

The genera of the Central and South American grasshopper family *Proscopiidae* (Orthoptera: Acridomorpha)

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Resumen

Se revisan y definen 21 géneros de la familia *Proscopiidae*, atendiendo a la genitalia del macho. De los 17 géneros reconocidos por CARBONELL (1977), dos se consideran sinonimias, mientras que *Taxiarchus*, anteriormente sinónimo de *Proscopia*, es restablecido como género válido. Se describen seis géneros nuevos —*Astromascopeia*, *Bolidorhynchus*, *Carphoproscopia*, *Microcoema*, *Pseudastroma* y *Sclerotoscopia*— estando basado el último de ellos en *Cephalocoema protopeirae* Amedegnato. Se estudian 61 especies, entre las cuales se establecen cuatro nuevas sinonimias y 24 se transfieren a otros géneros como comb. n.

Abstract

Twenty-one genera of the family *Proscopiidae* are reviewed and defined on the basis of the male genitalia. Of the seventeen genera recognised by CARBONELL (1977), two are synonymised, while *Taxiarchus* is restored from synonymy under *Proscopia*. Six new genera—*Astromascopeia*, *Bolidorhynchus*, *Carphoproscopia*, *Microcoema*, *Pseudastroma* and *Sclerotoscopia*— are described, the last being a genus based on *Cephalocoema protopeirae* Amedegnato. Sixty-one species were studied of which four are newly synonymised. Twenty four are newly allocated to genera as comb. n.

INTRODUCTION

The proscopiids are an exclusively New World group of grasshopper-like Orthoptera, which are flightless and usually wingless. They are all elongate and twig-like or stem-like. There is usually great sexual dimorphism, the males often being much smaller than the females. None of the *Proscopiidae* retain their wings for flight, though in several genera both sexes or just females retain wing rudiments. Those with large hind-wing remnants may use them in sexual display or defence. Unlike true acridids, the reduction of tegmina and wings of proscopiids takes place at the same rate. In con-

trast, among higher acridids progressive wing reduction takes place more rapidly in the hind-wing than the fore-wing or tegmen, the latter often being retained as part of the stridulatory mechanism or as a protective cover for the tympanum. In proscopiids an abdominal tympanal organ is absent, so this function for the reduced tegmina is not required. Careful examination under the microscope will often show the smallest of wing remnants as two pairs of small cuticular folds in species which are superficially totally wingless. In several proscopiids genera the metathorax and first abdominal segment are inflated suggesting a role in hearing. The femora in several species are furnished with a series of stiff bristles or ridges on their inner surface, again suggesting the possibility of sound production, though this has not yet been observed in nature. The universal flightlessness of the family may reflect the great antiquity of the group (JAGO, 1981).

A further feature peculiar to proscopiids are the appendiculate lower lobes of the knees of the hind femora (fig. 21). A tubercle on each side of the base of the hind tibia contacts the inside of these lobes when the tibia is folded, possibly replacing Brunners organ as part of a system of proprioception.

Perhaps as a result of the recent drought in north-eastern Brazil, several species have become economically important pests.

The point of departure for most students of the family is the monograph by MELLO-LEITAO (1939). This suffers from an emphasis on external morphology for definition of genera and species. DIRSH (1973) rightly suggested the need to study the male phallic complex of these insects, but warned that the homology of parts with those in other *Acridoidea* would be difficult. LIANA (1972) attempted review using male reproductive anatomy, but lacked male material for several of the genera she studied. CARBONELL (1977) produced an useful generic catalogue, listing all the then valid species. DESCAMPS (1973) used a limited selection of named material to investigate the male phallic structures of the *Proscopiidae* and was successful in showing how unusual the family is in this respect. Not only are the various plates and sclerotisations often bizarre and greatly simplified, but the proscopiids seem to have had a very long evolutionary history reflected in the great number of variations on an anatomically simple theme. Most authors would now group them with the *Eumastacidae* and *Trigonopterygidae*, which are also groups which have had a long and separate evolution apart from the main stream of other acridoids. Proscopiid genitalia, however, are structurally very similar to those of the *Pneumoridae* (unique to southern and central-eastern Africa) and it is questionable whether they are really closely related to the eumastacids.

The male genitalia are represented by what amounts to an eversible sac. The sclerotised elements are depicted in fig. 1 which represents a generalised proscopiid containing all the observed anatomical elements. The endophallic duct is divided into two parts, in a manner reminiscent of that in the *Acridoidea*. The most distal part (7), may be strongly sclerotised, perhaps enabling withdrawal of the distal part to be more efficiently achieved. In the latter case, the sclerotised part appears to reside in the region called the spermatophore sac in higher acridids. Extrusion of the endophallic sac and ducts leads to great change in the appearance of the phallic complex compare *Corynorhynchus brevisrostris* (fig. 86) and *C. ruficornis* (fig. 85) or

Astromoscopia albrechti (figs. 45 and 46). In these cases the ectophallic sclerites get displaced laterally and ventrally as the endophallus is protruded. In *Scleratoscopia* the eversible sac has tiny denticles, while in *Hybusa* sclerotised struts are present.

Considering the phallic complex in sequence from front to rear, the ectophallic membrane bears a transverse plate (1) which may be articulated with, or fused to, a pair of lateral hook-like lophi (2). The plate and/or lophi may be weak or absent. The lophi are weak in *Astroma*, *Corynorhynchus* and *Astromoscopia*. They are fused to the transverse plate in *Apioscelis*, *Epigrypa*, *Cephalocoema*, s. str., *Prosarthria*, *Proscopia* s. str., *Tetanorhynchus* and *Carpophrosopia* and are often developed into large up-turned hooks. In *Hybusa* the transverse plate forms the whole of the dorsal surface of the phallic complex, the lophal hooks being greatly reduced, lying side by side below it (fig. 99).

Immediately posterior to the transverse plate lies the median genital slit (3), each side of which is bordered by paired plates (10, 5 and 4). The most distal plates (4) may be in the form of pod-like valves (as in *Bolidorhynchus* and *Cephalocoema*), be used posteriorly (*Proscopia*), be thinly sclerotised but pod-like (as in *Astroma*), be reduced to a pair of bent, hook-like spicules (*Corynorhynchus*, *Stiphra*) or be massively sclerotised as ventro-apical lobes (*Scleratoscopia*). In some genera the paired dorso-lateral plates extend as a terminal ring below the apex of the genital slit, the ring being free (as in *Corynorhynchus*) or firmly fused to the paired plates (as in *Tetanorhynchus*).

In genera with well developed paired plates (4), these extend downwards and forwards to form a pair of more or less oblique (as in *Cephalocoema*) paired sclerites (6). These may be overlapped by or rest alongside another pair of plates (10), the latter being greatly enlarged to border the median genital slit (as in *Scleratoscopia*). In *Hybusa* the terminal paired plates and ventral annulus (4) seem to have become invaginated to lie between enlarged accessory plates (5). In *Bolidorhynchus* a pair of semi-circular struts is typically present (9), possibly homologous with (6) in other genera. In *Scleratoscopia* and *Tetanorhynchus* the paired plates (4) extend as a lightly sclerotised and complete ventral plate with a thickened anterior margin. (10) represent paired plates which overlies (6) and at outer edge are often identical to (6) in outline.

Finally, all distal plates except (4) may be eliminated, as is *Carpophrosopia*, (fig. 54) and *Epigrypa*, (fig. 92) leaving only a genital slit and soft eversible sac. In parallel with these changes, several genera have developed a tubular sclerotised genital duct (7,8), as in *Apioscelis* (fig. 22), *Proscopia* (fig. 122) and *Microcoema* (fig. 102). *Scleratoscopia* represents a tendency in the direction of massive sclerotisation of the plates seen in *Tetanorhynchus*, but such modification is very rare in proscopiids generally.

PRESENTATION

The genera are given in alphabetical order. The male phallic complex is described with the parts numbered as in (fig. 1) (1-10). No attempt, however, is made to deduce homology with the genitalia of other acridoids. In describ-

ing new species the range and mean of measurements and number of specimens measured are given. Representative members of each genus are drawn and figures given appropriate scale lines in a standardised manner throughout the paper.

The following abbreviations are used for the laboratories and museums from which material for this study was borrowed:

- MNHU = Museum für Naturkunde der Humboldt-Universität, Berlin;
 MNHN = Museum National d'Histoire Naturelle, Paris;
 ANS = Academy of Natural Sciences, Philadelphia;
 NM = Naturhistorisches Museum, Vienna;
 IZPAN = Instytut Zoologiczny, Warszawa;
 USNM = National Museum of Natural History, Washington;
 MCZH = Museum of Comparative Zoology, Harvard;
 MBA = Museum of Buenos Aires;
 MSANT = Museum of Santiago, Chile;
 ODNRI = Overseas Development Natural Resources Institute, Chatham;
- MLP = Museo de la Plata;
 MIZSU = Museo ed Istituto di Zoologia Sistemica dell' Università;
 Torino
 MNRJ = Museu Nacional, Rio de Janeiro.

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Key to genera of *Proscopiidae* based mainly on male internal genital morphology.

1. Genital duct distally and/or proximally heavily sclerotised. Transverse plate (1) always complete and fused to lateral hooks (2), though often only by a slender isthmus. Wing rudiments never present 2.
- Genital duct membranous, never sclerotised to form a distal or proximal pod or tube. Transverse plate (1) present to totally absent. Wing rudiments in some genera 5.
2. Head with protruding globular eyes (figs. 24, 118 and 182, 186) with rostrum much shorter than length of mead behind eyes. Subgenital plate

- of male spoon-shaped, apically paraboloid or rounded (figs. 26, 120 and 185) 3.
- Head with eyes less globose (fig. 103) and rostrum long and slender. Subgenital plate of male acute, membranous above (fig. 104) *Microcoema* gen. n.
3. Plates (4) and (5) in male phallic complex fused to form a solid plate and with median slit (3) terminating short of its apex, not bounded by greatly elevated lips in profile (compare with fig. 181). Lateral hooks (2) attached broadly to transverse plate (figs. 23, 121). Head (figs. 24 and 118) stocky and rostrum short depressed 4
- Plates (4) and (5) in male phallic complex sclerotised but pod-like (Fig. 180) with median slit extending to apex and its lateral lips elevated in profile (fig. 181). Lateral hooks (2) joined by a narrow isthmus to transverse plate (1) (figs. 189-193). Head relatively elongate with long slender region behind eyes (fig. 182) *Taxiarchus* Brunner gen. res.
4. Hooks (2) of dorsal plate (1) attached broadly to transverse plate (1) which is parallel-side (fig. 23). Plate (5) with median slit hidden below transverse plate so that at first glance genital duct has no means of exit. Subgenital plate ovoid to semi-circular as seen from above, its dorsal surface almost horizontal in repose. Hind femora inflated and baloon-like basally *Apioscelis* Brunner.
- Hooks (2) of dorsal plate attached broadly to transverse plate (1) which has laterally outwardly and forwardly directed pair of anterior lobes (fig. 121). Plate (5) with median slit (3) visible behind transverse plate. Sub-genital plate (fig. 120) ovoid, with its dorsal surface sloping sharply downwards in repose. Hind femora not greatly inflated or baloon-like basally *Proscopia* Klug.
5. Male phallic complex (fig. 99) unique with paired lateral hooks (2) forming pair of medially appressed stylets on dorso-apical mid-line of complex. Paired plates (4) internalised. Transverse plate (1) forming a complete dorsal shield. Stocky species (fig. 97) with head squatt and dorso-ventrally flattened. Meso- and metathorax inflated in a way reminiscent of *Epigrypa*. *Stiphra* and *Scopaeoscleratoscopia* *Hybusa* Erichson.
- Male phallic complex never of the form seen in figs. 99 and 100. Stocky to slender species, but never with head of form shown in fig. 97 6.
6. Transverse plate (1) present in male phallic complex 12.
- Transverse plate (1) absent from male phallic complex 7.
7. Lateral plates and hooks absent (2) or present only as membrane ... 8.
- Lateral plates (2) with hooks even if they are all that remains of lateral plates (fig. 43) 9.
8. Outer margins of plates (4) marginal to median slit (3) (fig. 107) with an angular outer profile. Elongate slender species with tendency for very bulbous eyes in males and rostrum in line with head (figs. 108 and 109). Posterior edges of abdominal tergites with tendency to be inflated (figs. 111 and 112). Metanotum never inflated *Nodutus* Liana.
- Outer margins of plates (4) marginal to slit (3) weakly sclerotised and

- without angular outer profile (fig. 150, 152). Fairly sturdy species with bulbous eyes but deflexed rostrum (figs. 155-158). Abdominal tergites not inflated posteriorly. Metanotum to a greater or lesser degree inflated *Stiphra* Brunner.
9. Lateral hooked plates (2) present only as apical hook (fig. 43). Paired plates (4) weak, pod-like in profile (fig. 44), reminiscent of *Cephalocoema* which however has a strong transverse plate. Rest of complex formed by a weakly sclerotised eversible sac and no other sclerotisations *Astromascopia* gen. n.
- Lateral hook-like plates (2) represented by lateral bands of cuticle as well as apical hooks (figs. 27, 29, 30, 84, 127 and 128). Paired plates (4) weak to stronger with various marginal thickenings 10.
10. Paired plates (fig. 84) forming sharply angled spicular plates (4) as seen from above. Male rostrum not fluted but delicate and tapered (figs. 79 and 80), but female rostrum apically expanded and fluted (figs. 87 and 88) *Corynorhynchus* Brunner.
- Paired plates (4) forming paired pod-like valves each side of median slit (3). Neither sex with inflated fluted rostrum; species small with long tapered rostrum in both sexes 11.
11. Lateral plates (4) of male phallic complex without anterior or posterior tubercle (figs. 27, 29, 30, 42). Males with wing rudiments present as longitudinal cuticular folds; females with two pairs of quite large wing rudiments (fig. 41) *Astroma* Charpentier.
- Lateral plates (4) of male phallic complex (figs. 127 and 128) with anterior and posterior marginal tubercles, anterior one being between tips of hooks of lateral plates (2). Neither sex with wing rudiments *Pseudastroma* gen. n.
12. Males and females with at least tiny traces of tegmina, more rudimentary in males than in females (where two pairs of wings are visible) (see figs. 2 and 6) 13.
- No traces of wing rudiments, even cuticular folds on meso- and metathorax having disappeared 14.
13. Transverse plate of male phallic complex (1) fused to lateral plates (4), but whole structure weak and membranous (figs. 4 and 5). Weak pair of anterior pronotal tubercles present dorso-anteriorly (figs. 2 and 6). Subgenital plate elongate, spatulate with strong lateral margins and lightly bifid apex (figs. 3 and 7). Tips of antennae always surpassing apex of rostrum *Anchocoema* Mello-Leitao.
- Transverse plate of male phallic complex (1) separated from strongly upcurved lateral plates (2) by membrane (figs. 10-12). Anterior pair of pronotal dorso-lateral tubercles absent, pronotum being smooth and not longitudinally carinate (figs. 16 and 17). Subgenital plate slipper-shaped, blunt to pointed (figs. 18-20), not apically emarginate. Rostrum of variable length (Figs. 13-15), decurved, antennal apices often falling short of its apex *Anchotatus* Brunner.
14. Male phallic complex with transverse plate (1) and lateral hook-like sclerites (2) forming a sub-circular plate, below whose ventro-anterior margins semi-circular struts (9) are visible. Rostrum of male and female elongate, apically expanded and fluted (fig. 51). Large insects, females

- often up to 130 mm. long. *Bolidorhynchus* gen. n.
- Male phallic complex without semi-circular struts (9) and with fused transverse plate (1) and lateral plates (5) forming a sub-rectangular structure. Rostrum of male and female never fluted 15.
15. Phallic complex of great simplicity, consisting of an eversible genital sac emerging between simple lateral plates (4) through a simple median slit (3). Plates bordering (3) not raised into pod-like structures. Lateral plates (2) lightly convergent backwards, ending in upcurved apical hooks 16.
- Phallic structures more complex, at least with lateral plates (4) bordering slit (3) raised into pod-like flanges, often of large size. Some species with highly complex paired sclerites (see figs. 136, 138). Lateral plates (2) strongly convergent at their tips, so hooked ends nearly touch (figs. 62, 135, 146, 196) 18.
16. Insects of very slender habitus with very elongate rostrum and subgenital plate in males. Posterior femora not armed with dorso-lateral apical spines *Carphoproscopia* gen. n.
- Insects of more heavily constructed habitus with relatively short rostra (figs. 89, 95 and 113) and subgenital plates (figs. 91 and 115) 17.
17. Lateral margins of median slit (3) formed by simple unelevated plates (4) (figs. 92-94). Subgenital plate truncate (fig. 96) to emarginate apically (fig. 91). Heavily built pronotum with coxae (unlike *Stiphra* fig. 159) attached at its mid-point. Head strongly conical; rostrum not pigmented below *Epigrypa* Brunner.
- Lateral margins of median slit (3) formed by upwardly flared rims of paired plate (4) (figs. 116 and 117). Subgenital plate pointed apically (fig. 115). Quite slender species with greatly elongated pronotum (fig. 114). Rostrum small, delicate, often brightly coloured ventrally *Prosarthria* Brunner.
18. Paired plates (4) of male phallic complex forming a lightly sclerotised pod-like margin to median slit (3) (figs. 59 and 195) 19.
- Paired plates (4) of male phallic complex forming heavily sclerotised complex margins to median slit (3) (figs. 136, 138 and 146) 20.
19. Sclerotised dorsal plate (plates (1) and (2) fused) of male phallic complex typically with lateral sclerotisations parallel (fig. 62) but with angular preapical lateral margins and delicate, upturned terminal hooks. Anteriorly, lateral plates (1) form pair of flared flat lobes (figs. 61-63) *Cephalocoema* Serville.
- Sclerotised dorsal plate with lateral sclerotisations convergent backwards (figs. 198-202) with massive, often overlapping, apical hooks (figs. 194-195). Oblique diagonal sclerites (10) in evidence, but without forwardly directed flared lateral lobes developed from plates (1) *Tetanorhynchus* Brunner.
20. Phallic complex of male about twice size of that in *Scopaeoscleratoscopia* (see figs. 134-138) with antero-lateral sclerites (6) flat, ovoid, set obliquely to long axis of complex. Subgenital plate pointed and sculptured (figs. 142 and 143). Meso- and metathorax not or hardly inflated. Rostrum of head no wider above than below *Scleratoscopia* gen. n.

- Phallic complex of male about half size of that in *Scleratoscopia* (see figs. 146-147) with antero-lateral sclerites (6) elongate, set at right-angles to long axis of complex. Subgenital plate pointed, smooth, smaller and not sculptured as in *Scleratoscopia*. Metathorax slightly but positively inflated. Rostrum narrower below than above.....
 *Scopaeoscleratoscopia* gen. n.

Anchocoema Mello Leitao (Fig. 2-7)

Anchocoema Mello Leitao, 1939: 298. Type species *Anchocoema subalata* Mello Leitao, 1939 by original designation MELLO LEITAO, 1939.

DIAGNOSIS.—*Male*. Transverse plate (1) fused to lophi (2) to form a single dorsal, lightly sclerotised plate. Lophi lobe-like, nor forming hooks (figs. 4, 5). Thus differing from *Pseudastroma* (figs. 127-129), *Astroma* (figs. 27-30) and *Corynorhynchus* (figs. 84-86) species, which internally lack the basal plate and have distal remnants of lophi hooked. Struts (9), accessory plates (10) absent, but median genital slit (3) continuous to apex of phallic complex and bordered by sclerotised toothed margins of otherwise weakly sclerotised pair of plates (4). Lightly sclerotised outer basal parts of (4) inflated on each side, hemispherical and granulate. Sclerotised margins of each plate (4), expanded, but more weakly thickened anteriorly, not angular (as in *Corynorhynchus*) nor with marked outer median angle (as in *Nodutus*) (fig. 107).

Externally with small flattened rostrum, antennae easily surpassing its apex (figs. 2 and 6). Head and pronotum with longitudinal carinule or smooth. Pronotum with tendency to have pair of raised teeth just behind cervical region dorsally. Tiny pair of wing rudiments present in both species examined. Sub-genital plate (figs. 3,7) membranous above, elongate to very elongate and apically emarginate. Cerci small, flattened, lightly incurved apically or at least flattened and sculptured. Posterior knees with pair of dorso-lateral apical spines (as in *Anchotatus*).

Female. Externally similar in appearance to males but in case of *subalata* body length roughly twice as long. Female wing rudiments slightly larger than those of male, but similarly both tegmen and hind-wings present. Upper side of hind-femur tri-carinulate, its twin upper knee lobes each with spine; lower inner and outer knee lobes appendiculate (as in *Anchotatus*, fig. 21). Hind tibiae flat to concave dorsally with spines set along a dentate ridge on each side.

REMARKS.—This genus contains nine listed species all from the western Andean region of Argentina. They are small as adults and may be mistaken for nymphs of larger species. They inhabit low woody shrubs in open heathland.

MATERIAL STUDIED:

Anchocoema perplexa Mello Leitao (figs. 2-4).

MELLO LEITAO, 1939: 375.

2 ♂, ARGENTINA, San Martín de los Andes, ODNRI

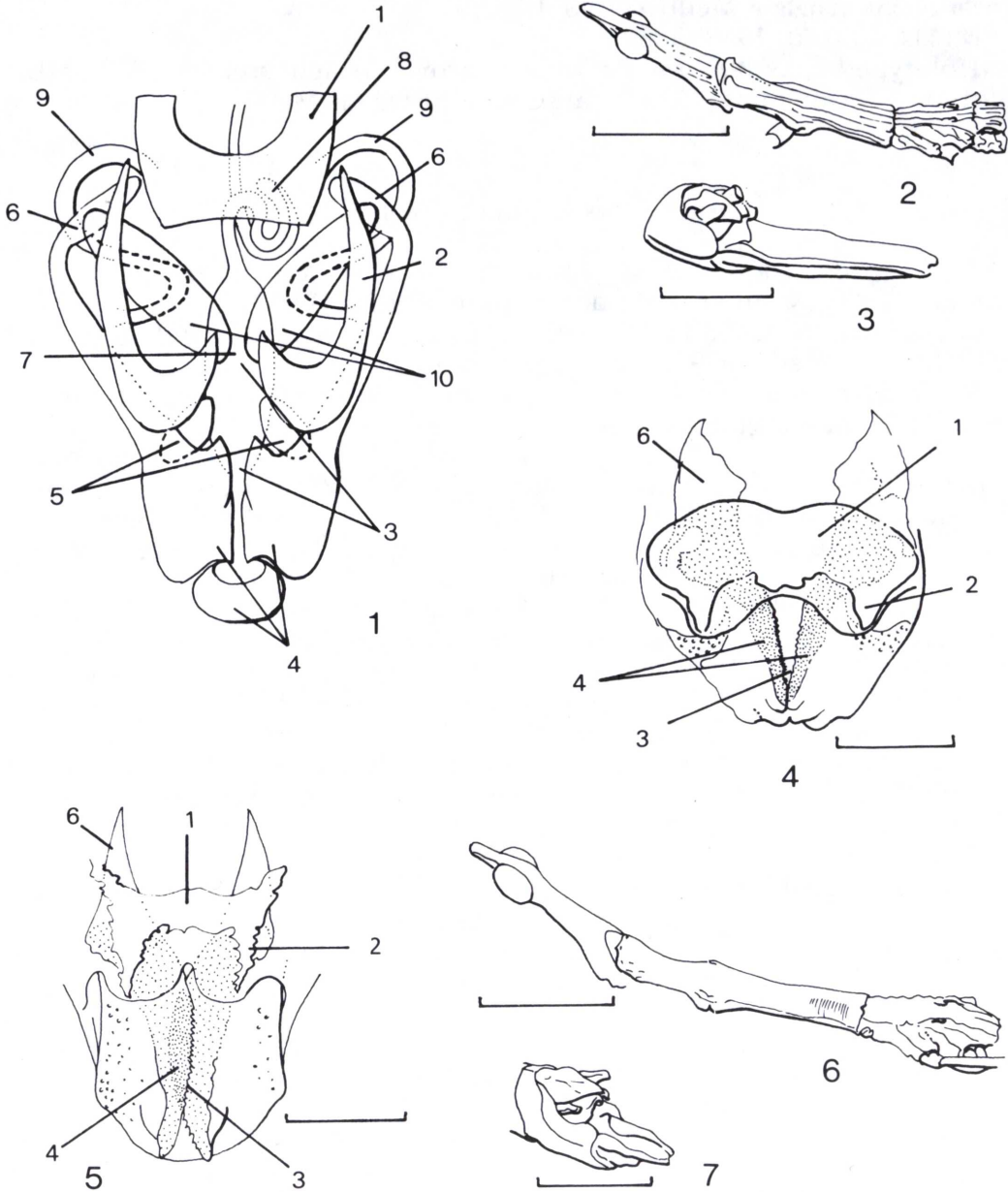


Fig. 1.—Schematic dorsal view of proscopiid male phallic complex. (1) transverse plate of ectophallic membrane; (2) pair of hook-like lophi; (3) median dorsal slit or genital opening; (4) pair of valvular plates lateral to genital opening; (5) sub-lophal pair accessory plates; (6) pair anterior supplementary lateral plates; (7) distal ejaculatory sac (sometimes heavily sclerotised), protrusible; (8) proximal part of endophallic duct (sometimes sclerotised); (9) pair of semi-circular lateral struts giving flexible attachment for "lophi"; (10) pair of plates overlaying (6).

