

NOTES ON SOME INDIAN PAUSSIDAE WITH THE DESCRIPTION OF A NEW SPECIES.

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This paper is intended to be a supplement to the work of Fowler, who monographed the family in the "Fauna of British India" series in 1912. It deals with the taxonomic study of those species which were poorly studied by Fowler and includes descriptions of those which have been described from India since his volume appeared. In addition I am describing a species new to science. The more important feature of my work is that I am describing the structure of the male genital tube of this family for the first time and I have attempted to furnish keys for separating the genera and species on the basis of this character. Raffray,¹ however, described and figured the genital organs in both sexes of a few species but his account appears to be based on the superficial examination of these organs. The great taxonomic importance of the structure of the genitalia is now well recognized by workers in the several orders of insects. The paper also contains new locality records and observations on the secondary sexual characters of certain species already known. Wherever the synonymy of the genera and species, noticed in this paper, are not satisfactorily dealt with by Fowler in his "Fauna" volume, I have given a complete account of the more important references to literature in such cases.

My notes are based mainly on the collection of the Zoological Survey of India, but through the kindness of Mr. T. Bainbrigge Fletcher, R. N., Imperial Entomologist, Dr. C. F. C. Beeson and Mr. J. C. M. Gardner, I have also had the opportunity of examining the Paussid material of the Agricultural Research Institute, Pusa and the Forest Research Institute, Dehra Dun, while stray specimens from other institutions sent to the Zoological Survey of India from time to time have also passed through my hands.

My acknowledgments are due to Lt.-Col. R. B. Seymour Sewell, I.M.S., for granting me the facilities for carrying on this work, to Dr. Hem Singh Pruthi for the suggestion that, in addition to other characters, I should also study the structure of the male genitalia and for the benefit of his advice in connection with such study and for revising my manuscript. I am also indebted to Professor P. E. Wasmann, S. J. for his valuable assistance in the verification of certain identifications. I have acknowledged in the text the help that I have received from other workers during the progress of my work.

In describing the genitalia I have chiefly followed the work of Sharp and Muir², who described these organs in several Coleoptera, including that of a Paussid, *Orthopterus smithi* Macl. The text-figures were drawn

¹ Raffray, *Nouv. Arch. Mus. Hist. Nat. Paris*, (2) VIII, pp. 325-334, pl. 16 (1885).

² Sharp and Muir, *Trans. Ent. Soc. London*, pp. 477-642 (1912).

by myself with the aid of the *camera lucida* and were prepared for publication with the assistance of Babus D. N. Bagchi and A. C. Chowdhury, the experienced artists of the Zoological Survey of India.

Family PAUSSIDÆ Westwood.

Subfamily PROTOPAUSSINÆ Gestro.

Genus **Protopaussus** Gestro.

1912. *Protopaussus*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 447-448.
 1912. *Protopaussus*, Wasmann, *Tijdschr. Entomol.*, LV, pp. 255-260.

Wasmann (*l. c.* p. 257) and Heller¹ have provided keys for the determination of the species of the genus. The key given below is based on their keys and includes the recently described *P. almorensis* Champion² from Sitoli, Central Almora division, United Provinces.

Key to the Species.

- Antennal segment 3 clearly longer than 2, much longer than broad.
- i. The three terminal segments of the antennae longer than broad *P. walkeri* Waterhouse.
 - ii. The three terminal segments of the antennae not longer than broad *P. feae* Gestro.
- Antennal segment 3 scarcely longer than 2, not longer than broad.
- i. Terminal segment ovate.
 - A. Antennal segments 2—9 spherical *P. bakeri* Heller.
 - B. Antennal segments 2—10 spherical *P. javanus* Wasmann.
 - ii. Terminal segment not ovate.
 - Antennal segments 7—10 quadrate *P. almorensis* Champion.

Subfamily CERAPTERINÆ Raffray.

Male genital tube.—Characterized by the asymmetrical slit situated at the distal end of the median lobe. Median lobe lunate or nearly so in appearance. Median orifice formed by the asymmetrical slit.

Genus **Cerapterus** Swederus.

1788. *Cerapterus*, Swederus, *Kongl. Svensk. Vetensk.-Akad. Handl.*, IX, p. 203.
 1838. *Cerapterus* (*Orthopterus*, *Arthropterus*, *Phymatopterus*). Westwood, *Entomol. Mag.*, V, pp. 502-503.
 1841. *Cerapterus* (*Orthopterus*, *Arthropterus*, *Phymatopterus*, *Homopterus*, *Pleuropterus*), id., *Trans. Linn. Soc. London*, XVIII, pp. 581-585.
 1843-45. *Cerapterus* (*Orthopterus*, *Arthropterus*, *Phymatopterus*, *Homopterus*, *Pleuropterus*), id., *Arcana Ent.*, II, pp. 5-9.
 1860. *Euthysoma*, Thomson, *Mus. Scient.*, II, p. 68.
 1885. *Cerapterus*, Raffray, *Nouv. Arch. Mus. Hist. Nat. Paris*, (2) VIII, pp. 336-337.
 1905. *Cerapterus*, Desneux, *Wytsman Gen. Ins. Coleopt. Paussidae*, fasc. XXXV, p. 9.
 1912. *Cerapterus*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 450.
 1926. *Cerapterus* (*Orthopterus*, *Eucerapterus*, *Euthysoma*), Kolbe, *Deutsch. Ent. Zeitsch.*, pt. V, pp. 377-384.

¹ Heller, *Wiener Entomol. Zeitung.*, XXXIII, pp. 204-205 (1914).

² Champion, *Entomol. Month. Mag.*, LIX, pp. 44-45 (1923).

Fowler and some other writers, e.g. Desneux (*l. c.* p. 9) and Raffray (*l. c.* p. 337, footnote 1) distinguished the sexes in this genus mainly by the shape and the pilosity of the ventral surface of the tarsal joints. Raffray's statement that the male is characterized by the projection of its aedeagus seems to be true of some specimens only. Kolbe (*l. c.* pp. 374—376) stated that the apical joint of the club of the antennae in the male is furnished with dense fine punctures, while the same organ in the female is more smooth and shining, and that the proportionate lengths of the second and the third joints of the club of the antennae differ in the two sexes. In the female of *C. latipes* Swederus I find that the apex of the pygidium is bluntly acuminate, the point being sulcate below. This feature may be considered as a secondary sexual character as it serves as a protection for the delicate ovipositor at the time of egg-laying.

Male genital tube.—Of the same plan as in *Orthopterus smithi*. Macl. (see Sharp and Muir) from which it differs in that the ventral portion of the distal end of the median lobe is acuminate, while in that of *Orthopterus* it is produced into a small curved knob. *Cerapterus* can be distinguished from *Pleuropterus*, the only other Indian genus of this subfamily, by the structure of the male genital tube as follows:—

Key to the Genera.

Median lobe distinctly lunate, distal end near apex dorsally tumid and curved at point, ventrally acuminate	<i>Cerapterus</i> Swederus.
Median lobe not distinctly lunate, distal end near apex dorsally produced into a regular broad point	<i>Pleuropterus</i> West- wood.

***Cerapterus latipes* Swederus.**

(Text-figures 1, 2.)

1788. *Cerapterus latipes*, Swederus, *Kongl. Svensk. Vetensk.-Akad. Handl.*, IX, pp. 203-204., pl. 6, figs. 1-6.
 1838. *Cerapterus latipes*, Westwood, *Entomol. Mag.*, V, p. 502.
 1841. *Cerapterus latipes*, id., *Trans. Linn. Soc. London*, XVIII, p. 582.
 1843-45. *Cerapterus latipes*, id., *Arcana Ent.*, II, p. 6, pl. 49, fig. 1.
 1912. *Cerapterus latipes*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 450-451, fig. 203.
 1926. *Cerapterus latipes*, Kolbe, *Deutsch. Ent. Zeitsch.*, pt. V, p. 384.

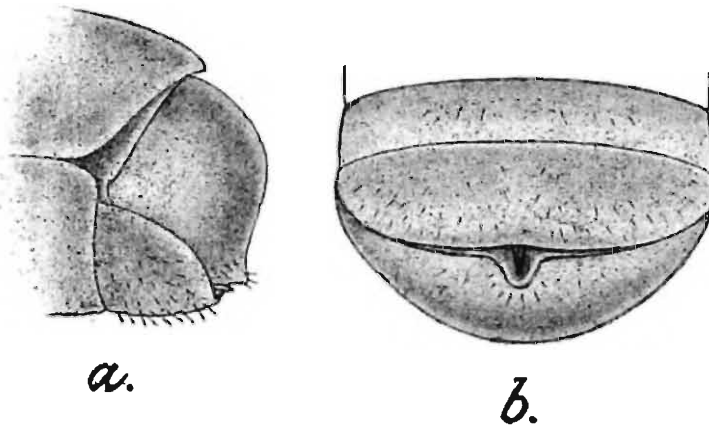
The species has not been found outside India although Swederus (*l. c.* p. 203) gives for its original habitat "Honduras, Central America" but, as Westwood¹ remarks, Donovan has repudiated this "on the authority of General Davies, the original possessor of the insect (who) stated it to be a native of Bengal"

Additional localities.—Bengal : Madhupur (*J. A. Betham* 5-III-08) ; Ceylon : Bandarawela, 4,000 ft. (*S. W. Kemp* IX-13), Dimbula, Habarana, Kandy, Madulsima, Mirigama, Nitre Cave, Pundaluoya ; Madras Presidency : Chittore (*N. S. Brodie* 25-VII-10), Madras (*Capt. W. Patton*), Neutral Saddle, 5,000 ft., Palni Hills (*S. W. Kemp* 13-15-IX-22 "under

