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THE AMERICAN GENERA OF ASILIDAE (DIPTERA): KEYS FOR IDENTIFICATION WITH AN ATLAS OF FEMALE SPERMATHECAE AND OTHER MORPHOLOGICAL DETAILS. VIII. SUBFAMILY LAPHYSTIINAE G. H. HARDY, WITH DESCRIPTIONS OF FIVE NEW GENERA AND SPECIES AND A CATALOGUE OF THE NEOTROPICAL SPECIES

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ABSTRACT

A key for the identification of the 17 American genera of Laphystiinae G. H. Hardy, with illustrations of spermathecae and other morphological details, is given. The following new genera and species are described: Chrysotriclis (type-species, C. willinkorum, sp. n.; type-locality: Argentina, Misiones, Loreto); Cochleariocera (type-species, C. neusae, sp. n.; type-locality: Brazil, Goiás, Rio Araguaia, Lago Rico); Cymbipyga (for Apoxyria cymbafer Artigas, 1983, from Chile); Gymnotriclis (type-species, G. coscaronorum, sp. n.; type-locality: Venezuela, Santa Ana, Tacarigua); and Protometer (with two species: P. evae, sp. n., the type-species, type-locality: Brazil, Amazonas, Paraná da Eva; and P. bokermanni, sp. n., type-locality: Brazil, Mato Grosso, São Domingos). Asicya Lynch Arribálzaga, 1880, is revalidated. A catalogue of the neotropical species is added.

Keywords: America, Asilidae, *Chrysotriclis*, *Cochleariocera*, *Cymbipyga*, *Gymnotriclis*, *Protometer*, Taxonomy, Neotropic, Catalogue.

INTRODUCTION

This is the part VIII of a serie of papers intended as a preliminary effort to define the American genera of Asilidae, describing the new genera, preparatory to the elaboration of a catalogue of Neotropical species for inclusion in the forthcoming World Catalogue of Flies, now being prepared by the U.S. Department of Agriculture and U.S. National Museum of Natural History, Washington D.C.

Previous parts in this series (published and in press) are:

- Part I (Key to subfamilies, subfamily Leptogastrinae): Gayana, Zool. 52(1-2): 95-114, 1988;
- Part II (Dasypogoninae): Gayana, Zool. 52(3-4): 199-260, 1988;
- Part III (Trigonimiminae): Bol. Soc. Biol. Concepción, 60: 35-41, 1989;
- Part IV (Laphriinae, except Atomosiini): Bolm.

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- Mus. paraense E. Goeldi, Zool. 4(2): 211-255, 1988;
- Part V (Stichopogoninae): Bol. Soc. Biol. Concepción, 61: 39-47, 1990;
- Part VI (Laphriinae, Astomosiini): Gayana, Zool. 55(1): 53-87, 1991;
- Part VII.1 (Stenopogoninae, key to tribes): Gayana, Zool. 55(2): 139-144, 1991.
- Part VII.2 (Stenopogoninae, Tribes Acronychini, Bathypogonini and Ceraturgini): Gayana, Zool. 55(3): 247-255, 1991;
- Part VII.3 (Stenopogoninae, Tribes Dioctriini and Echthodopini): Gayana, Zool. 55(4): 261-266, 1992;
- Part VII.4 (Stenopogoninae, Tribe Enigmomorphini): Bol. Soc. Biol. Concepción 62: 27-53, 1992;
- Part VII.5 (Stenopogoninae, Tribe Tillobromini): Rev. chilena. Ent. 19: 17-27, 1992;
- Part VII.6 (Stenopogoninae, Tribes Phellini, Plesiommatini, Stenopogonini and Willistonini): Gayana, Zool. 57(2): 309-321, 1994;
- Part VII.7 (Stenopogoninae, Tribe Cyrtopogonini): Bol. Soc. Biol. Concepción 62: 55-81, 1992.

MATERIAL AND METHODS

The material used in this series belongs mainly to the Museu de Zoologia da Universidade de São Paulo, Brazil (MZUSP) and to the Departamento de Zoología, Universidad de Concepción, Chile (UCCC).

The methodology employed in the dissection and preservation of the male terminalia, female spermathecae and other morphological parts is the same employed by Artigas (1971). All scales in the figures are in millimeters.

List of abbreviations:

- AMNH - American Museum of Natural History, New York
- BMNH - British Museum (Natural History), London
- CAS - California Academy of Sciences, San Francisco
- COR - Cornell University, Ithaca, N.Y.
- IML - Instituto Miguel Lillo, Universidad Nacional de Tucumán, S.M. de Tucumán
- MACN - Museo Argentino de Ciencias Naturales,

- Buenos Aires
- MUN - Zoologischen Sammlungen des Bayerischen Staates, Munich
- MZUSP - Museu de Zoologia, Universidade de São Paulo, São Paulo
- UCCC - Colecciones Científicas, Universidad de Concepción
- UK - University of Kansas, Lawrence
- USNM - United States National Museum of Natural History, Washington, D.C.
- WIEN - Naturhistorisches Museum, Zoologische Sammlungen, Vienna.

RESULTS

Subfamily Laphystiinae G.H. Hardy

Key to the American genera:

1. Dorsocentral bristles extending to anterior slope of mesonotum and always visible, even if hair-like (except in *Hexameritia* Speiser, where they cannot be discerned, due to exceptionally dense mesonotal pilosity; *Hexameritia* may be recognized by the exceptionally wide face (Fig. 3)). Scutellar margin with 6 or more (sometimes very numerous) long (twice or more length of scutellum) and slender hairs2
- Dorsocentral bristles, if present, restricted to post-sutural area of mesonotum. Scutellar margin with 4-5 pairs of bristles (Fig. 47), 2-4 strong bristles (Figs. 37-41), bare (Figs. 42-45), or with hairs which sometimes are very numerous and shorter than length of scutellum (Figs. 46, 48)5
- 2(1). Abdomen with numerous lateral bristles on tergites 1 and 2; tergite 3 and sometimes 4-5 with 1 or 2 bristles. Wing with cell r_5 closed, usually petiolate. Costa complete, or greatly reduced in width or absent beyond wing apex. Lower 55% to 70% of face gibbose and covered with slender bristles subequal in length to antennae, flat part with short hairs (Figs. 1-2). Ocellar tubercle with 2-4 bristles (Figs. 1-2). Antenna with 3 or 2 flagellomeres; scape

subequal to 1.5 times length of pedicel; first flagellomere 3/4 as long as scape and pedicel together, slightly to strongly swollen just beyond middle. Scutellum with 10-20 long marginal bristles (Fig. 33). Anatergite with about 20 long, slender bristles. Apical hind tarsomere with a weak spur on ventral surface. Male terminalia (cf. Fisher, 1977: figs. 33, 36, 37): hypandrium present, fused to basistyli, bilobed, the lobes divergent to contiguous; aedeagus with only one tube; epandrium longer than wide. Female spermathecae as in Figs. 51-52. All species sexually dimorphic, females have a wider face, longer wings and wider abdomen, generally more extensively tomentose dorsally; tibiae arcuate in males, straight in females. (Nearctic, extending to Baja California and northwesternmost Mexico) *Zabrops* Hull, 1957