Figs. 2-7.—*Anchocoema* males 1.—2-4: *Aperplexa*: 2) lateral aspect from left side, head and pronotum; 3) oblique view abdominal apex from left side; 4) phallic complex, dorsal aspect. 5-7. *subalata*: 5) phallic complex, dorsal aspect; 6) lateral aspect from left side, head and pronotum; 7) oblique view abdominal apex from left side. Scale line under fig. 6 represents 5 mm and refers and refers also to 5.

Anchocoema subalata Mello Leitao (figs. 5-7)

MELLO LEITAO, 1939: 386.

Holotype ♂, ARGENTINA, Catamarca prov., v (Daguerre) n.° 19718, MBA.
Allotype ♀, same data, 2 ♂, Catamarca prov. All MBA.

Anchotatus Brunner (Figs. 8-21)

Anchotatus Brunner, 1890: 110. Type species: *Anchotatus peruvianus* Brunner, 1890 by subsequent designation KIRBY, 1910.

Cephaloscopia Mello-Leitao, 1939: 300. Type species: *Cephaloscopia difficilis* Mello-Leitao, 1939. Monotypic Syn. n.

Miniscopia Liana, 1972: 400, figs. 72-76. Type species *Miniscopia danae* Liana, 1972. Monotypic. Syn. n.

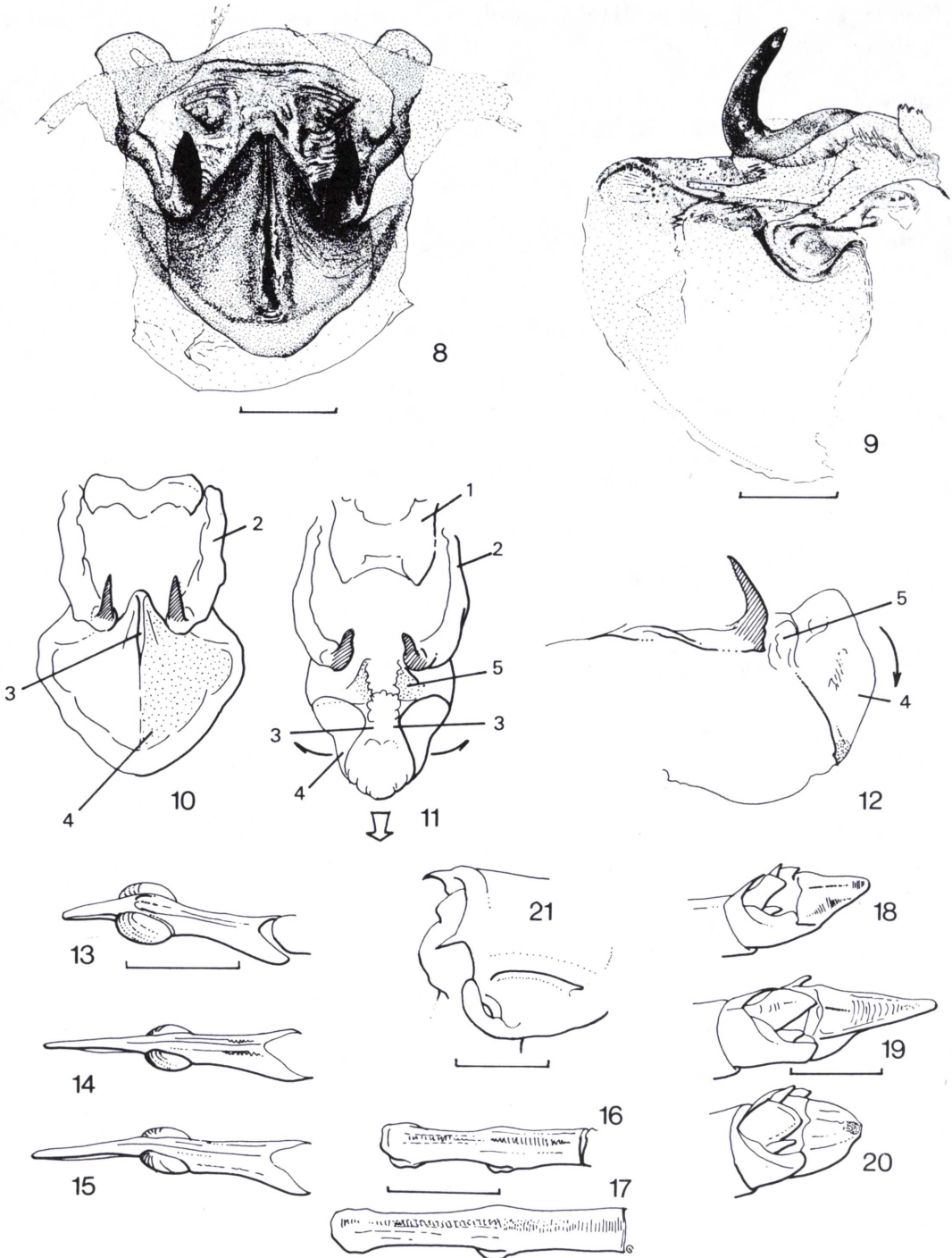
DIAGNOSIS.—*Male*. Transverse plate (figs. 10,11) (1) weak and articulated with slender hook-like «lophi» (2). Accessory plates bordering narrow median slit (3) forming raised lips when folded (fig. 12). Genital duct not sclerotised internally. Anterior supplementary plates (fig. 11 (5)) present, but lateral struts (fig. 11, (9)), absent. Head (figs. 13-15), slender, vertex decurved anteriorly or straight. Eyes with clear eyestripes. Occiput lightly grooved dorsally. Pronotum (figs. 16, 17) not armed with spines, lightly wrinkled transversely on mid-dorsal line. Two pairs of very tiny folds at each side of metanotum represent remains of tegmina and wings. Subgenital plate (figs. 18-20) flat above, apically somewhat truncate or even finely emarginate apically (as in *difficilis*). Upper side hind femur bi-carinulate; knees with pair of apical spines dorsally (fig. 21) on each side.

Female. Rostrum more robust than that of male, as long as or longer than portion of head behind eyes; in some species (e. g. *ecuadoricus*) fluted apically (as in *Bolidorhynchus*). Anterior pair of dorsal lateral spines on pronotum, strong or weak. Meso-notum with pair of postero-lateral lobes level with tegminal bases; metanotum with tendency to weak median carinula and median apical tooth. Tegmina and wings strongly developed (in *ecuadoricus* and *peruvianus*), when folded their apices level with or surpassing rear of metanotum. Hind femora bicarinate above and with same genicular morphology as *Anchocoema*.

REMARKS.—Fig. 10 shows the male complex completely retracted, while figs. 11 and 12 show the partly extruded state with valvular plates (4) slight-of sub-lophal pair of accessory plates (5) are visible as a consequence. *A. difficilis* is the largest and most robust species examined in this genus (see figs. 8 and 9).

The anatomy of the knees of the posterior femora and presence of very small wing rudiments in males (larger in females) suggests a common origin for this genus with *Anchocoema*.

The type species for *Cephaloscopia*, *Miniscopia* and *Anchotatus* are congeneric. *A. chapmani* is probably conspecific with *A. pugnax* Mello Leitao, 1939, since both come from Bonaire I. (BMNH). CARBONELL (pers. comm.) has sent photographs of the holotype of *Proscopia flavirostris* Blanchard, 1851



Figs. 8-21.—*Anchotatus* males.—8-12: phallic complex: 8) *difficilis* dorsal aspect, 9) *difficilis* lateral aspect from left side; 10) *chapmani* dorsal aspect; 11, 12) *peruvianus* dorsal and lateral aspect from right side respectively (genital duct partly extruded); 13-15) oblique view of head: 13) *ecuadoricus*; 14) *peruvianus*; 15) *chapmani*; 16, 17: oblique view pronotum from left side: 16) *peruvianus*; 17) *chapmani*; 18-20: oblique view abdominal apex from left side: 18) *peruvianus*; 19) *chapmani*; 20) *ecuadoricus*; 21) outer aspect right posterior knee - *peruvianus*. Scale line under figs. 8 and 9 represents 0.5 mm and applies to figs. 8-12 and 21; that under Fig. 13 represents 5 mm and applies to 13-17; that adjacent to Fig. 19 represents 2 mm and refers to figs. 18-20; that under 21 represents 1 mm.

(Holotype ♀ . Chile. MNHN) which he considers to be in the genus *Cephaloscopia*.

The genus contains ten published species. Their geographical distribution extends along the Andes from Chile to Peru, Ecuador and finally to Bonaire I. in the West Indies.

MATERIAL STUDIED:

Anchotatus peruvianus Brunner (Fig. 11, 12, 14, 16, 18)

BRUNNER 1890: 111.

Cotype ♀ . 17554. No other data. Labelled provisionally by CARBONELL, 1966, NM 4 ♂, 3 ♀, 2 ♀ n, ECUADOR, Loja (CAMPOS), Det. By HEBARD, ANSP.

Anchotatus ecuadoricus Hebard (Figs. 13, 20)

HEBARD, 1924: 165

Holotype ♀ , ECUADOR, Guayaquil. 1 ♂ , 1 ♀ , same data, Det. by REHN. ANSP.

Anchotatus chapmani Mello-Leitao (Figs. 10, 15, 17, 19)

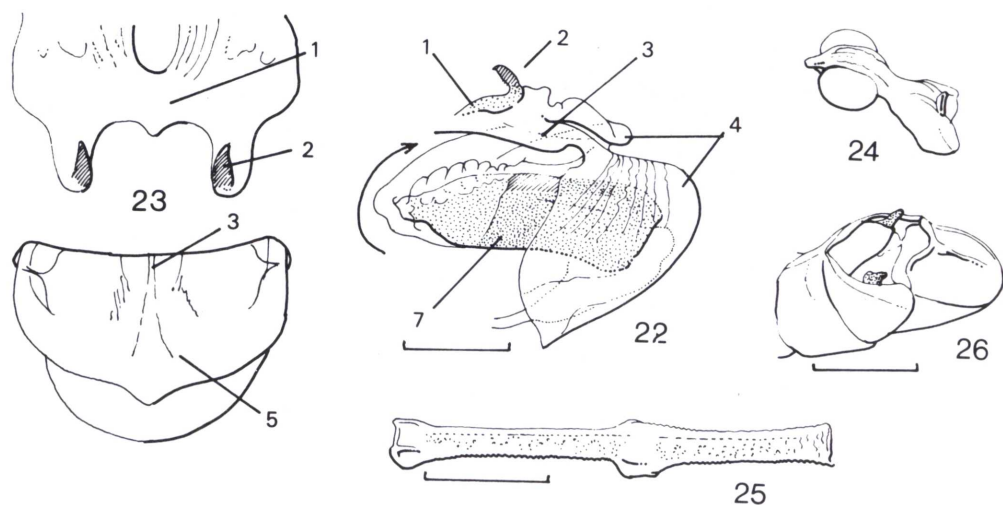
MELLO-LEITAO, 1939: 363.

Allotype ♂ . WEST INDIES, Bonaire I. BMNH.

Anchotatus difficilis (Mello-Leitao) comb. n., (Fig. 8, 9)

MELLO-LEITAO, 1939: 301.

Paratype ♂ . PERU, BMNH



Figs. 22-26.—*Apioscelis bulbosa* males.—22, 23: phallic complex: 22) lateral aspect from right side; 23) dorsal aspect showing transverse plate (1) and fused valvular plates (4); 24) oblique view head; 25) oblique view pronotum from left side; 26) oblique view abdominal apex. Scale under fig. 22 represents 0.5 mm and refers also to 23; that under 25 represents 5.0 mm refers also to 24; that under 26 represents 2.0 mm.

Anchotatus danae (Liana) comb. n.

LIANA, 1972: 401, 402, Figs. 72-76.

Holotype σ . ECUADOR, Loja, 26-VII-1905 (*Ohaus*). Conspecific with material det. as *Anchotatus peruvianus* by HEBARD ex ANSP. IZPAN.

Apioscelis Brunner (Figs. 22-26)

Apioscelis Brunner, 1890: 99. Type species: *Proscopia bulbosa* Scudder, 1869 by subsequent designation by KIRBY, 1910.

DIAGNOSIS.—*Male*. Transverse plate (fig. 23 (1)) fused with robust, hook-like "lophi" (2) to form a solid dorsal plate. Accessory plates (4) forming a solid shelf with, when retracted, median slit (3) almost hidden from view. Large bulbous membrane lies below (4). Genital duct (7) (fig. 22) heavily sclerotised and extrudable (see arrow). Head (fig. 24) short with very narrow portion below bulbous eyes. Vertex very short, decurved. Occiput with light striae between eyes and dorso-lateral longitudinal depressions posteriorly. Pair of tiny tubercles connected by a collar just at rear of occiput dorsally. Eyes bulbous, no eyestripes. Pronotum (fig. 25) much more elongate than *Anchotatus*, finely spinose throughout. Sub-genital plate (fig. 26) broadly rounded, spoon-shaped and laterally inflated. Posterior femora greatly inflated proximally in both sexes, bicarinate above. Genicular morphology as in fig. 21.

REMARKS.—The male holotype (ANSP) lacks and abdomen. A carefully matched male from Peru (Yurimaguas, Huallaga R.) was dissected instead.

The catalogue (CARBONELL, 1977) lists five valid species, of which *sajax* (Scudder) is considered here to be a member of the genus *Taxiarchus*. The genus is very similar to *Proscopia*, the male phallic complex differing mainly in its degree of sclerotisation in the genital duct (compare figs. 22 and 122). The genus seems to extend across Peru and Ecuador to Colombia (DESCAMPS, 1973).

MATERIAL STUDIED:

Apioscelis bulbosa (Scudder)

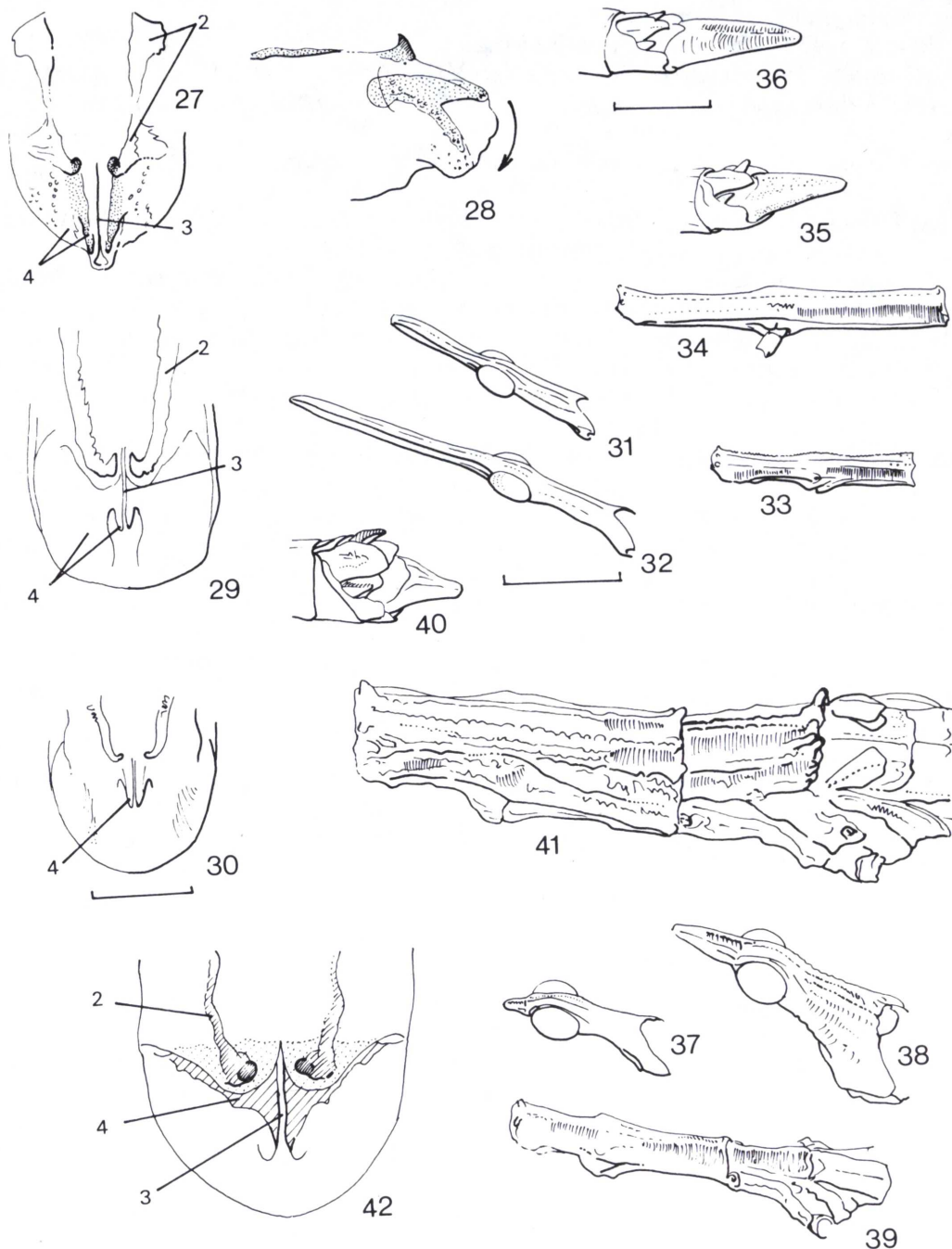
SCUDDER, 1869: 336.

All PERU. Holotype σ , Napo, Maranon; 1 φ , Rio Pacaya; 9 σ , 4 φ , Yurimaguas, Huallaga R.; 3 σ , Iquitos, Loreto; 1 σ , Contamano, Ucayali R. BRAZIL; 2 σ , Teffe, Amazonas. All ANSP.

Astroma Charpentier (figs. 27-42)

Astroma Charpentier, 1841: pl. 4. Type species: *Astroma chloropteron* Charpentier, 1841 by monotypy.

DIAGNOSIS.—*Male*. Transverse plate (1) absent (figs. 27, 29, 30, 42). Lophi very slender, sometimes broken mid-way (2), lying in flexible ectophallic membrane with distal extremities tiny, hook-like. Median slit (3) without process between, or anterior to, tips of (2) (compare with *Pseudostroma*, figs. 127, 128). Median dorsal pod-like processes of accessory plates (4) very small, in retracted position located mid-way between tip of complex and tips of lophi. In side view (fig. 28), feeble sclerotisation of (4) bifid when everted.



Figs. 27-36.—*Astroma* males.—27-30: phallic complex. 27) *chloropterum* dorsal aspect, partially everted; 28) *chloropterum* lateral aspect from right side, partially everted; 29) *striatum* dorsal aspect; 30) *fastigiatum* dorsal aspect; 31, 32) oblique view of head; 31) *chloropterum*; 32) *fastigiatum*. 33, 34.—oblique view of pronotum from left side; 33) *chloropterum*; 34) *fastigiatum*; 35, 36: oblique view from left side: 35) *chloropterum*; 36) *fastigiatum*. Figs. 37-42. *Astroma compactum* - 37, 38: oblique view from left side, male and female heads respectively; 39) oblique view, left side, male thoracic region; 40) oblique view, male abdominal apex; 41) oblique view, left side, female thoracic region; 42) male phallic complex, dorsal aspect. Scale under Fig. 30 represents 0.5 mm and refers also to 27-29 and 42; that under 32 represents 5.0 mm and refers also to 31, 33, 34, 37-39 and 41; that under 36 represents 2.0 mm refers also to 35 and 40.

All other paired plates absent. Head (figs. 31-32 and 37) delicate (elongate with long flat to slightly longitudinally sulcate vertex) to stocky; rostrum rectangular in cross section; less tapering than in *Anchotatus*. Pronotum (figs. 33 and 34) with many fine dorso lateral striae in rear half. In *chloropterum* and *compactum* (latter stocky species) cuticle micro-spinose and accentuated tubercles anteriorly; in *fastigiatum* (most elongate species) (fig. 34) cuticle almost smooth anteriorly and anterior tubercles less pronounced. Fore and hind-wings absent or reduced to very small carinulae. Subgenital plates (figs. 35, 36 and 40) not flat and membranous above, but equally sclerotised on all sides, with rounded edges. Micropustulate or minutely transversely striate. Only inner member of dorso-apical genicular spines present.

Females.—Slender to moderately stout (fig. 41). Head with rostrum much longer than occipital region to much shorter (as in fig. 38). Tendency to have clear longitudinal carinulae, especially in thoracic region. Body sculpture delicate to heavy. Pronotum with pair of anterior, dorso-lateral, spines and another pair at rear. Rear of mesonotum with a pair of oblique (*chloropterum*) to erect spines, in *A. compactum* supplemented by extra interstitial ones (fig. 41). Small fore and hindwing rudiments present, their apices extending beyond rear of metanotum (in *chloropterum*) or falling well short of it (in *compactum*). Genicular spines as for males.

REMARKS.—Eight species are attributed to this genus in CARBONELL (1977). They range from slender to quite heavily built insects (like *A. compactum* which inhabits *Larrea* bushes). The females, in particular, are quite elaborately striate and sculptured.

The genus is known only from Chile and Argentina.

MATERIAL STUDIED:

Astroma chloropterum Charpentier. All ANSP (figs. 27, 28, 31, 33, 35).

All CHILE. 8 ♂, 8 ♀, Cochagua; 1 ♂, Lota; 1 ♂ n, Cantiri; 7 ♂, 2300 m, Santiago, Lagunillos; 1 ♂, Aconcagua, nr. Zapalla, Cachagua, Additionally- 1 ♂, 1 ♀, Colchagua, BMNH.

Astroma striatum Blanchard. All ANSP (fig. 29)

BLANCHARD, 1851 (in Gay): 60.

CHILE, 2 ♂, 2 ♀, Aconcagua nr. Zapalla, Cachagua.

Astroma fastigiatum (Mello-Leitao) comb. n. (figs. 30, 32, 34, 36)

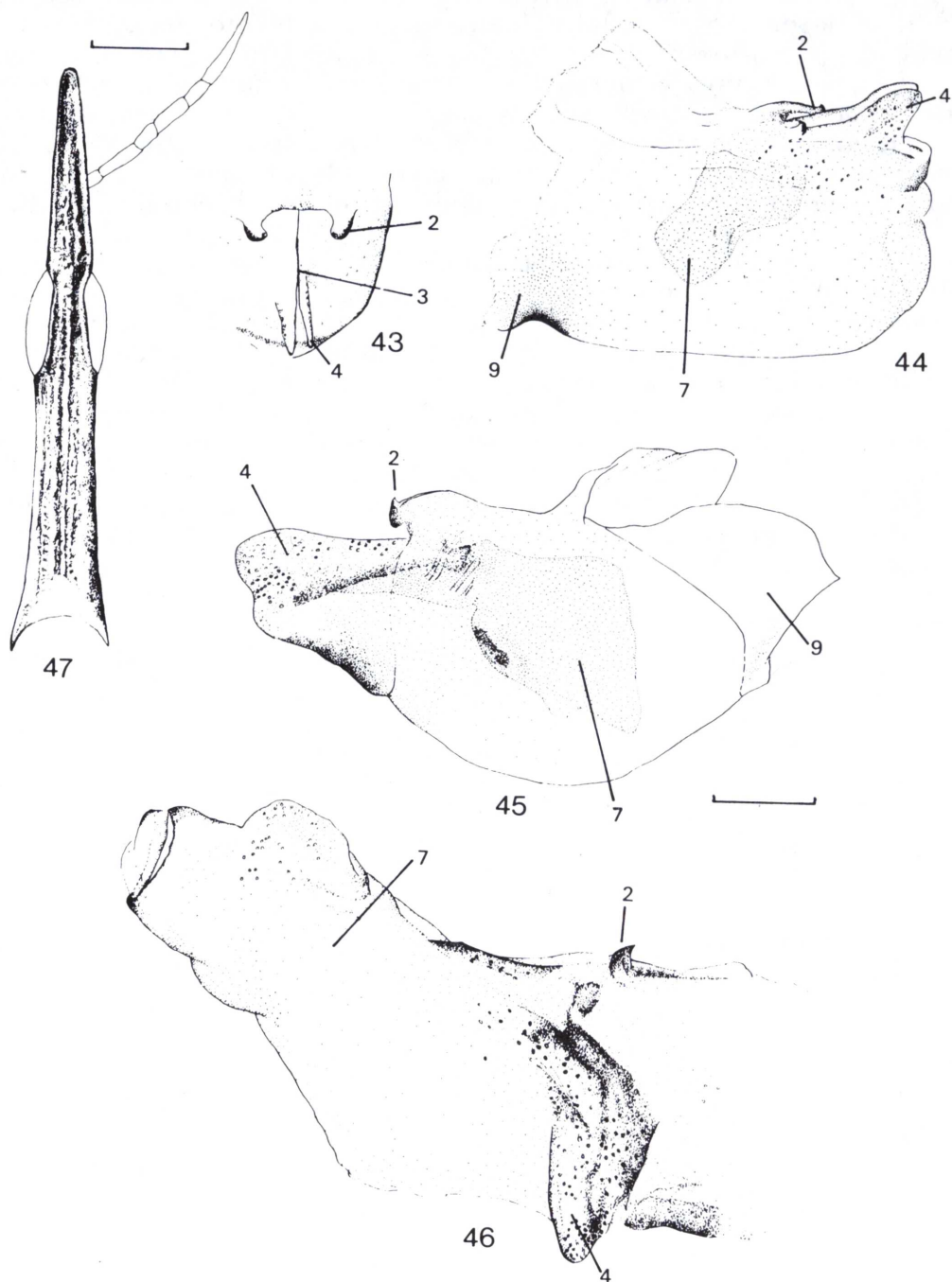
Cephalocoema fastigiata Mello-Leitao, 1939: 308.

