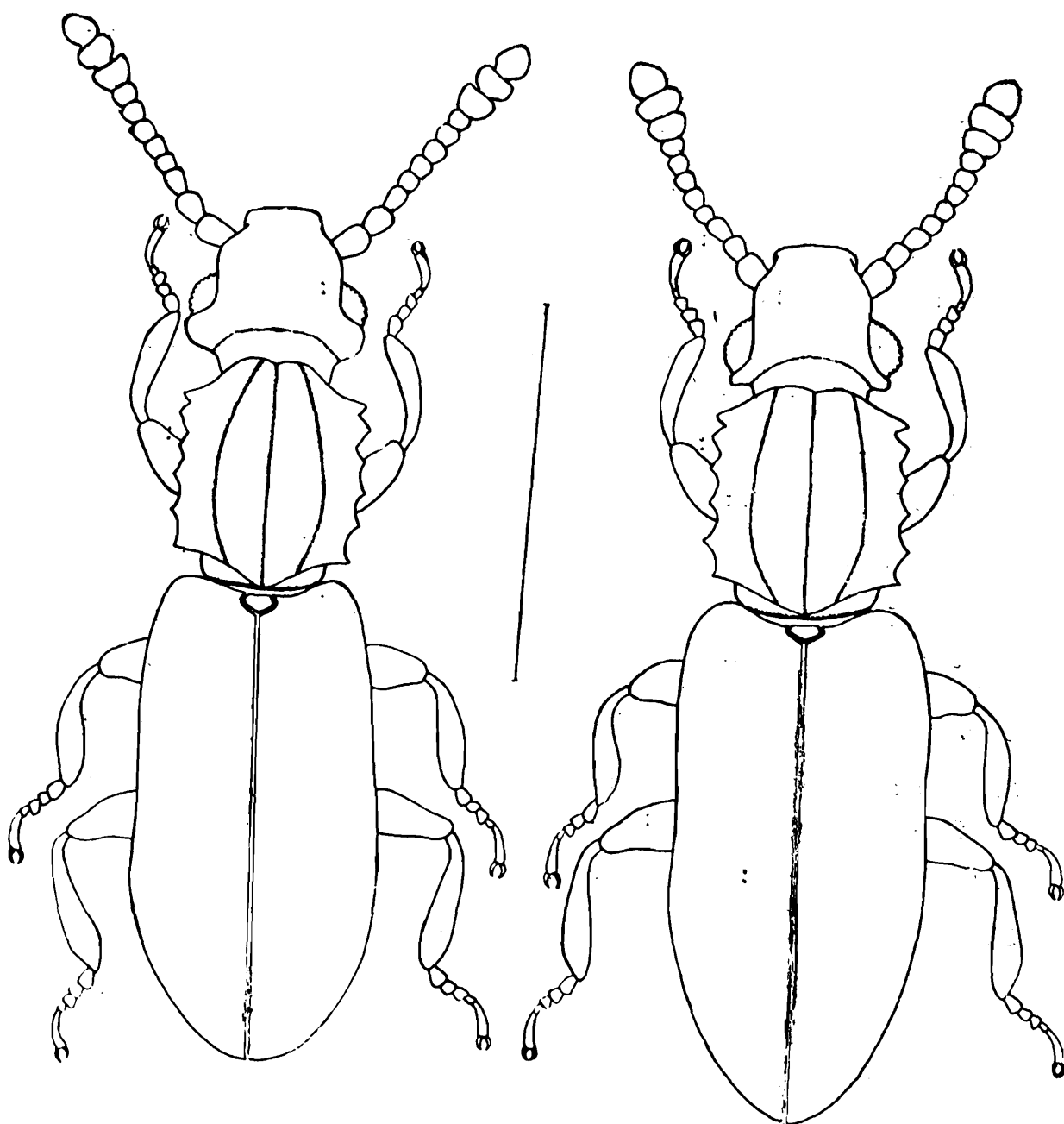
*Oryzaephilus surinamensis* : Reitter, 1911, *Fauna Germanica* 3 : 46 ; Grouvelle, 1912, *Annls Soc. ent. Fr.* 81 : 318 ; Halstead, 1980, *Zool. J. Linn. Soc.* 69 : 286-290.

*Common name* : Saw-toothed grain beetle.

This is a most notorious insect pest that attacks almost all stored food products of vegetable origin and has a world-wide distribution. This species (Text-fig. 7) can easily be recognised by its prothorax with six lateral teeth on each side and three longitudinal carinae on pronotum, temple about as long as 3.5 to 4 eye facets and about as long as eye ; aedeagus (Text-fig. 9) with parameres long and slender, each paramere with numerous short setae and a few long apically forked setae on outer margin and apex. Length 2.75-3.50 mm.

*Specimen examined* : INDIA : TAMIL NADU. Coimbatore, 440 m., 1 ex., ii. 1970, T. R. S. Nathan.

*Distribution* : Cosmopolitan.



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Text-figs. 7-8. 7, *Oryzaephilus surinamensis* (Linnaeus), Dorsal view ; 8, *Oryzaephilus mercator* (Fauvel), Dorsal view (scale=1 mm.).