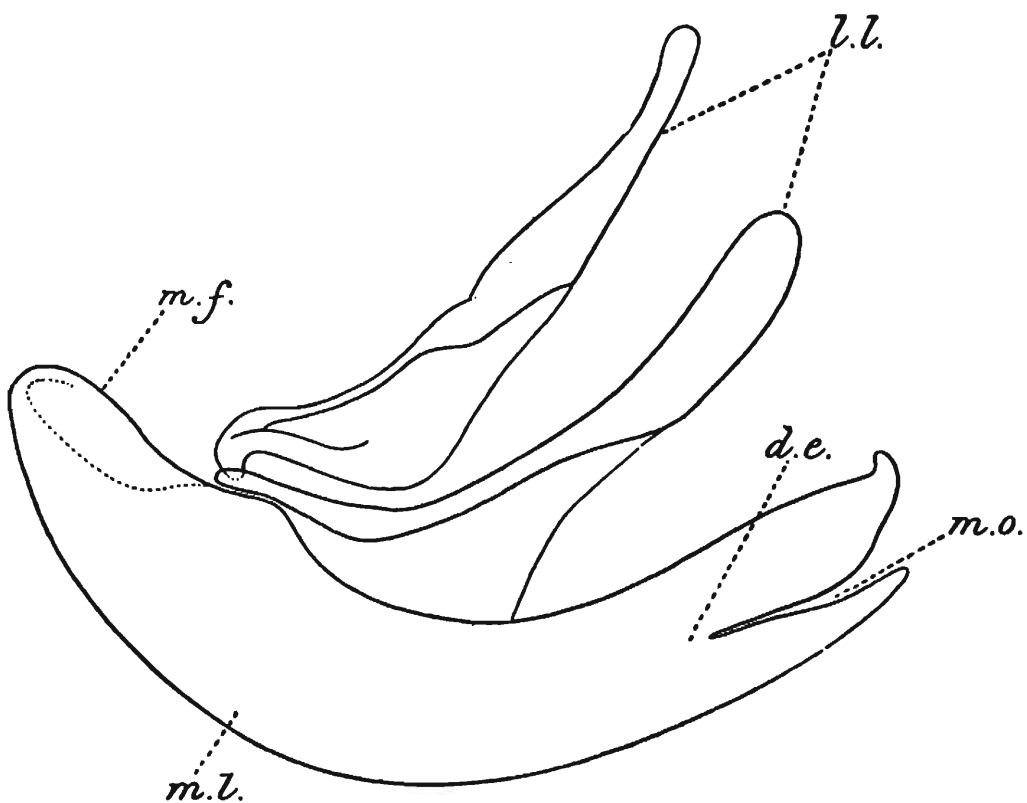
¹ Westwood, *Arcana Ent.*, II, p. 6 (1843-45).

rotten plantain stems"), Pondicherry; Travancore: Trichur (*G. P. Pillai* III-V-17); United Provinces: Dehra Dun (*C. F. C. Beeson* 3-VII-23).

Length: 9-12 millim.



TEXT-FIG. 1.—*Cerapterus latipes* Swederus. Pygidium of ♀, (enlarged). *a.* lateral view; *b.* ventral view.



TEXT-FIG. 2.—*Cerapterus latipes* Swederus. Genital tube of ♂. Lateral view, \times ca. 25. *d. e.* distal end of median lobe; *l. l.* lateral lobes; *m. f.* median foramen; *m. l.* median lobe; *m. o.* median orifice.

Cerapterus latipes subsp. *singalensis* Kolbe.

1926. *Cerapterus latipes* subsp. *singalensis*, Kolbe, *Deutsch. Ent. Zeitsch.*, pt. V, p. 384.

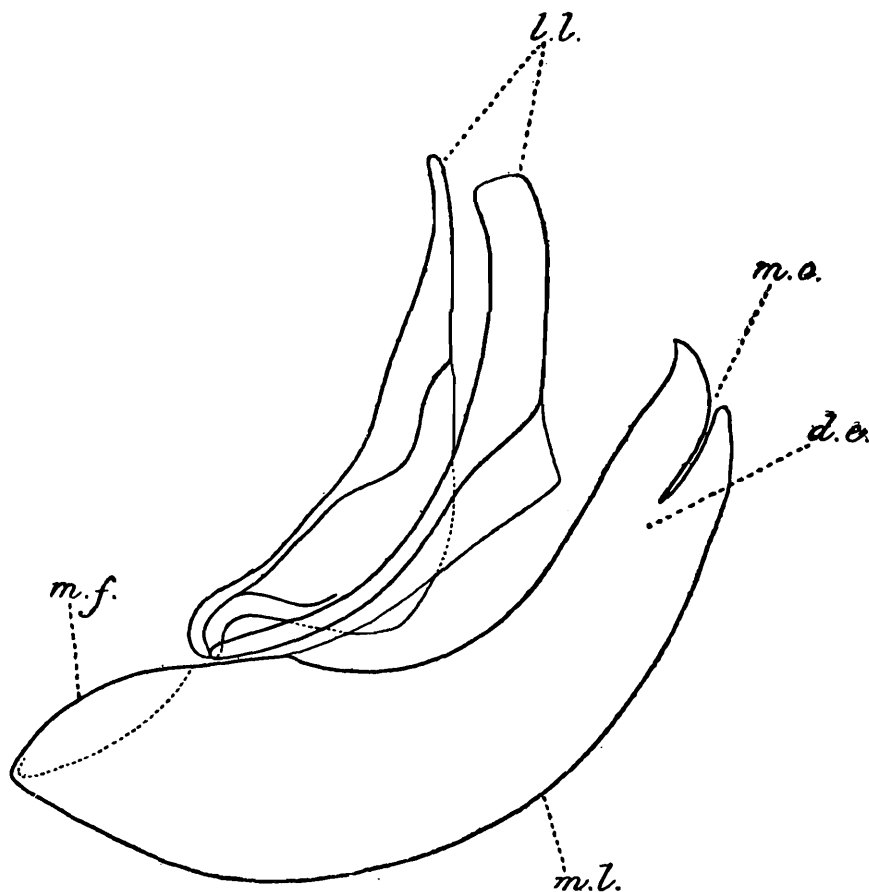
Kolbe described this subspecies from Ceylon. It differs from the *forma typica* in that "the body is larger, with smaller spots on the elytra, Length: 12 millim",

***Cerapterus horsfieldi* Westwood.**

(Text-figure 3.)

1833. *Cerapterus latipes* ?, Westwood, *Trans. Linn. Soc. London*, XVI, pp. 670-672, pl. 33, figs. 52-56.
 1838. *Cerapterus horsfieldii*, id., *Entomol. Mag.*, V, p. 502.
 1841. *Cerapterus horsfieldii*, id., *Trans. Linn. Soc. London*, XVIII, p. 583.
 1843-45. *Cerapterus horsfieldii*, id., *Arcana Ent.*, II, p. 7, pl. 49, fig. 2.
 1905. *Cerapterus horsfieldii*, Desneux, *Wytzman Gen. Ins. Coleopt. Paussidae*, fasc. XXXV, p. 10, pl. 1, fig. 4.
 1916. *Cerapterus horsfieldii*, Wasmann, *Zool. Jahrbucher*, XXXIX, pp. 204-206, pl. 4, fig. 19.
 1926. *Cerapterus horsfieldii*, Kolbe, *Deutsch. Ent. Zeitsch.*, pt. V, p. 384.

The structure of the male genital tube appears to be different from that of *C. latipes* Swederus (compare text-figures 2 and 3).



TEXT-FIG. 3.—*Cerapterus horsfieldii* Westwood. Genital tube of ♂. Lateral view, × ca. 30. Lettering as in fig. 2.

Westwood¹ described and figured *C. horsfieldii* and *C. quadrimaculatus* as two separate species but Desneux (*l. c.* p. 10) recognized both as *C. horsfieldii* Westwood. Desneux's figure (*l. c.* pl. 1, fig. 4) of *C. horsfieldii* Westwood appears, however, to be the same as that given by Westwood for *C. quadrimaculatus*.

Additional localities.—Burma: Mohnyin River, Katha (*C. F. C. Beeson* 19-V-19 "at light"). Hitherto not known from India proper.

¹ Westwood, *Arcana Ent.*, II, p. 7, pl. 49, figs. 2-3 (1843-45).

Genus **Pleuropterus** Westwood.1912. *Pleuropterus*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 451.1918. *Pleuropterus* (*Pleuropterinus*), Wasmann, *Tijdschr. Entomol.*, LXI, pp. 79-82.

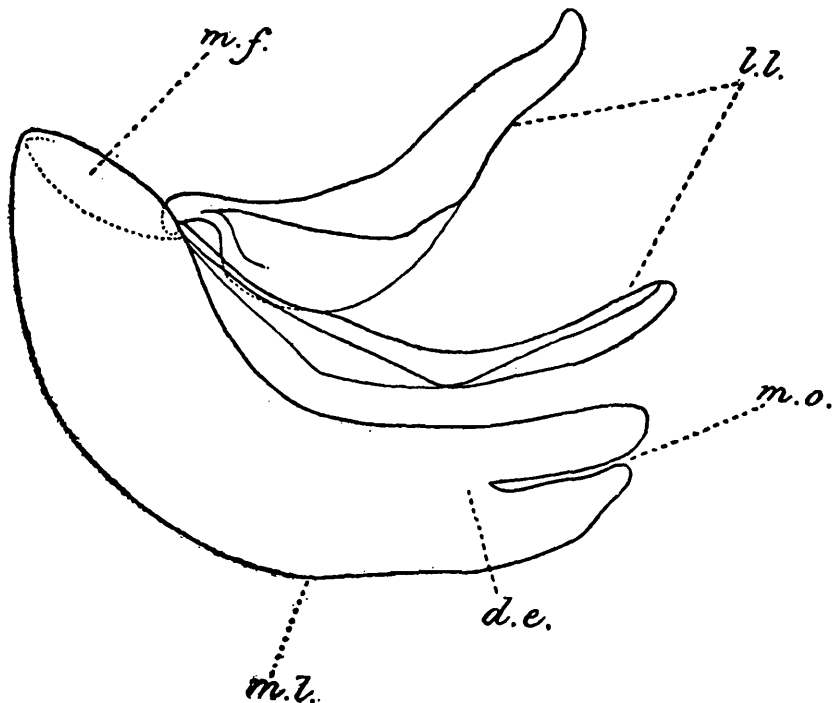
Wasmann divides the genus into two subgenera, *Pleuropterinus* and *Pleuropterus*, s. str. The two Indian species described so far are both included in the latter. I have nothing further to add here regarding the structure of the male genital tube.

Pleuropterus taprobanensis Gestro.

(Text-figure 4.)

1912. *Pleuropterus taprobanensis*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 451-452, fig. 204.1918. *Pleuropterus taprobanensis*, Wasmann, *Tijdschr. Entomol.*, LXI, p. 82.

One of the two specimens belonging to the Colombo Museum bears no locality label. My thanks are due to Dr. R. Gestro for verifying my identification of this specimen. The Colombo Museum, moreover, does not seem to possess the two examples listed by Haly.¹



TEXT-FIG. 4.—*Pleuropterus taprobanensis* Gestro. Genital tube of ♂. Lateral view, × ca. 28. Lettering as in fig. 2.