Holotype ♂, ARGENTINA, Mendoza prov., Vega del Loro, MLP.

Astroma compactum Brunner. All ANSP (figs. 37-41)

BRUNNER, 1890: 120.

All ARGENTINA. 1 ♂, 3 ♀, Mendoza prov., Chacras de Coria; 1 ♀, Mendoza prov., La Paz; 4 ♂, 2 ♀, Mendoza prov., San Ignacio; 6 ♂, 9 ♀, Mendoza prov., Mendoza; 1 ♂, San Luis prov., Alto Pencosa.



Figs. 43-47.—*Astromascopia* males.—43-46: phallic complex: 43) *daguerrei* dorsal aspect; 44) *daguerrei* lateral aspect, from left side; 45) *albrechti* lateral aspect, from left side, retracted; 46) *albrechti* same as 45 but everted showing reversal of plates (4); fig. 47. *Astromascopia daguerrei*; dorsal aspect of head in male. Scale under fig. 45 represents 0.5 mm and refers also to 43, 44 and 46; that just above fig. 47 represents 2.0 mm.

Astromascopia gen. n. (figs. 43-47)

Type species: *Cephalocoema daguerrei* Mello-Leitao, 1939.

DIAGNOSIS.—*Male*. Transverse plate (1) absent (fig. 43) as in *Astroma*, but unlike latter with "lophi" even further reduced to leave only their distal hooks (2) (fig. 44). Median slit (3) clearly visible and bordered each side by a pair of pod-like accessory plates (4) (see figs. 44 and 46). Unlike *Astroma* these plates (4) extend well beyond rear edge of phallic complex, as in *Cephalocoema* which, however, has a well developed transverse plate. Supplementary plates 5, 6, and 10 absent. Semicircular rim of cuticle below paired pod-like valve (4), extends ventrally into a membrane protecting phallic complex below and anteriorly forming a flared, forwardly directed ventral sclerite (figs. 44 and 45, (9)) which in mature individuals is more heavily sclerotised than rest of complex (probably an apodeme enabling muscular withdrawal of complex as a whole). Head (fig. 47) with eyes not greatly protruding. Vertex tapering in front of eyes, flat to slightly convex above, flat below, with lower surface narrower than upper surface resulting in sides of vertex converging downwards. Slender species with smooth pronotum which bears delicate lateral ridges or none; very light transverse striae. Wing rudiments absent. Subgenital plate pointed, long and slender, flat and membranous above with a median ventral carina below. Knee lobes as in fig. 21, but dorso-lateral apical spines weak to absent.

Female. Elongate, slender, with rostrum subequal to length of occiput behind eyes. Rostrum square in cross section to slightly inflated posteriorly. Eyes decumbent. Head smooth. Pronotum smooth without marginal teeth front or rear; very finely punctate. Wing rudiments totally absent. Posterior knee morphology as in males.

REMARKS.—Figs. 45 and 46 illustrate dramatically the change in shape of the phallic complex of *A. albrechti* during extrusion. Note the valvular plates (4) swing outwards and downwards and the massive apical part of the distal ejaculatory sac (7) is everted. Paired cushions dorsally are characteristic in this example.

MELLO-LEITAO puts named material into the species *Cephalocoema canaliculata* Guerin Meneville. The type of this species is lost. It is possible to speculate that *Astromascopia daguerrei* (M.-L.) is in fact this species. Note that some *A. daguerrei* material was det. as *Cephalocoema canaliculata* (Guerin-Meneville).

The genus is known from Uruguay and Argentina.

MATERIAL STUDIED:

Astromascopia daguerrei (Mello-Leitao) comb. n. (figs. 43, 44, 47)

MELLO-LEITAO, 1939: 307.

Holotype ♂, ARGENTINA, Chaco, XII-1936, (DAGUERRE), MBA; ♂, ARGENTINA, Misiones, ANSP; 1 ♂, URUGUAY, Rivera, Terro Mirrinaque. BMNH; 1 ♀, ARGENTINA, Catamarca, v. 1936 (DAGUERRE) det. as *Cephalocoema canaliculata* by MELLO-LEITAO Dep. MNRJ.

Astromascopia albrechti (Zolessi) comb. n. (figs. 45, 46).

Cephalocoema albrechti Zolessi, 1968: 56.

Paratype σ , URUGUAY, Paysandu, Puerto Pepe Aji, BMNH. 1 σ , laboratory bred stock, ODNRI; 3 σ , 2 φ , Arrigas, San Gregorio, IV-63 (CARBONELL), ONDRI; 1 φ , URUGUAY, Artigas, Arroyo de la Invernada, 18-II-1954 (CARBONELL) among dry grasse and bushes, MNRJ.

Astromascopia sp.

BRAZIL. 1 σ , 1 φ , Rio Grande do Sul, Porto Alegre, 17-V-1936, det. as *Cephalocoema canaliculata* by MELLO-LEITAO, MNRJ.

Bolidorhynchus gen. n. (figs. 48-53)

Type species: *Tetanorhynchus borellii* Giglio-Tos, 1897.

DIAGNOSIS.—*Male*: Transverse plate (1) and "lophi" (2) strongly fused to form an almost circular ring of heavy cuticle (figs. 48-50). Pair of semi-circular lateral struts present (9). Median dorsal slit well marked (3), ending between pair of strong accessory plates (4) with its aperture well short of apex of apparatus. Head (fig. 51) with fluted vertex or rostrum, expanding apically with four fins or ridges. Eyes moderately inflated. Pronotum very elongate, smooth, lacking teeth or denticles at front or rear. Wing rudiments absent. Subgenital plate pointed (figs. 52 and 53) with soft upper membrane and clear median ventral keel; often elongate. Cerci small, rudimentary. Supranal plate rounded. Posterior knees (as in fig. 21) and with upper outer apical spines strong, often black.

Female. Much larger than males but rostrum and pronotum as in male. Rostrum as long as or longer than occipital region. Wing rudiments absent. Cuticle generally smooth, with abdominal, tergites not ridged or sulcate. Large insects, often up to 130 mm. long from tip of rostrum to apex of abdomen.

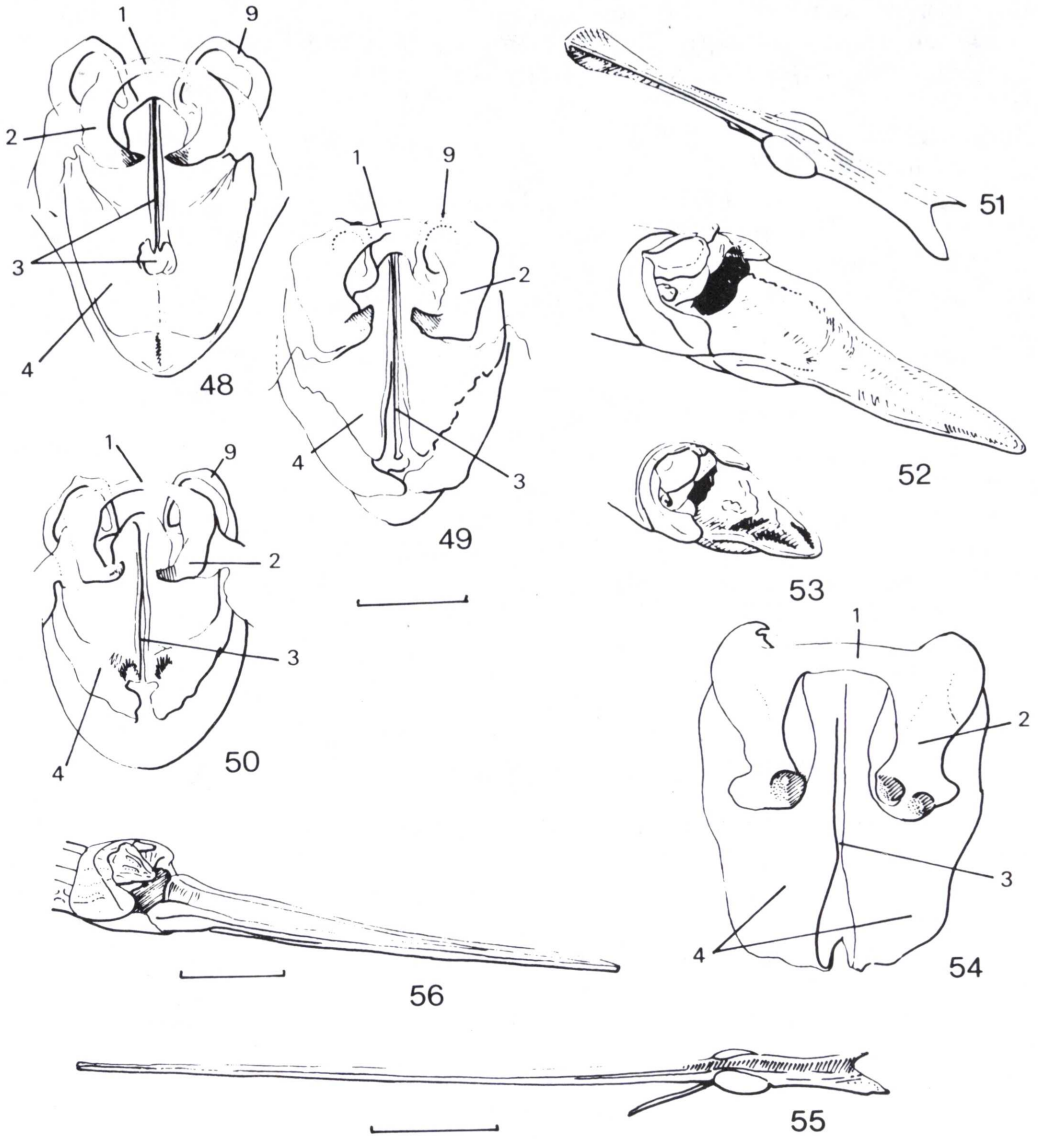
REMARKS.—Females in *Anchotatus* have the same rostral morphology, a trend in the same direction being also seen in true *Cephalocoema* species.

The male material ascribed to a *Tetanorynchus* sp. in DESCAMPS (1973) belongs to this genus.

The genus occurs in central Brazil, Bolivia and Argentina.

CARLOS CARBONELL (per. comm.) considers that "San Lorenzo" on the labels of *B. magna* and *B. gigantea* is not San Lorenzo, Bolivia, but is really San Lorenzo, Jujuy prov., Argentina. On the other hand, the holotype σ and allolectotype of *B. borellii* are clearly from Bolivia. It is thus likely, that after further collecting, *B. borellii* and *B. magna* will be found to be conspecific, but with so many species represented by female types, I am leaving this open for the present.

It is worth comparing the rostral morphology in some of the above types. *B. borellii*, φ , has the rostrum markedly expanded distally. *B. magna* material, on the other hand has weaker flaring of the rostrum, but no less than might be expected from individual variation. The holotype of *C. caizana* has a short rostrum, but this appears to be the result of breakage and healing during nymphal development. The rostrum is clearly fragile when developed to such a grotesque degree and in *C. obtusa* (specimen ex. alcohol) the rostrum is almost broken at the same part where breakage has occurred in *C. caizana*.



Figs. 48-53. *Bolidorhynchus* males.—48-50: dorsal aspect phallic complex: 48) sp. indet. (misdet. *Cephalocoema calamus* Burmeister); 49) *borellii* holotype ♂ ; 50) *rileyi* holotype ♂ ; 51) oblique view head of *borellii*; 52, 53: oblique view abdominal apex: 52) *borellii*; 53) *rileyi*. Figs. 54-56.—*Carphoproscopia lancea* males: 54) dorsal aspect phallic complex; 55) oblique view from left side of head; 56) oblique view from left side of abdominal apex. Scale under fig. 49 represents 0.5 mm and refers also to 48, 50 and 54; that below 56 represents 2.0 mm and refers also to 52, 53; that under 53 represents 5 mm and refers to 51 also.

MATERIAL STUDIED:

All lectotypes selected by CARBONELL (1966) published here.

Bolidorhynchus rileyi (Mello Leitao) comb. n. (figs. 50 and 53).

Tetanorhynchus rileyi Mello Leitao, 1939: 338.

Holotype σ , BRAZIL, Matto Grosso. BMNH.

Bolidorhynchus borellii (Giglio-Tos) comb. n. (figs. 49, 51 and 52).

GIGLIO-TOS, 1897: 18.

Holotype σ , BOLIVIA, San Lorenzo, MIZSU; Allolectotype φ , same data, MIZSU; Cotype σ , same data. ANSP; Additional material, all ANSP; BOLIVIA 1 φ , Caiza; 1 φ , paratype, *Tetanorhynchus insignis* Hebard, 1931, Ft. Esteros; 1 φ , Samubuale; ARGENTINA, 2 σ , 3 φ , Jujuy prov., Jujuy.

Bolidorhynchus sp. (fig. 48).

BOLIVIA. 1 σ , det. as *Cephalocoema calamus* Burmeister, Corumba, ANSP.

Bolidorhynchus magna (Giglio-Tos) comb. n. et nom. rev.

Cephalocoema magna Giglio-Tos, 1897: 20 (photograph examined).

Holotype φ , ARGENTINA, [Jujuy], San Lorenzo, MIZSU.

Cephalocoema gigantea Giglio-Tos, 1897: 27. Syn. n.

Holotype φ , ARGENTINA, [Jujuy], San Lorenzo, MIZSU.

Cephalocoema obtusa Giglio-Tos, 1897: 20. Syn. n.

Holotype φ , BOLIVIA, San Lorenzo, MIZSU; 1 φ paralectotype, same data. MIZSU.

Cephalocoema caizana Giglio-Tos, 1897: 20. Syn. n.

Holotype φ , BOLIVIA, Caiza, MIZSU.

Carphoproscopia gen. n. (figs. 54-56)

Type species: *Cephalocoema lancea* Burmeister, 1880.

DIAGNOSIS.—*Male*. Phallic complex simple, sac-like (fig. 54) with transverse plate fused to hook-like "lophi" (2). Twin accessory plates very simple (5). Semi-circular lateral struts (9) absent. Head immensely etiolated, superficially like a greatly elongated *Cephalocoema* or *Microcoema*. Vertex (fig. 55) rectangular in cross-section. Sub-genital plate elongated (fig. 56) lower surface carinate on mid-line, upper surface flat and more membranous. Wing rudiments absent. Knees of posterior femora as in fig. 21, but completely unarmed dorsally.

Female. Very similar to male but larger. Very slender, grasslike up to 150 mm. long.

REMARKS.—The specimen examined had experienced trauma to the phallic complex, the "lophal" hook on the right hand side having a double apex as a consequence. The genitalia seem most closely similar to those of *Parapioscelis* and *Epigrypa*, not however, to those of *Cephalocoema*.

The type of *Cephalocoema lancea* is very fragile and badly damaged. What remains, however, is morphologically very similar to the holotype of *C. lineata*.

MATERIAL STUDIED:

Carpophrosopia lancea (Burmeister) comb. n.

Cephalocoema lancea Burmeister, 1880: 7.

Holotype ♀, ARGENTINA, Mendoza (Antigua), MBA; Additional material 2 ♀ (nymphs?), BRAZIL, Matto Grosso, MBA.

Cephalocoema lineata Brunner, 1890: 118. Syn. by Mello-Leitao, 1939: 310, confirmed.

Holotype ♀, ARGENTINA, Mendoza prov., IZPAN; Additional material ANSP, all ARGENTINA: 1 ♀, Mendoza, prov., Coria; 1 ♀, Tucuman prov.; 1 ♀, Mendoza prov., Potrerillos; 2 ♀, Mendoza prov., Mendoza.

Cephalocoema Serville (figs. 57-78)

Cephalocoema Serville, 1839: 577. Type species: *Proscopia* (*Cephalocoema*) *sica*, Serville, 1839 by original designation and monotypy.

DIAGNOSIS.—*Male*. Transverse plate of phallic complex (1) and lophi (2) fused to form a single «H» or «π»-shaped plate, with a large pair of flat anterior expansions in mature specimens (figs. 58 and 61-65). Outer apical margin of lophi (2) angulate (not smoothly curved as is *Tetanorhynchus*). Lophi with delicate, small, hooked tips, which are closely approximated on mid-line, but with tips orientated vertically or postero-obliquely (not boldly up-curved and forwardly flexed as in *Tetanorhynchus*). Median slit (3) (figs. 58, 59, 61-64) clearly visible along its entire length, with lateral pair of accessory plates (4) forming a pod-like structure when retracted (figs. 57, 59, 66-70). Anteriorly plates (4) are lightly sclerotised, forming a membrane (6), below more strongly sclerotised oblique plates 10. These articulate at their posterior ends with front end of a pair of accessory plates (5) (fig. 61), which are formed by a ventral extension from lower apical part of lateral hooks (2). Genital ducts not sclerotised.

Head with rostrum of variable length (figs. 71, 73 and 75) with its under-side flat to lightly longitudinally sulcate below, flat at sides and narrower below than dorsally. Short stockier species (fig. 75) with comparatively more protruding eyes than more elongate members of genus. Pronotum smooth, lightly punctate, rounded to weakly carinate laterally; unarmed at front or rear (fig. 77). Wing rudiments absent. Subgenital plate pointed (figs. 72, 74, 76); carinula ventrally below; longitudinally sulcate above. Lateral lobes of hind femur as in fig. 21; pair of small sharp marginal spines dorso-laterally.

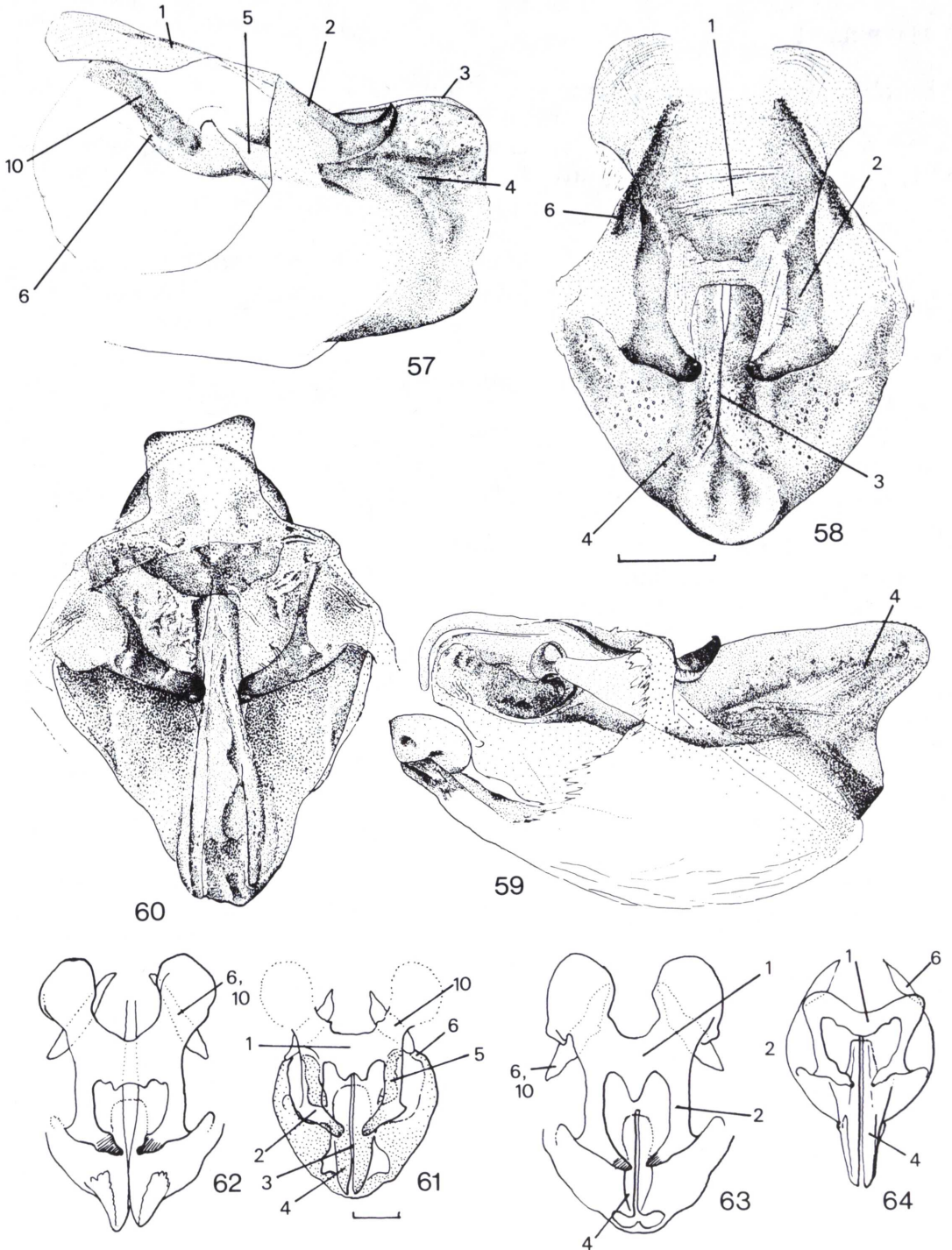
Female. Anatomically similar to male externally but large. Rostrum (fig. 78) elongate, weakly fluted near apex. Eyes small and protruding; base of head comparatively broad. Pronotum cylindrical, weakly punctate, unarmed as is males. Wing rudiments absent. Knees of hind femora as is males.

MATERIAL STUDIED:

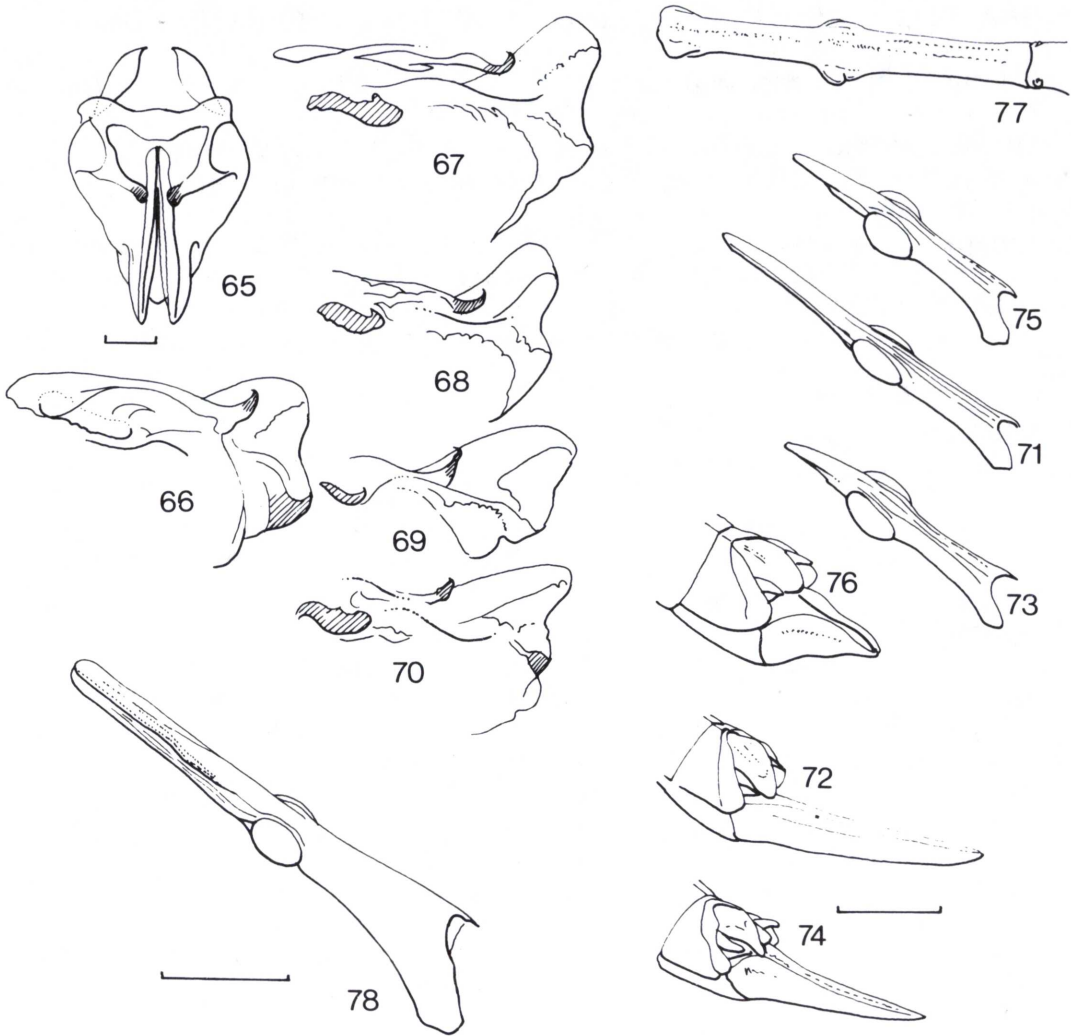
Cephalocoema sica (Serville) (Figs. 57, 58, 71, 72).