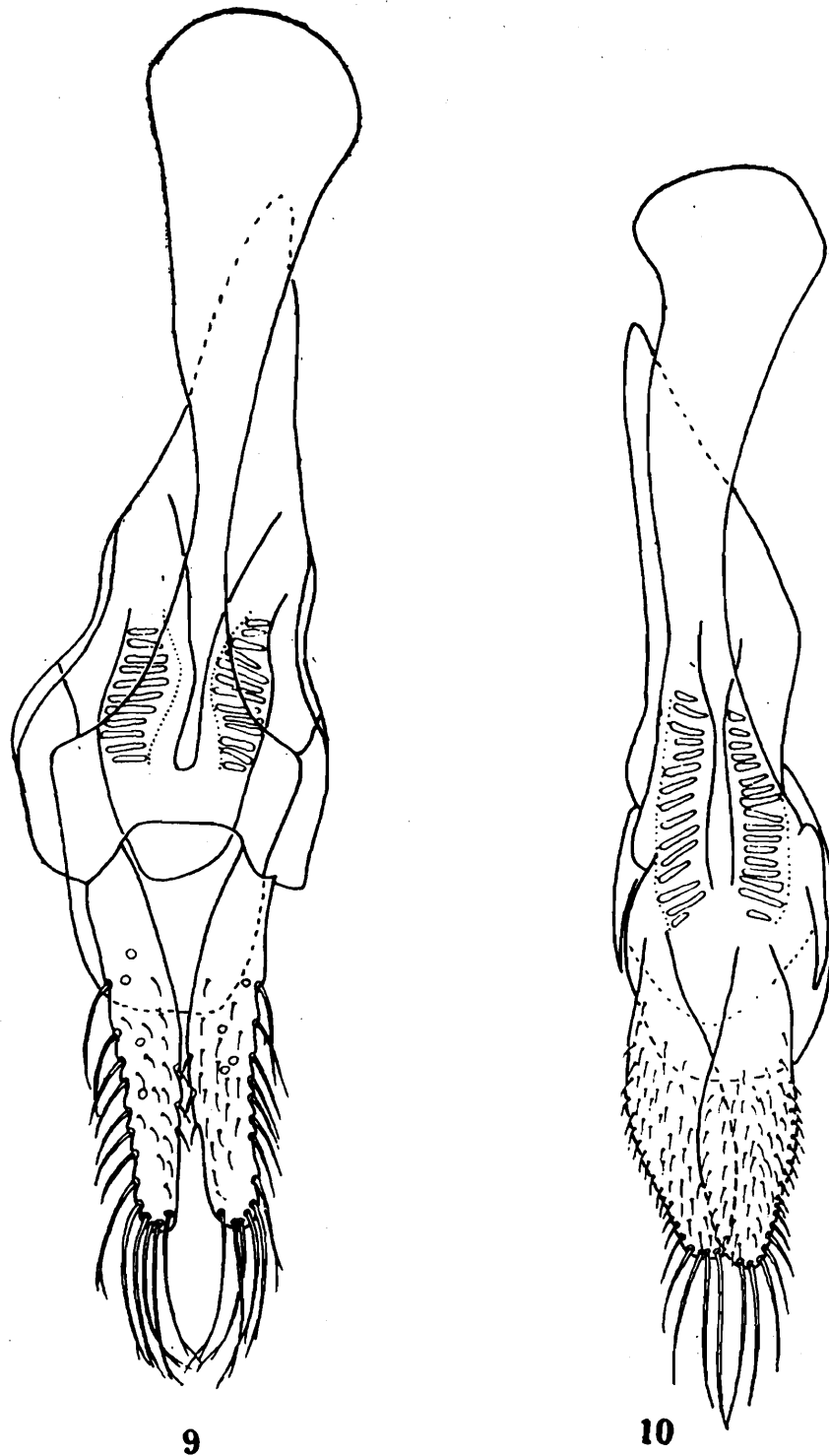
5. *Oryzaephilus mercator* (Fauvel)

(Text-figs. 9, 10)

*Silvanus mercator* Fauvel, 1889, *Revue Ent.* 9 : 132 (France, Africa, New Caledonia);  
Reitter, 1890, *Wien. ent. Ztg.* 9 : 255.

*Silvanus gossypii* Chittenden, 1897, *Bull. Bur. Ent. U. S. Dep. Agric.* 8 : 13.

*Silvanus (Oryzaephilus) mercator*; Ganglbauer, 1899, *Die Käfer von Mitteleuropa*  
3 : 585.



Text-figs. 9-10. Aedeagus, Dorsal view : 9, *Oryzaephilus surinamensis* (Linnaeus);  
10, *Oryzaephilus mercator* (Fauvel).

*Oryzaephilus mercator* : Reitter, 1911, *Fauna Germanica* 3 : 46 ; Slow, 1958, *Bull. ent. Res.* 49 : 27 ; Halstead, 1980, *Zool. J. Linn. Soc.* 69 : 306-309.

This is also a well known stored grain pest, closely related to *O. surinamensis* but can easily be separated by its temple about as long as 2 to 2.5 eye facets or about one-third as long as eye (Text-fig. 8) ; its aedeagus (Text-fig. 10) with parameres slightly broader across posterior half, and each paramere with numerous small setae and a few long setae only at apex. Length 3.00-3.50 mm.

*Specimen examined* : INDIA : TAMIL NADU, Coimbatore, 440 m., 1 ex., ii. 1970, T. R. S. Nathan.

*Distribution* : Cosmopolitan.

## 6. *Monanus concinnulus* (walker)

(Text-figs. 11, 12)

*Monotoma concinnulus* Walker, 1858, *Ann. Mag. nat. Hist.* (3) 2 : 207 (Sri Lanka).

*Emporius concinnulus* (Walker) : Grouvelle, 1908, *Annls Soc. ent. Fr.* 77 : 489.

*Monanus* (s. str.) *concinnulus* (Walker) : Grouvelle, 1912, *Annls Soc. ent. Fr.* 81 : 371 ; Pal, 1981, *Oriental Ins.* 15 : 247.

Grouvelle (1908 and 1912) dealt with this species and mentioned its distribution as cosmopolitan. Pal (1981) recorded it from the different States of India. A distinct transverse spot on elytra is the most conspicuous character for recognising this species (Text-fig. 11). The aedeagus (Text-fig. 12) with parameres elongated, each paramere with an apical long and two short setae. Length 1.60-2.35 mm.

*Specimen examined* : INDIA : TAMIL NADU, Anaimalai Hill, Aliyar Dam, 550 m., 1 ex., 17. xi. 1972, Besuchet Löbl Mussard.