At most tergite 1 with lateral bristles. Wing with cell r₅ open. Apical hind tarsomere without spur on ventral surface. Other combinations of characters3

3(2). Head exceptionally wide, 2 times its own height, and face wide (1/3 head width; Fig. 3). Face prominent, longest ventrally, of reduced height, strongly rounded (Fig. 4). Face, front and occiput with dense, fine pile. Abdomen broad, flattened, the margin densely fine pilose. Dense, rather woolly pilose flies (especially head, thorax and lateral margins of abdomen). Male terminalia (Figs. 53-56): hypandrium present, but reduced; epandrium very short basally, with two extremely long lateral prolongations; basistylus with stiff, long, apical bristles; aedeagus with a single tube. Spermathecae with a common duct (cf. Artigas, 1971: fig. 26). (Chile)..... *Hexameritia* Speiser, 1920

Head never as above and face narrower (Figs. 5-6, 7-8). Rather bare flies. Epandrium never as above. Spermathecae with ducts fused basally, but not forming a single duct (Figs. 63, 70)4

4(3). Normally only 6 bristly long hairs on scutellar margin (Fig. 35). Mesonotum and abdomen with short, appressed pile. First two pairs of femora normal, hind pair only slightly thickened; hind tibia moderately thickened; neither posterior femur nor tibia arcuate. Ocellar tubercle with a pair of slender, long, divergent bristles between ocelli (Fig. 6). Male terminalia (Figs. 57-61): hypandrium present, elongate and slender, with two prolongations at apex, these prolongations showing short spines. Spermathecae as in Figs. 62-63. (Brazil: Santa Catarina) *Helolaphyctis* Hermann, 1920

Several bristly long hairs on scutellar margin (Fig. 36). Mesonotum with fine, long, bristly, erect pile. Hind femur arched and thickened. Ocellar tubercle without strong bristles. Male terminalia as in Figs. 64-68: hypandrium short, grossly horseshoe-shaped. Spermathecae as in Figs. 69-70. (Brazil: Goiás to Santa Catarina)..... *Apoxyria* Schiner, 1866

5(1). Antenna with 3 flagellomeres (Fig. 10)6

Antenna with 1 or 2 flagellomeres7

6(5). Face below antennae 1/4 head width and divergent below (Fig. 9); in lateral view nearly plane with eye, except to lower 1/3 which, while relatively short, is gently rounded and gibbose, with a few bristles and hairs (Fig. 10). Scape about four times as long as the short, beadlike pedicel; flagellum slender, longer than combined length to scape and pedicel, second flagellomere quite short, third longer, wider, blunt, cup-shaped, with enclosed spine (Fig. 37). Abdominal tergites 1-6 with lateral bristles. Wing with Costa continuing all around wing and cells r₁ and r₅ widely open. Male terminalia (Figs. 71-74) with epandrium longer than wide, bearing laterally long, thin, transparent, centrally convex, uneven, posteriorly rounded wing-like processes, leaving a deep recess which is notched; hypandrium present, short, semicircular; aedeagus with

- only one tube. (Brazil (Mato Grosso) to Argentina (Salta, Jujuy)).....
*Laphygmolestes* Hull, 1962
- Face wide, at antennae subequal to one and one-fourth times width of an eye, evenly produced from oral margin to antennae, the gibbosity covered with pile, which is longest and densest at oral margin, where these usually are some slender bristles. Scape subequal to 1.5 times length of pedicel; first flagellomere subequal to one and one third times the combined length of scape and pedicel; third flagellomere much longer than the second, with an oblique excavation bearing a small spine. Dorsocentral bristles absent. Scutellum with marginal bristles or hairs, length and number of these variable. Wing with Costa extending only to apex of cell cup, absent beyond, or, rarely, ending at wing apex; cell r_1 narrowly closed to narrowly open; cell r_5 generally open, but closed and petiolate in several species. Tergites 1-6 with lateral bristles. Male terminalia (cf. Fisher, 1977: figs. 5, 8, 9): hypandrium absent; epandrium wider than long, aedeagus with a single tube. (Predominantly Holarctic, a few species in the Oriental and Afrotropical regions).....*Laphystia* Loew, 1847
- 7(5). Face extremely narrow, at level of antennae about 1/5 head width (Figs. 12, 13). Antenna with only 1 flagellomere. All wing cells open. Scutellar margin with 2-4 strong bristles (Figs. 38,39). Ventral surface of apical hind tarsomere with a weak spur 8
- Face wider, 1/4 to 1/3 head width (Figs. 15, 17, 19, 21, 23, 26, 27, 29, 31). Antenna with 1 or 2 flagellomeres. Cells r_1 and r_5 open or closed. Scutellum with marginal bristles, short hairs (which may be very numerous) or bare (Figs. 40-48). Ventral surface of apical hind tarsomere with or without a spur9
- 8(7). Posterior dorsocentral bristles present. Abdomen only with tergites 1-3 with lateral bristles. Male terminalia with hypandrium present and aedeagus with a single tube (Figs. 75-78). Spermathecae as in Figs. 79-80. (Chile).....
*Cymbipyga*, gen. n.
- Dorsocentral bristles absent. All abdominal tergites with lateral bristles. Hypandrium absent (or fused with bases of gonopods?), aedeagus with three clearly visible apical tubes (Figs. 81-85). Spermathecae as in Figs. 86-87. (Nearctic, Neotropical, but not in Chile).....
*Psilocurus* Loew, 1874
- 9(7). Cell r_5 open.....10
- Cell r_5 closed and petiolate13
- 10(9). Scutellar margin with 2 strong bristles (Figs. 40-41). Antenna with 2 flagellomeres. Cell r_1 open or closed. Only one pair (normally weak) of posterior dorsocentrals. Ventral surface of apical hind tarsomere with a strong spur, plus 2 to 20 spines.....11
- Scutellar margin bare (Figs. 42-43). Antenna with 1 or 2 flagemeres. Cell r_1 closed. Posterior pair of dorsocentrals present or absent. Ventral surface of apical hind tarsomere with or without a spur, with or without spines12
- 11(10). Pulvilli absent (Fig. 50A). Ventral surface of apical hind tarsomere with a spur and 16-20 spines in two more or less parallel rows of 8-10 (Fig. 50A). Cell r_1 open. Male terminalia (Figs. 88-91): hypandrium subtriangular, apex very slender and acuminate; basistyli almost ovoid, relatively short, with typical curved, apically bifid dististyli; aedeagus a single tube; epandrium large, ovoid. Female spermathecae with a common duct (Figs. 92-93). (Peru, Brazil).....
*Macahyba* Carrera, 1947
- Pulvilli present. Ventral surface of apical hind tarsomere without spur, only 2-4 spines present. Cell r_1 closed. Male terminalia