SERVILLE, 1839: 577.

Holotype ♂, BRAZIL, Sao Paulo, Campos Gerais, parti-mer (idionales) MNHN.



Figs. 57-64.—*Cephalocema* males, phallic complex: 57) *sica*, lateral aspect from left side; 58) *sica*, dorsal aspect; 59) *sublaevis*, lateral aspect from left side; 60) *sublaevis*, dorsal aspect; 61) sp. B (unnamed sp. ODNRI collection) dorsal aspect; 62) *apucaranensis*, dorsal aspect; 63) sp. F (unnamed sp. ODNRI collection) dorsal aspect; 64) *sublaevis*, dorsal aspect. Scale line under fig. 58 represents 0.5 mm and refers also to 57, 59 and 60; that under fig. 61 represents 0.5 mm and refers also to 62-64.



Figs. 65-78.—*Cephalocoema* males.—65) *sublaevis*, dorsal aspect phallic complex; 66-70: phallic complex from left side showing variation in profile of plates (4): 66) sp. F; 67) *apucaranensis*; 68) *apucaranensis*; 69) *sublaevis*; 70) *sublaevis*. 71-76: head and abdominal apex, oblique view from left side; 71, 72) *sica*; 73, 74) *sublaevis*; 75, 76) *apucaranensis*; 77) pronotum from left side, *apucaranensis*; 78) *Cephalocoema* female - *apucaranensis*, head from left side. Scale line under fig. 78 represents 5 mm and applies to 71, 73, 75, 77 and 78; that under 72 represents 2.0 mm and applies to 72, 74 and 76 also; that under 65 represents 0.5 mm and applies to 66-70 also.

Tetanorhynchus mendesi Piza, 1943: 45. Type lost. BRAZIL, Sao Paulo, Campinas and Piracicaba. Syn-by Piracicaba, 194: 157-158. Also examined - 1 ♂. BRAZIL, Sao Paulo, ANSP.

Cephalocoema sublaevis (Brunner) comb. n. (figs. 59, 60, 64, 65, 69, 70, 73, 74).

Tetanorhynchus sublaevis Brunner, 1890: 105.

BRAZIL, 1 ♂, Sao Paulo, Piquete, ANSP; 1 ♂, St. Catherine, BMNH.

Cephalocoema apucaranensis (Liana) comb. n. (figs. 62, 68, 75, 76, 77, 78).

Tetanorhynchus apucaranensis Liana, 1972: 426.

All BRAZIL, Parana prov., ONDRI, JAGO coll. 2 ♂, 2 ♀, route BR 277, 3 km. E. of Tres Pinheiros, 12-IV-88, *Araucaria* woodland and *Sphagnum* bog with bare rock outcrops; 4 ♂, 2 ♀, Parc Nacional do Iguacu, 19-IV-85, margin of park S.W. of Ceu Azul; 4 ♂, 1 ♀, route BR 373 just E. of Guarapuava, 10-IV-85, *Araucaria* forest reserve; 5 ♂, 3 ♀, route BR 373 nr. Barre Grande, 13-IV-85, gravel pit with bamboo and secondary growth with Compositae; 2 ♂, 6 ♀, Parc Nacional do Iguacu, 17-IV-85, forest margin near maize fields.

Cephalocoema sp. (fig. 63, 66).

BRAZIL, 1 ♂, E. of Papaná, Guoyra, (3-7)-IV-29 (Ogloblin). BMNH.

Corynorhynchus Brunner (figs. 79-88)

Type species: *Proscopia radula* Klug, 1920 by subsequent designation REHN, 1905.

DIAGNOSIS.—*Male*. Phallic complex (fig. 84) lacking transverse plate (1). Slender "lophi" (2) greatly reduced, with weak apical hooks (figs. 85, 86). Pair of plates (4) reduced to pair of angularly bent spicules, whose median distal sections border a narrow median slit (3), which is otherwise delicately membranous. Distal ventral plate (4), if present, reduced to small discrete sclerite. When everted valvular plates (4) are directed ventrally (fig. 86). Genital duct unsclerotised. Anterior supplementary plates (6) and lateral struts (9) absent.

Head (figs. 79, 80) with highly inflated eyes and delicate tapered rostrum which is rectangular in cross section. Pronotum finely granulate anteriorly and with dorso-lateral or dorsal transverse striae in posterior half (fig. 81) and with a fine lateral carinule along whole length on each side (sometimes carinule just behind eye also). Pronotum cylindrical in form and proportions similar to those of *Cephalocoema* (fig. 77), but in latter cuticle less rugose. Front margin somewhat elevated. Cerci robust, tapered (figs. 82 and 83); flat above. Supra-anal plate bluntly to acutely pointed. Knees of posterior femora with dorso-posterior spines (compare fig. 21). Wing rudiments absent.

Female: Head (figs. 87 and 88) with fluted rostrum, flared ridges expanding apically, meeting at a point (fig. 88) or in a transverse ridge (fig. 87). Cuticle pustulate behind eyes. Rostrum proportionally shorter than in *Bolidorhynchus*. Large insects (length up to 130 mm.); males much smaller and more delicate. Wing rudiments absent. Posterior knee lobes as in males.

REMARKS.—Many insects in this genus have been misidentified at species level. The name *radula* Klug has been allocated indiscriminately. The species

show great sexual dimorphism. Females have a fluted rostrum (figs. 87 and 88) while males do not (in contrast to *Bolidorhynchus* gen. n. in which both sexes have the modified vertex).

Genus distributed from eastern Brazil to Panama.

MATERIAL STUDIED:

Corynorhynchus radula (Klug) (Figs. 79, 81, 83, 84, 85, 88).

Proscopia radula Klug, 1820: 20, pl. 3, fig. 4.

Lectotype ♀, here designated, BRAZIL, Rio v. Olf (green label); Paralectotype ♀ here designated, same data (left hind and mid-leg missing), MNHU.

Proscopia ruficornis Klug, 1820: 24, pl. 4, fig. 11.

Holotype ♂, BRAZIL, Para (Sieber), MNHU. Syn. by BRUNNER, 1890: 102.

Corynorhynchus hispidus (Klug) (figs. 80, 82, 86, 87)

Proscopia hispidus Klug, 1820: 25, pl. 4, fig. 14.

Lectotype ♀ here designated, BRAZIL, Bahia, Sello (2227) (small green label); paralectotype ♀, here designated, BRAZIL, same data (abdomen missing). Both MNHU.

Proscopia brevisrostris Klug, 1820: 25, pl. 4, fig. 14.

Lectotype ♂ here designated, BRAZIL, Sello, Bahia Reis (2245), MNHU; paralectotype ♂ here designated, BRAZIL, same data, MNHU. Syn. by BRUNNER, 1890: 103.

Corynorhynchus spinosus (Klug)

Proscopia spinosus Klug, 1820: 22, pl. 4, fig. 8.

Holotype ♀, BRAZIL, Bahia, Sello (2220), MNHU.

Corynorhynchus septentrionalis (Brunner) comb. n.

Taxiarchus septentrionalis Bruner, 1905: 313.

Holotype ♀, PANAMA, ANSP. Additional material - 1 ♂, PANAMA, Barro Colorado I., 24-V-1937 (Schrader) (comp. with type), ANSP.

Epigrypa Brunner (figs. 89-96).

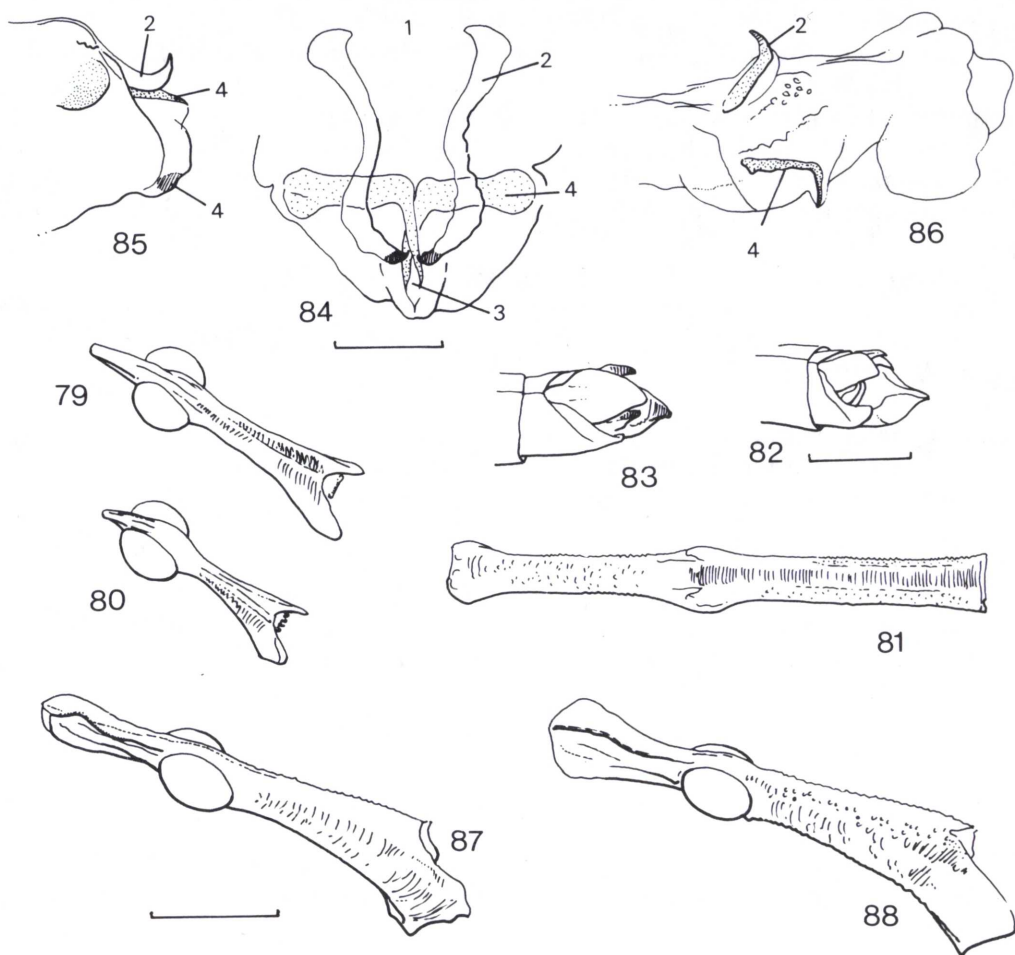
Type species: *Epigrypa curvicollis* Brunner, 1890: 163 by original designation.

DIAGNOSIS.—*Male*. Phallic complex of great simplicity (figs. 92-94), consisting of a large eversible sac and a sub-rectangular arrangement of transverse plate (1) (figs. 92, 94) and hooked "lophi" (2). Endophallic duct not sclerotised (hence unlike *Apioscelis* or *Microcoema* figs. 22 and 102). Lacking sclerotised paired plates (4) (not even like those found fused in *Proscopia* fig. 121), or separate and reduced in *Stiphra*, (fig. 150).

Head (fig. 89, 95) strongly built; rostrum short and flat below, lightly decurved. Eyes inflated with clear eyestripes. Head reminiscent of that seen in *Stiphra* (fig. 156). Males (fig. 90) with tendency for region of metanotum to be inflated (as in *Stiphra*, fig. 160). Unlike *Stiphra*, however, pronotum with region anterior to bases of fore-legs subequal, to just longer than, region behind fore-legs (in *Stiphra* much shorter, leaving labial region of head very

close to base of fore coxae and pronotum anterior to fore-coxae less than half length of region posterior to them). Tip of male abdomen (figs. 91, 96) with shorty, squat to elongate, apically bifid subgenital plate; cerci short incurved. Cuticle on thorax and abdomen smooth. Abdominal tergites not longitudinally ridged. Base of fore-legs red at maturity. Posterior femora with pair of apical dorso-lateral spines (as in fig. 21).

Female. Similar morphologically to male. Like male lacking wing rudiments, but abdomen with very weak longitudinal carinulae on each tergite.



Figs. 79-88.—*Corynorhynchus*.—79, 80 males head from left oblique aspect: 79) *ruficornis*; 80) *brevirostris*. 81) male prothorax from oblique left aspect - *ruficornis*; 82, 83: male abdominal apex: 82) *brevirocstris*; 83) *ruficornis*; 84-86: male phallic complex: 84) dorsal aspect *ruficornis*; 85) lateral aspect from left side, *ruficornis*; 86) lateral aspect from left side in everted condition, *brevirostris*; 87-88: left lateral oblique aspect female head; 87) *hispidus*; 88) *radula*. Scale line under fig. 87 represents 5 mm and applies to 79, 88, 80, 81 also; that under 82 represents 2.0 mm and refers to 83 also; that under 84 represents 0.5 mm and refers to 85, 86 also.

REMARKS.—Males examined about 80 mm. long. In life probably olivaceous brown and lacking both the cream metathoracic side stripes seen in males of *Stiphra* and the transverse cream first abdominal tergite seen in some females of that genus.

Three species so far described. Geographical range Ecuador and Colombia.

MATERIAL STUDIED:

Epigrypa curvicollis Brunner (figs. 89-93).

Epigrypa curvicollis Brunner, 1890: 113.

Holotype ♀, ECUADOR. 1627. No other data. Nymph. NM.

Additional material, det. HEBARD and all ANSP. ECUADOR: 1 ♂, 1 ♀ Rio Pescado; 1 ♀, Maramal; 1 ♂, 1 ♀, Balzpamba; 1 ♂, Pallatanga; 1 ♂, Duran.

Epigrypa bispinosus (Hebard) comb. n. (figs. 94-96)

Anchotatus bispinosus. Hebard, 1924: 166.

Allotype ♂, ECUADOR, El Morro (Campos). ANSP.

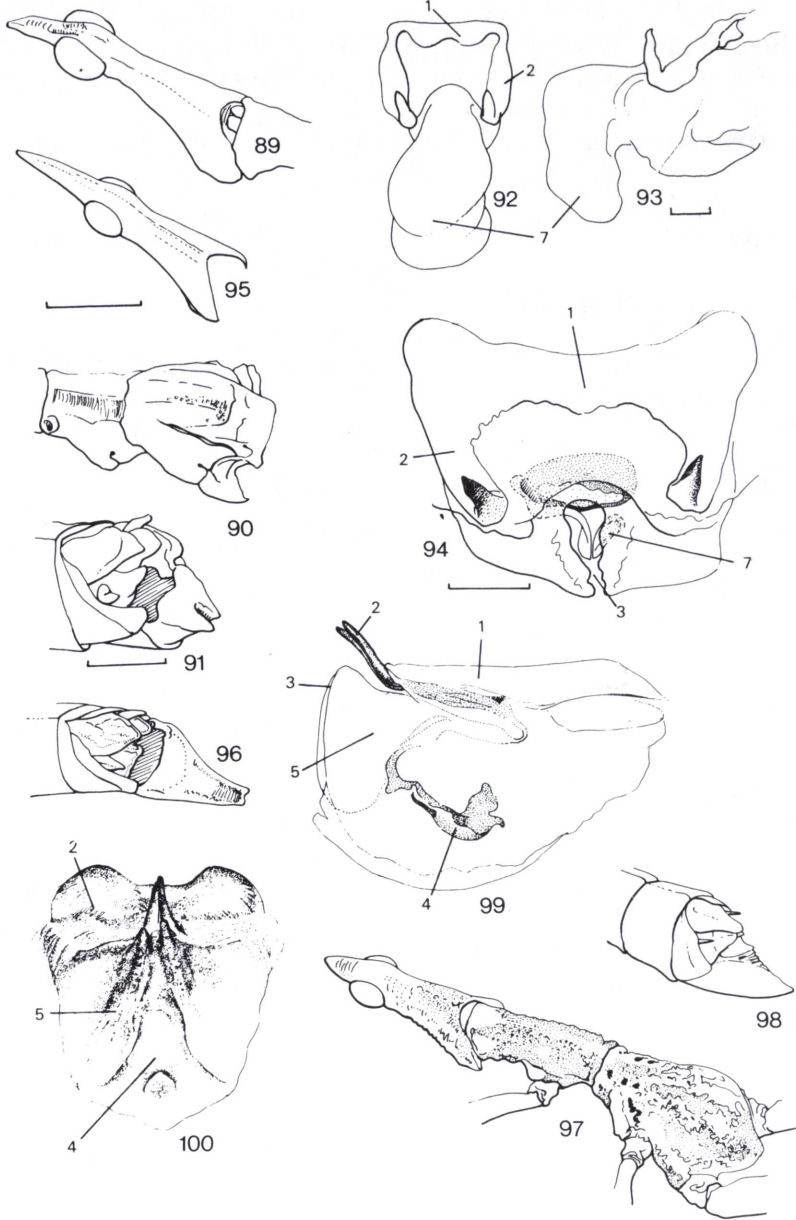
Hybusa Erichson (figs. 97-100)

Type species: *Proscopia occidentalis* Westwood, 1843: 53, pl. 63, fig. 1.

DIAGNOSIS.—*Male*. Phallic complex only superficially of great simplicity (figs. 99, 100) with uniquely modified components. Transverse plate forming a dorsal, lightly sclerotised shield (1), fused with lophal hooks whose lateral parts have disappeared and whose remnant consists of a pair of closely appressed terminal styli and a weak median plate, inflexed, and fused on mid-line (2). Median slit (3) hidden from above and bordered by a pair of large but thinly sclerotised lateral plates (4). Median slit continued ventrally and concealing a pair of complex extrudable plates of unknown homology, which now occupy a sub-ventral position. Distal and proximal endophallic ducts unsclerotised.

Head (fig. 97) superficially like a very heavy version of that seen in *Epigrypa* (compare figs. 89 and 97), but genae warty and vertex of rostrum convex, ovoid in cross-section. Metathorax inflated (fig. 97), but metanotum smoothly convex posteriorly, without median dorsal tooth. Pronotum very short, robust and punctate. Subgenital plate (fig. 98) simple, conical, not apically bifid (as in *Epigrypa*). Apical dorsal genicular spines large, flat, triangular, with curved emargination between.

REMARKS.—In life probably variegated black and yellow on body and hind femora giving a tortoiseshell appearance. Species may be distasteful. Genus includes four described species. All species are indigenous to Chile and Argentina. The extraordinary pair of internalised plates are illustrated in DESCAMPS (1973) (p. 85, figs. 16, 17 - «penis dorsalement») without comment. LIANA (1972) saw only female material. The endophallic spicules of *Proscopia* may well be a further invagination and reduction of (4) seen in this genus, being an intensification of the invagination of distal sclerotisations in the phallic complex. In this way superficial and primitively proximal ones may have become distally terminalised.



Figs. 89-96.—*Epigrypa* males.—89-93: *curvicollis*: 89) oblique aspect head from left side; 90) thoracic segments II and III plus abdominal tergite I showing dorsal inflation; 91) abdominal apex, oblique aspect left side; 92) phallic complex sac everted dorsal aspect; 93) phallic complex sac everted, lateral aspect from right side; 94-96: *bispinosus*: 94) phallic complex, dorsal aspect; 95) oblique aspect head from left side; 96) abdominal apex, oblique aspect left side. Figs. 97-100. *Hybusa occidentalis*, male.—97) head and thorax, oblique aspect from left side; 98) abdominal apex; 99) phallic complex, lateral aspect from right side; 100) phallic complex, ventro-posterior aspect. Scale line under fig. 95 represents 5 mm and refers to 89, 90 and 97 also; that under 91 represents 2.00 mm and refers to 96, 98 also; that under 92 represents 0.5 mm and refers to 93 also; that under 94 represents 0.5 mm and refers to 99, 100 also; that under 93 represents 0.5 mm and refers to 92 also.

MATERIAL STUDIED

Hybusa occidentalis (Westwood) (figs. 97-100)

Syntype ♂. No locality data. Herewith designated lectotype. BMNH.

Hybusa coniceps (Blanchard)

Proscopia coniceps Blanchard, 1851: 63. All ANSP. CHILE, 1 ♂ n, Contin prov.; 1 ♂, Valparaiso prov.; 1 ♂ Limache.

Microcoema gen. n. (figs. 101-106).

Type species: *Cephalocoema acuminata* Scudder, 1869.

DIAGNOSIS.—*Male*. Transverse plate (fig. 101, 1) strong and firmly fused to curved, hook-like lophi (2) (fig. 102). Lateral plates (4) fused posteriorly and forming a smooth semi-circular outline in profile. Distal part of genital duct (fig. 102, 7) strongly sclerotised, narrow and gently curved (reminiscent of that seen in *Apioscelis*, fig. 22, and *Taxiarchus*, fig. 180). All other paired plates absent.

Head (fig. 103) with greatly elongated rostrum which is longitudinally sulcate below. Pronotum smoothly rounded above with trace of decumbent median carinula in posterior half. Fore coxae attached roughly mid-way along prothorax. Meta-notum and first abdominal tergite with lightly raised median ridge. Unlike *Anchocoema* in lacking traces of wing rudiments. Abdominal tergites smoothly cylindrical dorsally with microscopic transverse striae and pits. Subgenital plate (fig. 104) conical, pointed, membranous above almost to tip. Small decurved decumbent cerci present. Supra-anal plate narrow, triangular. Posterior femora with simple strong longitudinal dorsal carinula; knees unarmed dorso-apically.

Female.—Much larger (fig. 105-106) with long rostrum, sulcate below as in males. Pronotum lightly tectiform, slightly flattened dorso-ventrally. Pronotum armed (fig. 106) or unarmed (fig. 105) - if former three small anterior tubercles and a single large median tooth present. No wing rudiments. Abdominal tergites smooth or with faint traces of longitudinal carinulae. Posterior femora with pair of dorso-longitudinal carinulae. Knees unarmed dorsally.

REMARKS.—The genus contains three species distributed in Ecuador and Peru (perhaps S. W. Brazil also).

MATERIAL STUDIED:

Microcoema acuminata (Scudder) comb. n. (fig. 101-105).

SCUDDER, 1869: 337.

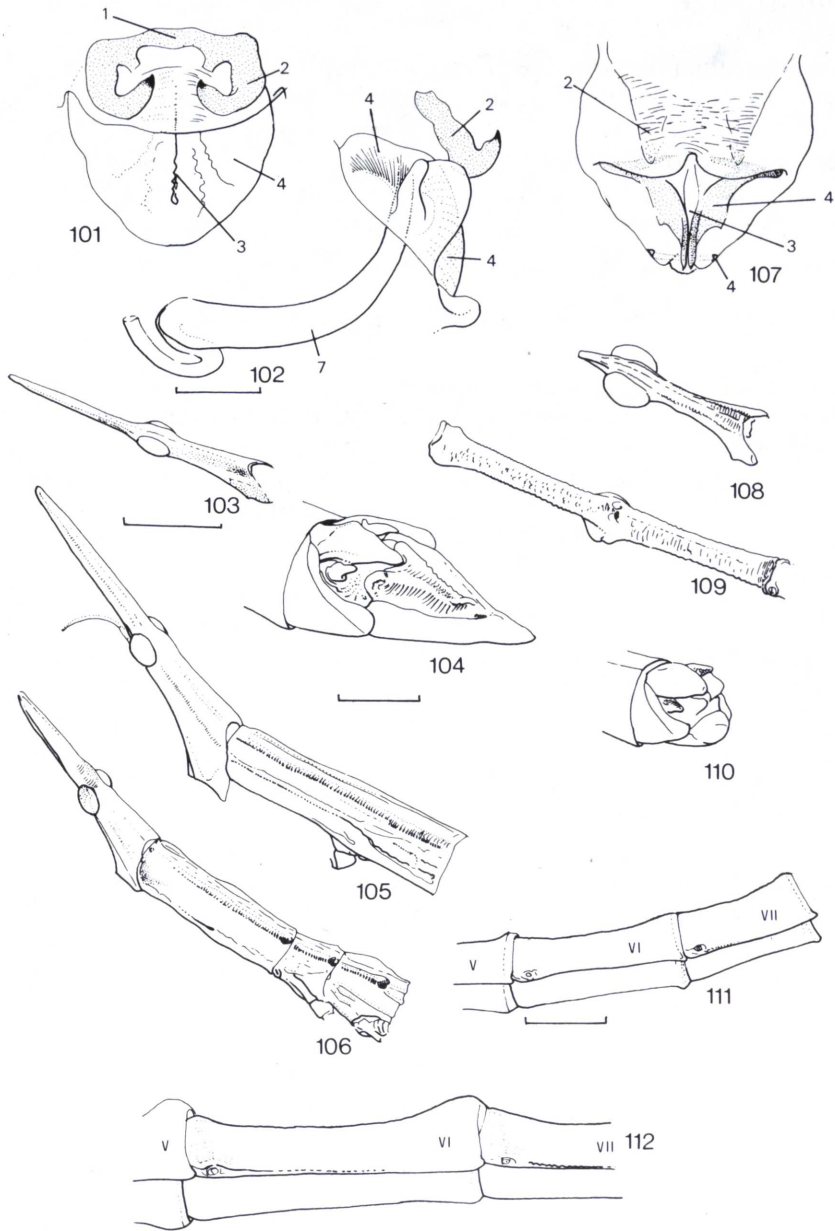
1 ♀ holotype, ECUADOR, Quito, Napo, ANSP.