*Distribution* : India : Assam, West Bengal, Bihar, Uttar Pradesh, Delhi, Tamil Nadu, Karnataka. Outside India this species is widely distributed both in the Old and New Worlds.

Subfamily : PSAMMOECINAE

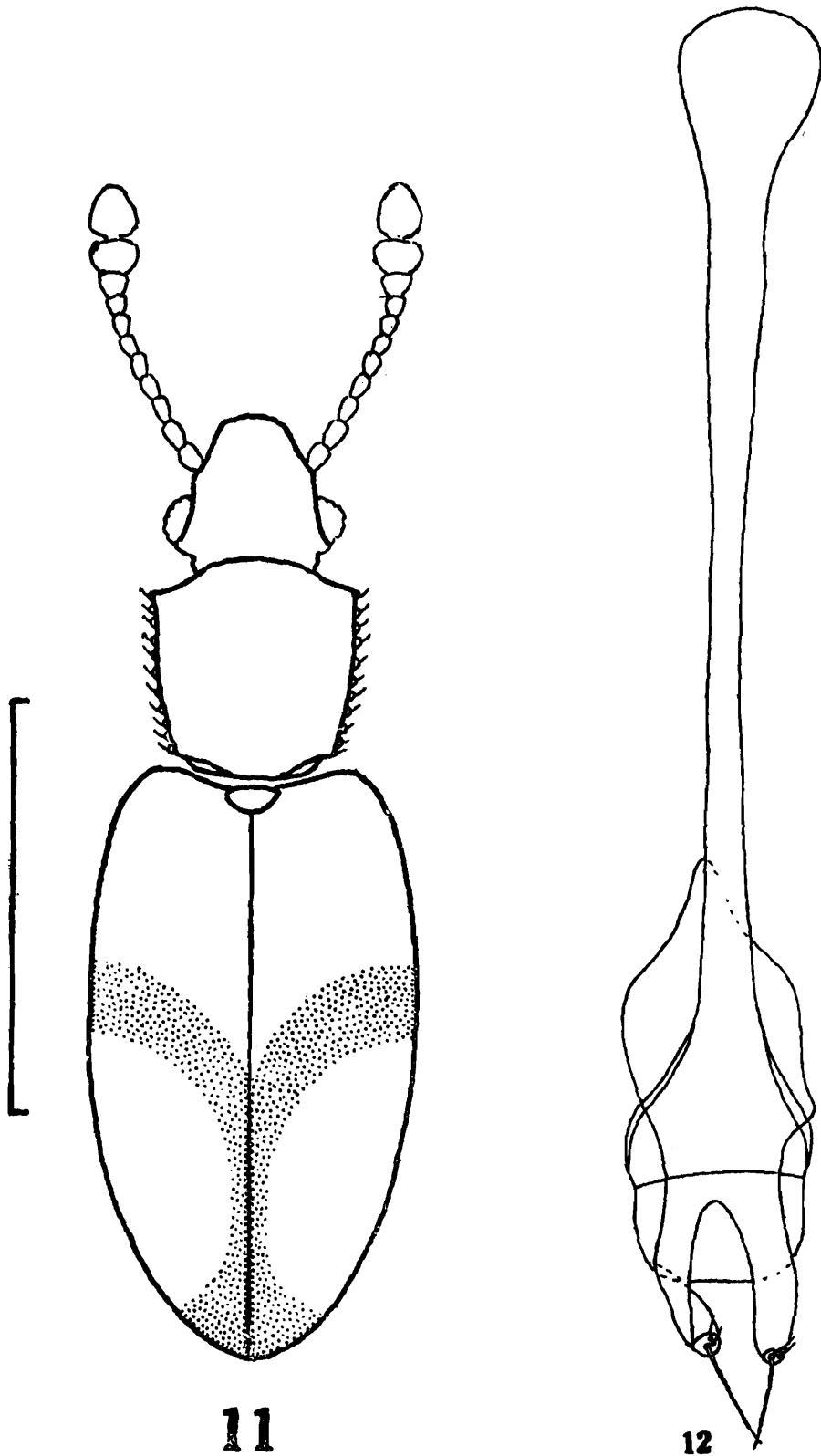
## 7. *Psammoecus andrewesi* Grouvelle

(Text-fig. 13)

*Psammoecus andrewesi* Grouvelle, 1908, *Annls Soc. ent. Fr.* 77 : 476 (Nilgiri Hills : India).

Grouvelle (1908) recorded this species from Tamil Nadu (South India) and Pal and SenGupta (1979) recorded this species from Meghalaya. This is a distinct species and can be easily recognised by