- (Figs. 94-97): hypandrium triangular, wider than high, the apex not produced; basistyli much longer than above, dististyli simple, short; epandrium subtrapezoidal. Female spermathecae with a common duct (Figs. 98-99). (Peru, Bolivia).....
..... *Martinia* Hull, 1962
- 12(10). Antenna with only 1 flagellomere, apically flattened, spatulate, with a shallow concavity bearing a spine (Fig. 20). Three or more pairs of post-sutural dorsocentral bristles. Ventral surface of apical hind tarsomere only with 2 spines; no spur present. Male terminalia (Figs. 100-103): hypandrium almost an equilateral triangle; basistyli short, subtriangular, with elongate, simple, curved dististyli; aedeagus a single tube; epandrium almost ovoid, with concave apex. Female spermathecae with a common duct (Figs. 104-105). (Brazil: Goiás)
..... *Cochleariocera*, gen. n.
- Antenna with 2 flagellomeres (Fig. 22). Dorsocentral bristles absent. Ventral surface of apical hind tarsomere with 2-3 spines, plus a definite spur. Male terminalia (Figs. 106-110): hypandrium with wide base and narrow, tongue-like apex; aedeagus a single tube; epandrium similar to an ant's head. Female spermathecae with a common duct; spermathecal capsules elongate, curled, thick (Figs. 111-112). (Brazil: Amazonas, Mato Grosso; Colombia).....
..... *Protometer*, gen. n.
- 13(9). Cell r_1 open. Ventral surface of apical hind tarsomere without spur and without small spines. Basistyli without an apical row of stiff bristles or short spines (Fig. 113).....14
- Cell r_1 closed. Ventral surface of apical hind tarsomere with a definite spur, with or without small spines in addition to spur. Basistyli apically with a row of stiff bristles or short spines (Figs. 121, 130, 133).....15
- 14(13). Hind femur exceptionally stout and enlarged, bearing strong tuberculate spines ventrally (Fig. 49). Relatively large, robust flies, with dense, flat, appressed, glittering, matted, conspicuous abdominal pile. Abdomen usually robust and short oval, tergites 1-2 only with lateral bristles. Male terminalia (Figs. 113-116): hypandrium almost heart-shaped; basistylus with apical prolongation, dististylus elongate; aedeagus a single tube; epandrium with characteristic 'U'-shape. Female spermathecae with common duct (Figs. 117-118). (Colombia to Argentina, but not in Chile) *Triclioscelis* Roeder, 1900
- Femur of normal width. Pile moderately abundant and shorter. Mystax with a row of strong bristles on oral margin and dense, recumbent, squamose hairs above (Figs. 25-26). Only tergite 1 with lateral bristles. Pronotum with strong dorsal and posterolateral bristles. Female spermathecae as in Figs. 119-120 (with a common duct). (Holarctic)..... *Perasis* Hermann, 1905
- 15(13). Scutellar margin with bristles (Fig. 46). Pulvilli absent (Fig. 50B). Ventral surface of apical hind tarsomere with 9 small spines in addition to spur, forming a triangle (Fig. 50B). Male terminalia as in Figs. 121-124). Female spermathecae (Figs. 125-126) with a common duct. (Argentina).....
..... *Asicya* Lynch Arribalzaga, 1880
- Scutellar margin bare, or margin with dense, short, upturned pile (Figs. 47-48). Pulvilli present. Ventral surface of apical hind tarsomere without small spines in addition to spur16
- 16(15). Mystax restricted to lower face (Figs. 29-30). Relatively large (13.5 mm), blackish, almost bare flies. Mesonotal and scutellar discs covered with spinules (Fig. 47). Male terminalia very peculiar (Figs. 127-130). Female spermathecae (Figs. 131-132) with a common duct; capsules forming an extremely coiled spire (Venezuela) *Gymnotriclis*, gen. n.
- Mystax dense, occupying entire face (Figs.

31-32). Short, broad, yellowish, densely pilose flies. Scutellum covered with dense, silky, recumbent yellow hairs (Fig. 48). Male terminalia as in Figs. 133-136. Female spermathecae (Figs. 137-138) with a common duct; capsule with many coils. (Argentina) *Chrysotriclis*, gen. n.

Genus *Apoxyria* Schiner

Apoxyria Schiner, 1866: 674. Type-species, *apicata* Schiner (orig. des.).

americana Carrera, 1955: 109, figs. 3-6. Type-locality: Brazil, Goiás, Corumbá (Now Corumbá de Goiás, D.F.), Fazenda Monjolinho. HT: MZUSP.

apicata Schiner, 1866: 682. Type-locality: not stated (Brazil, São Paulo, Ipanema, in HT label). HT: WIEN.

Genus *Asicya* Lynch Arribálzaga

Asicya Lynch Arribálzaga, 1880: 224. Type-species, *fasciata* Lynch Arribálzaga (mon.).

fasciata Lynch Arribálzaga, 1880: 227. Type-locality: Argentina, Buenos Aires, Baradero. HT: MACN (in very poor condition).

Genus *Chrysotriclis*, gen. n.

Head, lateral view (Fig. 32). Eye of approximately same width above and below. Occiput not produced, with strong bristles on upper margin. Face gradually produced from base of antennae to oral margin. Mystax occupying entire face, composed of strong bristles below, which reach apex of proboscis, and abundant hairs in the rest of the face. Proboscis long, slightly dorsoventrally flattened, with blunt apex, without a dorsal keel. Palpus short, second segment cylindrical, with scattered, long, fine pile. Scape nearly cylindrical, with long and thick hairs on ventral and lateral surface; pedicel shorter than scape, with medium-sized hairs on dorsal and lateral surfaces, more abundant on ventral surface;

flagellum as long as two preceding antennal segments, narrow at base, broader on middle and gradually attenuated towards apex, the latter with an ovoid concavity bearing a very short, conical spine at its center.

Head, frontal view (Fig. 31). Face slightly narrower than width of an eye, and narrowing slightly towards oral margin. Frons divergent. Ocellar tubercle prominent, with scattered, long, bristle-like hairs.