Additional localities.—Ceylon : Kandy (C. F. S. Baker IV-15) ; Madras Presidency : Nilgiri Hills (*Bombay Natural History Society* 17-X-14).

Subfamily **PAUSSINAE** Raffray.

The study of the buccal appendages in the members of this subfamily shows that the number of the joints of the labial palpi is four and not three as stated by Fowler (*l. c.* pp. 454—470).

¹ Haly, *1st Rep. Colln. Beetles Colombo Mus.*, p. 84 (1890).

Male genital tube.—Characterized by the absence of the asymmetrical slit situated at the distal end of the median lobe. Median lobe more or less scaphiform; lateral lobes asymmetrical. The various genera constituting the subfamily may be distinguished by the structure of the tube as follows :—

Key to the Genera.

1. Median lobe distinctly scaphiform.
 - i. Distal end dorsally produced caudad into a conical process.
 - A. Genital tube long and slender.
 - a. Conical process abruptly produced *Platyrhopalopsis* Desneux.
 - b. Conical process not abruptly produced *Platyrhopalides* Wasmann.
 - B. Genital tube stout and stumpy *Platyrhopalus* Westwood.
 - ii. Distal end raised but not dorsally produced caudad into a conical process *Euplatyrhopalus* Desneux.
2. Median lobe not distinctly scaphiform.
 - i. Distal end broader than or as wide as base.
 - A. Lateral lobes equal in length *Merismoderus* Westwood.
 - B. Lateral lobes unequal in length . *Ceratoderus* Westwood.
 - ii. Distal end narrower than at base . *Paussus* Linnaeus.

Genus *Ceratoderus* Westwood.

- 1843-45. *Ceratoderus*, Westwood, *Arcana Ent.*, II, p. 37.
 1845. *Ceratoderus*, id., *Trans. Linn. Soc. London*, XIX, pp. 51-52.
 1847. *Melasnospilus* (*Ceratoderus*), id., *Trans. Ent. Soc. London*, V, pp. 22-23.
 1854. *Ceratoderus*, Lacordaire, *Hist. Nat. Ins. Gen. Coleopt.*, II, pp. 10-11.
 1874. *Melanopsilus* (*Ceratoderus*), Westwood, *Thes. Ent. Oxon.*, pp. 79-80.
 1885. *Ceratoderus*, Raffray, *Nouv. Arch. Mus. Hist. Nat. Paris*, (2) VIII, pp. 340-341.
 1904. *Ceratoderus*, Wasmann, *Notes Leyden Mus.*, XXV, p. 16.
 1905. *Ceratoderus*, Desneux, *Wylsman Gen. Ins. Coleopt. Paussidae*, fasc. XXXV, p. 16.
 1912. *Ceratoderus*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 454-455.
 1921. *Ceratoderus*, Wasmann, *Entomol. Blatt.*, XVII, pp. 159-162.

Male genital tube.—Median lobe broader at the distal end than at the base; median orifice situated ventrally at the apex of the distal end of the median lobe, with the extremity more or less excised; median foramen as wide as the lobe, with the lateral lobes attached to its dorsal edge. Right lateral lobe broad and flattened, with the apex considerably acuminate, almost reaching the apex of the median lobe, left lateral lobe slender and considerably shorter.

The two species, *C. bifasciatus* (Kollar) and *C. andrewesi* Desneux differ in the shape of the excision at the distal end of the median lobe.

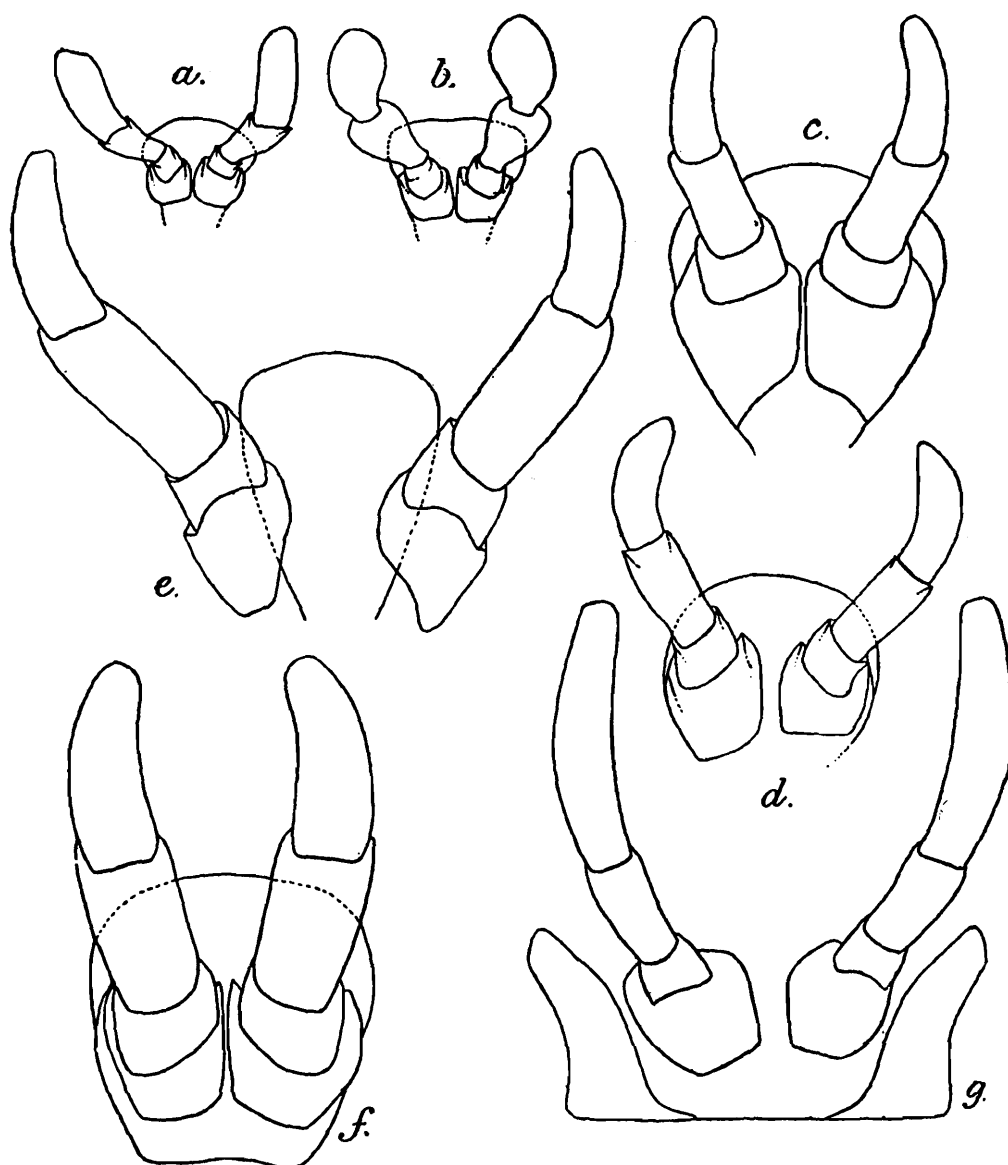
***Ceratoderus bifasciatus* (Kollar).**

(Text-figures 5 (a), 6.)

1836. *Paussus bifasciatus*, Kollar, *Ann. Wien. Mus.*, I, p. 336, pl. 31, fig. 7.
 1838. *Paussus bifasciatus*, Westwood, *Trans. Ent. Soc. London*, II, pp. 90-91, pl. 10, fig. 3.
 1843-45. *Ceratoderus bifasciatus*, id., *Arcana Ent.*, II, p. 37, pl. 58, fig. 1.
 1845. *Ceratoderus bifasciatus*, id., *Trans. Linn. Soc. London*, XIX, p. 52.

1847. *Melanospilus (Ceratoderus) bifasciatus*, id., *Trans. Ent. Soc. London*, V, p. 23.
 1874. *Melanopsilus (Ceratoderus) bifasciatus*, id., *Thes. Ent. Oxon.*, p. 80.
 1885. *Ceratoderus bifasciatus*, Raffray, *Nouv. Arch. Mus. Hist. Nat. Paris*, (2) VIII, pl. 15, fig. 6; pl. 17, figs. 22-24.
 1904. *Ceratoderus bifasciatus*, Wasmann, *Notes Leyden Mus.*, XXV, p. 16.
 1912. *Ceratoderus bifasciatus*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 455, fig. 206.
 1921. *Ceratoderus bifasciatus*, Wasmann, *Entomol. Blatt.*, XVII, pp. 160-162.

Additional localities.—Bihar : Chapra, Pusa ; Burma : Pyonchaung Res., North Toungoo (*B. M. Bhatia* 14-XI-21); United Provinces : Dehra Dun (*G. D. Bhasin* 8-V-27).

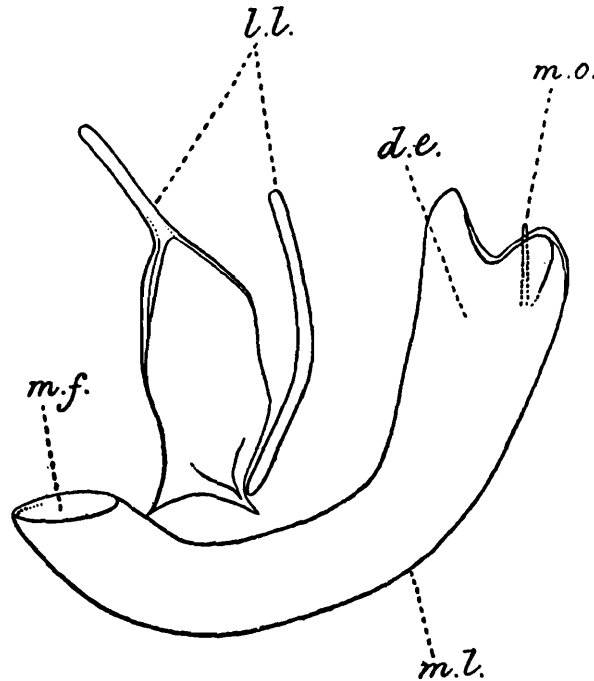


TEXT-FIG. 5.—*a. Ceratoderus bifasciatus* (Kollar). Labial palpi, \times ca. 34. *b. Merismoderus bensoni* Westwood. Labial palpi, \times 67. *c. Platyrhopalus denticornis* (Donovan). Labial palpi, \times 20. *d. Euplatyrhopalus vexillifer* (Westwood). Labial palpi, \times 48. *e. Platyrhopalopsis melleyi* (Westwood). Labial palpi, \times 49. *f. Platyrhopalides badgleyi* (Fowler). Labial palpi, \times 43. *g. Paussus sesquisulcatus* Wasmann. Labial palpi, \times ca. 46.