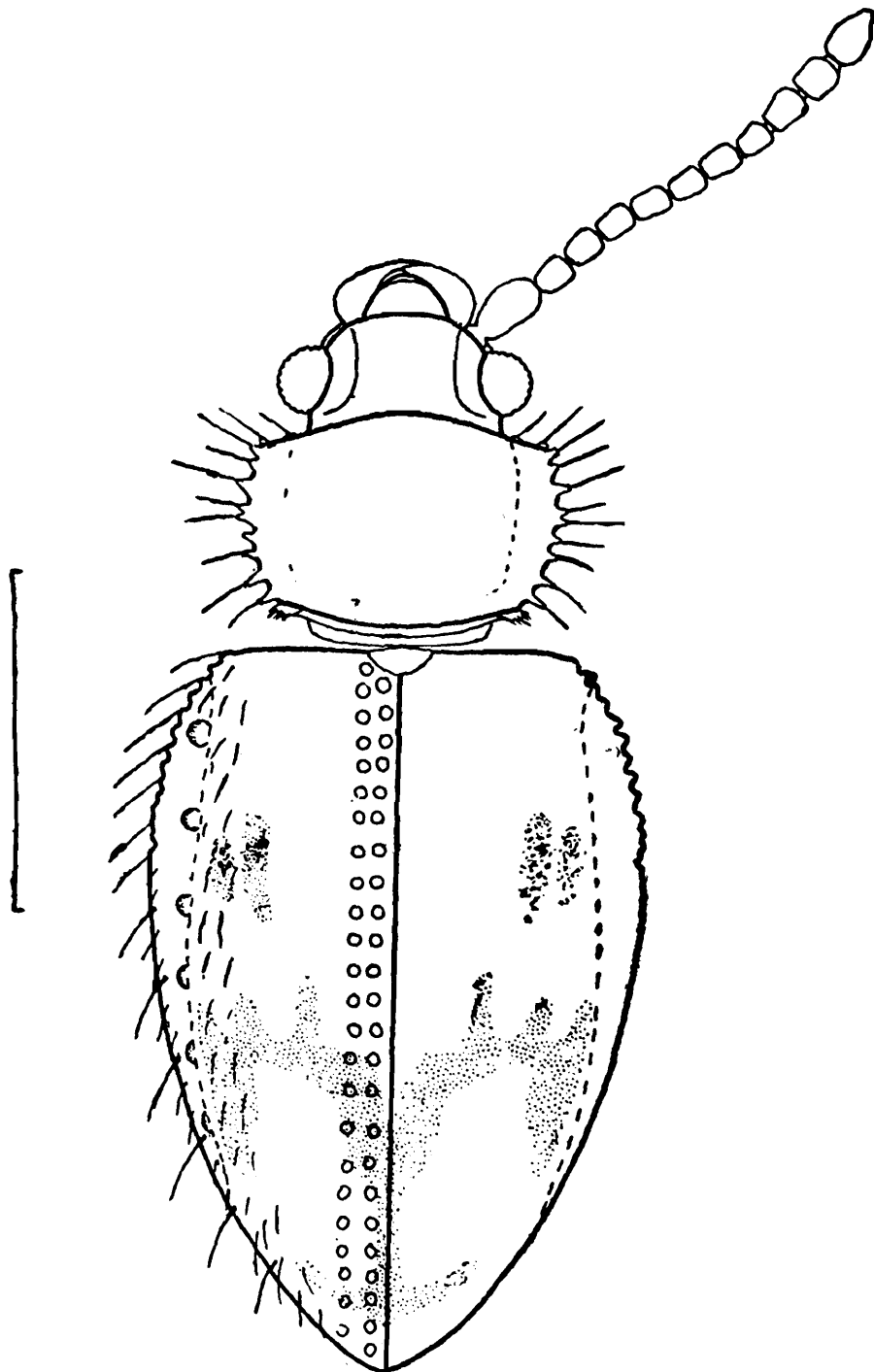
Text-figs. 11-12. 11. *Monanus concinnulus* (Walker), Dorsal view (scale=1 mm.).

12. Aedeagus of *Monanus concinnulus* (Walker), Dorsal view.

its elytra being distinctly narrowed behind middle and subacuminate at apex, antenna unicolourous, blackish linear longitudinal spots on each elytron, head across eyes distinctly narrower than prothorax across anterior margin, lateral margins of prothorax and elytra explanate and six large glandular punctures along lateral margin of each elytron, Length 2.60-3.35 mm.

*Specimen examined* : INDIA : TAMIL NADU, Nilgiri Hills, 71 km. E. Coonoor, 1350m., 1 ex., 19. xi. 1972, Besuchet Löbl Mussard.

*Distribution* : India : Meghalaya, Tamil Nadu.



**13**

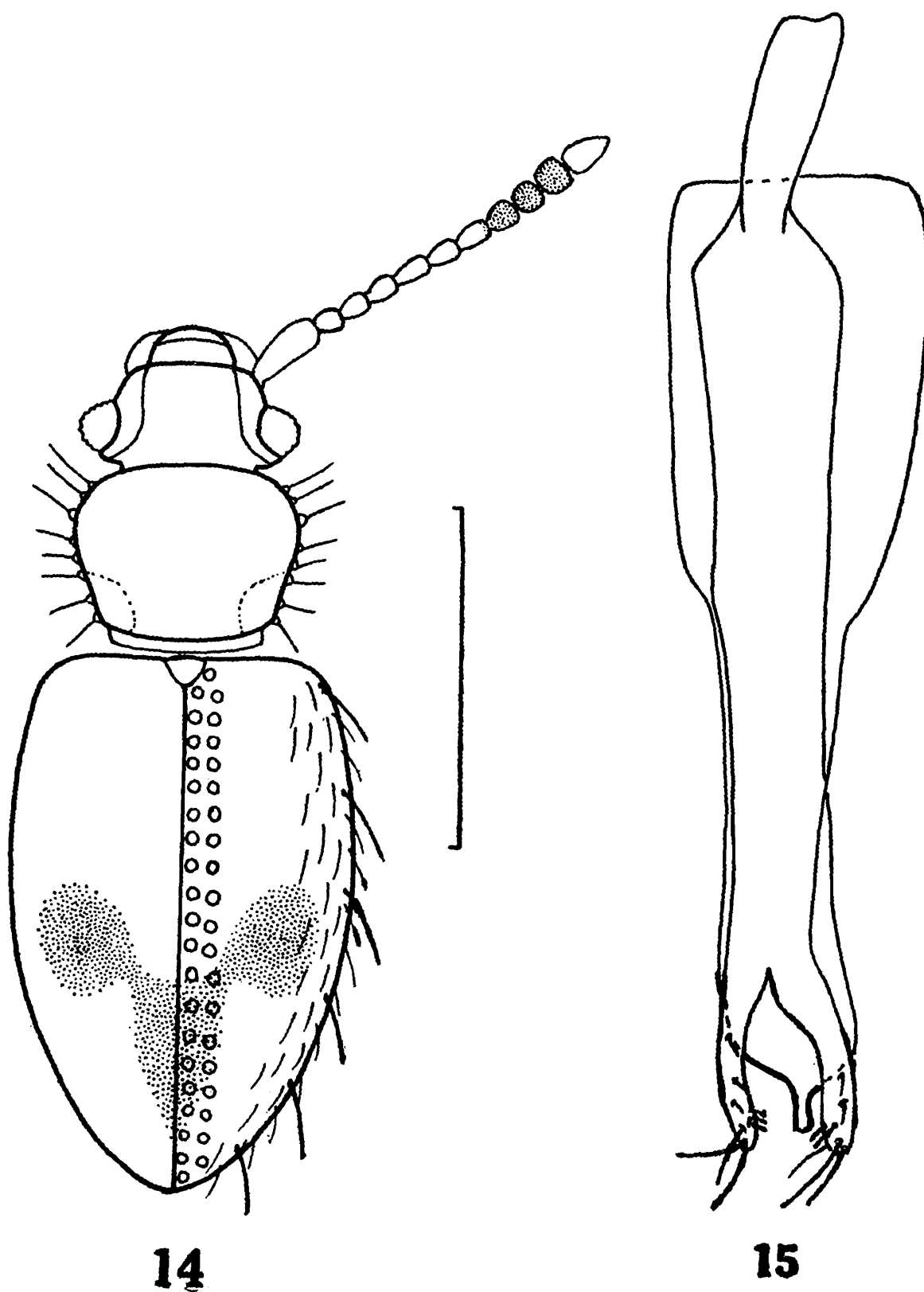
Text-fig. 13. *Psammoecus andrewesi* Grouvelle, Dorsal view (scale=1 mm.).