Thorax. Mesonotum subquadrate. 3-4 notopleurals, 3 supraalars, 1-3 postcallars, one of them, at least, strong. Scutellar margin with fine long hairs and no bristles (Fig. 48). No bristles on mesonotal disc, except for those mentioned before. Pronotum with long, bristly hairs. Mesonotal vestiture dense, consisting of fine, more or less long, semierect hairs. Scutellar disc similar in vestiture to mesonotum. Pleura with scattered long, fine hairs, longer and denser on anepisternum; katatergite with a tuft of long, bristly hairs. Anatergite bare.

Wing. Costa complete. Cells r_1 , r_5 and cup closed and petiolate.

Legs strong, fore and middle pairs with thick femora and strong tibiae, femora about 1/3 thicker than tibiae; hind pair larger than the preceding, femora 1/3 thicker than tibiae, tibiae arcuate. Claws curved. Pulvilli not reaching tip of claws. Empodium 4/5 length to pulvilli. All legs covered with fine hairs; bristles mostly located on tarsi, a few on the tibiae, none on the femora.

Abdomen as wide as thorax, covered with more or less long, fine, reclinate hairs; no bristles on abdominal tergites, except for a group of long bristles on sides of tergite 1.

Male terminalia as in Figs. 133-135.

Position of spermathecae in the female's abdomen as shown in Fig. 137; spermathecae as in Fig. 138.

Type-species, *Chrysotriclis willinkorum*, sp. n.

Chrysotriclis willinkorum, sp. n.

Body length: 9.5 mm; wing length: 8.2 mm.

Male: Head black; frons and face with yellow-grey micropubescence, except for the ocelli, which are shining black. All hairs and bristles light-golden. Scape and pedicel light-brown, apex of pedicel lighter; flagellum reddish-brown; antennal

hairs withish. Hairs and bristles on occiput light-golden. Hairs of postocular area light-golden. Beard. hairs of proboscis and palpus also light-golden.

Thorax. Disc of mesonotum light-brown in ground color, with three longitudinal black stripes: a central one, extending and tapering from anterior slope to near base of scutellum, longitudinally divided on its anterior half by a narrow stripe of greyish pruinosity; and two lateral stripes occupying more or less the posterior 2/3 of the disc, undivided at the transverse suture. The central and the lateral black stripes are more or less separated by greyish pollinosity, and more or less coalesce on the posterior part of the disc, depending on the angle of observation. Lateral margins of the disc and its posterior slope also covered with grey pollinosity. Postalar callus brownish-red. All hairs and bristles golden-yellow. Disc of scutellum black, margin broadly reddish-brown; hairs golden-yellow. Postnotum covered with whitish pruinosity, hairs golden-yellow. Pleura almost completely covered with greyish pruinosity, hairs dark yellow; hairs of propleura, anepisternum and katatergite yellowish. Coxae covered with identical pruinosity; hairs like those of pleura. Legs light yellowish-brown, apical tarsal segment black. On the basal third of the dorsal surface of the front tibia there exists a faint triangular spot, dark in color. Hairs of legs light-golden, bristles light reddish-brown. Claws black, reddish at base.

Wing brownish.

Abdomen with mottled reddish and black areas, vestiture light-yellow to light-golden, bristles on sides of tergite 1 yellowish. Male terminalia as in Figs. 134-136.

Female: Similar to the male, but mesonotum slightly more reddish in ground color; hairs of face and mystax of lighter hue. Position of spermathecae in the female's abdomen as in Fig. 131 and spermathecae as in Fig. 132.

Holotype male Argentina, Misiones: Loreto, ix.1955 (Dirings) (MZUSP). Paratypes: 1 female, Argentina, Formosa: Gran Guardia, i-ii.1953 (J. Foerster) (IML; spermathecae in prepare); 1 female, Paraguay, Itapúa: Vega, xii-1954 (Dirings) (MZUSP).

The beautiful golden species is dedicated to our dear friends Prof. and Mrs. Abraham Willink.

Genus *Cochleariocera*, gen. n.

Head, lateral view (fig. 19). Eyes large, wider on upper part, narrowing below. Occiput moderately prominent, with strong bristles on upper margin. Face rounded, slightly produced at oral margin. Mystax slender, as long as proboscis, with abundant bristles restricted to oral margin; decumbent fine hairs present from oral margin to base of antennae. Proboscis about as long as oral cup, slender, apex acute. Palpus long and slender, second segment constricted on basal 1/3, dilated in the middle and then slender again, almost cylindrical on apical 1/3. Antenna: scape cylindrical, apical perimeter produced, so the pedicel emerges from its interior; scape with a small, blunt, spiniform expansion on its dorsal margin and a strong bristle, surrounded by shorter bristles and fine hairs, on its ventral surface; pedicel conical, arising, as already said, from the interior of the scape, with fine hairs on the dorsal and ventral surfaces; flagellum long, spindle-shaped, nearly twice the length of two basal segments of antenna combined, apex characteristically flattened and spatulate with a shallow concavity bearing a minute spine; this spoon-shaped apex of the flagellum (after which the generic name was created) is a unique feature among the Laphystiinae.

Head, frontal view (Fig. 20). Face at level of antennae approximately 3/4 width of an eye, slightly narrower at oral margin, deeply tomentose. Frons divergent, tomentose (but not so heavily as face). Ocellar tubercle slightly prominent, covered with short, fine hairs, but without bristles.

Mesonotum with 2-3 notopleurals, 2 supraalars, 2 bristles on posterior callus, 3 posterior dorsocentrals. Scutellum devoid of bristles, only with sparse, fine hairs (Fig. 42). Mesonotal disc with appressed, short pile. Postpronotum with long, fine hairs only. Pleura with fine long hairs; katatergite with a tuft of long, fine hairs. Postnotum short, anatergite bare. Posterior surface of postalar calli flat and vertical.

Wing. Cell r_1 closed with a short petiole.

Legs slender, with long bristles, especially on tibiae. All legs covered by dense, fine pile, mainly on ventral surface of posterior femora of males. Pulvilli well-developed, as long as claws.

Abdomen almost as wide as thorax, tapering towards apex, with fine pilosity, longer on sides of

tergites. Tergites 1-6 sgenerally with 3-4 strong bristles on each side.

Male terminalia as shown in Figs. 100-102.

Situation of spermathecae in the female's abdomen and spermathecal structure as in Figs. 104-105.

Type-species, *Cochleariocera neusae*, sp. n.

***Cochleariocera neusae*, sp. n.**

Body length: 11 mm; wing length: 8 mm

Male: Frons dull black in ground color, covered with more or less dense greyish-white micropubescence, except over ocelli, which are bright dark-brown. Face densely covered with shiny, silky-white micropilosity. Hairs on frons, face, mystax, beard, occiput, palpi, antennae and proboscis white. Palpi and proboscis shining black with white hairs. Occiput dark-brown, with white micropubescence only on lower half; upper half ochre, with strong yellowish-brown bristles. Scape and pedicel black, with white micropubescence; flagellum black at base, orange in remainder, apical concavity black.