Additional material ANSP: 5 ♂, 7 ♀, 2 ♀ nymphs, ECUADOR, Tambillo.

Microcoema tridens (Hebard) comb. n. (fig. 106).

Cephalocoema tridens Hebard, 1924: 171.

1 ♀ holotype, PERU, Yolon, ANSP.



Figs. 101-106.—*Microcoema*.—101-104 males *acuminata*: 101, 102) dorsal and lateral aspect from left side, phallic complex; 103) head, oblique aspect left side; 104) abdominal apex; 105, 106 females: 105) *acuminata*, head and pronotum, oblique view left side; 106) *tridens*, head and pronotum, oblique view left side. Figs. 107-112.—*Nodutus* males: 107) sp. indet. A phallic complex dorsal aspect; 108) sp. indet. A head, oblique aspect left side; 109) sp. indet. A pronotum; 110) sp. indet. A abdominal apex, oblique view left side; 111) sp. indet. A abdominal segments V-VII from left side; 112) *asymmetricus*, abdominal segments V-VII left side. Scale line under fig. 103 represent 5 mm refers to 105, 106, 108 and 109 also; that under 104 represents 2.0 mm refers to 110 also; that under 102 represents 0.5 mm refers to 101, 107 also; that under 111 represents 1 mm refers to 112 also.

Microcoema vittata (Brunner) comb. n.*Cephalocoema vittata* Brunner, 1913: 177.

1 ♂, 1 ♀, PERU, Cuzco, Urubamba, 2.800 m, 7-IV-62 (MESA), det. by CARBONELL, 1976, MNRJ.

Nodutus Liana (figs. 107-112)*Nodutus Liana*, 1972: 411-413, figs. 101-109. Type species *Corynorhynchus asymmetricus* Mello Leitao, 1939 by original designation.

DIAGNOSIS.—*Male*. As in *Corynorhynchus* transverse plate of phallic complex (1) (fig. 107) absent. Lophi reduced to mere vestiges with apical hooks (2) non functional and membranous. Accessory plates (4) reduced to pair of spicules with angular process on their outer sides (compare shape in *Corynorhynchus*, fig. 84). Genital duct not sclerotised. Distal valvular plates (4D) reduced to a sub-annular band. Anterior supplementary plates and lateral struts absent. Head (fig. 108) like that of *Corynorhynchus* (compare with figs. 79, 80). Pronotum with distinct raised anterior dorsal collar (fig. 109), otherwise like *Corynorhynchus* (fig. 81). Meso and metanotum lightly inflated dorsally; no wing rudiments. Knees of hind femora dorsa-laterally armed with small apical spines. Cerci short and flat above (fig. 110) but subgenital plate short and hemispherical (not pointed as in *Corynorhynchus*). Tendency for each abdominal tergite to show pronounced to weak distal inflation (figs. 111 and 112).

Female. None examined. *Corynorhynchus spinosus* (Klug) may belong to his genus. Note that a female of *N. asymmetricus* studied by LIANA (1972), from the same locality as the male, has a fluted rostrum whose dorsal flutes are smaller than the ventral ones. The rostrum is reminiscent of that in *Corynorhynchus radula* (fig. 88), showing the close affinity between the two genera.

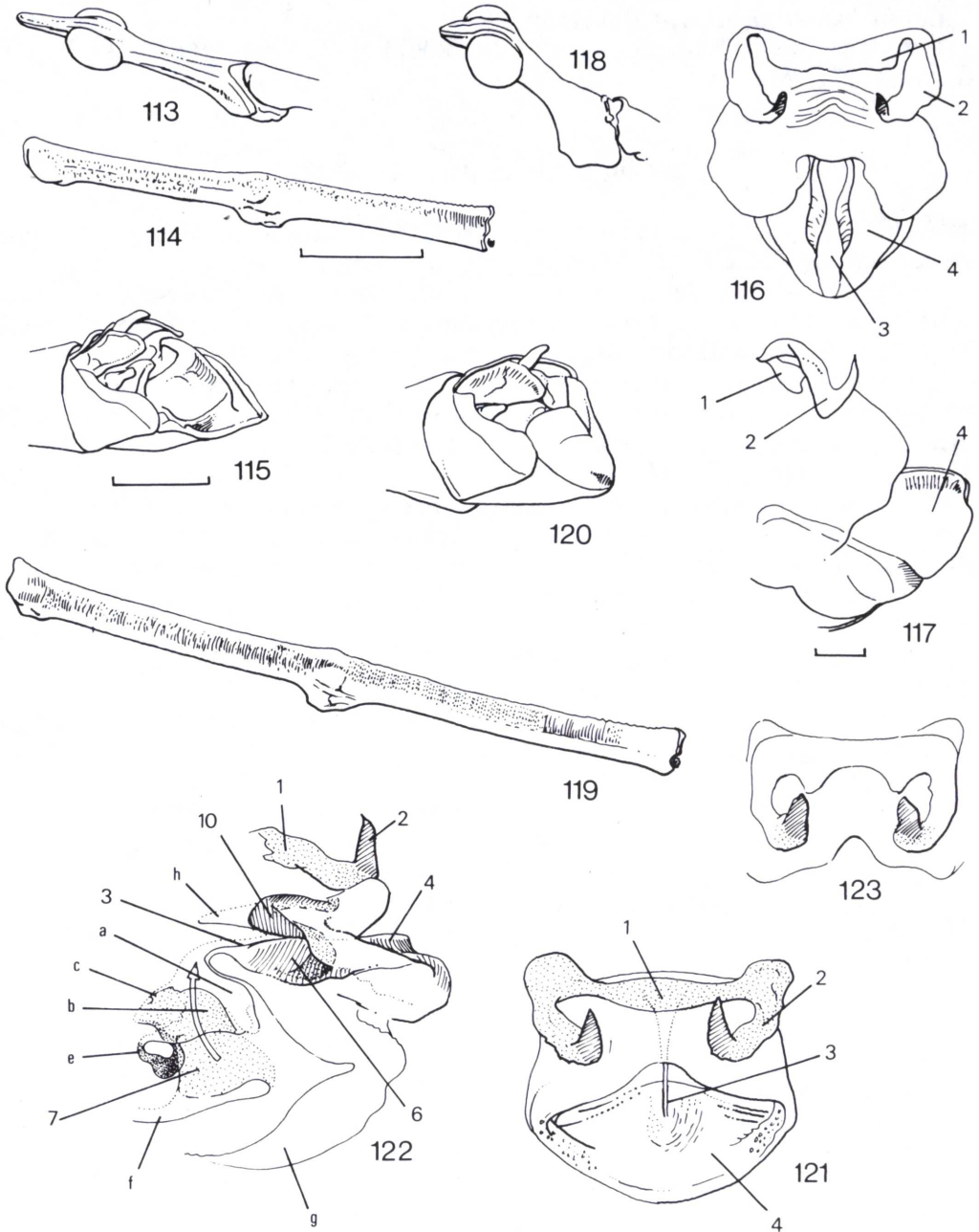
REMARKS.—The unnamed *Corynorhynchus* species illustrated in DESCAMPS (1973), p. 83) is actually a member of this genus. The holotype of *asymmetricus* is in MNRJ.

MATERIAL STUDIED:

Nodutus asymmetricus (Mello-Leitao) (fig. 112).*Corynorhynchus asymmetricus* Mello-Leitao, 1939: 343.

1 ♂, BRAZIL, Espirito Santo, IZPAN.

Nodutus sp. (figs. 107-111)2 ♂, BRAZIL, Rio de Janeiro, ANSP, det. by HERBARD as *Corynorhynchus hispidulus* Brunner, 1890.**Prosarthria** Brunner (figs. 113-117)*Prosarthria* Brunner, 1890: 93.Type species: *Prosarthria teretirostris* Brunner, 1890: 93 by original designation.



Figs. 113-117.—*Prosarthria teretirostris*, males.—113) head, oblique aspect left side; 114) pronotum left side; 115) abdominal apex left side; 116) phallic complex, dorsal aspect; 117) phallic complex, lateral aspect left side. Figs. 118-122.—*Proscopia* males: 118) head, lateral oblique aspect left side; 119) pronotum; 120) abdominal apex, postero-lateral aspect left side; 121) phallic complex, dorsal aspect; 122) phallic complex, lateral aspect left side. Fig. 123.—*Proscopia aberrans*, male phallic complex. Scale line under fig. 114 represents 5 mm and refers to 113, 118, 119 also; that under 115 represents 2.0 mm and refers to 120 also; that under 117 represents 0.5 mm and refers to 116, 121, 122, 123 also. For letters a - h see text.

DIAGNOSIS.—*Male*. Phallic complex mainly membranous (figs. 116 and 117). Transverse plate (1) fused to hook-like lophi (2) via a slender isthmus. This structure sits upon a delicate ectophallic membrane of sac-like form. Paired plates present (4) with paired and outwardly flared margins bordering longitudinal slit (3). Genital duct not sclerotised and all other paired plates absent. Very similar to *Corynorhynchus* but with transverse plate (1) well developed and paired plates (4) not reduced to styli. Like *Epigrypa* in form of transverse plate and lophi (compare with fig. 92), but paired plates present (in *Epigrypa* no paired plates and genital sac extruded from membranous orifice).

Head (fig. 113) delicate, slender, with very bulbous eyes which almost touch ventrally. Head flattened dorso-ventrally and thus ovoid in cross-section. Rostrum short and in line, nor decurved, with antennae twice its length in male; rostrum longitudinally sulcate below, flat above and in some species brightly coloured (e.g. scarlet below in *P. teretirostris*). Prothorax cylindrical (fig. 114), microtuberculate throughout and without anterior or posterior spines. Meso and metanotum not inflated and lacking wing rudiments. Abdominal tergites smooth, non striate. Sub-genital plate pointed (fig. 115) with extensive dorsal membrane. Cerci small, lightly incurved and flat above. Knees of posterior femora with appendiculate lower inner and outer lobes and dorso-lateral apical spines. Hind femora smooth with single dorsal carinula. Body olivaceous brown (in *caucensis*) or with a scarlet flush ventrally in prothoracic region (in *teretirostris*).

Female.—Anatomically very similar to males but larger insects (males about 70 mm. body length; females 100 mm.) Pronotum lightly dorso-ventrally flattened. Ovipositor valves varnished black at margins.

REMARKS.—The genus is quoted by CARBONELL as occurring in Colombia, Venezuela and Ecuador.

MATERIAL STUDIED:

Prosarthria teretirostris Brunner (figs. 113-117)

Holotype ♂, 12-630, no other data, NM; Topotype ♂, COLOMBIA, Santa Marta, 26-XII-1920 (drawn), ANSP.

Prosarthria caucensis Hebard

HEBARD, 1923: 194.

Holotype ♂, COLOMBIA, Cauca R., VII, ANSP. Additional material 1 ♂, COLOMBIA, Magdalena valley, El Banco (ALLEN), BMNH.

Prosarthria sp. (possibly *teretirostris*).

1 ♂, 1 ♀ n, VENEZUELA, 30 km. S. of Galeras route 8, 12-VII-81 (JAGO), ODNRI; 1 ♀ VENEZUELA, 1 km. S. of junction routes 8 and 13, flooded savanna, 14-VIII-81 (JAGO), ODNRI; 1 ♂ n, VENEZUELA, 63 km. E. of junction routes 8 and 13, rocky wooded hillside, 14-VII-81 (JAGO), ODNRI.

Proscopia Klug (figs. 118-126)

Proscopia Klug, 1820: 17.

Type species: *Proscopia gigantea* Klug, 1820 by subsequent designation GERIN-MENEVILLE, 1828.

DIAGNOSIS.—*Male*. Phallic complex (figs. 121, 122) with transverse plate (1), fused to hook-like lophal plates (2). This structure flexibly attached by membrane to back of delicately sclerotised paired plates (10), which are widely separated with an anterior pouch-like median extension of the membrane (*h*) between them. Lateral paired plates (10) flexed forward and loosely attached to front edge of paired plates (4) at a point which is homologous with paired plates (6) in other genera. Paired plates (4) fused posteriorly (fig. 121) so that median genital slit (3) open anteriorly but closed posteriorly. Paired plates (4) thus lie in more or less one plane giving an appearance very different to pod-like structure of say *Cephalocoema* (fig. 59). To anterior of (3) membrane opens into a vestibule (*a*) into anterior floor of which opens sclerotised duct (*b*) via a transverse orifice (*c*). Extensions of sclerotised duct antero-ventrally support sides of vestibule (*a*) and constitute a small fork-like pair of apodemes (*e*). Ventro-posteriorly sclerotised part of genital duct (*b*) expands before opening into proximal and narrower portion of genital duct (*f*). Paired plates (4) folded ventrally to form a thinly sclerotised but complete membrane (*g*). During copulation sclerotised duct (*b*) can be everted via vestibule (*a*) between anterior parts of paired plates (6) via median slit (3).

Proscopia aberrans Hebard (fig. 123).

HEBARD, 1923: 196.

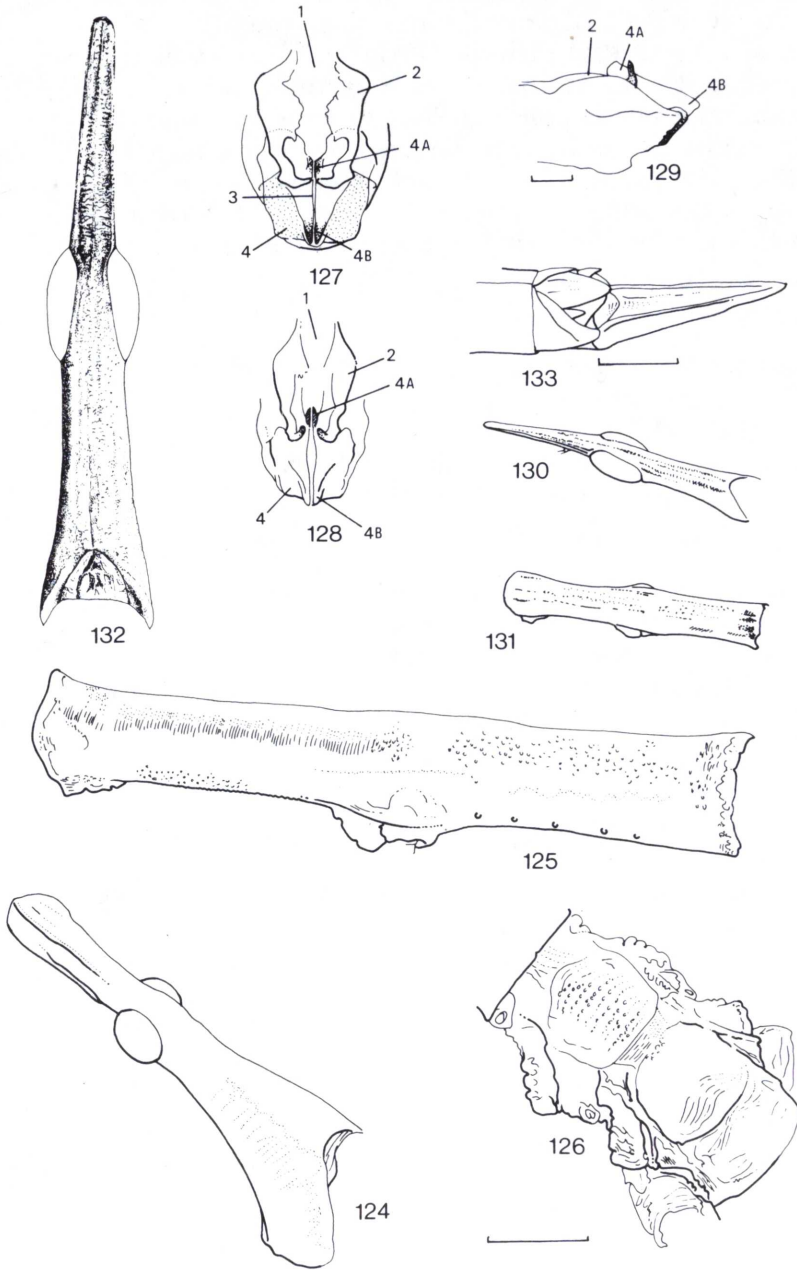
Topotype ♂, COLOMBIA, Villa Vicencio, ANSP.

Pseudastroma gen. n. (figs. 127-133)

Type species: *Tetanorhynchus gracilis* Brunner, 1913.

DIAGNOSIS.—*Male*. Phallic complex with transverse plate (1) absent (as in *Astroma*, *Anchochoema* and *Corynorhynchus* figs. 127 and 128). Lateral plates small but strong and at apices almost touching on midline (2). Valvular plates (4) forming a raised crest, stright as seen in profile (fig. 129, 4) and concealing narrow, parallel-sided genital slit (3). Anterior margin of valvular plates forming a pair of small nodules (4A) lying between and slightly in front of hooked lophal apices when genitalia retracted (equivalent to ornamented lobes 4A in *Scleratoscopia*, fig. 134). Posterior end of paired valvular plates (4B) produced into angular apex (fig. 129). Genital duct not sclerotised.

Head elongate, narrow and tapered with long narrow, tricarinate, flat-topped rostrum (figs. 130, 132). Pronotum smooth (fig. 131), micro-punctate dorsally, lightly flattened dorso-ventrally with tendency to pair of decumbent to rounded but clear lateral carinae. Pronotal margins to front and rear, unarmed. Wing rudiments absent. Meso and metanotum not inflated. Abdominal tergites smooth, most distal ones with very faint longitudinal carinulae. Cerci small, conical. Supra-anal plate diamond shaped. Subgenital plate (fig. 133) elongate, pointed, flat to longitudinally sulcate above with tiny denticles and sharply carinate below. Knees of hind femora with apical up-



Figs. 124-126.—*Proscopia gigantea* female: 124) head, oblique aspect left side; 125) pronotum, oblique aspect left side; 126) meso- and metathorax, dorso-lateral aspect left side. Figs. 127-133.—*Pseudastroma* males: 127-129) phallic complex: 127) *perducta*, dorsal aspect; 128) *gracilis*, dorsal aspect; 129) *gracilis*, lateral aspect left side; 130) *gracilis*, head oblique aspect, left side; 131) *gracilis*, pronotum, oblique aspect left side; 132) *perducta*, head dorsal aspect; 133) *perducta*, abdominal apex. Scale line under fig. 126 represents 5 mm and refers to 124, 125, 130, 131 also; that under 129 represents 0.5 mm and refers to 127, 128 also; that under 133 represents 2.0 mm and refers to 132 also.

per angles unarmed or with rudimentary decumbent spines. Hind femora slender with weak pair of dorsal carinulae; smooth.

Female. Head like that of male. Pronotum very weakly tricarinate to smooth above, but with definite lateral carinae and dorsoventrally flattened. Wing rudiments absent. Meso and metanotum parallel sided - not inflated. Abdominal tergites smooth with weakest of longitudinal carinulae.

REMARKS.—This genus is so far confirmed from central Brazil. DESCAMPS (1973) illustrates an unnamed species attributed to *Astroma* which probably belongs to this genus. If so then the genus is also found in Bolivia.

MATERIAL STUDIED:

Pseudastroma gracilis (Brunner) comb. n. (figs. 128, 129, 130, 131).

All ANSP unless otherwise stated.

BRUNER, 1913: 437.

BRAZIL, Cotype 1 ♂, Chapada nr. Cuyaba, Matto Grosso, here designated lectotype; 1 ♂, Chapada, Campo; 1 ♂, Golas Gurupi, 800 km. N. of Brasilia. BMNH.

Pseudastroma perducta (Mello-Leitao) comb. n. (figs. 127, 132, 133).

All BMNH unless otherwise stated.

Cephalocoema perducta Mello-Leitao, 1939: 318.

BRAZIL, Holotype 1 ♂, Matto Grosso; 1 ♂, Matto Grosso; 4 ♂, 3 ♀, Matto Grosso, 12°50'S to 12°51'S, 51°46'W to 51°47'W (7-III) - (17-IV) and (28-IX) - (18-X) - 1968, (RICHARDS), ODNRI.

Scleratoscopia gen. n. (figs. 134-145)

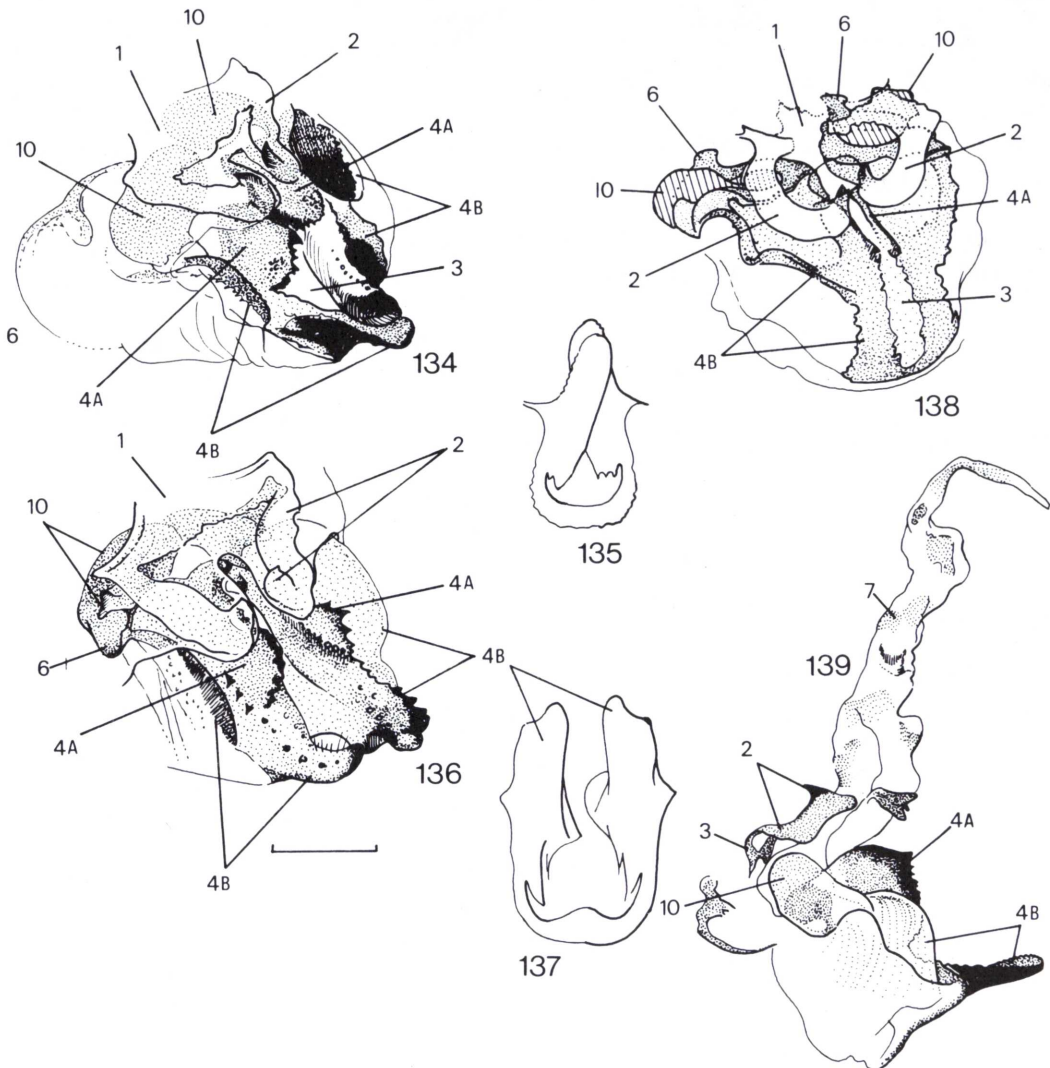
Type species: *Cephalocoema protopeirae* Amedagnato, 1985: 71-75, 12 figs.