### 8. *Psammoecus lepidus* Grouvelle

(Text-figs. 14, 15)

*Psammoecus lepidus* Grouvelle, 1908, *Annls Soc. ent. Fr.* 77. 483 (Shembaganur, Madura district : India).

Grouvelle (1908) described this species from Madura district : Tamil Nadu (South India) and Pal and Sengupta (1979) recorded this

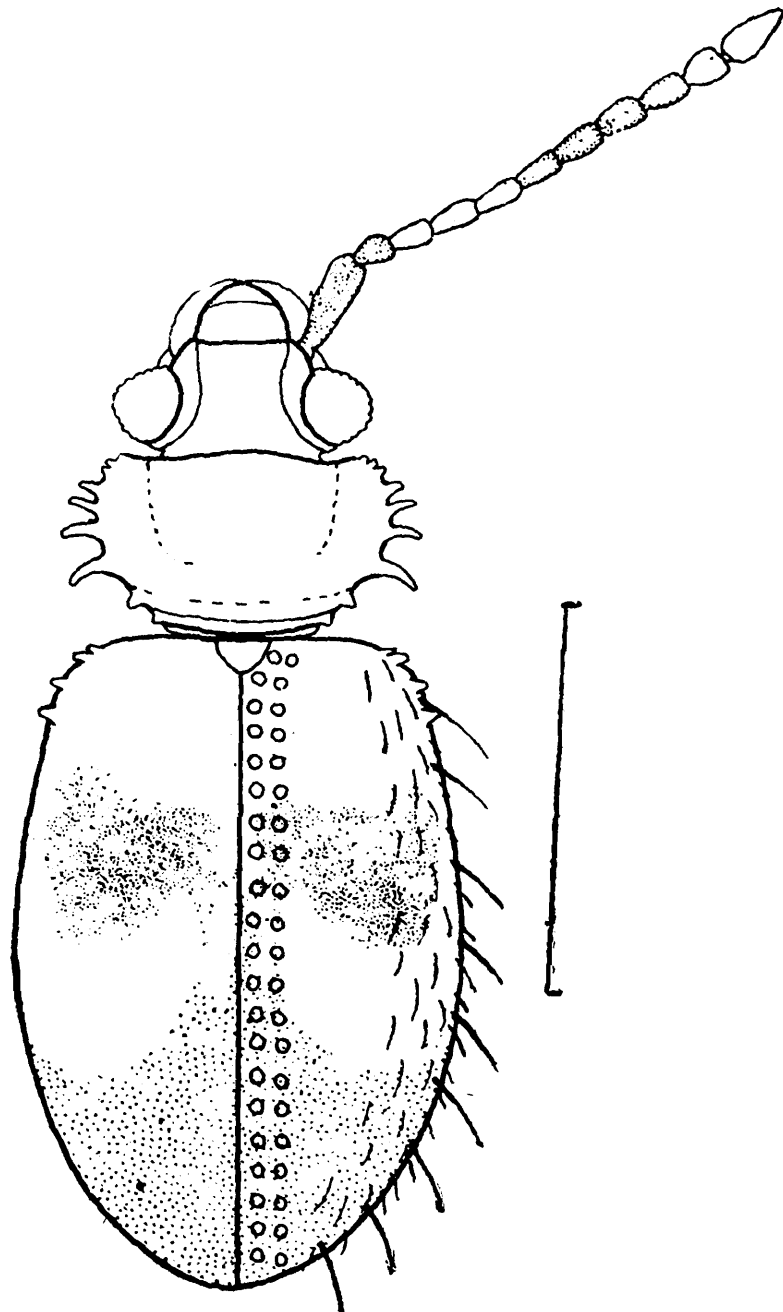


Text-figs. 14-15. 14. *Psammoecus lepidus* Grouvelle, Dorsal view (scale=1 mm. ).

15. Aedeagus of *Psammoecus lepidus* Grouvelle, Dorsal view.

species from Bhutan. This species (Text-fig. 14) is closely related to *P. harmandi* Grouvelle but can be separated by its apical part of antennal joint 7 and joints 8-10 blackish, head and prothorax blackish and elytra reddish brown with blackish spots, lateral margin of prothorax slightly wavy and sinuate before posterior angle ; aedeagus (Text-fig. 15)

with median lobe broad, abruptly narrowed and rather broadly pointed at apex, parameres long and slender, each paramere with a few apical long setae and few short setae on its surface. Length 2.25-2.85 mm.



**16**

Text-fig. 16. *Psammoecus delicatus* Grouvelle, Dorsal view (scale=1 mm.).