Disc of mesonotum black, with appressed, golden-brown hairs, except for a roughly triangular area behind postpronotum which is deep black, with a central dot of brownish-gold tomentum. There exist some more or less distinct stripes on the mesonotal disc, as follows: a longitudinal middle stripe, narrow, of light-brown tomentum, which extends from the anterior margin to slightly beyond level of transverse suture; then, at each side of the latter, a black stripe (due to absence of tomentum), from the anterior margin to the posterior dorsocentrals; a narrow reddish-golden stripe over the transverse suture. Lateral margins of mesonotal disc with grey pruinosity. All bristles orange-red. Posterior slope of mesonotum flattened, formed a notorious declivity, more or less devoid of pollen. Pleura grey-tomentose, with more or less defined black areas, especially on lower surface of anepisternum. Hairs on pleura long and yellowish-white. Scutellum shining-black, with thick golden pile on margin and long, yellowish-white hairs on disc. Postnotum with silvery-grey tomentum.

Wing slightly tinged with yellow. Sc and R entirely, and remaining veins only at base, reddish-

yellow, brownish at remainder. Squamae and halteres yellow.

Legs. Coxae black, covered by dense, dull, greyish micropubescence. Femora black, orange yellow on apical border, with fine white hairs. Front and middle tibiae with a small orange area at base, the rest black; posterior tibia with the basal 4/5, mainly at external surface, orange. apex black. Tarsi black. Claws black, dark-brown at base. Pulvilli reddish-yellow.

Abdomen black, posterior margin of tergites with a broad band of grey pruinosity; hairs and bristles white; where pruinosity is missing on posterior border of tergites, a reddish narrow band can be seen, especially on segment 6. Venter black, with sparse grey micropubescence and white hairs.

Male terminalia black (Figs. 101-102); aedeagus as in Fig. 103.

Female: More orange in color than male. Micropubescence and tomentum, mystax and legs golden-orange, in occiput, frons and face mostly golden. Thorax darker, pleura golden or golden-brown. Legs entirely orange, hairs and bristles concolorous; coxae black with golden pruinosity. Abdomen more orange, bands of pruinosity broader, sometimes covering most of the surface of tergites.

Holotype male, Brazil, Goiás: Lago Rico, Rio Araguaia, ix. 1952 (F. Lane) (MZUSP). Paratypes: 7 males and 6 females, same data as holotype, plus 1 female, Brazil, Goiás: Corumbá, Fazenda Monjolinho (now Corumbá de Goiás, D. F.). Paratypes in MZUSP, except for 3 specimens from Rio Araguaia, in the MZUC.

This species is dedicated to Mrs. Neusa F. A. da Costa.

Genus *Cymbipyga*, gen. n.

Small, relatively bare flies.

Head, lateral view (cf. Artigas, 1983: fig. 4). Eyes large, wider on upper part, attenuated below. Occiput strongly sunken, with strong bristles on upper margin. Face roundly produced on basal half. Mystax composed of strong erect bristles scattered all over facial gibbosity. Laterofrontal bristles equidistant, in the number of 5, about half the length

of the upper bristles of mystax. Ocellar tubercle small, rounded, with vertical borders. Proboscis short, cylindrical, with a dorsal keel, the tip blunt, slightly surpassing facial gibbosity. Palpus with cylindrical second segment, reaching half length of proboscis. Scape strongly attenuated at tip, with 1 long and strong bristles and short bristle-like hairs on ventral surface and 3 stout bristles dorsally; pedicel shorter and thicker than scape, almost subcylindrical, with short and strong bristles on dorsal and ventral surfaces; flagellum fusiform, as long as the preceding two antennal segments, with an apical concavity with a short central spine.

Head, frontal view (cf. Artigas, 1983: fig. 3). Frons divergent, wider than face, with curved borders, covered with pruinosity. No hairs or bristles on ocellar tubercle. Face narrow, covered by short, dense micropubescence, a few long hairs between antennae and mystax. Postocular area, proboscis and palpi with dense hairs of similar length.

Thorax. Mesonotum subquadrate. 1 notopleural, 1 supraalar, 1 bristle on posterior callus, 5 weak and short dorsocentrals. Mesonotal disc covered by short, appressed, fine hair. Pronotum shining, with fine bristles. Central part of scutellar disc with pruinosity, the rest shining; 4 strong, long, erect, equidistant bristles on scutellar margin. Pleura shining, covered by short micropubescence in well-defined areas: a few hairs, mainly on the anepisternum and katatergite. Anatergite bare.

Wing hyaline, cell r_5 open.

Legs long and slender, posterior femora longer, all tibiae straight. Claws gently curved. Empodium and pulvilli of equal length, not reaching claws' tip. Vestiture of legs with fine, short, scattered, appressed hairs; bristles mainly on tibiae and tarsi.

Abdomen of same width of thorax, with short, scattered and appressed fine hair; 4 bristles on sides of tergite 1, 2 of them longer and blade-like.

Male terminalia as shown in Figs. 75-78.

Female similar to the male, with a crown of equidistant, strong and long bristles on tergite 9. Situation of the spermathecae in the female's abdomen and spermathecal structure as shown in Figs. 79 and 80.

Type-species, *Apoxyria cymbafera* Artigas, 1983.

Cymbipyga cymbafera (Artigas, 1983), comb. n.

Apoxyria cymbafera Artigas, 1983: 27-33. Type-locality: Chile, Santiago, Colina, El Portezuelo. HT: UCCC.

Genus *Gymnotriclis*, gen. n.

Medium-sized, relatively bare flies.

Head, lateral view (Fig. 30). Eyes large. Occiput concave, with strong bristles on upper margin. Postocular area with strong and long bristles. Face evenly rounded, almost flat, slightly produced at oral margin. Mystax composed of strong bristles and hairs, restricted to oral border. Fine, scattered hairs from oral border to base of antennae. Proboscis long, acute, extending well beyond oral border, more or less flattened dorsoventrally, triangular in section, tip strongly depressed. Palpi short, cylindrical, attenuated at both ends, with strong bristles, longer on ventral side. Scape subcylindrical, with strong bristles. Pedicel conical towards the base, apex rounded, as long as scape, with a few bristles on dorsal and ventral surfaces. Flagellum spindle-shaped, slightly longer than scape and pedicel together, its second segment diminute, with a minute spine.

Head, frontal view (Fig. 29). Face 2/3 on an eye's width, borders subparallel. Frons almost of same width as face, borders approximately parallel. Strong fronto-orbital bristles. Ocellar tubercle subconical, ocellar bristles present.