DIAGNOSIS.—*Male*. Male genitalia moderately (fig. 138) to heavily sclerotised (figs. 134, 136 and 139). Transverse plate (1) and lateral hook-shaped lophi (2) fused, with lateral lophi, convergent towards rear. Not attached below by a sclerotised plate (5) to accessory plate (10) (thus unlike *Cephalocoema*). Lophal hooks powerful, deflexed forwards (like *Tetanorhynchus*). Accessory plates weakly to strongly developed (6 and 10, but in all three known species inner margin of lateral plates (4A) develops heavily sclerotised lips, often forming inwardly directed lobes which border longitudinal slit (3) and lie between and below lophi. Apices of lateral plates to greater (figs. 134, 136) or lesser degree (fig. 138) sclerotised and produced to form a pair of terminal hooks, horns or bands of tough cuticle (4B). No other genus of proscopiid so far known includes species with such heavily sclerotised male phallic complex.

Simple pod-like lateral plates of *Cephalocoema* and *Tetanorhynchus* are replaced in this genus by heavy lateral plates, a tendency at its least developed in *S. silvai* (Rehn), where lateral plates have a weakly toothed inner margin (4A). Apices of plates (4B) tightly fused to ventro-apical band of cuticle (figs. 135, 137 and 138). Genitalia of *Scopaeoscleratoscopia* morphologically very similar (figs. 146 and 147) but half the size.

Head with relatively short rostrum (figs. 140 and 141), pointed and con-

vex above, with antennae quite long extending well beyond apex of rostrum. Eystripes evident. Pronotum smooth, unarmed anteriorly or posteriorly, micro-punctate with pair of lateral lobes broadly developed over bases of fore-coxae which are situated equidistant from front and rear of pronotum. Wing rudiments absent. Meso and metathorax not or hardly inflated. Abdominal tergites smooth or with fine carinulae, especially at sides (figs. 142 and 143). Tergites 10, 11 and subgenital plate smooth or finely sculptured. Cerci small, tapered and incurved. Sub-genital plate pointed, acutely carinate below and larger than in *Scopaeoscleratoscopia* but not greatly elongate.



Figs. 134-139.—*Scleratoscopia*, males phallic complex: 134) *protopeirae* oblique aspect left side; 135) *protopeirae* paired valves (4) ventral aspect; 136) *spinosa* oblique aspect left side; 137) *spinosa* paired valves (4) ventral aspect; 138) *silvai* oblique aspect left side; 139) *protopeirae* left side phallic duct everted. Scale line under fig. 136 represents 1.0 mm and applies throughout.

Membrane above covering heavily sclerotised paired phallic plates (4) which are readily visible on withdrawing this dorsal membrane. Supra-anal plate, simple lozenge-shaped. Knees of hind femora weak dorso-lateral apical spines.

Female. Larger than male (figs. 144, 145). Rostrum more elongate and flat above, longitudinally sulcate below. Eystripes visible. Cervical sclerites in evidence just behind head dorsally. Pronotum variable anteriorly smooth, lightly elevated, with (fig. 144) to without (fig. 145) pair of marginal nodules. Sometimes with three very weak longitudinal carinulae but otherwise transversely microstriate or lightly micro-punctate and smooth. Wing rudiments absent. Colour light ochre to olivaceous with tendency to display lighter pair of side stripes in pronotal region.

REMARKS.—The number prefixed by «R» in parentheses represents label/locality notation by Dr. M. LECOQ, PRIFAS who collected most of the material.

Cephalocoema, *Tetanorhynchus*, *Scopaeoscleratoscopia* and *Scleratoscopia* are three very closely similar genera, anatomical facies indicating possible common origin. Of the three, *Cephalocoema* has the weakest lophal hooks (2) which are directed obliquely towards the rear or vertically. In *Tetanorhynchus* these hooks are apically upcurled so as to be directed forwards and are always much heavier than in *Cephalocoema*. The pod-like form of the paired plates (4) in the last two genera is, however, a common feature, while in *Scleratoscopia* and *Scopaeoscleratoscopia*, these paired plates are progressively thickened and toughened into two distinct regions (4A, 4B). A small but distinctive difference separating *Tetanorhynchus* from the other two is that the paired anterior plates (6) and (10) tend to lie in a vertical plane - not horizontally as in *Cephalocoema* and *Scleratoscopia*.

The three known species of *Scleratoscopia* are very similar externally but very easily differentiated using the male phallic morphology. For this reason no key to species is given and reference should be made to figs. 134-139. Note the difference in scale of figs. 146, 148 which makes the complex of *S. simplex* roughly half the size of that in the other species. In this respect the complex of *S. simplex* is similar in size to that in some *Tetanorhynchus*, species, affording yet another link to that genus and indicating, perhaps, that the very large male genitalia of the *Scleratoscopia* species is a secondary and unique feature of the genus. In *Scleratoscopia* and *Scopaeoscleratoscopia* plates (4) are firmly joined ventro-apically, whereas in *Tetanorhynchus* the terminal ventral sclerite is separated.

Scleratoscopia protopeirae (Amedegnato) (figs. 134, 135, 139, 140, 142).

Cephalocoema protopeirae Amedegnato, 1985: 71-75, 12.

DIAGNOSIS.—*Male*. Genitalia (fig. 134) redrawn here for comparison with *S. spinosa* sp. n. (otherwise well illustrated in AMEDEGNATO, 1985).

Transverse plate (1) proportionally smaller than that in *S. spinosa* (fig. 136), with inter-lophal slot narrower. Lateral plates (fig. 134) (4) with heavily sclerotised distal and proximal lobate expansions (4B) on external margin, proximal one being smoothly ovoid and distal one untoothed, but with crenelated margin. Large terminal processes bearing small papillae along their dorsal surface. Apical processes on right and left side assymmetrical (fig. 135) and overlapping in repose. Inner margin of lateral plates (fig. 134)

(4A) with an expanded and posteriorly toothed lobe. Inner and outer dorsal margins of paired plates (4) dip ventrally towards front to form a small flat laminar extension (6), hidden below a pair of inwardly sloping ovoid accessory plates (10). Whole complex enclosed below by a thin tough membrane, whose front margin is thickened. Apical horns of lateral plates united below by a semi-circular belt of cuticle. Genital slit (3) capable of sideways expansion to allow eversion of long membranous distal part of genital duct (fig. 139) whose walls bear sculptured areas of thicker cuticle.

Head (fig. 140) slightly narrower basally than in *spinosa* (fig. 141), but not as slender in post-ocular region as *silvai*. Pronotum with lighter coloured, decumbent, longitudinal lateral callosities. Meso and metathorax not inflated. Subgenital plate (fig. 142) and adjacent sclerites, sculptured; subgenital plate shorter and more obtusely pointed than in *spinosa* (compare fig. 143).

Female. Rostrum usually (fig. 145) proportionally longer than in *spinosa*. Cuticle smooth, polished. Pronotum with tendency to have three weak longitudinal carinulae dorsally and, in such cases, with pair of small dorso-lateral tubercles on anterior margin.

Measurements (mm)	Male (n = 10)	Female (n = 6)
Width head across genae	2.79 - 3.58, 3.28	3.50 - 4.38, 39.2
Length of rostrum	2.59 - 3.55, 2.92	5.24 - 7.37, 6.38
Pronotal length	11.86 - 13.69, 12.86	11.88 - 16.94, 14.93
Length posterior femur	17.40 - 22.31, 19.49	18.05 - 25.55, 23.06
Length tip of rostrum to end of abdomen	54.50 - 67.31, 57.79	63.15 - 84.76, 77.07

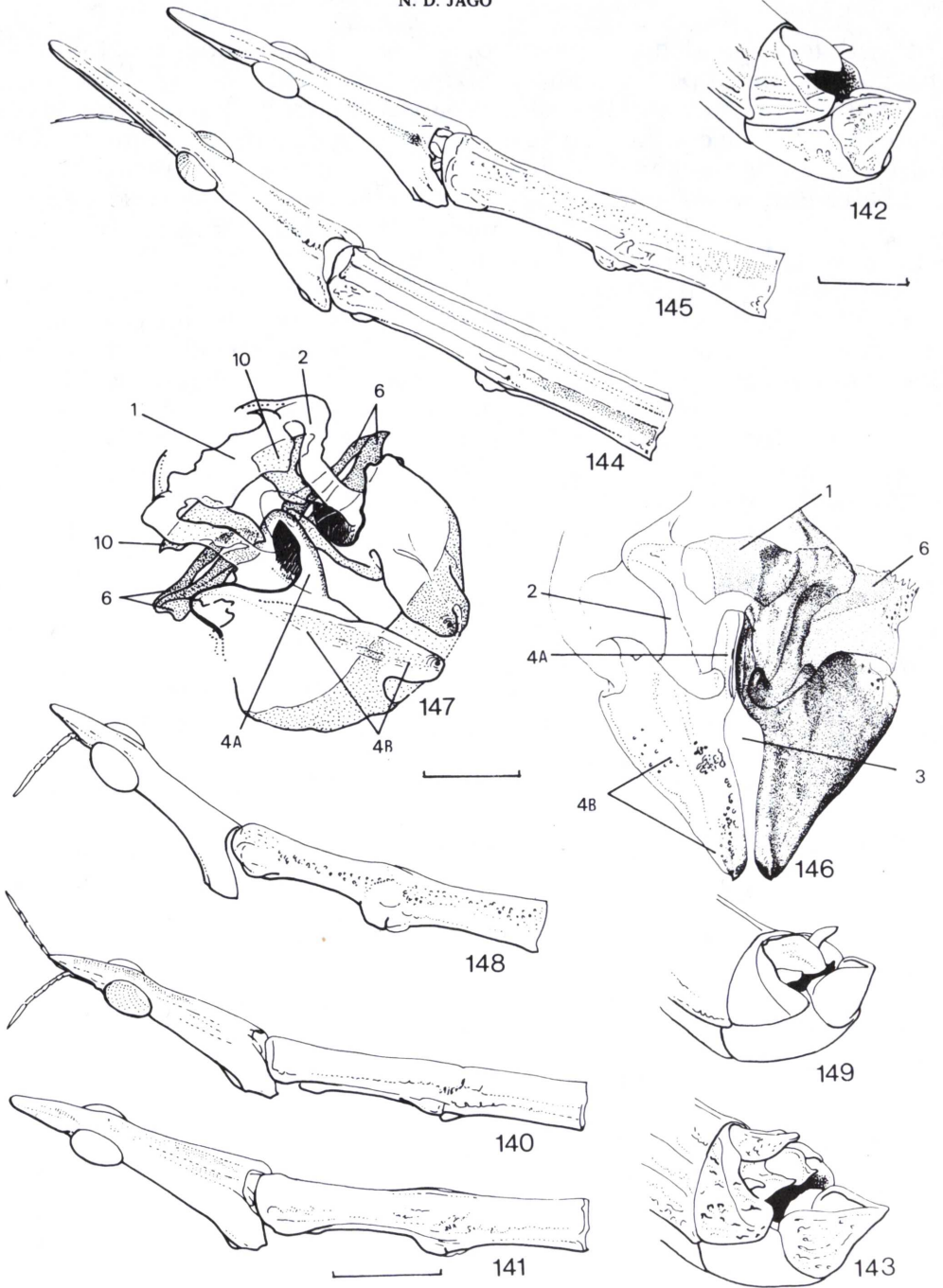
REMARKS.—This economically important species has been confused, until recently, with *S. spinosa* sp. n. and *S. silvai*. Locality distribution is shown in map 1.

MATERIAL STUDIED:

For distribution see map 1. All BRAZIL and ex. coll. of M. LECOQ at PRIFAS unless otherwise stated. 12 ♂, 4 ♀, topotypes, Pernambuco, Petrolina, Bebedoura, 8-V-84, ODNRI; 2 ♂, 1n (R512) Bahia, Remanso, 20-III-86; 1 ♂, (R.700), Bahia, Canudo, 21-V-86; 5 ♂, 5 ♀, (R.707), Pernambuco, Petrolina, 4-VI-86; 1 ♀, Pernambuco, Petrolina, 6-V-86.

***Scleratoscopia spinosa* sp. n.** (figs. 136, 137, 141, 143, 145).

DIAGNOSIS.—*Male*. Transverse plate (1) and lophi (2) very similar to those of *S. protopeirae*, but whole structure proportionally larger and inter-lophal slot wider. Lateral plates massively sclerotised (fig. 136, 4A, 4B). Apical horns of lateral plates curved inwards and upwards (not straight as in *protopeirae*), each assymetrical horn being linked by a belt of cuticle (fig. 137). External margin of lateral plates with single very large smooth proximal lobe (4B), distal marginal lobe present in *S. protopeirae* being absent. Outer dorso-lateral row of tubercles increasing in size anteriorly to form a dorso-lateral outer row of large teeth on inflated inner margin of lateral plate (4A). This inflated region bowed on inner margin to form a massive crenelated border,



Figs. 140-145.—*Scleratoscopia* males, head and pronotum oblique aspect left side: 140) *protopeirae*; 141) *spinosa*; 142, 143) abdominal apex, oblique aspect left side; 142) *protopeirae*; 143) *spinosa*; 144, 145) females, head and pronotum oblique aspect left side: 144. *spinosa*) 145. *protopeirae*.) Figs. 146-149.—*Scopaeoscleratoscopia simplex*: 146) male phallic complex, dorsal aspect; 147) male phallic complex, oblique aspect, left side; 148) male head and pronotum, oblique aspect left side; 149) male abdominal apex, oblique aspect left side. Scale line under fig. 141 represents 5 mm and refers to 140, 144, 145, 148 also; that under 142 represents 2.0 mm refers to 143, 149 also; that under 147 represents 0.5 mm refers to 146 also.

terminating anteriorly with a large tooth. Tooth of left lateral plate locks in front of right-hand partner. Lateral plates dip sharply downwards anteriorly to form a small oblique extension (6) which is, however, larger than that in *protopeirae*, being about half size of paired accessory plate (10) which lies above it loosely attached by membrane. Paired accessory plates (10) each with a dorso-lateral condylar horn which articulates loosely with outer corner of transverse plate (1) (in this respect very different from *protopeirae* whose paired accessory plates (10) lack such condylar horns). Whole complex with ventral membrane as in *protopeirae*.

Head (fig. 141) broader than in *S. protopeirae* at base. Rostrum flat below, and as in *protopeirae* same width below as above. Eyestripes in evidence. Pronotum smooth, unarmed, shining, micropunctate. Wing rudiments absent; metathorax slightly inflated. Abdominal tergites 1-6 smooth; rest (fig. 143) sculptured with folds and irregular carinulae. Subgenital plate pointed; generally more elongate than in *S. protopeirae*. Knees of hind femora with very weak dorso-lateral apical spines. Hind femora smooth with basal part lightly inflated and inner side with vertical striae and granulations.

Insect shining, beautiful olive green with delicate dark green lines and yellow-green lighter longitudinal patterns.

Female. Rostrum proportionally shorter (fig. 145) than in *S. protopeirae* (fig. 144). Rostrum flat below with marginal ventrolateral carinulae. Form of thorax and hind femora as for male; wing rudiments absent.

Measurements (mm)	Male (n = 9)	Female (n = 7)
Head width across genae	3.15 - 4.23, 3.74	3.78 - 4.51, 4.18
Length of rostrum	2.98 - 4.05, 3.38	4.30 - 4.95, 4.66
Pronotal length	13.16 - 15.11, 14.50	14.35 - 17.59, 16.24
Length posterior femur	20.05 - 25.03, 22.79	21.44 - 26.82, 24.61
Length tip of rostrum to end of abdomen	58.52 - 67.08, 63.63	72.43 - 87.44, 79.59

REMARKS.—The distribution of this species is shown in map 1.

MATERIAL STUDIED.—All BRAZIL and ex. coll. of M. LECOQ at PRIFAS unless otherwise stated:

Holotype σ (R724), Bahia, 42 km. W. of Ibotirama, 11-VI-86 MNHN; all paratypes, 2 σ , 2 σ same data as holotype MNHN; 2 σ (R.758), Bahia, Bom Jesus da Lapa, 15-VI-86; 2 σ (R761), Bahia, Riacho de Santana, 15-VI-86; 1 σ (R753), Bahia, 24 km. S. of Santa Maria da Vitoria, 14-VI-86; 3 σ , 4 σ (R723), Bahia, Ibotirama, 11-VI-86 (of these 1 σ , 1 σ , BMNH; 1 σ , 1 σ MNRJ).

Scleratoscopia silvai (Rehn) comb. n. (fig. 138)

Tetanorhynchus silvai Rehn, 1957: 112.

DIAGNOSIS.—*Male*. Phallic complex (fig. 138) simple basic pattern with lateral plates (4B) smoothly rounded, not extended into ventro-apical tooth thus differing from *protopeirae* and *spinosa*. Lateral lobes (4B) comparatively weak and paired marginal thickenings (4A) not lobiform but rectilinear.

Externally rostrum of head narrower below than above, thus unlike *protopeirae* or *spinosa*. Pronotum identical with *protopeirae*. Head proportionally shorter than in other two species ratio of length head behind eye up to pronotum: length of eye about 2.3 (2.6 in *spinosa*). Metanotum slightly inflated not inflated in *protopeirae* or *spinosa*. Supra-anal plate smooth, ovoid; not sculptured and apically pointed as in two other species. Subgenital plate like that of *spinosa* (as in fig. 143).

Female. Head and rostrum very similar to those of *S. protopeirae*; rostrum longer than that in *S. spinosa* (in latter antennal apices surpass tip of rostrum). Also like *S. protopeirae* in that pronotum anterior to fore-coxae ovoid in cross-section; almost circular in *spinosa*. Unlike *protopeirae* and *spinosa*, profile of upper edge of upper ovipositor valves deeply concave just before apex: in other two species profile almost straight. Colour characters probably unreliable, though in PRIFAS material cream lateral stripes of pronotum more marked in *silvai*.

Measurements (mm)	Male (n = 7)	Female (n = 3)
Width head across genae	3.11 - 3.54, 3.30	4.17, 3.96, 3.88
Length of rostrum	2.39 - 3.52, 2.96	6.04, 5.11, 7.04
Pronotal length	12.32 - 15.18, 14.11	17.17, 15.85, 16.50
Length posterior femur	19.95 - 22.44, 21.18	25.84, 23.88, 23.38
Length tip of rostrum to end of abdomen	56.61 - 66.61, 62.83	86.43, 78.90, 82.55

REMARKS.—The distribution of this species is shown in map 1.

MATERIAL STUDIED.—Paratype σ , BRAZIL, Rio Grande de Norte, Baixa Verde, (Mann) ANSP. Also all BRAZIL, coll. PRIFAS by M. Lecoq, 1 σ , 3 ♀ (R591) Paraiba, Cajazeiras, 22-IV-86; 1 σ (R584) Rio Grande de Norte, Mossoro, 21-IV-86; 1 σ , Paraiba, Patu, 21-IV-86; 1 σ , (R609), Pernambuco, 17 km. S. of Cruz de Malta, 30-IV-86.

Scopaeoscleratoscopia gen. n. (figs. 146-149)

Type species: *Scopaeoscleratoscopia simplex* sp. n.

DIAGNOSIS.—*Male*. Phallic complex (figs. 146 and 147) about half size of that in *Scleratoscopia*, though externally insects of very similar dimensions. Transverse plate (1) and lateral hooks (2) like those of *Scleratoscopia*, but transverse plate (1) proportionally more massive and extending into "lophal" interspace. Plate 6 peculiar, slender, orientated transversely and overlaid by triangular plates (10). Inner margins of lateral plates (4) raised into a pair of vertical opposed lobes (4A), which lie snugly between upcurved hooks of lateral plates (1). Apically lateral plates (4) developed into a pair of simple conical processes (4B), joined ventro-apically by tough cuticle (very similar to *Scleratoscopia*).

Head generally more slender than of *Scleratoscopia* spp. (see fig. 148). Rostrum flat below. Lateral parts of pronotum rounded, not with decumbent, rounded lateral carinae (as in *Scleratoscopia*). Cuticle less shining than that of latter genus; matte, micropunctate. Wing rudiments absent. Meso and

metanotum quite heavily punctate dorsally, metanotum moderately inflated. Fore coxae attached mid-way along prothorax. Cuticle of abdominal tergites smooth. Subgenital plate proportionally smaller than in *Scleratoscopia* (fig. 149), unsculptured. Cerci more robust and decurved. Hind femora armed with pair of dorso-lateral apical spines.

Female.—So far not collected.

Scopaeoscleratoscopia simplex sp. n. (figs. 146-149)

DIAGNOSIS: As for genus. Only male known.

Measurements (mm.)	Male (holotype)	Paratypes
Head width across genae	2.71	2.37, 2.79, 3.03
Length of rostrum	2.85	2.52, 2.68, 2.39
Pronotal length	13.39	14.11, 12.98, 19.27
Length posterior femur	19.07	19.28, 17.76, 19.27
Length tip of rostrum to end of abdomen	59.69	61.74, 57.24, 59.49

MATERIAL STUDIED.—Holotype ♂, BRAZIL, (Para), Santarem, BMNH; Paratypes, 2 ♂, BRAZIL, Para, Mocajuba Mangabeira, X-52 (ROGO) MNRJ; 1 ♂, BRAZIL, Para, Mocajuba, Mangabeira, II-53 (ROGO) MNRJ.

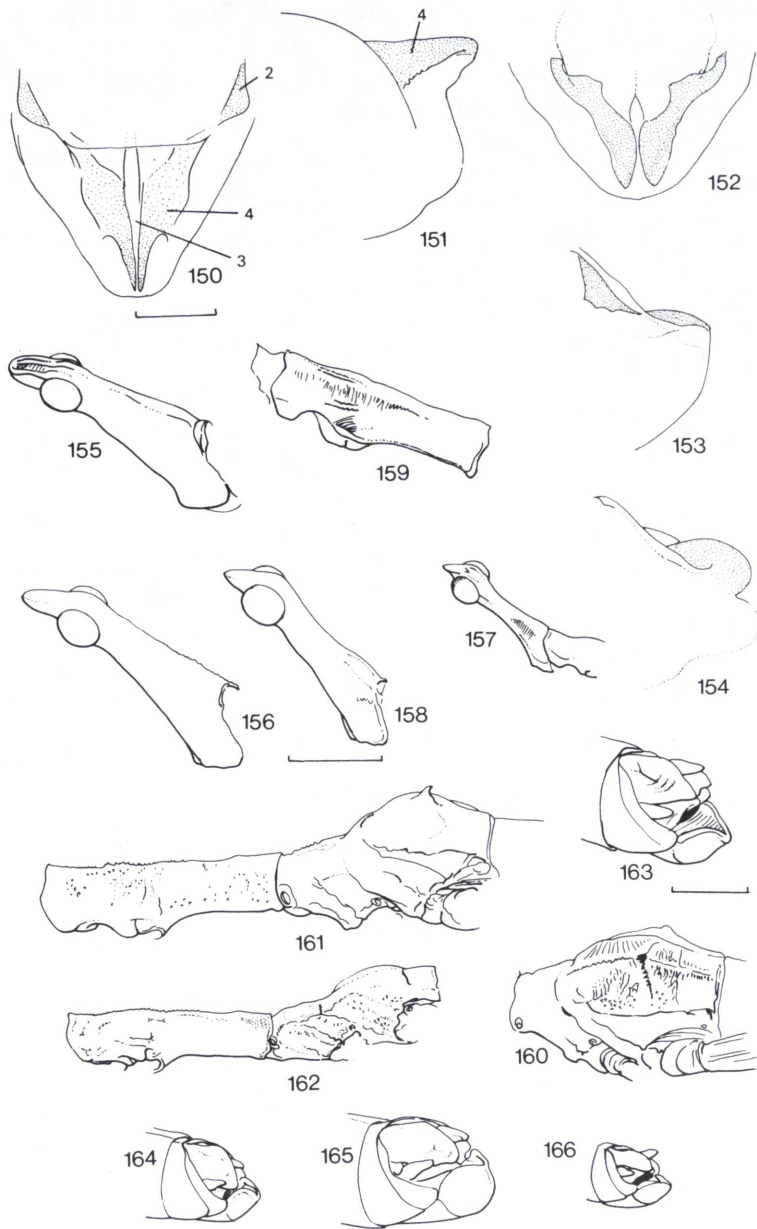
REMARKS.—The holotype was misidentified by MELLO-LEITAO as *Corynorhynchus radula* (Klug). This genus is for the present monotypic. It is clearly very close to *Scleratoscopia* morphologically.

Siphra Brunner (figs. 150-179)

Siphra Brunner, 1890: 107. Type species *Siphra lobata* Brunner, 1890: 108 by subseq. design. KIRBY, 1910: 87.

DIAGNOSIS.—*Male*. Heavily built insects with fragile, thinly sclerotised, phallic complex (figs. 150-154). Transverse plate (1) absent and remnants of lateral plates forming tiny pouches (2); hook-like «lophi» absent. Genital duct unsclerotised. Paired plates (4) reduced to pair of barb-like spicules; pod-like in profile (figs. 151, 153, 154).