*Specimens examined* : INDIA : KERALA, Cardamom H., Multapalti pres Munnar, 1700 m., 1 ex., 24. xi. 1972, Besuchet Löbl Mussard ; TAMIL NADU, Palni H., Berijam Lake, 2150 m., 56 ex., 14. xi. 1972, Besuchet Löbl Mussard ; Kodaikanal, 2100 m., 14 ex., Besuchet Löbl Mussard ; 10 km. N-O Kodaikanal, 2150 m., 6 ex., 15. xi. 1972, Besuchet Löbl Mussard.

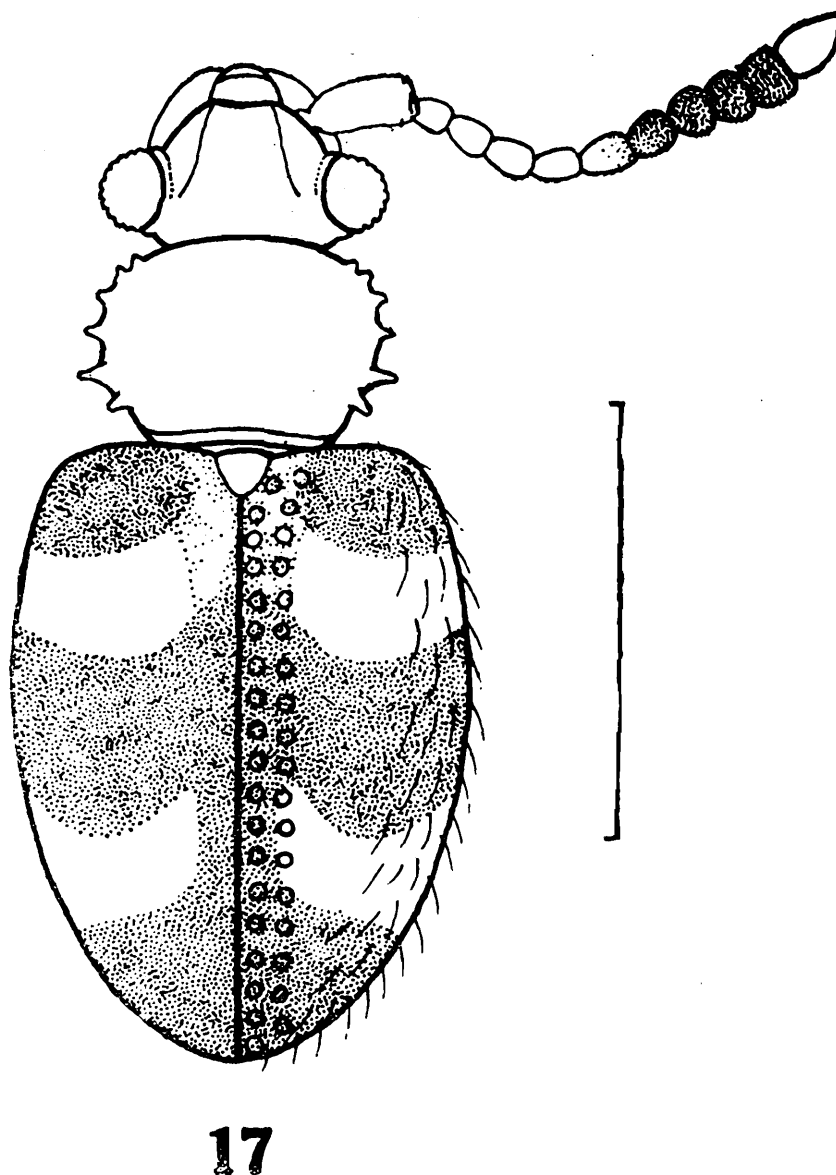
*Distribution* : India : Kerala, Tamil Nadu ; Bhutan.

9. *Psammoecus delicatus* Grouvelle

(Text-fig. 16)

*Psammoecus delicatus* Grouvelle, 1908, *Annls. Soc. ent. Fr.* 77 : 487 (Sri Lanka) ; Pal, 1985, *Misc. publ. Rec. zool. Surv. India, Occ. pap.* 71 : 21.

This species (Text-fig. 16) can be recognised by its prothorax being markedly transverse, strongly depressed in front of prothoracic base and its lateral sides widely explanate ; teeth on lateral margin of



Text-fig. 17. *Psammoecus simoni* Grouvelle, Dorsal view (scale=1 mm.).

prothorax narrow, markedly long and a few of them about four times as long as broad ; antennal joints distinctly elongated, scape at least three times longer than wide ; antennal scape and pedicel, apical part of joint 6 and joints 7-9 blackish and joints 10 and 11 yellowish white. Length 2.41-2.57 mm.

*Specimens examined* : INDIA : KERALA, Cardamom H., Vallara fall, 450-500 m., 1 ex., 25. xi. 1972, Besuchet Löbl Mussard ; SRI LANKA (Central), Kandy, 600 m., 1 ex., 15. i. 1970, Mussard Besuchet Löbl ; 1 ex., ( particular locality not given ), i. 1965, R. Mussard.

*Distribution* : India : Kerala ; Sri Lanka.

### 10. *Psammoecus simoni* Grouvelle

(Text-fig. 17)

*Psammoecus simonis* Grouvelle, 1892, *Annls Soc. ent. Fr.* 61 : 287 (Philippines).

*Psammoecus simoni* Grouvelle : Grouvelle, 1908, *Annls Soc. ent. Fr.* 77 : 488.

This is a distinct species and can be recognised by its two transverse characteristic spots on elytra and two small rounded spots near humeral angles, and transverse spots interconnected by longitudinal sutural spot. Length 2.13-2.58 mm.

*Specimen examined* : SRI LANKA (Central), Mahaweli Ganga, à 7 miles de kandy, 450 m., 1 ex., 15. i. 1970.

*Distribution* : Sri Lanka ; Malaysia ; Indonesia ; Philippines ; Seychelles Is. ; Madagascar.