Thorax. Pronotum with strong, long bristles. Mesonotum subquadrate, vestiture consisting of short, appressed, bristly hairs, 2 notopleurals, 4 supraalars, 2 postcallars. Scutellum with abundant spinules on disc, and no marginal scutellar bristles (Fig. 47). Anatergite bare. A tuft of strong bristles on katatergite.

Wing. Cell r_1 closed, with a short petiole. Cell r_5 closed and petiolate.

Legs long and slender, femora more or less thickened, with very fine, short hairs; bristles short and feeble. Claws curved. Pulvilli shorter than claw. Empodium shorter than pulvilli.

Abdomen as wide as mesonotum, covered by fine, short hairs similar to those on posterior femora; bristles only on sides of tergite 1.

Male terminalia as in Figs. 127-130, with a row of short spines on posterior border of gonopods.

Female similar to male. Situation of the spermathecae in the female's abdomen and spermathecal structure as in Figs. 131 and 132.

Type-species, *Gymnotriclis coscaronorum*, sp. n.

***Gymnotriclis coscaronorum*, sp. n.**

Body length: 13,5 mm; wing length: 9,5 mm.

Male: Frons shining black, fronto-orbital bristles black. Ocellar tubercle black, ocelli reddish-brown, ocellar bristles short and black. Face covered by golden pruinosity, except on center, where there is a large, conspicuous triangular area, devoid of pruinosity and shining black. Bristles of mystax golden-yellow. Scape shining dark-brown, bristles black. Pedicel dull-brown, bristles black. First flagellomere dull reddish-brown, darker on apical half. Proboscis shining black, hairs at base white, yellow at apex. Hairs of lower part of postocular area white. Palpi reddish-brown, first segment with white hairs; bristles of second segment black.

Thorax. Pronotum shining black, with white bristles. Mesonotum black, vestiture composed of short, decumbent, black hairs; lateral margins, behind postpronotum, the mesonotal disc is covered by dull silvery pruinosity and bears a few yellow hairs. Notopleurals, supraalars and postcallars black. Pleura, except for small, well-defined areas, covered by dull silvery pruinosity; very fine and long white hairs spread all over the pleura; bristles on katatergite white.

Legs. Coxal vestiture as in anepisternum. Femora, tibiae and tarsi dark brown, upper surface of femora darker. A few short, black bristles near apex of dorsal surface of femora. Remainder of legs' bristles short and black. Claws black. Pulvilli whitish. Empodium light-brown.

Wing brownish, with brown veins.

Abdomen shining black, with triangular spots of dull silvery pruinosity on sides of tergites and with a line of similar pruinosity on posterior margin of tergites 4 and following. Vestiture of

tergites consisting of short, fine, whitish-yellow hairs. Bristles at sides of tergite 1 whitish.

Male terminalia as in Figs. 127-130.

Female: Similar to male, but legs more reddish, mainly the tibiae.

Position of the spermathecae in the female's abdomen and spermathecal structure as in Figs. 131 and 132.

Holotype male, N.E. Venezuela: Sta. Ana, Tacarigua, i.i.1950 (no collector) (MZUSP). Paratypes: Venezuela, Carabobo: Mariara, 20.vii.1948 (no collector), 1 male, 2 females; N.E. Venezuela, Salamanca, 29.viii.1953 (no collector), 1 female; do., 29.xii.1956 (no collector), 1 female; do., 19.viii.1956 (no collector), 1 male; PANAMA, Canal Zone: Madden Forest Preservem. 8.ix.1958 (W.J. Hanson), 1 female (all in MZUSP, except for 1 male from Venezuela, Mariara, and 1 female from Venezuela, Salamanca, in UCCC).

This species is dedicated to our good friends Prof. and Mrs. Sixto Coscarón.

Genus *Helolaphyctis* Hermann

Helolaphyctis Hermann, 1920: 193. Type-species, *modesta* (orig. des.).

chrysorhea Hull, 1958a: 97. Type-locality: Brazil, Santa Catarina, Nova Teutonia. HT: BMNH.
modesta Hermann. Nomen nudum.

nitida Hull, 1958b: 162. Type-locality: Brazil, Santa Catarina, Nova Teutonia. HT: BMNH.

Genus *Hexameritia* Speiser

Eutrichodes Hermann, 1920: 190 (preocc. Warren, 1891). Type-species, *Dasyopogon micans* Philippi (orig. des.).

Hexameritia Speiser, 1920: 447 (nom. nov. for *Eutrichodes* Hermann). Type-species, *Dasyopogon micans* Philippi (aut.).

micans (Philippi), 1865: 690, fig. (*Dasyopogon*). Type-locality: Chile, Santiago. HT lost. NT: UCCC.

splendens Philippi, 1865: 690 (*Dasyopogon*).

Type-locality: Chille, Illapel. HT lost.
tricolor Schiner, 1868: 162 (*Triclis*). Type-
 locality: Chile. HT: WIEN.

Genus *Laphymolestes* Hull

Laphymolestes Hull, 1962: 76. Type-species,
flavipes Hull (orig. des.).

flavipes Hull, 1962: 78. Type-locality: Brazil, Mato
 Grosso do Sul, Corumbá. HT: COR.

Genus *Laphystia* Loew

Laphystia Loew, 1847: 538. Type-species, *sabulicola*
 Loew (mon.).

Laphyctis Loew, 1858: 338. Type-species,
Stichopogon gigantellus Loew (mon.).

opaca Coquillet, 1904: 180. Type-locality: USA,
 Texas. HT: USNM.

apaca Hermann, 1908: 158, misspell.

sonora Wilcox, 1960: 343, fig. 1. Type-locality:
 Mexico, Sonora, La Cholla. HT: Martin Coll.

Genus *Macahyba* Carrera

Macahyba Carrera, 1947: 203. Type-species, *nor-*
destina Carrera (orig. des.).

nordestina Carrera, 1947: 205, figs. 1-8. Type-
 locality: Brazil, Ceará, Icó. HT: MZUSP.

?*schnusei* (Hermann), 1908: 159, figs. 5-6, pl. 4,
 fig. 2 (*Laphystia*). Type-locality: Peru,
 Ucayali R., 300 m. HT: MUN. *N. comb.*

Genus *Martinia* Hull

Martinia Hull, 1962: 91. Type-species, *moloch* Hull
 (orig. des.).

moloch Hull, 1962: 92. Type-locality: Bolivia,
 Camamina. HT: USNM.

scalaris (Hermann), 1908: 157, fig. 4 (*Laphystia*).
 Type-locality: Peru, mouth of Pachitea R.,
 150 m. ST: MUN.

Genus *Perasis* Hermann

Perasis Hermann, 1905: 37. Type-species, *sareptana*
 Hermann (mon.).

argentifacies (Williston), 1901: 310 (*Triclis*). Type
 locality: Mexico, Guerrero, Chilpancingo.
 HT: BMNH.