Head robust (figs. 155-158) with rostrum short, decurved and marked dorso-laterally by decumbent carinulae or none; square to rounded in cross-section. Eyes protruding, but region behind eyes only moderately constricted or not at all constricted. Head expanding towards genae and cervical region, often inflated dorsally at rear. Pronotum (figs. 159, 161, 162) cylindrical, smooth to microtuberculate or spinose. Fore coxae very near to cervical region. Mesothorax lightly expanded posteriorly, but metathoracic segment and first abdominal region lightly (fig. 162) (*giraffe* sp. n.), metanotum clearly demarcated by sutures, but lacking a mid-dorsal tooth; in *gibbosa* (fig. 160) metanotum and first abdominal tergite less clearly demarcated but mid-dorsal nodule developed just anterior to suture; in *robusta* metanotum greatly inflated with well developed mid-dorsal tooth or spine, but dorsal transverse



Figs. 150-166.—*Stiphra* males.—150-154. phallic complex: 150) *gibbosa* dorsal aspect; 151) *gibbosa* lateral aspect right side; 152) *giraffe* dorsal aspect; 153) *giraffe* lateral aspect right side; 154) *robusta* lateral aspect right side; 155-158: oblique aspect head left side: 155) *gibbosa*; 156) *robusta* (large form); 157) *robusta* (small form); 158) *giraffe*; 159) pronotum *gibbosa*, lateral aspect left side; 160) *gibbosa*, meso- and metathorax and first abdominal tergite, oblique aspect left side; 161, 162: pronotum, meso- and metathorax and first abdominal segment: 161) *robusta*; 162) *giraffe*; 163-166: abdominal apex, oblique aspect left side: 163) *gibbosa*; 164) *giraffe*; 165) *robusta* (large form); 166) *robusta* (small form). Scale line under fig. 150 represents 0.5 mm and applies to 151-154 also; that under 158 represents 5.0 mm and applies to 159-162 also; that under 163 represents 2.0 mm and refers to 164-166 also.

suture weak or absent (fig. 161). Wing rudiments absent. Abdominal segments smooth. Subgenital plate short, bluntly pointed and bluntly carinate posteriorly (figs. 163-166). Posterior tibial spines finely pointed to lamellate, set on two dorsolateral tibial ridges; proximal to most proximal outer spine there may be a ridge extending to joint, just beyond genicular lobe. Middle pair of tibiae equipped dorsally with pair of clear longitudinal dorsolateral carinae (as in figs. 174-176), in some cases with outer basal extension in form of flat lobe (as in fig. 174). Dorso-apical genicular spines present; fine and pointed.

Female. Head heavily built (figs. 167-170). In most species rostrum short, but in some species (e.g. figs. 168-169) individuals with long or short rostra are common. Rostrum bluntly fluted, roughly square in cross-section, often pigmented black or red. Pronotum cylindrical with prothoracic coxae very near to cervical region. Prothoracic cuticle smooth to finely denticulate. Meso and metanotum not, to moderately, to distinctly inflated (figs. 171-173); if last, as in *S. robusta* (fig. 172), metanotum bears a small median dorsal tooth. Mid-tibiae as for males, clearly bicarinate dorsally and in *S. lobata* with outer carina bearing basal lamellate lobe (figs. 174-176). Hind tibiae with tendency to lamellate, dorsal spines along inner and outer margins (figs. 177-179). Wing rudiments absent. Genicular lobes as in males.

REMARKS.—This genus is important economically (LAUNOIS, 1984). The species are, however, not easy to diagnose given lack of comprehensive collections. Reliably determined material is scarce. For this study there was no male material of *S. lobata*, though from the literature (LIANA, 1972) it appears to be a good species with very clear taxonomic characters (see LIANA, fig. 60). Her data indicates a distribution in N. W. Brazil (Espírito Santo Prov.) and Venezuela.

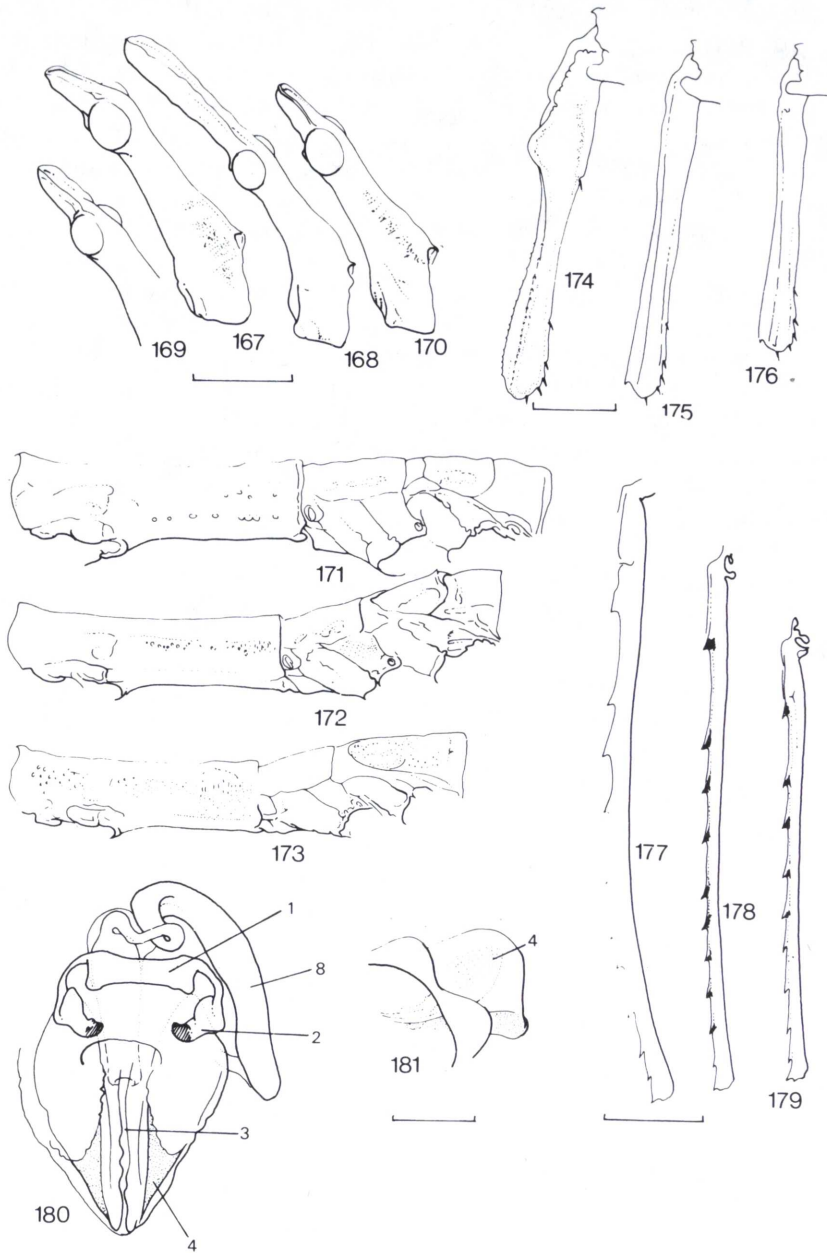
S. gibbosa differs from the other species before me in having red pigment at the proximal end of the fore-femora. It occurs in Bolivia. My identification of *gibbosa* relies upon determined specimens from ANSP, no type material. LIANA (1972) records *Stiphra arribalzagai* MELLO-LEITAO from the same part of Bolivia, hence my material could be *arribalzagai*.

Most of the specimens for this review are the major pest species, to which I have given the name *S. robusta* Mello-Leitao, 1939 and for which I have a paratype (BMNH). This species is astonishingly variable in size in both sexes. The biggest females come from Atlantic areas of N. E. Brazil. The species has a black rostral apex in males; base of fore-femora of male of male is black; females have a cream «saddle» across abdominal tergite 1; tibial spines of hind legs are black and laminar. Male genitalia of micro and macromales are, however, very similar in size. The species distribution seems to extend across N. E. and Central Brazil. It is often abundant (see map 2).

All material of *S. tuberculata* Brunner at my disposal can be attributed to *S. robusta* so I cannot comment on the validity of *S. tuberculata* as a species. *S. bitaeniata* M-L. and *S. cearensis* Gunther have type localities situated in the middle of the range of *S. robusta* in N. E. Brazil and are therefore suspect.

S. anatina may replace *S. robusta* in the extreme S. E. of Brazil.

The new species described here, *S. giraffe*, is very distinctive. The male head has no black pigment on the rostrum and the proximal black pigment on the fore-femora is more restricted than in *S. robusta*. Furthermore, both



Figs. 167-179.—*Stiphra* females.—167-170: head, oblique aspect left side: 167) *lobata*; 168) *robusta* (nasute form); 169) *robusta* (brachyrostrate form); 170) *giraffe*; 171-173) left lateral aspect thorax: 171) *lobata*; 172) *robusta*; 173) *giraffe*; 174-176: right middle tibiae, outer side: 174) *lobata*; 175) *robusta*; 176) *giraffe*; 177-179: posterior tibiae, outer side showing row of tibial spines and ridges and dorso-lateral margin: 177) *lobata*; 178) *robusta*; 179) *giraffe*.

Figs. 180, 181.—*Taxiarchus* male phallic complex: 180) *paraensis* dorsal aspect; 181) *latirostris*, profile of valves (4) left side. Scale line under fig. 167 represents 5 mm and refers to 168-173, 177-179 also; that under 177 represents 2 mm and refers to 175, 176 also; that under 181 represents 1.0 mm and refers to 180 also.

sexes are more delicate, the male heads being very etiolated while the male meta-notal inflation is very weak. Hence, in this respect, the two sexes are very similar. The posterior tibial spines are only weakly laminar or more usually finely pointed and spiniform. The area of distribution (map 2) is discrete.

It is fairly clear that the extreme polymorphism of *S. robusta* has caused great confusion. Being an important pest species it would be legitimate to study the advantages to the species of this great range of body size and the developmental, behavioural or genetic mechanisms which control it. In respect of its enormous range of size variation it is unique among acridids.

PROVISIONAL KEY TO SPECIES IN THE GENUS *STIPHRA*

Males

1. Mid-tibiae with lobe-like proximal dorso-lateral lobe (as in figure 174) *lobata*
- Mid-tibiae not so armed (fig. 175) 2
2. Tip of rostrum yellow or olivaceous grey-green 3
- Tip of rostrum red *robusta*
3. Tip of rostrum yellow. Base of mid and fore-femora red. Metanotum moderately inflated with small median dorsal tooth (fig. 160) Body yellow-green to olivaceous green; hind tibiae dull yellow with flat lamellate dorsal spines *gibbosa*
- Tip of rostrum grey green. Base of mid- and fore-femora black. Metanotum less inflated than *gibbosa* (fig. 162). Thorax grey-green dorsally, dull grey laterally; hind tibiae light brown with weak conical black spines *giraffe* sp. n.

Females

1. Rostrum blue-grey laterally, grey above. Third abdominal tergite extensively creamy grey. Hind tibiae with black-tipped grey spines. Tibiae dark grey carinulae. Mid tibiae with basal dorsal lamellate lobe. Ovipositor valves light ochrous brown *lobata*.
- Rostrum with at least some trace of red pigment. Third abdominal tergite dark in colour. Hind tibiae blue-grey or orange. Mid-tibiae lacking lamellate basal lobe. Ovipositor valves grey-brown or yellow with black tip 2
2. Rostrum red, often very elongate. Base of mid- and fore-femora black. First abdominal tergite cream. Hind tibiae orange-red with black, lamellate dorsal spines *robusta*.
- Rostrum shorter; black at sides with only traces of red pigment. Base of mid- and fore-femora grey, same colour as distal part of femur. First abdominal tergite dark dorsally, narrowly light grey laterally. Hind tibiae dull blue grey; carinulae micro denticulate dorsally joining weakly lamellate spines *giraffe* sp. n.

Stiphra giraffe sp. n. (figs. 152, 153, 158, 162, 164, 170, 173, 176, 179, 209).

DIFFERENTIAL DIAGNOSIS.—Males. Aedeagus (fig. 153) with lightly curved dorsal profile, not straight (as in *gibbosa*, fig. 151) or semi-circular (as in *robusta*, fig. 154). Valves (4) (fig. 152) rather short and blunt compared with *gibbosa* (fig. 150). Head (fig. 158) with small deflexed rostrum, occipital region slightly inflated, never as constricted behind eyes as is smallest examples of *robusta* (fig. 157) nor as robust as large specimens of *robusta* (fig. 156) or *gibbosa* (fig. 155). Pronotum (fig. 162) denticulate, lightly arched anteriorly and cylindrical (thus differing from *robusta* and *gibbosa*, figs. 161 and 159). Metanotum only slightly inflated, without dorsal tooth or tubercle. Subgenital plate (fig. 164) like a miniature version of *gibbosa* (fig. 163). Posterior tibiae with conical not lamellate spines; middle tibiae lacking lobe of *lobata*.

Female. Head (fig. 170) with small straight, not deflexed rostrum. Metanotum (fig. 173) hardly inflated (like *lobata*, fig. 171) and lacking median dorsal tooth of *robusta* (fig. 172). Middle tibia (fig. 176) like that of *robusta* (fig. 175), lacking basal lobe of *lobata* (fig. 174). First abdominal segment dark in colour dorsally, only lighter grey at sides (not cream throughout as in *robusta*). Hind tibiae with weakly lamellate dorsal spines (not black and strongly lamellate as in *robusta*); tibial colour generally dull blue-grey.

For other characters see key to species. Distribution see fig. 210.

Measurements (mm)	Male (n = 13)	Female (n = 9)
Head width across genae	2.42 - 4.45, 3.52	3.20 - 5.36, 3.78
Length of rostrum	0.91 - 1.57, 1.20	2.58 - 4.59, 3.28
Pronotal length	7.45 - 10.63, 9.28	9.46 - 12.17, 10.66
Length posterior femur	12.93 - 19.25, 16.36	16.11 - 22.01, 18.65
Length tip of rostrum to end of abdomen	42.03 - 63.05, 52.88	64.61 - 86.39, 69.92

MATERIAL STUDIED.—All Brazil and ex. coll. of M. LECOQ at PRIFAS unless otherwise stated.

Holotype σ , (R652), Sergipe prov., Propria, 16-V-86. All paratypes 8 σ , 7 φ , (R652) same locality as holotype (1 σ , 1 φ MNRJ; 1 σ , 1 φ BMNH; rest MNHN); 1 σ , 1n, (R690), Bahia prov., Tucano, 20-V-86; 1 σ , (R350), Pernambuco prov., Caruaru, 21-I-86; Alagos prov., 2 σ , 2 φ (R649), 30 km. S. of fork with AL 220, 15-V-86; 2 σ , (R633), Sao José de Tapera, 13-V-86; 3 σ , 1 φ , 4n (R630), Delmiro Gouveia, 13-V-86; 3n (R631), Olho d'Agua do Casada, 13-V-86.

OTHER SPECIES STUDIED:

Stiphra lobata Brunner (figs. 167, 171, 174, 177).

BRUNNER, 1890: 108.

Lectotype σ , BRAZIL, 7665, no other data. Selected by CARBONELL, 1966 but unpubl. NM.

Stiphra gibbosa (Guerin-Meneville) (figs. 150, 151, 155, 159, 160).

Proscopia gibbosa Guerin-Meneville, 1884: 339. Type lost. All ANSP. BOLIVIA. 4 ♂, 3 ♀, Santa Cruz de la Sierra, 20/28-II-1922 (STEINBACH); 2 ♂, prov. Sara, Dep. Santa Cruz, 500 m.

Stiphra robusta Mello Leitao (figs. 154, 156, 157, 161, 165, 166, 168, 169, 172, 175, 178)

MELLO-LEITAO, 1939: 437.

All BRAZIL and ex. coll. M. LECOQ at PRIFAS unless otherwise stated. All Pernambuco State - 2 ♂, 10 ♀, 2n, 17 km. S. Cruz de Malta, 30-IV-86; 3 ♂, 2 ♀, 5 km. N. of Lagoa, 30-IV-86; 1 ♂, 1 ♀ (R610), Lagoa, 30-IV-86; 7 ♂; 3 ♀, 2n, Petrolina, 4-VI-86; 1 ♂, 1 ♀, (R620) Petrolina, Centre Embrapa, 6-V-86; 2n, (R342), Garanhuns, 20-I-86; 1 ♂, 1 ♀, (R613), Jutai, 30-IV-86; Paratype ♂. Recife, (MELLO-LEITAO) BMNH; All Rio Grande do Norte State - 2 ♂, 3 ♀, 4n, 21 km. W. of Riachuelo, 19-VI-86; 1 ♂, 1 ♀, (R584), Mossoro, 21-IV-86; 1 ♂, 1n. (R578), Fernando Pedrosa, 20-IV-86; 1 ♂, 3n (R573), Riachuelo, 19-IV-86; 1 ♂, Ceara-Mirim (Mann) ANSP. Det. as *St. tuberculata*. All Ceara State - 1 ♀, 7n (III-IV instar?), (R419), 40 km. N. of Santa Quiteria, 20-II-86; 3 ♂, 2 ♀, (R597), Nissao Velha, 22-IV-86; 1 ♂, 1 ♀, (R594), Iara, 22-IV-86; All Bahia State, In, (R683), Caldas do Cipo. 19-VI-86; 1 ♂, 1 ♀ (R513), Remanso, 20-II-86; All Paraiba State - 1 ♂, (R591), Cajazeiras, 22-IV-86; 1 ♂, 1 ♀, Independencia (MANN & HEATH) ANSP.

Taxiarchus Brunner (figs. 180-193) gen. res.

Taxiarchus Brunner, 1890: 109. Type species. *Taxiarchus superbus* Brunner, 1890: 110 by monotypy.

DIAGNOSIS.—*Male*. Phallic complex (fig. 180) with lightly sclerotised apical and heavily sclerotised proximal duct (8). Transverse plate (1) and hook-like lophi (2) of characteristic shape, joined by a slender isthmus (more solidly constructed in *Proscopia* figs, 121 and 123)). Paired, pod-like plates (4) meeting dorsally forming a slit (3) which is open to apex of phallus; plates (4) convex in profile (fig. 181). No other paired plates or sclerotisations.

Head with very large globular eyes and a short rostrum (fig. 182). Genae often with cream spots or lighter in colour than rest of head. Pronotum elongate (fig. 183), tuberculate surface being very twiglike. Meso- and metathorax not inflated, but punctate, tuberculate and sculptured (fig. 184). Abdomen smooth. Abdominal apex obliquely truncate.

MATERIAL STUDIED:

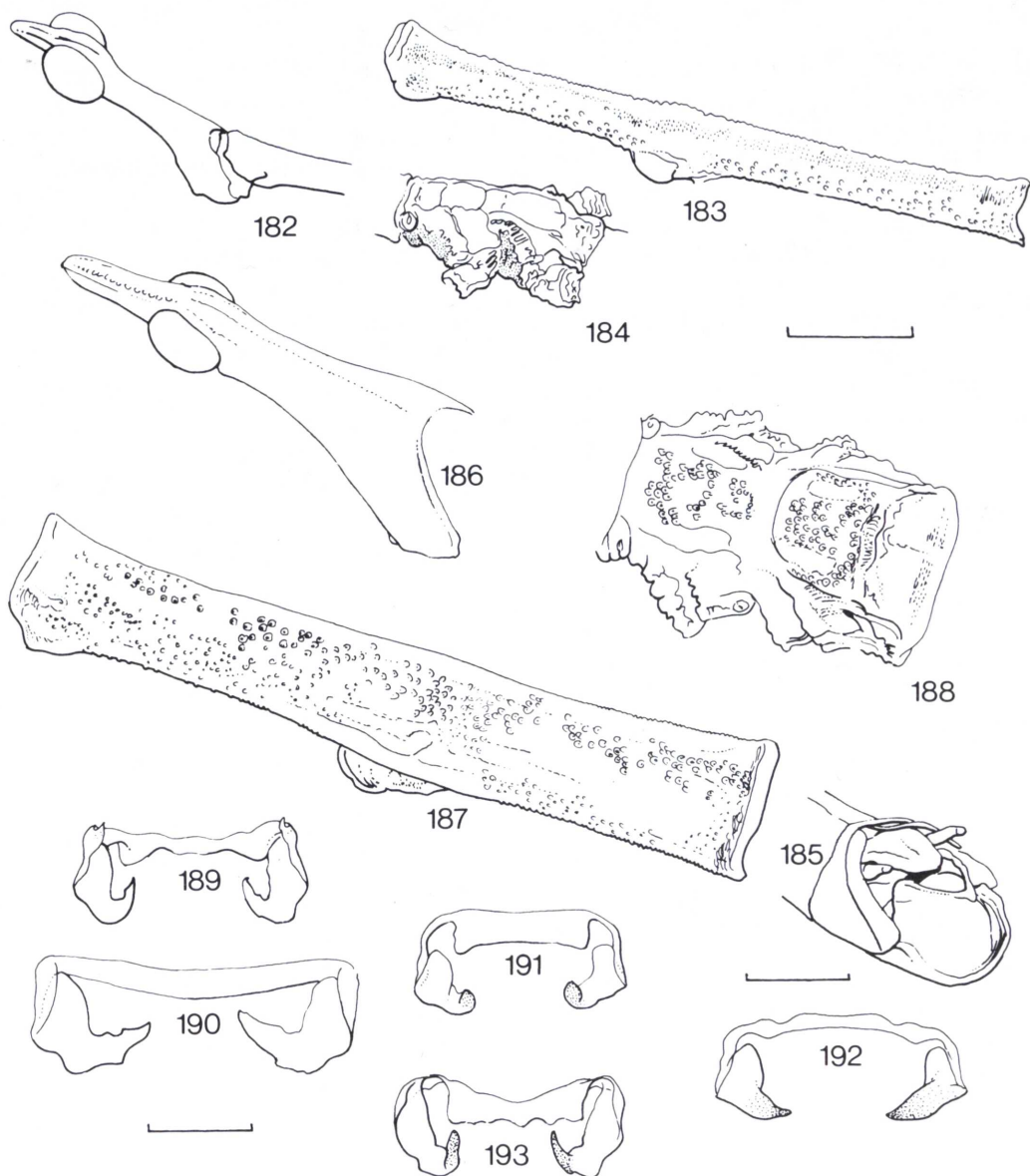
Taxiarchus superbus (Brunner) comb. res. (figs. 186-189)

BRUNNER, 1890: 110.

Hololectotype ♀. 13.327 no other data. NM. Selected by CARBONELL, 1966. Locality PERU?, Alto Amazonas (CARBONELL, 1977).

Taxiarchus sp. (fig. 193)

BRAZIL. 1 ♂, Para, Benevides, X-1918 (KLAGES) (det. *Proscopia scabra*



Figs. 182-193.—*Taxiarchus*: 182) *paraensis* male head, oblique aspect left side; 183) *latirostris* male pronotum, oblique aspect left side; 184) *latirostris* male thorax and first abdominal tergite; 185) *paraensis* male abdominal apex; 186-188) *superbus* female: 186) head, oblique aspect left side; 187) pronotum left side; 188) meso- and metathorax plus first abdominal tergite; 189-193) male epiphallus: 189) *superbus*; 190) *latirostris*; 191) *paraensis*; 192) *sajax* (homotype); 193) sp. indet. Scale line under fig. 183 represents 5 mm and refers to 182-184, 186-188 also; that under 185 represents 2.0 mm; that under 190 represents 1.0 mm refers to 189-193 also.

Klug) ANSP; 1 ♂, Matto Grosso, Chapada near Cuyaba ANSP. (det. *Corynorhynchus radula* Klug by BRUNNER).

Taxiarchus paraensis Rehn sp. res. (figs. 180, 182, 185, 191)

Rehn, 1906: 332, later wrongly synonymised under *scabra* by REHN, 1918: 168.

Holotype ♂, BRAZIL, (Para), Obidos. Type 5128 ANSP.

Taxiarcus latirostris (Brunner) comb. n. (figs. 181, 183, 184, 190)

Proscopia latirostris, Brunner, 1890: 96. CARBONELL (1977) recalls *latirostris* wrongly synonymised under *Proscopia inaequalis* Walker, 1870 by KIRBY, 1910: 84.

1 ♂, PERU, Quiroz, Rio Paucartambo, 16-IX-32 (det. by REHN 1935) ANSP.

Taxiarchus sajax (Scudder) comb. n. (fig. 192)

Proscopia sajax Scudder, 1869: 336 erroneously transferred to *Apioscelis*.