***Ceratoderus andrewesi* Desneux.**

1912. *Ceratoderus andrewesi*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 456, fig. 207.
 1921. *Ceratoderus andrewesi*, Wasmann, *Entomol. Blatt.*, XVII, pp. 160-161.

The Colombo Museum possesses two examples of this species without any history; evidently they were taken in Ceylon. The species is recorded from the Madras Presidency.



TEXT-FIG. 6.—*Ceratoderus bifasciatus* (Kollar). Genital tube of ♂. Lateral view, × 46. Lettering as in fig. 2.

Genus *Merismoderus* Westwood.

1846. *Leiomatocerus*, Benson, *Calcutta Journ. Nat. Hist.*, VI, pp. 465-467 and 470.
 1847. *Melanospilus* (*Merismoderus*), Westwood, *Trans. Ent. Soc. London*, V, pp. 22-23.
 1854. *Merismoderus*, Lacordaire, *Hist. Nat. Ins. Gen. Coleopt.*, II, p. 11.
 1874. *Melanospilus* (*Merismoderus*), Westwood, *Thes. Ent. Oxon.*, pp. 79-80.
 1885. *Merismoderus*, Raffray, *Nouv. Arch. Mus. Hist. Nat. Paris*, (2) VIII, pp. 341-342.
 1904. *Merismoderus*, Wasmann, *Notes Leyden Mus.*, XXV, p. 16.
 1905. *Merismoderus*, Desneux, *Wytzman Gen. Ins. Coleopt. Paussidae*, fasc. XXXV, pp. 16-17.
 1912. *Merismoderus*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 457.

Male genital tube.—Very similar to that of *Ceratoderus* except for the median lobe, which is only as wide at the distal end as at the base; median orifice situated ventrally at the apex of the distal end of the median lobe; median foramen as wide as the lobe, with the lateral lobes attached to its dorsal edge. Both lateral lobes of equal length.

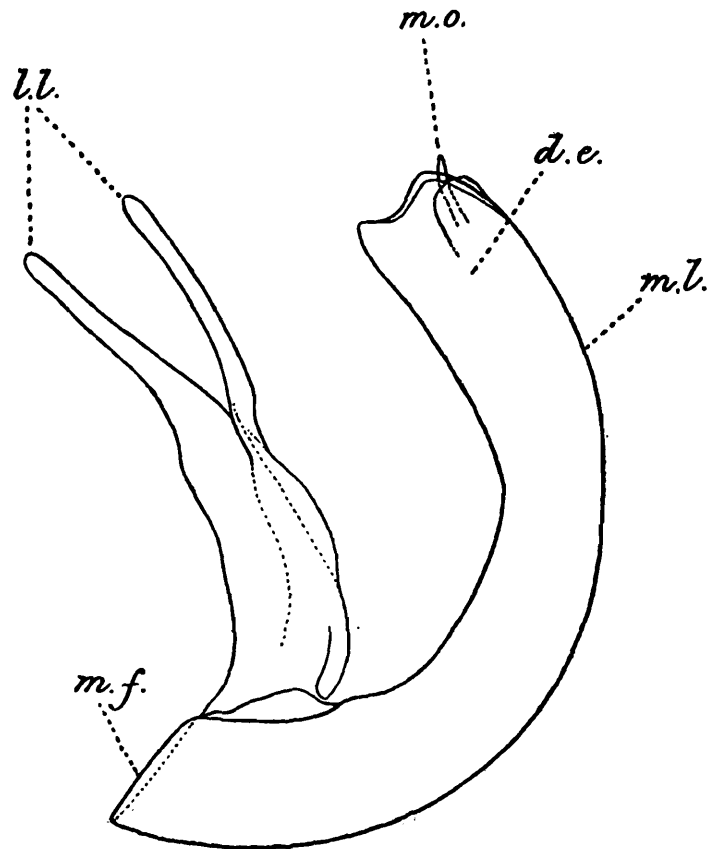
Merismoderus bensoni Westwood.

(Text-figures 5 (b), 7.)

1912. *Merismoderus bensoni*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 457-458, fig. 208.

In four of the five specimens that I have examined there is, in addition to the general markings on the elytra described by Fowler, a short longi-

tudinal black streak on each elytron which varies in thickness and extends from the centre of the basal margin to the lateral spots.



TEXT-FIG. 7.—*Merismoderus bensoni* Westwood. Genital tube of ♂. Lateral view, × 40. Lettering as in fig. 2.

Additional localities.—Bihar: Pusa (G. R. Dutt 18-VII-08 “from the nest of *Prenolepis longicornis*”; Fletcher Coll. 4-IX-16 “being dragged along by three workers of *Prenolepis longicornis*”).

Genus *Platyrhopalus* Westwood.

1833. *Platyrhopalus*, Westwood, *Trans. Linn. Soc. London*, XVI, pp. 654-657.
 1838. *Platyrhopalus*, id., *Nat. Hist. Ins. Ind.*, p. 8.
 1843-45. *Platyrhopalus*, id., *Arcana Ent.*, II, pp. 73-77.
 1854. *Platyrhopalus*, Lacordaire, *Hist. Nat. Ins. Gen. Coleopt.*, II, p. 13.
 1885. *Platyrhopalus*, Raffray, *Nouv. Arch. Mus. Hist. Nat. Paris*, (2) VIII, pp. 344-345.
 1904. *Platyrhopalus*, Wasmann, *Notes Leyden Mus.*, XXV, p. 17.
 1905. *Platyrhopalus*, Desneux, *Wytsman Gen. Ins. Coleopt. Paussidae*, fasc. XXXV, pp. 18-19.
 1912. *Platyrhopalus*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 458-459.
 1917. *Platyrhopalus* (*Platyrhopalopsis*, *Platyrhopalides*, *Euplatyrhopalus*, *Stenorhopalus*), Wasmann, *Tijdschr. Entomol.*, LX, pp. 391-393.

Male genital tube.—Median lobe stout and stumpy, dorsally produced at the distal or caudad end into a conical process, broader at the distal end than at the base; median orifice situated ventrally at the apex of the distal end of the median lobe; median foramen as wide as the lobe, with the lateral lobes attached to its dorsal edge. Right lateral lobe broad and flattened, almost reaching the apex of the median lobe, left lateral lobe narrow and slightly shorter.

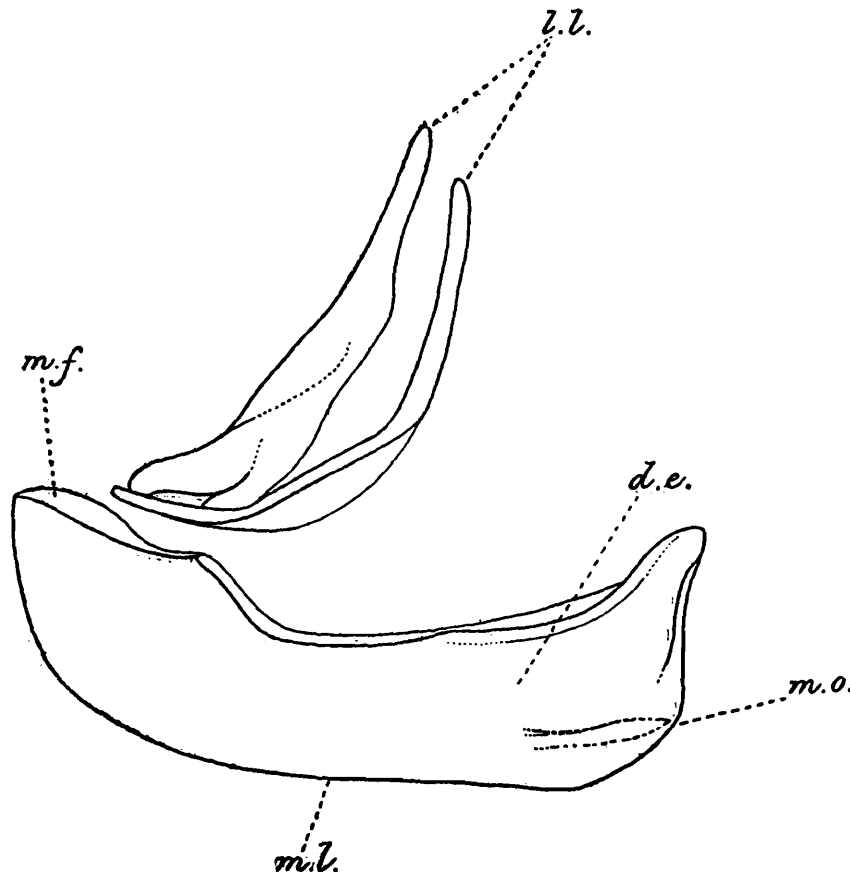
In four of the eight Indian species that I have examined there is a distinct variation in the appearance of the distal end of the median lobe, which may serve for specific distinction.

Platyrhopalus denticornis (Donovan).

(Text-figures 5 (c), 8, 9.)

1800. *Paussus denticornis*, Donovan, *Ins. Ind.*, I, pl. 5, fig. 1.
 1833. *Platyrhopalus denticornis*, Westwood, *Trans. Linn. Soc. London*, XVI, pp. 657-659, pl. 33, figs. 43-48.
 1838. *Platyrhopalus denticornis*, id., *Nat. Hist. Ins. Ind.*, p. 8, pl. 5, fig. 1.
 1841. *Platyrhopalus denticornis*, Burmeister, *Mag. Zool.*, pl. 76, fig. 2.
 1843-45. *Platyrhopalus denticornis*, Westwood, *Arcana Ent.*, II, pp. 77-78, pl. 68, fig. 1.
 1854. *Platyrhopalus denticornis*, Lacordaire, *Hist. Nat. Ins. Gen. Coleopt.*, Atlas, pl. 14, fig. 3.
 1904. *Platyrhopalus denticornis*, Wasmann, *Notes Leyden Mus.*, XXV, p. 19, pl. 3, fig. 2.
 1912. *Platyrhopalus denticornis*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 459-460, fig. 209.
 1917. *Platyrhopalus denticornis*, Wasmann, *Tijdschr. Entomol.*, LX, pp. 386-387 and 393.