Genus *Protometer*, gen. n.

Head, lateral view (Fig. 22). Eyes large,
 wider on upper part, attenuated below. Occiput not
 prominent, with strong bristles on upper border.
 Mystax composed of fine bristles restricted to oral
 margin. Face flat, not produced on oral margin,
 with a few hairs scattered all over its surface.
 Proboscis short, surpassing oral margin, cylindrical,
 slightly narrowed on middle, apex blunt. Palpi long
 and slender, attenuated near apex, with fine bristles.
 Scape gently distended ventrally, with a bristle
 ventrally placed, almost as long as pedicel, and
 showing fine, bristly hairs; pedicel with short
 bristles on dorsal surface as well as ventrally; first
 flagellomere nearly spindle-shaped, covered by
 dense velvety micropubescence; second
 flagellomere short with a minute apical spine.

Head, frontal view (Fig. 21). Face narrower
 than an eye's width, gently widening at oral margin,
 covered by dense micropubescence and fine,
 scattered, long hairs. Frons divergent, covered by
 dull grey pruinosity and hairs similar to those of
 face. Frontoorbital bristles weak, similar to the
 hairs. Ocellar tubercle with bristles.

Thorax. Pronotum covered with pruinosity
 and long, bristle-like hairs. Mesonotum
 subquadrate, slightly globose. 1-2 notopleurals, 1-
 3 supraalar, 1-2 bristles on posterior callus.
 Mesonotal vestiture consisting of short, fine,
 decumbent hairs. Scutellum as the mesonotum,
 no marginal scutellar bristles present. Pleura
 covered by micropubescence and fine long hairs;
 a tuft of long, bristly hairs on katatergite.

Wing. Cell r_1 closed, with a short petiole.
 Cell r_5 open.

Legs long. Femora with long hairs. Tibiae
 and tarsi with appressed short hairs. Claws gently
 curved, pulvilli not reaching apex of claws.
 Empodium slightly longer than pulvilli.

Abdomen as wide as mesonotum, covered by fine, short hairs. There are bristles at the sides of the first six tergites.

Male terminalia as shown in Fig. 110.

Location of spermathecae in the female's abdomen and spermathecal structure as in Figs. 111-112.

Type-species, *Protometer evae*, sp.n.

***Protometer evae*, sp.n.**

Body length, 9 mm; wing length, 5 mm.

Male: Head black, with dull silvery pruinosity unevenly distributed over frons, ocellar tubercle and occiput. Face with dull silvery micropubesence, except on central area, which is black. Postocular area with dense silvery micropubesence. All hairs and bristles on head white. Antennae black; scape with silvery micropubesence, bristles and hairs white; pedicel with whitish pruinosity, bristles black; flagellum white-pruinose, dark golden in parts.

Thorax. Pronotum uniformly covered with silvery pruinosity; hairs white. Mesonotum black, partially covered by grey pruinosity forming well-defined areas of black, grey and white: a double grey stripe goes from the anterior margin to the posterior one; besides these there are two grey areas divided by the transverse suture; area behind postpronotum black. Sides of mesonotum, from postpronotum to posterior calli grey and black areas surrounded by a white border of pruinosity. Pleura uniformly covered by shining silvery pruinosity; hairs and bristle-like hairs white.

Legs black, with white, fine, appressed hairs, similar on femora, tibiae and tarsi; all bristles white. Claws black. Empodium and pulvilli white. The short ventral bristles of the tarsi black, bristles on apex of last tarsal segment also black.

Wing hyaline with reddish-brown veins.

Abdomen. Tergite 1 almost entirely covered by silvery-yellow pruinosity; remaining tergites with lateral margins and posterior border greyish pruinose, with short yellow hairs; remaining area of the tergites appearing black, with short black hairs. Bristles at sides of tergites white.

Terminalia black, with abundant silvery pruinosity and white hairs over distal half of epandrium and gonopods, in a striking contrast. Terminalia as in Figs. 106-109.

Holotype male, Brazil, Amazonas: Paran da Eva, 8.xi.1969 (N. Papavero). Paratypes: 2 females (one with abdomen in microvial; head of the other missing), same data as holotype (MZUSP).

***Protometer bokermanni*, sp.n.**

Body length: 12 mm; wing length: 8 mm.

Male: Face, frons, ocellar tubercle, occiput and postocular area black, covered by silvery pruinosity. The face has, in addition, shining silvery micropubesence. Head bristles and hairs white.

Thorax. Pronotum black, with silvery pruinosity, bristles white. Mesonotum black, with grey pruinosity, less dense in some areas: there is a double central stripe and two rounded areas on sides, divided by the transverse suture. Sides of mesonotum between transverse suture and postalar calli lighter. Vestiture of disc, hairs and bristles white. Scutellar disc dark, margin light, all hairs white. Pleura with silvery pruinosity and white hairs.

Wing hyaline, veins brown. Sc. base of R₁ and base of all other veins lighter.

Legs. Femora and tarsi black, tibiae yellowish-brown; hairs on femora long and white, on tibiae and tarsi denser, shining silvery, bristles white. Claws black, reddish at base. Pulvilli and empodium whitish.

Abdomen. Tergites anteriorly black, posteriorly with dense, dark-golden micropubesence; bristles at sides of tergites white. Male terminalia as in Fig. 110.