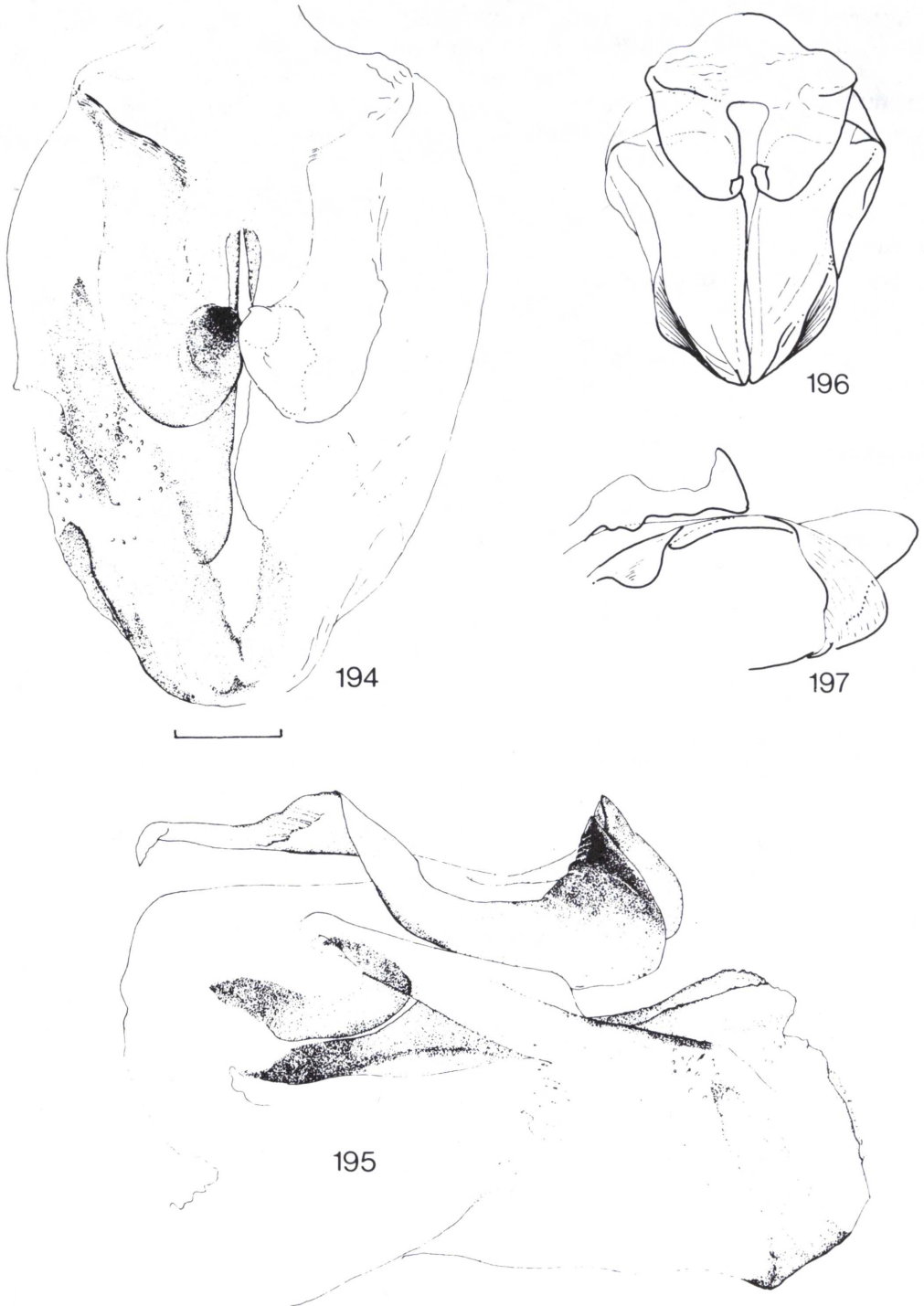
1 ♂, PERU, Rio Pacaya, VII-1912 («compared with type both REHN, and HEBARD and agrees fully») ANSP.

Tetanorhynchus Brunner (figs. 194-208)

Tetanorhynchus Brunner, 1890: 104. Type species *Proscopia punctata* Klug, 1820: 19, pl. 3, fig. 3 by subseq. design. REHN, 1905: 677.

DIAGNOSIS.—*Male*. Surface sculpture and form seen in figs. 203, 206 (*calamus*). Transverse plate (1) and lateral hooks (2) fused into a single transparent shield-shaped plate within which are areas of thicker cuticle (figs. 194-200). Most of plate thin, transparent and difficult to see by reflected light. Posteriorly with pair of strong upwardly and anteriorly curved hooks (thus differing from delicate hooks in *Cephalocoema* - see figs. 57 and 67-70). Posterior median part between hooks narrowly excised. Hooks convergent posteriorly, their apices approximated in mid-line or even overlapping as in *Scleratoscopia* (see very different plan view in *Cephalocoema* figs. 61 and 62). Median slit (3) very long, often to apex but closed ventroposteriorly by semi-annular cuticle (4B) (as is *Scleratoscopia* and *Cephalocoema*). Edges of median slit (3) lightly sclerotised (unlike *Scleratoscopia*) and paired plates (4) forming a pod-like structure (like that in *Cephalocoema*) and extending forward as a weak sclerite (6) underlying oblique, forwardly convergent plates (10), which may be angularly bent (fig. 202), but lie largely in a vertical plane (not horizontally as in *Cephalocoema* (fig. 61) or *Scleratoscopia* (fig. 134)). Posterior part of paired hooks (2) not heavily sclerotised or tooth-like (thus more similar to *Cephalocoema* than to *Scleratoscopia*).

Head conical with rostrum variably developed (figs. 203-205). Rostrum flat dorsally. Cuticle smooth, shiny. Pronotum micropunctate to very weakly transversely striate; without front or rear margins dentate. Cervical sclerites visible dorsally. Prothorax lightly depressed dorso-ventrally (except in *smithii*) with tendency to demarcation of rounded lateral carinulae. Fore coxae mid-way along prothorax. No traces of wing rudiments. Metathorax weakly differentiated from first abdominal tergite. Meso- and metathorax



Figs. 194-197.—*Tetanorhynchus*, male phallic complex: 194) *calamus* (holotype) dorsal aspect; 195) *calamus* (holotype) lateral aspect left side; 196) *leonardosi* (holotype) dorsal aspect; 197) *leonardosi* (holotype) lateral aspect left side. Scale line under fig. 194 represents 0.5 mm and applies throughout.

not, or only weakly, inflated. Abdominal tergites smooth. Subgenital plate pointed (figs. 206-208) sulcate and membranous dorsally, carinate below. Cerci small, strong, conical. Knees of posterior femora with pair of dorso-lateral apical spines.

Female. Rostrum elongate, of similar form to that of males. Rostrum tapered and not fluted or flared apically. Eyes protruding. Wing rudiments absent. In other respects such as form of pronotum, position of fore-coxae, absence of wing rudiments, cuticular sculpturing and form of posterior genicular region, like that of males.

REMARKS.—*Tetanorhynchus* and *Scleratoscopia* are sufficiently similar morphologically to suggest a common origin. *Cephalocoema* is also part of the same group of genera.

Insufficient reliably identified material was available to generalise in this genus on female morphology. Male genitalia are, however, remarkably constant and conform to subtle variation on an immediately recognisable basic pattern. Material illustrated and named here has been identified by reference to valid types or recent descriptions.

The material of *T. leonardosi* suffers from both its immaturity and previous preservation in alcohol. The only male (holotype, kindly lent by MNRJ) is badly distorted.

The genus occurs in central South America, and includes species from Bolivia, Paraguay, N. Argentina and Brazil. In contrast, the reliably determined material of *Cephalocoema* is mainly from southern Brazil, while *Scleratoscopia* is known only from northern and central to N. E. Brazil.

A provisional key to species based on males only, is given below. None of the species are of economic importance.

KEY TO SPECIES MALES

1. Subgenital plate (fig. 206) at least six times longer than supranal plate. Rostrum longer than length of meso- plus metathorax plus abdominal tergite 1 (fig. 203) (N. Argentina; S. Brazil) *calamus*.
- Subgenital plate no more than four times longer than supra-anal plate. Rostrum shorter than or equal to meso- plus metathorax plus abdominal tergite 1 (figs. 204, 205) 2.
2. Meso and metathorax clearly inflated. Prothorax cylindrical in front of and behind coxae, not dorso-ventrally depressed and with lateral margin marked only by line of light pigment. Head greatly widened at level of genae (fig. 205), so head much wider than width of pronotum across its anterior lateral lobes (N. Paraguay; Brazil) *smithii*.
- Meso and metathorax not inflated. Prothorax lightly compressed dorso-ventrally, ovoid in cross section in front of and to rear of forecoxae, lateral margins marked by pale decumbent ridge. Head only slightly widened basally so maximum head width only slightly wider than width of pronotum across its anterior lateral lobes (as in fig. 204) 3
3. Rostrum roughly equal to distance between back of head on mid-line and rear edge of eyes. Subgenital plate four times length of supranal plate. (C. Brazil) *borero*.

- Rostrum much shorter than post-ocular region of head. Subgenital plate at most three times length of supra-anal plate 4
- 4. Antennae projecting beyond tip of rostrum a distance equal to length of rostrum. Rostrum less than 1.5 times length of compound eye. (C. Brazil) *leonardosi*.
- Antennae projecting beyond tip of rostrum a distance less than length of rostrum. Rostrum more than 1.6 times longer than length of compound eye 5
- 5. Rostrum more than 2.1 times length of compound eye. Interocular distance barely wider than width of an eye as seen from above (fig. 204) (S. W. Brazil) *bihastatus*.
- Rostrum less than 2.1 times length of compound eye. Interocular distance barely wider than width of compound eye. Interocular distance broad, clearly wider than width of an eye as seen from above. (Bolivia) *humilis*.

MATERIAL STUDIED:

Tetanorhynchus humilis Giglio-Tos (Fig. 198)

GIGLIO-TOS, 1987: 18.

Cotype σ , BOLIVIA, Caixa, ANSP. (Here designated lectotype). Also BOLIVIA, 1 σ , Provincia Sara, 5/20-II-22 (STEINBACH) ANSP; 1 σ , Sta. Cruz de la Sierra, 450 mm., (STEINBACH).

Tetanorhynchus bihastatus Rehn (figs. 199, 204, 207)

REHNS, 1904: 677.

Paratype σ , BRAZIL, Corumba, highland, III, ANSP; 1 σ , Matto Grosso do Sul state, Corumba, IV - labelled *Tetanorhynchus propinquus* Brunner by BRUNNER).

Tetanorhynchus borero Rehn (fig. 201).

Rehn, 1957: 118.

Holotype σ , BRAZIL, Matto Grosso, Santa Rosa de Descalvados, 16-VII-31, (REHN) ANSP.

Tetanorhynchus calamus (Burmeister) comb. n. (figs. 194, 195, 202, 203, 206).

Cephalocoema calamus Burmeister, 1880-II.

Holotype σ , ARGENTINA, Chaco, MLP. Also - BRAZIL, 1 σ , Matto Grosso, 20 mls. S. of Sta. Rosa de Descalvados, 14-VIII-31 (REHN) (measured by REHN) (labelled paratype *T. borero* REHN) ANSP.

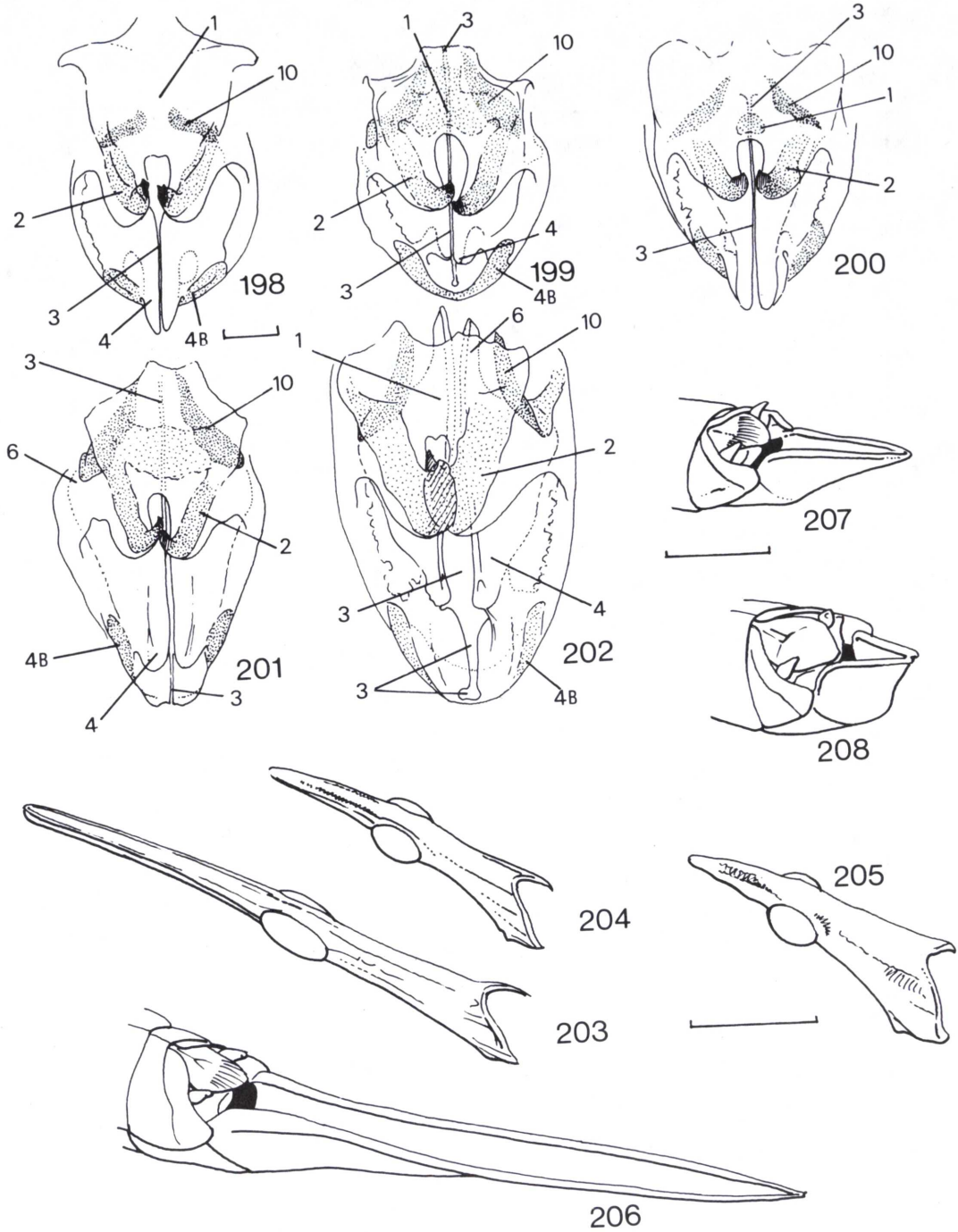
Tetanorhynchus leonardosi (Mello-Leitao), comb. nov. (figs. 196, 197).

Cephalocoema leonardosi Mello-Leitao, 1939: 311.

Holotype 1 σ , BRAZIL, Alto Araguae, 11044, (Goias, Matto Grosso), MNRJ. Also BRAZIL. 1 σ , paratype 11045 MNRJ.

Cephalocoema maculatissima, Mello-Leitao, 1939: 313.

Holotype σ , BRAZIL, 11038. No other data, MNRJ. Syn. n.



Figs. 198-208.—*Tetanorhynchus*: 198) *humilis* dorsal aspect; 199) *bihastatus* dorsal aspect; 200) *smithi* dorsal aspect; 201) *borero* dorsal aspect; 202) *calamus* dorsal aspect; 203-205) male head, oblique aspect left side: 203) *calamus*; 204) *bihastatus*; 205) *smithi*; 206-208) male abdominal apex, oblique aspect left side: 206) *calamus*; 207) *bihastatus*; 208) *smithi*. Scale line under fig. 198 represents 0.5 mm and refers to 199-202 also; that under 207 represents 2.0 mm and refers to 206, 208 also; that under 205 represents 5 mm and refers to 203, 204 also.

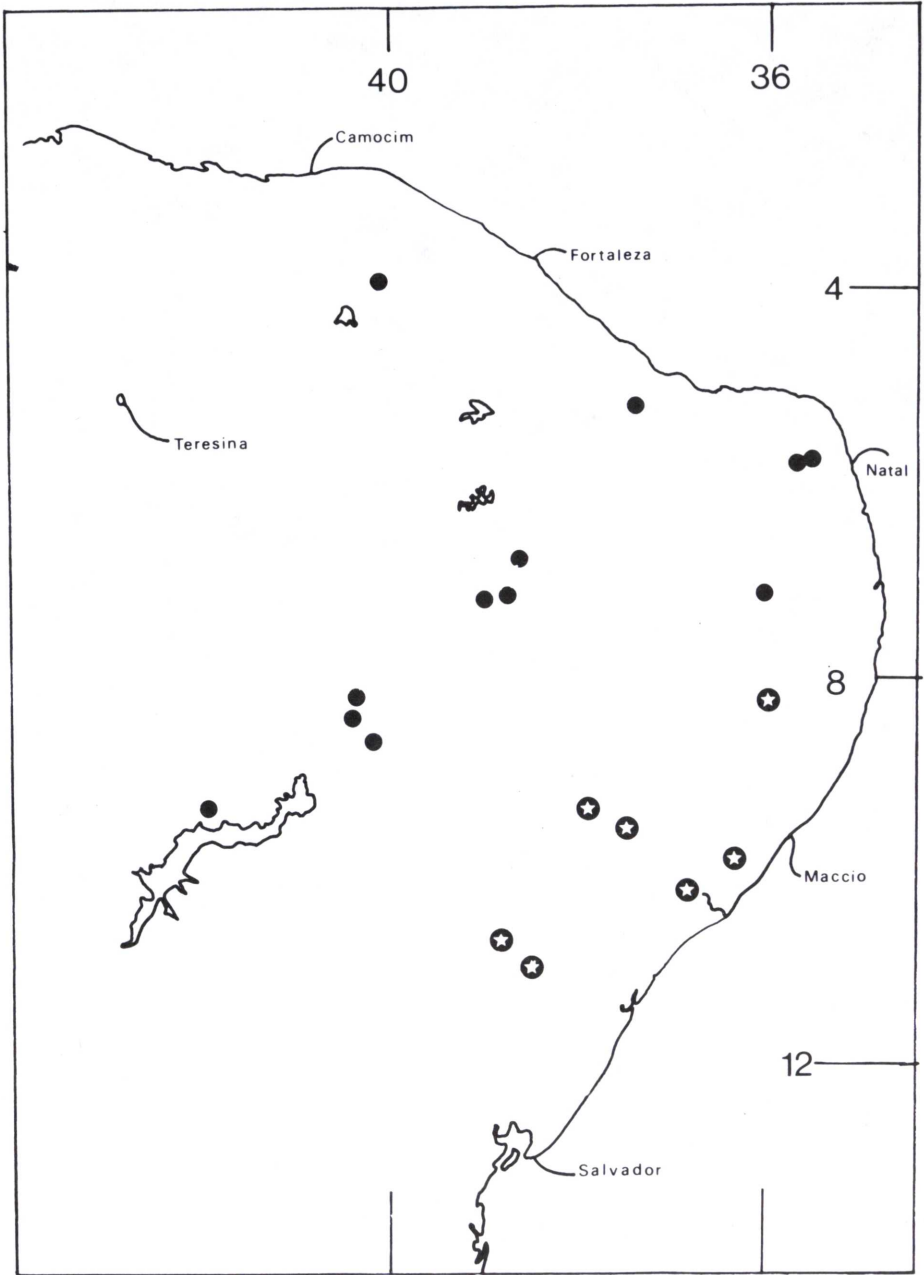


Fig. 209.—Distribution of the genus *Stiphra* in N.E. Brazil - ★ spot and star giraffe; ● solid spot robusta. Map shows areas between 36°-44° W longitude and 2°-14° S latitude.

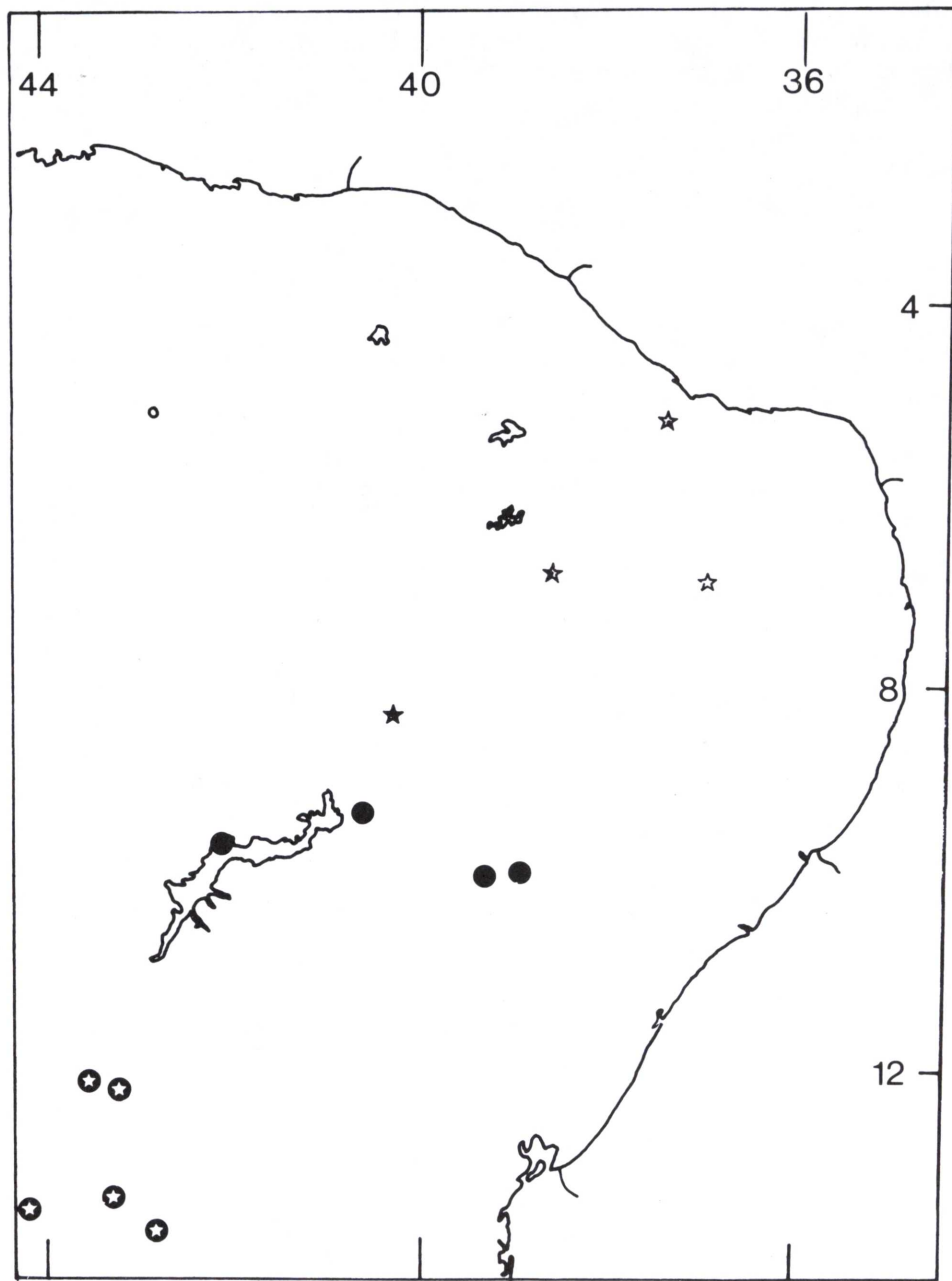


Fig. 210.—Distribution of the genus *Scleratoscopia* in N.E. Brazil (coordinates as for Fig. 209)
 - ★ *star silvai*; ● *solid spot protopeirae*; ★ *spot and star spinosa*.

Tetanorhynchus smithi Rehn (figs. 200, 205, 208).

REHN, 1904: 678.

BRAZIL. 1 ♂, Matto Grosso do Sul state, Corumba, IV, (labelled *T. smithi* REHN by BRUNNER) ANSP; 1 ♂, same locality, 16-IV-27 (Ms Longfield) (labelled *Cephalocoema borellii* (G.-T.) by MELLO-LEITAO) BMNH.

Also, but without genitalia, 1 ♂, PARAGUAY, Horqueta, 45 km. E. of Rio Paraguay, 57W 23N, 15-V-33 (SCHULZE) ANSP, (Labelled *T. bihastatus* REHN by REHN, 1957).

GENERA REMAINING UNSTUDIED

Bazylukia Liana

Bazylukia Liana, 1972: 386-388, figs. 14-21.

Type species: *Bazylukia sabanillensis* Liana, 1972 by monotypy and original designation.

REMARKS.—The type species for the genus was described from an unique female. It is a most unusual proscopiid, lacking any elongated rostrum, the head having the superficial appearance of a member of the Romaleidae, Phaeoparini. Wing rudiments are absent. The type locality is Ecuador, Sabanilla.

Photographs of the female holotype of *Apioscelis compacta* Brunner (NM, Vienna; type locality COLOMBIA, Bogota) taken by Dr. CARBONELL show that it matches the female BMNH material identified as this species. Study confirms CARBONELL'S view (pers. comm.) that LIANA (1972) misidentified the specimen she labelled *Astroma compacta* (Brunner). I agree with him also that *Bazylukia sabanillensis* and *A. compacta* are congeneric but unlikely to be conspecific. The greatly inflated proximal parts of the hind femora of *compacta* suggest an affinity with *Apioscelis bulbosa*.

Epsigrypa Mello-Leitao

MELLO-LEITAO, 1939: 301. Type species: *Epsigrypa chilenses* Mello-Leitao, 1939. 302 by monotypy and original designation.

REMARKS.—The holotype is lodged in the Museum of Santiago, Chile. The genus contains one described species, which only occurs in Chile.

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