The descriptions and figures of the mandible as furnished by both Westwood¹ and Burmeister (*l.c.* pl. 76, fig. 5) differ from the actual structure of the appendage of those specimens that I have examined in the following particulars:—(1) the absence of the bidentate edge of



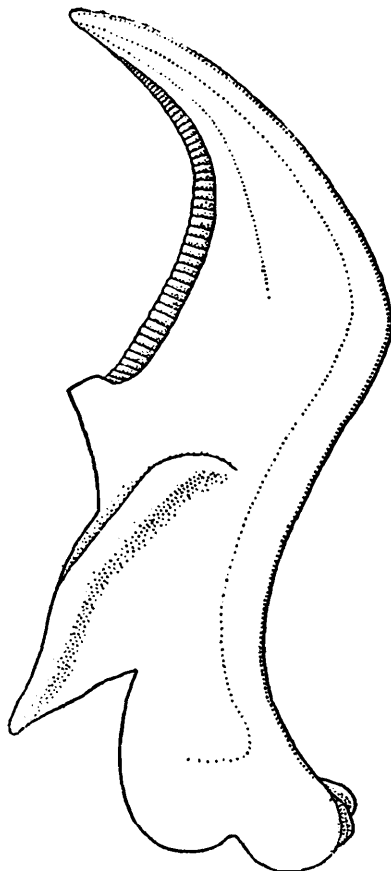
TEXT-FIG. 8.—*Platyrhopalus denticornis* (Donovan). Genital tube of ♂. Lateral view, × ca. 26. Lettering as in fig. 2.

the internal margin of the mandible, which is unidentate, a fact borne out by Fowler (*l. c.* p. 444) in his account of the general structure

¹ Westwood, *Trans. Lin. Soc. London*, XVI, p. 655, pl. 33, fig. 45 (1833).

of the family and (2) the presence of the crenulated area of the anterior lunulate portion of the same margin. The mandible, moreover, is falciform in appearance.

Additional localities.—Assam : Goalpara ; Bengal : Daltonganj (*C. S. Misra* VIII-05) ; Berar : Akola (*C. H. Dracott* VII-IX-11) ; Bihar : Chapra, Pusa (*T. B. Fletcher* 26-VI-11 “at light” ; *U. Bahadur* 30-VIII-15 “at light”) ; Bombay : Bamnoli, Satara district to Akalpa, Ratnagiri district (*S. P. Agharkar* 27-X-12) ; Central Provinces : near Dewalgaon, Bhandara district (*A. D. Imms* 28-XI-12), Khudrahi, South Mandla



TEXT-FIG. 9.—*Platyrrhopalus denticornis* (Donovan). Mandible, lateral view, $\times 120$.

(*N. C. Chatterjee* 22-VI-27 “at light”) ; Madras Presidency : Nilgiri Hills (*Bombay Natural History Society* 17-X-14) ; Punjab : Rawalpindi (*R. A. Hodgart* VI-VII-17) ; United Provinces : Cawnpore (*F. M. Howlett* 28-VIII-13 “at light”), Dehra Dun (*C. F. C. Beeson* 30-VI-14 “bungalow at light”) ; *J. C. M. Gardner* 12-VIII-25 “Forest Research Institute Compound”), Lucknow (*Mrs. A. Shadwell* XI-12). A common species attracted to light in large numbers.

***Platyrrhopalus angustus* Westwood.**

1838. *Platyrrhopalus angustus*, Westwood, *Trans. Ent. Soc. London*, II, pp. 92-93, pl. 10, fig. 6.
 1843. *Paussus* sp. no. 2, Boyes, *Journ. Asiat. Soc. Bengal*, (n. s.) XII, p. 427, fig. 2.
 1843-45. *Platyrrhopalus angustus*, Westwood, *Arcana Ent.*, II, pp. 78-79; pl. 68, fig. 3.
 1843-45. *Platyrrhopalus suturalis*, id., *ibid.*, pp. 161-162, pl. 88, fig. 1.
 1912. *Platyrrhopalus angustus*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 461-462.

Additional localities.—Bengal : Berhampore Court, Murshidabad district (*S. Ribeiro* XII-22 “in company with *Solenopsis geminata* Fabr.”); Rajshahi (*T. B. Fletcher* 24-III-11 “strong odour of iodine under log”); Bihar : Chapra, Masari, Pusa (*H. M. Lefroy* VI-09 “at light”), Saran ; Central Provinces : Hoshangabad (*T. B. Fletcher* 14-19-IX-11 “at light”); North-West Frontier Province : Tarnab, Peshawar district (*T. B. Fletcher* 2-VI-16 “at light”); Punjab : Bara Hotar, Murree Hills (*H. S. Pruthi* 10-IX-28 “under stones”), Abbottabad (*Fletcher Coll.* 10-VI-16).

Platyrhopalus intermedius Benson.

1912: *Platyrhopalus intermedius*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 462.

I have to record here a single male specimen which probably belongs to this species. It is from Pashok, 3,500 ft., Darjeeling district, Eastern Himalayas (*F. H. Gravely* 1-12-X-17).

Platyrhopalus westwoodi Saunders.

1838. *Platyrhopalus westwoodii*, Saunders, *Trans. Ent. Soc. London*, II, p. 84, pl. 10, fig. 5
 1843-45. *Platyrhopalus westwoodii*, Westwood, *Arcana Ent.*, II, p. 78, pl. 68, fig. 2.
 1912. *Platyrhopalus westwoodi*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 462-463.

I have referred to this species a single male specimen which appears to differ from previous descriptions in that the pygidium is not black and shining.

Additional locality.—Upper Burma : Pokokku (*Miss Molesworth*).

Genus **Euplatyrhopalus** Desneux.

1912. *Euplatyrhopalus*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 465-466.
 1917. *Platyrhopalus* (*Euplatyrhopalus*), Wasmann, *Tijdschr. Entomol.*, LX pp. 392-393.

The trophi of this genus, as pointed out by Westwood, have not been described and figured correctly. Fowler (*l. c.* p. 465) remarks that the maxillary and the labial palpi are each composed of four and three joints respectively, while in his “Key to the Indian Genera of the Subfamily Paussinae” the maxillary palpi are said to be five-jointed. The inconsistency of his diagnosis led me to examine these appendages each of which I find to be as follows :—maxillary palpi five-jointed, labial palpi four-jointed.

I have already in an earlier work¹ referred to the characteristic club of the antennae in this genus and my observation has been supported by Kolbe², who records a similar structure in *Paussus* also.

Male genital tube.—Different from those of the genera *Platyrhopalus*, *Platyrhopalopsis* and *Platyrhopalides* in the shape of the median lobe which is raised but not dorsally produced caudad at the distal end into a conical process. Lateral lobes shorter and stouter than in the other genera.

¹ Ribeiro, *Journ. Asiat. Soc. Bengal*, (n. s.) XX, p. 385 (1924).

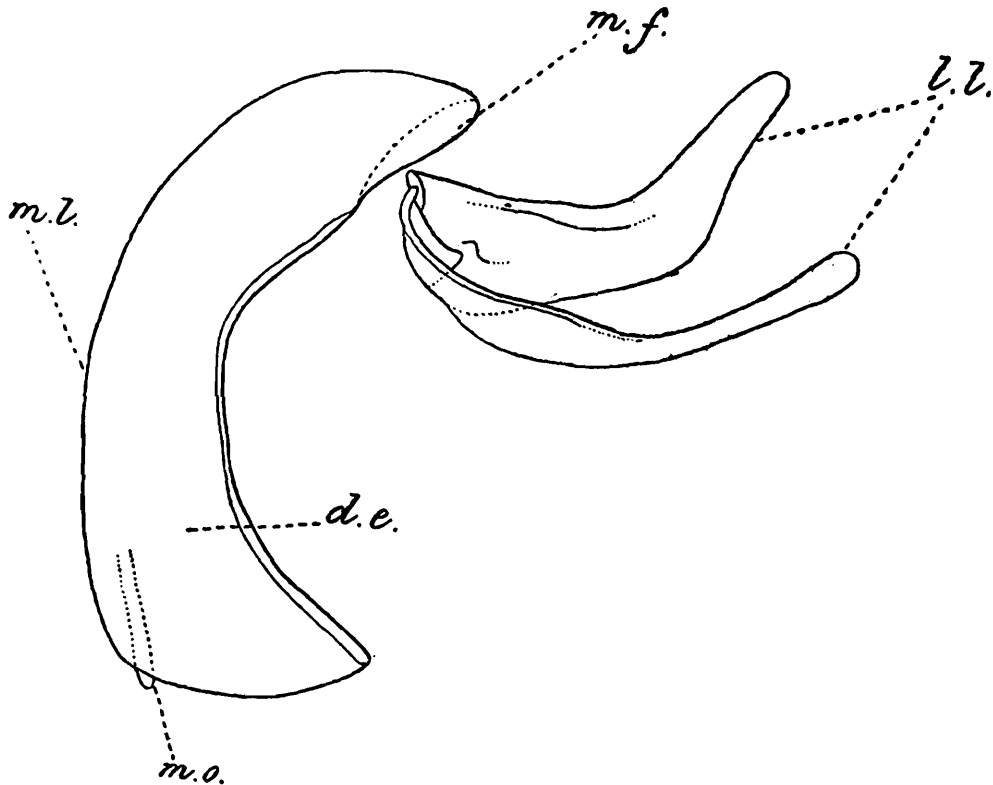
² Kolbe, *Zool. Anz.*, LXXII, p. 215 (1927).

Euplatyrhopalus aplustrifer (Westwood).

(Text-figure 10.)

1833. *Platyrhopalus* ? *aplustrifer*, Westwood, *Trans. Linn. Soc. London*, XVI, pp. 664-666, pl. 33, fig. 51.
 1843-45. *Platyrhopalus aplustrifer*, id., *Arcana Ent.*, II, pp. 163-164, pl. 88, fig. 3.
 1904. *Platyrhopalus aplustrifer*, Wasmann, *Notes Leyden Mus.*, XXV, pp. 21-22, fig. a.
 1905. *Euplatyrhopalus aplustrifer*, Desneux, *Wytzman Gen. Ins. Coleopt. Paussidae*, fasc. XXXV, p. 18, pl. 1, fig. 18.
 1912. *Euplatyrhopalus aplustrifer*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 466, fig. 212.
 1917. *Platyrhopalus* (*Euplatyrhopalus*) *aplustrifer*, Wasmann, *Tijdschr. Entomol.*, LX, p. 393.