### 11. *Psammoecus trimaculatus* Motschulsky

(Text-figs. 18, 19)

*Psammoecus trimaculatus* Motschulsky, 1858, *Etud. ent.* 7 : 45 (Sri Lanka) ; Grouvelle, 1908, *Annls Soc. ent. Fr.* 77 : 476.

? *Cucujus incommodus* Walker, 1859, *Ann. Mag. nat. Hist.* (3) 3 : 53.

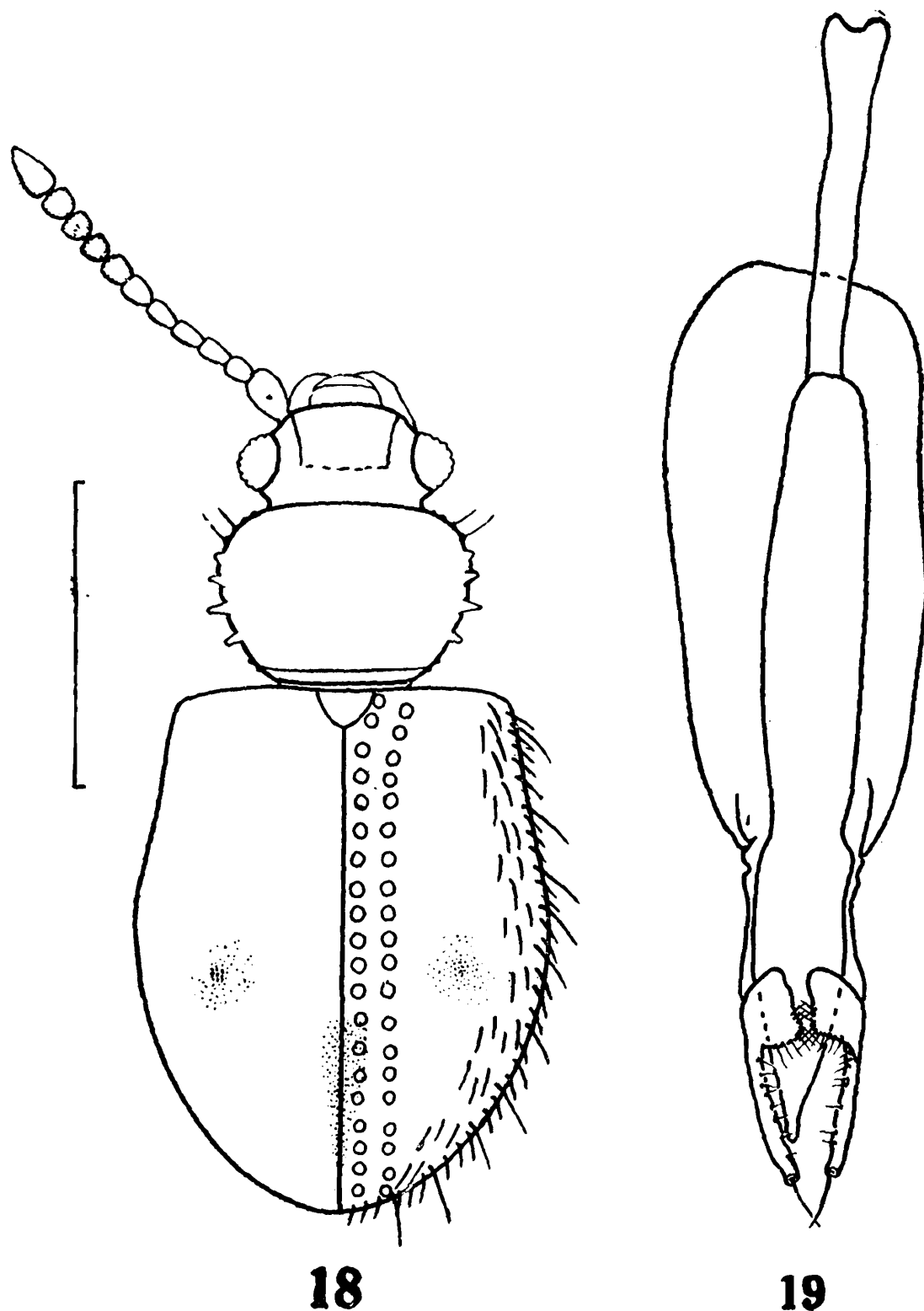
*Telephanus cruciger* Waterhouse, 1876, *Entomologist's mon. Mag.* 13 : 125.

Motschulsky (1858) described this species from Sri Lanka, Grouvelle (1908) synonymised ?*Cucujus incommodus* Walker and *Telephanus cruciger* Waterhouse with this species. Pal and Sengupta (1979) recorded this species from Bhutan. *P. trimaculatus* (Text-fig. 18) is closely related to *P. impressicollis* Grouvelle but can be easily separated by the presence of longitudinal sutural spot on elytra, prothorax less transverse and transverse depression in front of prothoracic base indistinct, and lateral teeth hardly twice wider than long. Aedeagus (Text-fig. 19) with median lobe long, gradually narrowed and pointed at apex ; parameres long and slender, each paramere with a long apical seta and few short setae along its inner margin, a few short and rather dense setae also at its broad base. Length 2.23-2.94 mm.

*Specimens examined* : INDIA : TAMIL NADU, Coimbatore, 440 m., 3 ex., 22. xi. 1972, Besuchet Löbl Mussard ; KERALA, Cardamom H.

Periyar env. Aranya Nivas, 950 m., 1 ex., 4. xi. 1972, Besuchet Löbl  
Mussard.