Fowler (*l. c.* p. 466) states that the Indian Museum possesses a specimen from Kanara, Bombay Presidency. I have been unable



TEXT-FIG. 10.—*Euplatyrhopalus aplustrifer* (Westwood). Genital tube of ♂. Lateral view, × 26. Lettering as in fig. 2.

to trace any specimen from this locality. The collection contains a single male individual taken in Netrakona, Mymensingh district, Bengal (*J. N. Bagchi* 4-X-09) and this has already been recorded by Fowler.

Euplatyrhopalus vexillifer (Westwood).(Text-figure 5 (*d.*))

1912. *Euplatyrhopalus vexillifer*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 466-467.

Additional locality.—Burma: Zinba Valley, Tavoy (*R. N. Parker* XI-24 "at light").

Genus **Platyrhopalopsis** Desneux.

1912. *Platyrhopalopsis*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 467.
 1917. *Platyrhopalus* (*Platyrhopalopsis*), Wasmann, *Tijdschr. Entomol.*, LX, p. 392.

Desneux¹ established the genus *Platyrhopalopsis* to contain the two species, *P. melleyi* and *P. picteti* both of which Westwood² had classified as belonging to *Platyrhopalus*. In general facies and in the structure of the male genital tube the two genera are distinct and I, therefore, endorse Desneux's arrangement.

Male genital tube.—More nearly related to that of *Platyrhopalides* from which it may be distinguished by the following:—median lobe less protuberant dorsally at the distal end with the conical process abruptly produced.

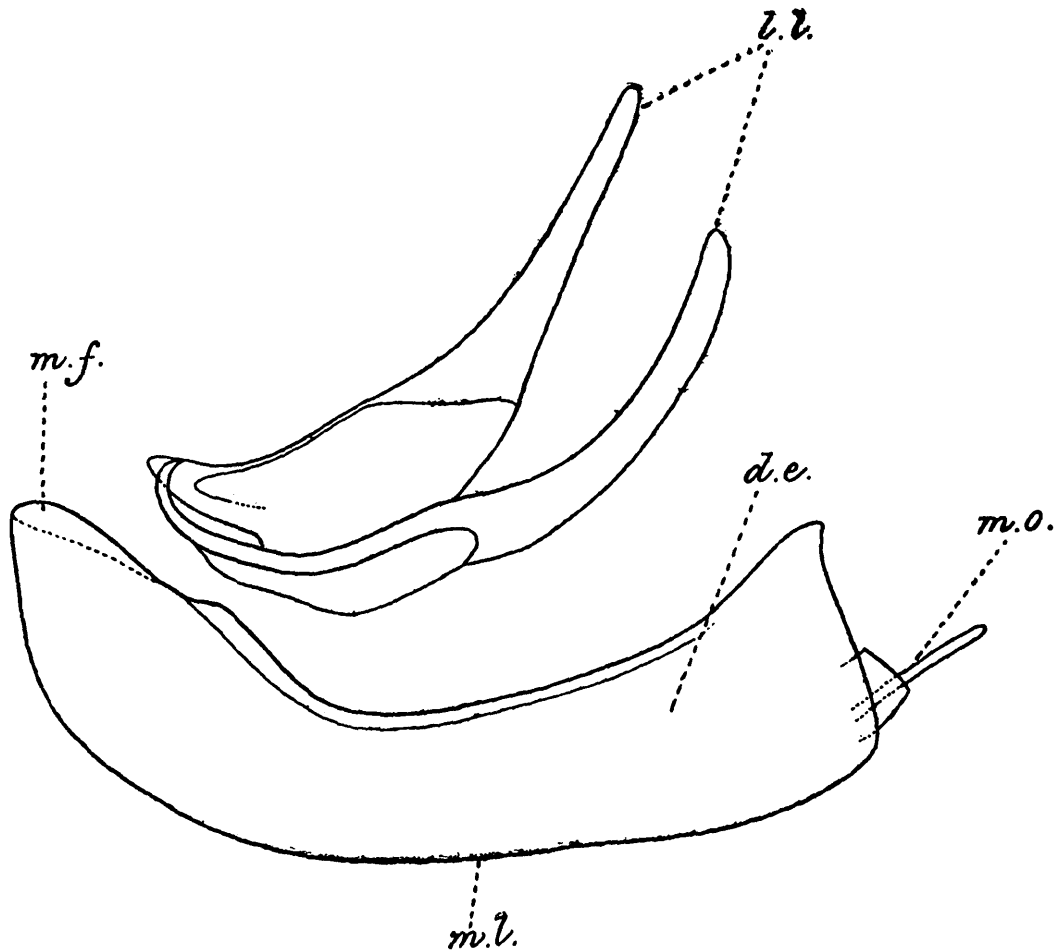
***Platyrhopalopsis melleyi* (Westwood).**

(Text-figures 5 (e), 11.)

1912. *Platyrhopalopsis melleyi*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 468, fig. 213.

The sexes of this species may be separated as follows:—The male is smaller in size than the female and has the elytra covering the whole of the abdomen; in the female the tip of the ovipositor is visible in most cases.

Additional localities.—Madras Presidency: Coimbatore, Ernad, Nilambur, Somwarpet, North Coorg (*L. Newcome* 21-X-09), Tope, 500 ft., Palni Hills (*S. W. Kemp* 22-23-IX-22 "at light"); Travancore: Trichur (*G. P. Pillai* III-V-17).



TEXT-FIG. 11.—*Platyrhopalopsis melleyi* (Westwood). Genital tube of ♂. Lateral view, × 28. Lettering as in fig. 2.

¹ Desneux, *Wytzman Gen. Ins. Coleopt. Paussidae*, fasc. XXXV, p. 20 (1905).

² Westwood, *Trans. Linn. Soc. London*, XVI, p. 683 (1833); *Thes. Ent. Oxon.*, p. 82, pl. 18, figs. 2-3. (1874).

Genus **Platyrhopalides** Wasmann.

1912. *Platyrhopalopsis* (in part), Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 467.

1917. *Platyrhopalus* (*Platyrhopalides*), Wasmann, *Tijdschr. Entomol.*, LX, pp. 392-393.

Erected by Wasmann for the reception of Fowler's *Platyrhopalopsis badgleyi* and considered by him to be of subgeneric importance. In general facies and in the structure of the male genital tube *Platyrhopalides* is entirely different from *Platyrhopalopsis*, from which it is still further distinguished by the shape of the pronotum. The same features hold good for the separation of the sexes as in *Platyrhopalopsis*. I have nothing further to add here regarding the structure of the male genital tube.

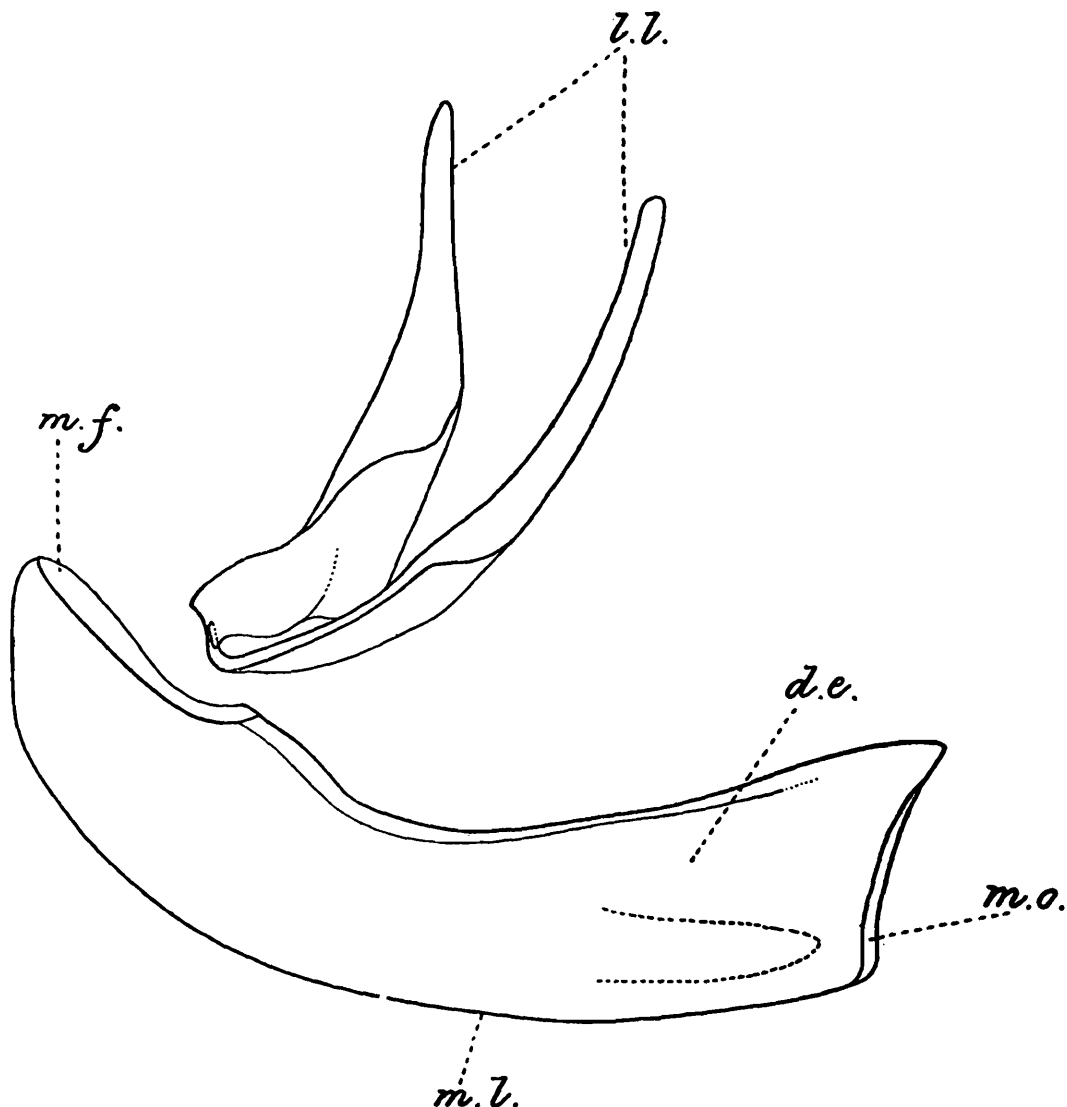
Platyrhopalides badgleyi (Fowler).

(Text-figures 5 (f), 12.)

1912. *Platyrhopalopsis badgleyi*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 469, fig. 214.

1917. *Platyrhopalus* (*Platyrhopalides*) *badgleyi*, Wasmann, *Tijdschr. Entomol.*, LX, p. 393.

Additional localities.—Assam : Shillong, Khasi Hills. Mairong.



TEXT-FIG. 12.—*Platyrhopalides badgleyi* (Fowler). Genital tube of ♂. Lateral view, × 30. Lettering as in fig. 2.

Genus **Paussus** Linnaeus.1912. *Paussus*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 469-474.1917. *Paussus*, Wasmann, *Tijdschr. Entomol.*, LX, pp. 384-386.1919. *Paussus*, id., *ibid.*, LXII, pp. 121-124.

Male genital tube.—Almost similar to those of the genera *Ceratoderus* and *Merismoderus*, but with the median lobe narrower at the distal end than at the base and not deeply excised; median orifice situated ventrally at the apex of the distal end of the median lobe. Lateral lobes unequal, a feature characteristic of *Ceratoderus* and *Paussus* only. The shape of the distal end of the median lobe varies in those species that I have examined; evidently this is of specific importance.

Paussus desneuxi Fowler.1912. *Paussus desneuxi*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 475-476, fig. 215.

Additional locality.—Peninsular Siam: Patalung (*I. H. N. Evans* 16-V-24 "at light"). Hitherto confined to India only.

Paussus spencei Westwood.1912. *Paussus spencei*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 476.

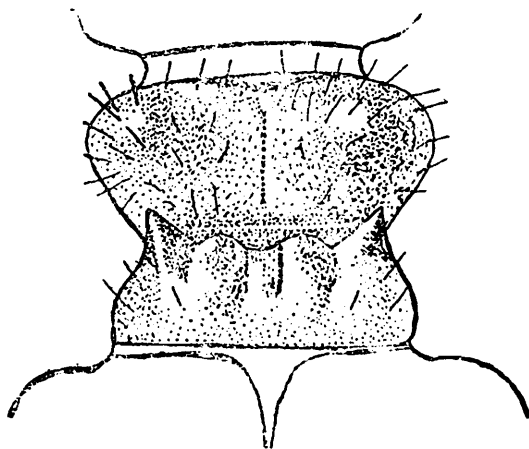
Additional locality.—Madras Presidency: Varagambady, Salem division (*C. N. Coll.* I-II-15).

Paussus cognatus Westwood.

(Text-figure 13.)

1912. *Paussus cognatus*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 477-478, fig. 217.

I have figured here the pronotum of the insect as previous descriptions and figures of the structure, though elaborate, nevertheless leave one in doubt as to its true identity. In commenting upon Fowler's description of the pronotum I would remark that the posterior portion of the pronotum is apically angulate at the sides.

TEXT-FIG. 13.—*Paussus cognatus* Westwood. Pronotum. Dorsal view, \times ca. 16.

Additional locality.—Madras Presidency: Bangalore (*C. D. Gregson* V-12 "at light").

Paussus hearseyanus Westwood.

1912. *Paussus hearseyanus*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 478-479, fig. 219.

Additional locality.—Madras Presidency: Coimbatore (T V B. 21-VII-09).

Paussus sesquisulcatus Wasmann.

(Text-figure 5 (g).)

1912. *Paussus sesquisulcatus*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 480.

Additional locality.—Central Provinces: Motinala River, South Mandla (N. C. Chatterjee 25-VI-27).

Paussus sesquisulcatus var. **brevicornis** Wasmann.

1912. *Paussus sesquisulcatus* var. *brevicornis*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 480.

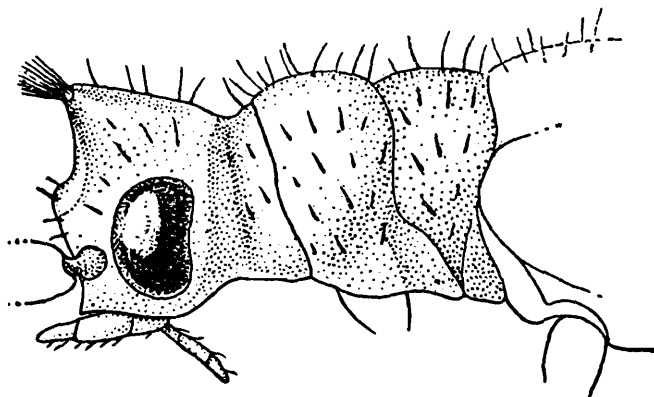
Additional locality.—Bihar: Chapra.

Paussus adamsoni Fowler.

(Text-figure 14.)

1912. *Paussus adamsoni*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 481, fig. 220.

Fowler, in describing the species, failed to give due prominence to the characteristic horn-like structure situated on the head of the insect though he has shown it in his figure. This structure is peculiar to the species alone. Its description is as follows:—Forehead concave, vertex with a tubercle bearing a tuft of golden-yellow bristles.



TEXT-FIG. 14.—*Paussus adamsoni*. Fowler. Head. Lateral view, $\times 17$.

Additional locality.—Upper Burma: Pouk, 618 ft. (Miss Molesworth X-15).

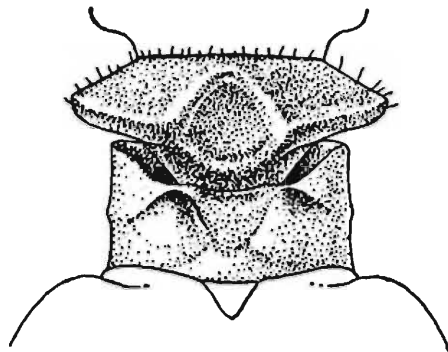
Paussus pilicornis Donovan.

(Text-figure 15.)

1912. *Paussus pilicornis*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 482.

Since Donovan's illustration of the species is imperfect and as those of Westwood are misleading, I have appended a figure of the pronotum of the insect. I have nothing further to add here regarding its structure.

Additional locality.—Bengal: Calcutta (S. W Kemp 13-III-16 "Museum Compound").



TEXT-FIG. 15.—*Paussus pilicornis* Donovan. Pronotum. Dorsal view, $\times 30$.

Paussus fletcheri Fowler.

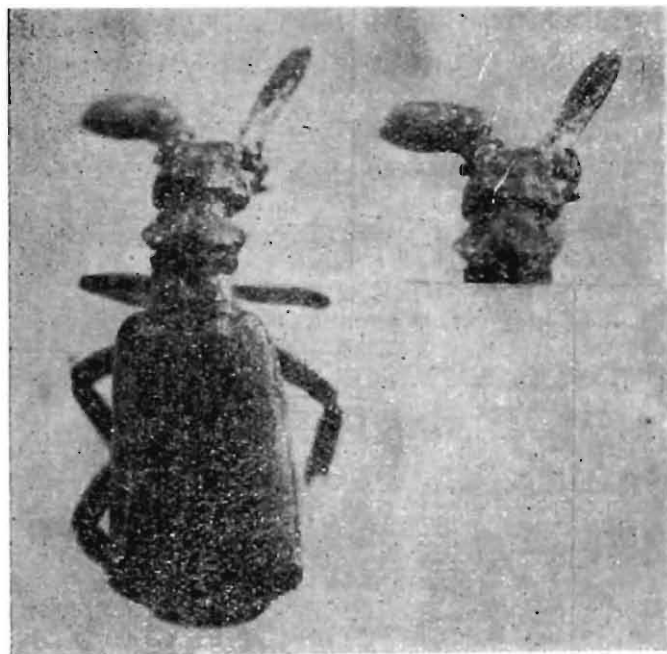
1912. *Paussus fletcheri*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 483, fig. 222.

Additional localities.—Bombay Presidency: Talewadi near Castle Rock, North Kanara district (S. W Kemp 3-10-X-16); Madras. Presidency: Attakatti (*Pusa Colln.* 15-XII-17).

Paussus sewelli, sp. nov.

(Text-fig. 16.)

Fulvo-castaneous, shining, punctured, with the head, antennae and pronotum somewhat reddish, with the elytra dark except the extreme base; head about as broad as pronotum, raised in the middle and foveolate, with the eyes not prominent; antennae with a long subcylindrical



TEXT-FIG. 16.—*Paussus sewelli* sp. nov. $\times 12$.

club, outer side somewhat longer than the inner, with the base externally produced into a hook-like process; pronotum longer than broad, divided

by a deep transverse central furrow, the anterior portion with the sides dilated and distinctly angulate, the posterior portion much as in *P. saundersi* Westw., with the sides parallel, terminating in a fine process in front (laterally) on each side; elytra finely and closely setose; legs much as in *P. saundersi* Westw. and *P. hardwickei* Westw.

Length: 4.5 millim.

Locality.—Bihar: Pusa (*Haq. Coll.* I. IX. 17 “among dabhi rarhi and batri roots”). Type in the collection of the Imperial Agricultural Research Institute, Pusa.

The new species belongs to the group of *P. saundersi* Westw. and *P. hardwickei* Westw. from both of which it is distinct in the shape of the club of the antennae and in the pronotum. I give below its position among the Indian species enumerated by Fowler.

Key to the Species.

- I. Club of antennae not excavate. (*Paussus*, i. sp.).
 - ii. Club of antennae long and narrow, cylindrical or subcylindrical.
 - I. Club of antennae without minute teeth at the apex, subcylindrical; head not strongly produced before the eyes.
 - A. Club of antennae less elongate and parallel-sided.
 - a. Outer side of club of antennae somewhat rounded; colour unicolorous fulvo-castaneous. *saundersi* Westw.
 - b. Outer side of club of antennae somewhat more produced than the inner; colour not unicolorous. *sewelli* n. sp.
 - B. Club of antennae more elongate, parallel-sided, outer side almost as straight as the inner; elytra with the disk black. *hardwickei* Westw.

I have much pleasure in associating the name of this new species with that of my Director, Lt-Col. R. B. Seymour Sewell, I.M.S., as a mark of gratitude for his kind interest in my work.

Paussus hardwickei Westwood.

- 1833. *Paussus hardwickii*, Westwood, *Trans. Linn. Soc. London*, XVI, pp. 649-650, pl. 33, figs. 39-40.
- 1843-45. *Paussus hardwickii*, id., *Arcana Ent.*, II, pp. 189-190, pl. 94, fig. 5.
- 1904. *Paussus hardwicki*, Wasmann, *Notes Leyden Mus.*, XXV, p. 34.
- 1912. *Paussus hardwicki*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 484, fig. 223.

Additional locality.—United Provinces: Mussoorie, 6,000-7,000 ft. (*Col. Harcourt IX-21*).

Paussus boysi Westwood.

- 1912. *Paussus boysi*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 488-489, fig. 226.