*Distribution* : India : Tamil Nadu, Kerala ; Bhutan ; Sri Lanka,  
Burma ; Malayasia ; Japan ; Madagassar,

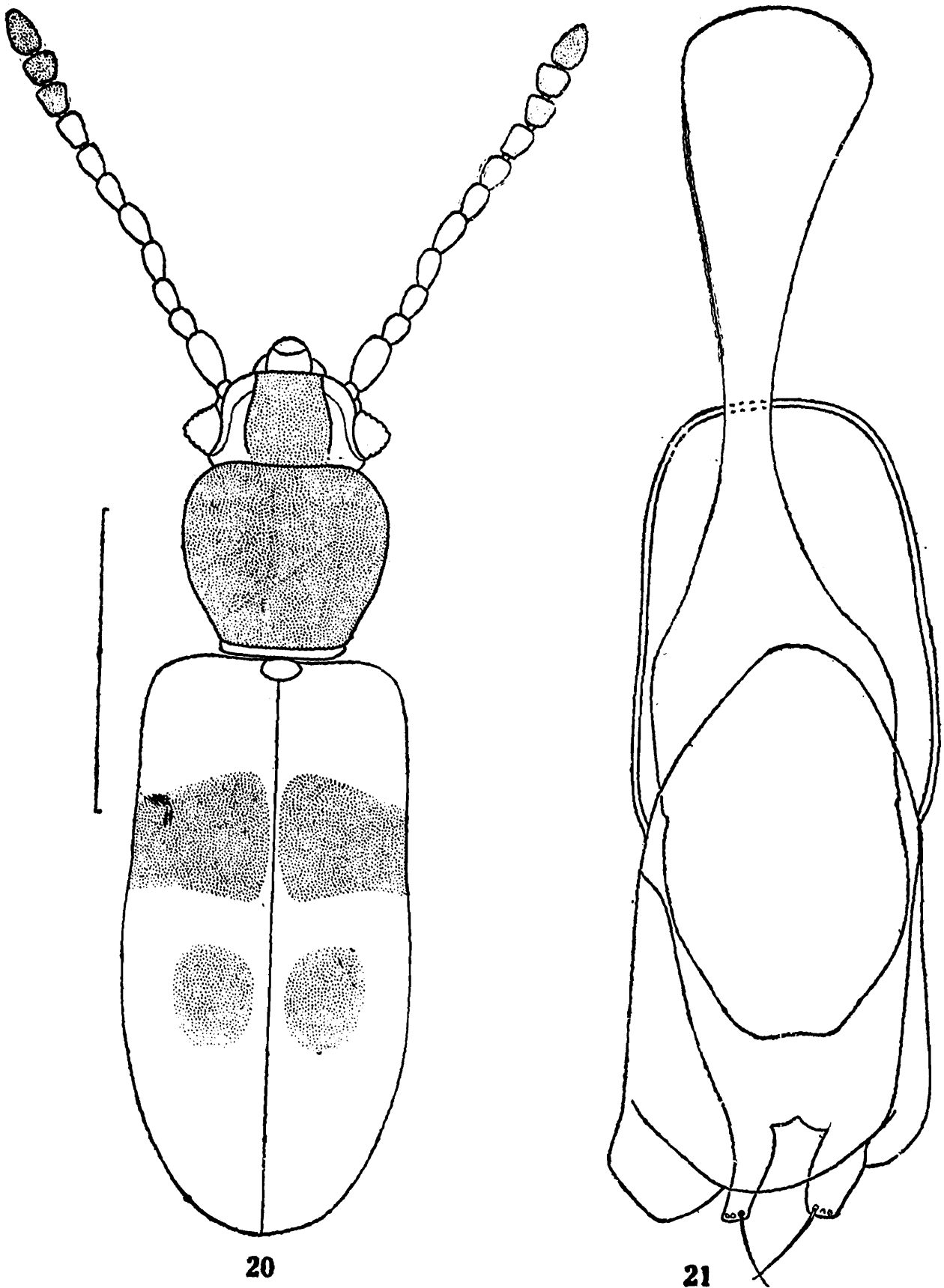


Text-figs. 18-19. 18. *Psammoecus trimaculatus* Motschulsky, Dorsal view (scale=1 mm.).  
19. Aedeagus of *Psammoecus trimaculatus* Motschulsky, Dorsal view.

## Subfamily CRYPTAMORPHINAE

12. *Cryptamorpha infans* Grouvelle

(Text-figs. 20, 21)

*Cryptamorpha infans* Grouvelle, 1908, *Annls Soc. ent. Fr.* 77 : : 474 (Madura : India).Text-figs. 20-21. 20. *Cryptamorpha infans* Grouvelle, Dorsal view (scale=1 mm.).21. Aedeagus of *Cryptamorpha infans* Grouvelle, Dorsal view.



This (Text-fig. 20) is a distinct species, can be easily separated from other Indian species of *Cryptamorpha* by its longitudinal grooves on vertex of head converging posteriorly but not united, eyes projected, and puncturation on vertex and pronotum coarse and dense ; aedeagus (Text-fig. 21) with median lobe broadly pointed, parameres short and each paramere with one long apical seta. Length 2.33-2.69 mm.

*Specimens examined* : INDIA : TAMIL NADU, Palni Hills, Kodaikanal, 2250 m., 3 ex., 12. xi. 1972, Besuchet Löbl Mussard ; Palni Hills, Berijam Lake, 2150 m., 1 ex., 14. xi. 1972. Besuchet Löbl Mussard.

*Distribution* : India : Tamil Nadu.

#### SUMMARY

96 specimens of *Silvanidae* collected from South India (Tamil Nadu and Kerala) and Sri Lanka present in Museum d' Histoire Naturelle de Genève comprise 12 species under 5 genera. *Psammoecus delicatus* Grouvelle is recorded for the first time from India.

During 1965 to 1972 Besuchet, Mussard and Löbl collected 96 specimens of *Silvanidae* from Southern India, chiefly from Nilgiri Hills, Cordamom Hills and Sri Lanka. These specimens were made available to the writer for study which represent 12 species under 5 genera. One species of the genus *Silvanoprus* Reitter is new to science which has also been recorded by Dr. D. G. H. Halstead of Pest Infestation Control Laboratory Slough, England.

#### ACKNOWLEDGEMENTS

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