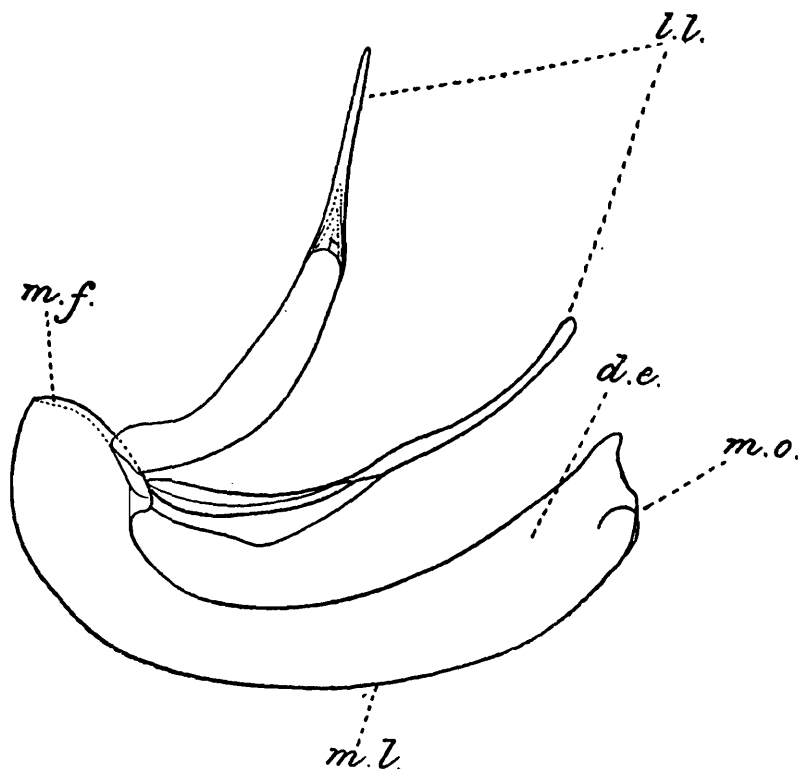
Additional localities.—Central Provinces: Baihar, Balaghat (*B. M. Bhatia 30-VII-27*); United Provinces: Lachiwala River, Dehra Dun (*N. C. Chatterjee 4-IX-22*).

Paussus jerdani (Hope mss.) Westwood.

(Text-figure 17.)

1912. *Paussus jerdani*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 490-491, fig. 227.
 1917. *Paussus jerdani*, Wasmann, *Tijdchr. Entomol.*, LX, pp. 384-385.
 1922. *Paussus jerdani*, id., *Mitt. Naturh. Mus. Hamburg*, XXXIX, p. 33.

Additional localities.—Bombay Presidency: Fernhill, Khandala, 2,700 ft. (Rev. J. Assmuth 29-V-11 "in nest of *Pheidole latinoda angustior*



TEXT-FIG. 17.—*Paussus jerdani* Westwood. Genital tube of ♂. Lateral view, × 28. Lettering as in fig. 2.

Forel"); Madras Presidency: Kotagiri, Nilgiri Hills (*Mrs. N. B. Kinnear* V-VI-16); Palni Hills, 3,000-6,000 ft. (*P. S. Nathan Colln.* 10-31-V-17); United Provinces: Dehra Dun (*Forest Zoological Colln.* 18-VI-15).

Paussus thoracicus Donovan.

1800. *Paussus thoracicus*, Donovan, *Ins. Ind.*, no. 1, pl. 2.
 1833. *Paussus thoracicus*, Westwood, *Trans. Linn. Soc. London*, XVI, pp. 640-641, pl. 33, figs. 28-30.
 1838. *Paussus thoracicus*, id., *Nat. Hist. Ins. Ind.*, p. 10, pl. 5, fig. 2.
 1843-45. *Paussus thoracicus*, id., *Arcana Ent.*, II, pp. 180-181, pl. 90, fig. 4.
 1904. *Paussus thoracicus*, Wasmann, *Notes Leyden Mus.*, XXV, pp. 44 and 54, pl. 5, fig. 4.
 1912. *Paussus thoracicus*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 491-492, fig. 228.
 1922. *Paussus thoracicus*, Wasmann, *Mitt. Naturh. Mus. Hamburg*, XXXIX, p. 33.

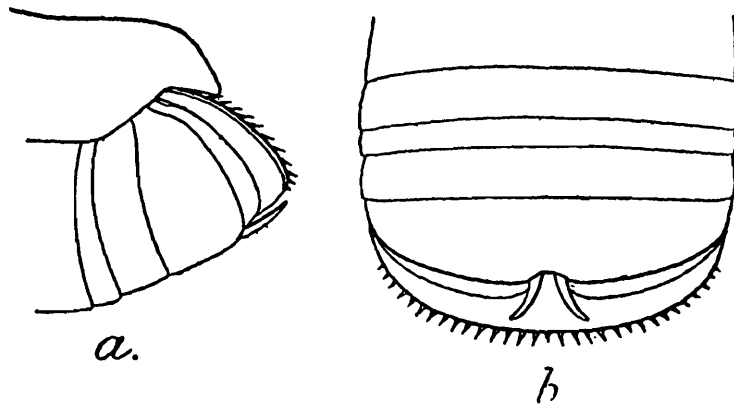
Additional locality.—Bihar: Pusa (*Fletcher Coll.* 20-IV-18).

Paussus tibialis Westwood.

(Text-figure 18.)

1912. *Paussus tibialis*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 495-496.

In this species the female may be distinguished as follows:—The fifth ventral segment of the abdomen is apically incised in the middle at



TEXT-FIG. 18.—*Paussus tibialis* Westwood. Abdomen of ♀, × 17. a. lateral view; b. ventral view.

which point the ovipositor protudes; the sixth segment, partially visible, is also incised. This peculiarity may serve as a secondary sexual character for the determination of the sexes.

Additional localities.—Bihar : Chapra, Pusa.

***Paussus nauceras* Benson.**

1912. *Paussus nauceras*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, p. 497, fig. 230.

Additional localities.—Bihar : Chapra, Pusa ; Madras Presidency : Coimbatore (C. K. S. Coll. I-15) ; Punjab, Gurdaspur (A. G. R. Coll. 1-XI-08) ; United Provinces : Dindihat, 5,000 ft., Almora district (R. N. Parker 2-VII-23.)

I am inclined to think that the insect which Fowler (*l. c.* p. 494) has recorded from Travancore, base of Western Ghats (*Annandale*) under *Paussus seriesetosus* Wasmann is none other than this species.

***Paussus politus* Westwood.**

1912. *Paussus politus*, Fowler, *Faun. Brit. Ind. Coleopt. Paussidae*, pp. 497-498.

Additional locality.—Ceylon : Kandy (*Colombo Museum* III-18).

The following three species have been described from India since Fowler published his work. I reproduce below their descriptions (translated into English) as given by the author.

***Paussus escherichi* Wasmann.**

1911. *Paussus escherichi*, Wasmann, *Tijdschr. Entomol.*, LIV, pp. 195-197, fig. 1.

“ Rufo-ferrugineous, with a large black spot near the apex of the elytra, dull, head closely coriaceous, vertex with a distinct small fovea, transversely impressed between the eyes, clypeus not carinate ; antennae with the first joint coarsely granulose, club less coarsely granulose, clothed with very short white setae, somewhat shining, boat-shaped, three times longer than broad, subparallel-sided, with the apex subtruncate and produced backwards in a fulvo-penicillate tooth, deeply

excavate, lower margin of the excavation quadridentate, with the teeth fulvo-penicillate, upper margin not dentate, basal tooth of club of antennae not recurved and scarcely produced; pronotum closely coriaceous, scarcely broader than head, deeply divided, anterior part pointed at the sides, depressed in the middle, posterior part a little narrower than anterior, a little contracted at base, deeply depressed anteriorly and obsoletely foveolate at the base in the middle; elytra alutaceous, somewhat shining, longitudinally and obsoletely punctured, with very short white setae which are thicker and longer on its surface, margins of the elytra fulvo-penicillate; pygidium fulvo-penicillate; legs short and scarcely setose, femora coarsely granulose.

Length: 5.5 millim."

Locality.—Ceylon: Peradeniya (*K. Escherich* 1911 "in nest of *Pheidole indica* subsp. *rotchana* var. *divinans* Forel under stone").

***Paussus madurensis* Wasmann.**

1913. *Paussus madurensis*, Wasmann, *Entomol. Mitt.*, II, pp. 381-382.

"Pitchy black, slightly shining, with the head, antennae, anterior part of the pronotum, base of the elytra and legs black, hardly setigerous, except for the elytra with very short setae on the disk and with short red setae at the sides; head rugulose, vertex with two auriculate tubercles, carinate in front on either side and sulcate in the middle; club of antennae compressed, flat above, narrowed at apex, a little more than twice as long as broad, deeply but narrowly excavate, excavation with blunt tubercles, bare; pronotum as broad as the head and as long as broad, poorly rugulose, deeply divided, anterior part as broad and almost as long as the posterior, with the sides angulate, impressed in the middle, posterior part with the sides straight, with tufts of small yellow hairs in the middle of the transverse furrow; elytra parallel, poorly alutaceous, scarcely impressed and finely punctured; pygidium with the margin below sparsely set with tufts of reddish hairs; legs with the femora and middle tibiae moderate, posterior tibiae strongly dilated.

Length: 5 millim."

Locality.—Madras Presidency: Shembaganur, Madura.

***Paussus angustulus* Wasmann.**

1922. *Paussus angustulus*, Wasmann, *Mitt. Naturh. Mus. Hamburg*, XXXIX, p. 34.

"Small very narrow; flat, rufo-castaneous, dull, except the elytra which are shining black, with the base and apex reddish, sparsely setose; head closely rugulose, with a minute tubercle in front, clypeus depressed and emarginate; antennae closely rugulose with the club boat-shaped, twice longer than head, perpendicularly narrowed towards apex, the upper and the lower margins of the excavation with teeth, in the latter setigerous; pronotum about as broad as the head, one-third more broad than long, transversely quadrate, deeply divided, anterior part very short, closely rugulose, with the sides rounded and not excised in the middle, posterior part much longer and broader than the anterior, somewhat shining, a little dilated at the sides before the middle, deeply

excavate in the middle, a longitudinal median line towards the base with a folded arrangement on both sides; elytra parallel, flat, twice more long than wide, a little broader than pronotum, scarcely very finely punctured, with long reddish setae at the sides and at the apex; pygidium dull, posterior margin rufo-setose; legs slender.

Length: 4·8 millim."

Locality.—Madras Presidency: Matse, Malabar (*Donkier*).