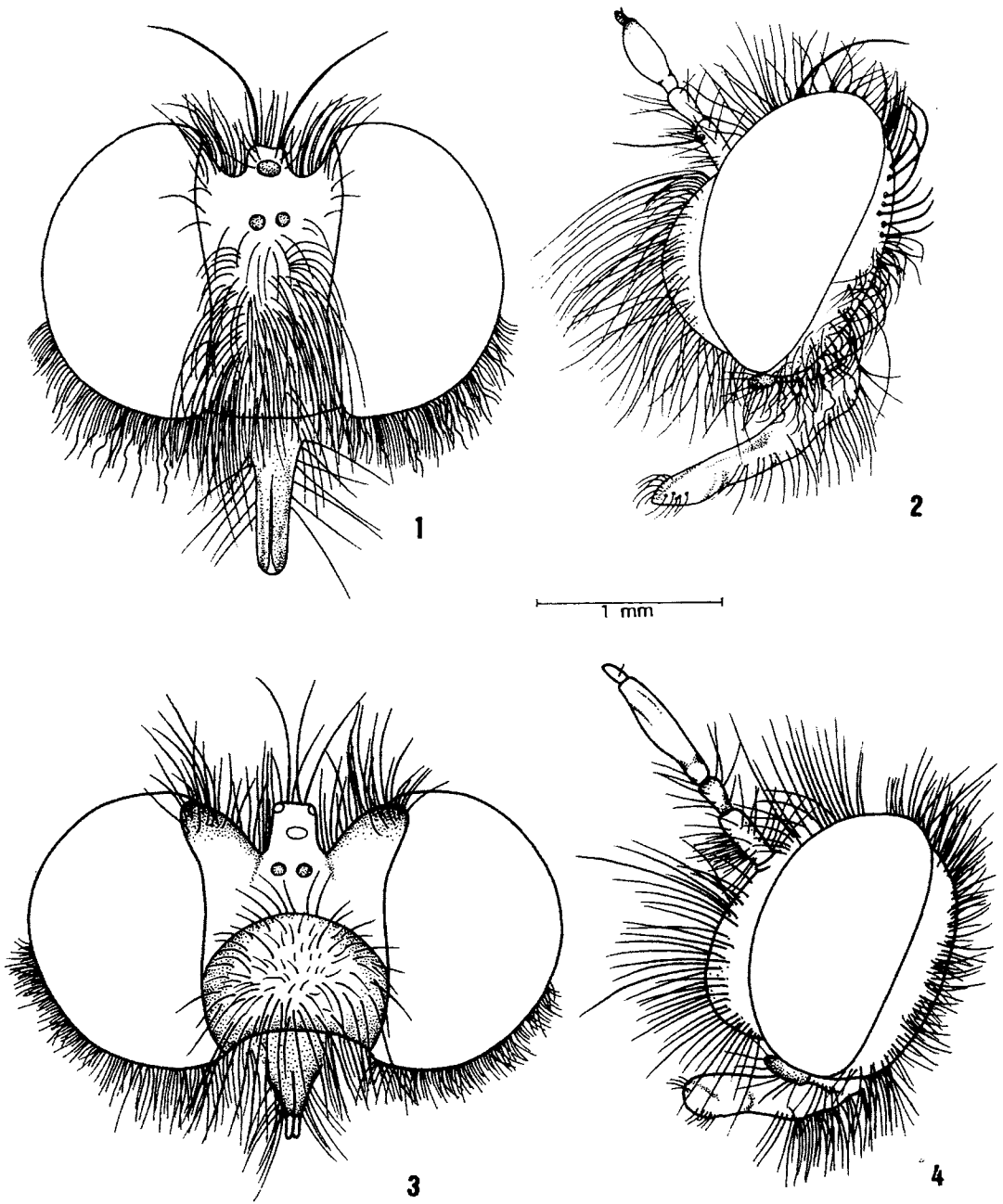
Female: Similar to male, but generally with pruinosity, micropubesence, and hairs more golden.

Holotype male, Brazil, Mato Grosso: So Domingos, xi.1940 (W. Bokermann) (MZUSP); Paratypes: 1 male and 2 females, same data as holotype (MZUSP, UCCC).

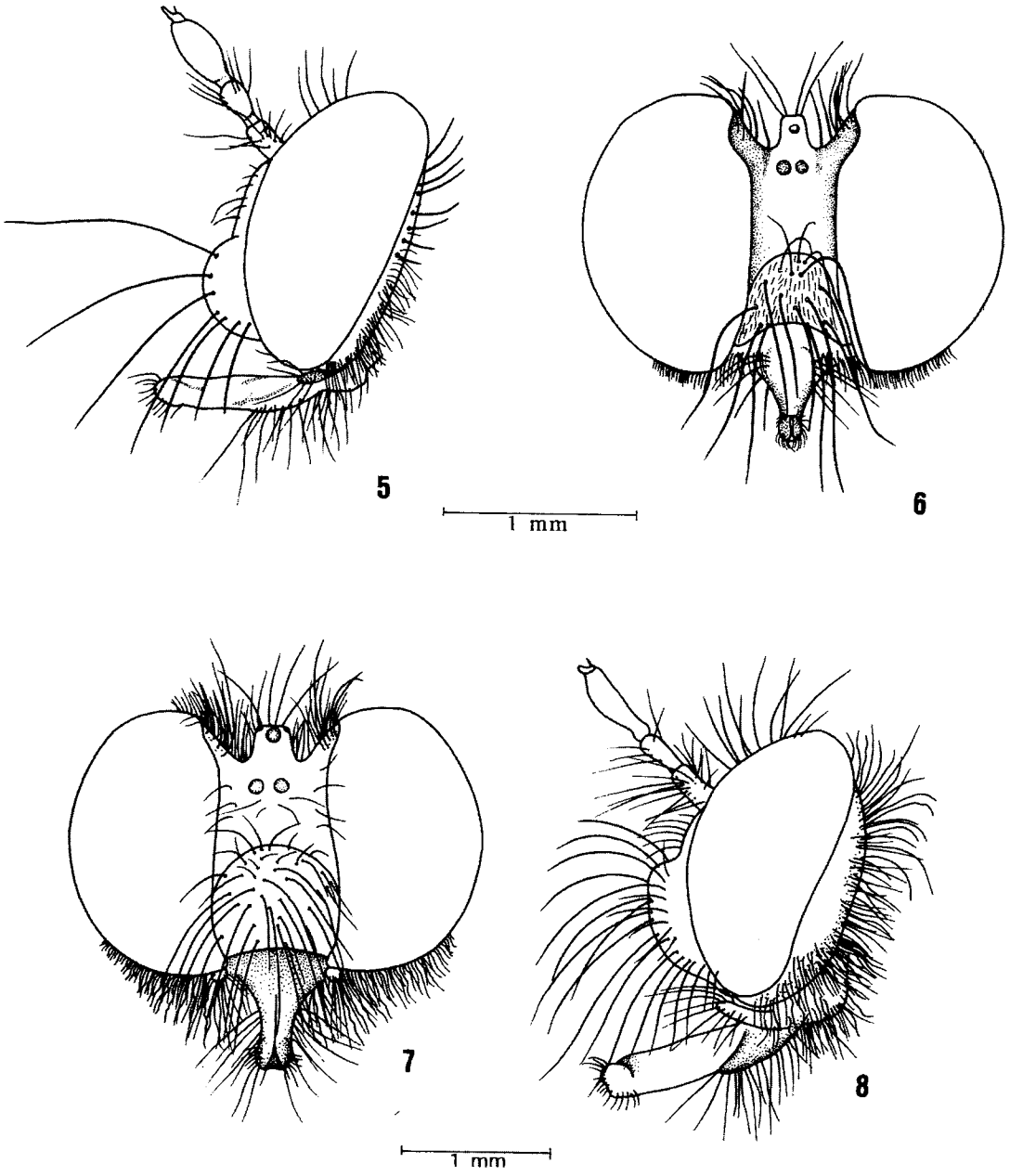
Genus *Psilocurus* Loew

Psilocurus Loew, 1874: 373. Type-species, *nudiusculus* Loew (mon.).

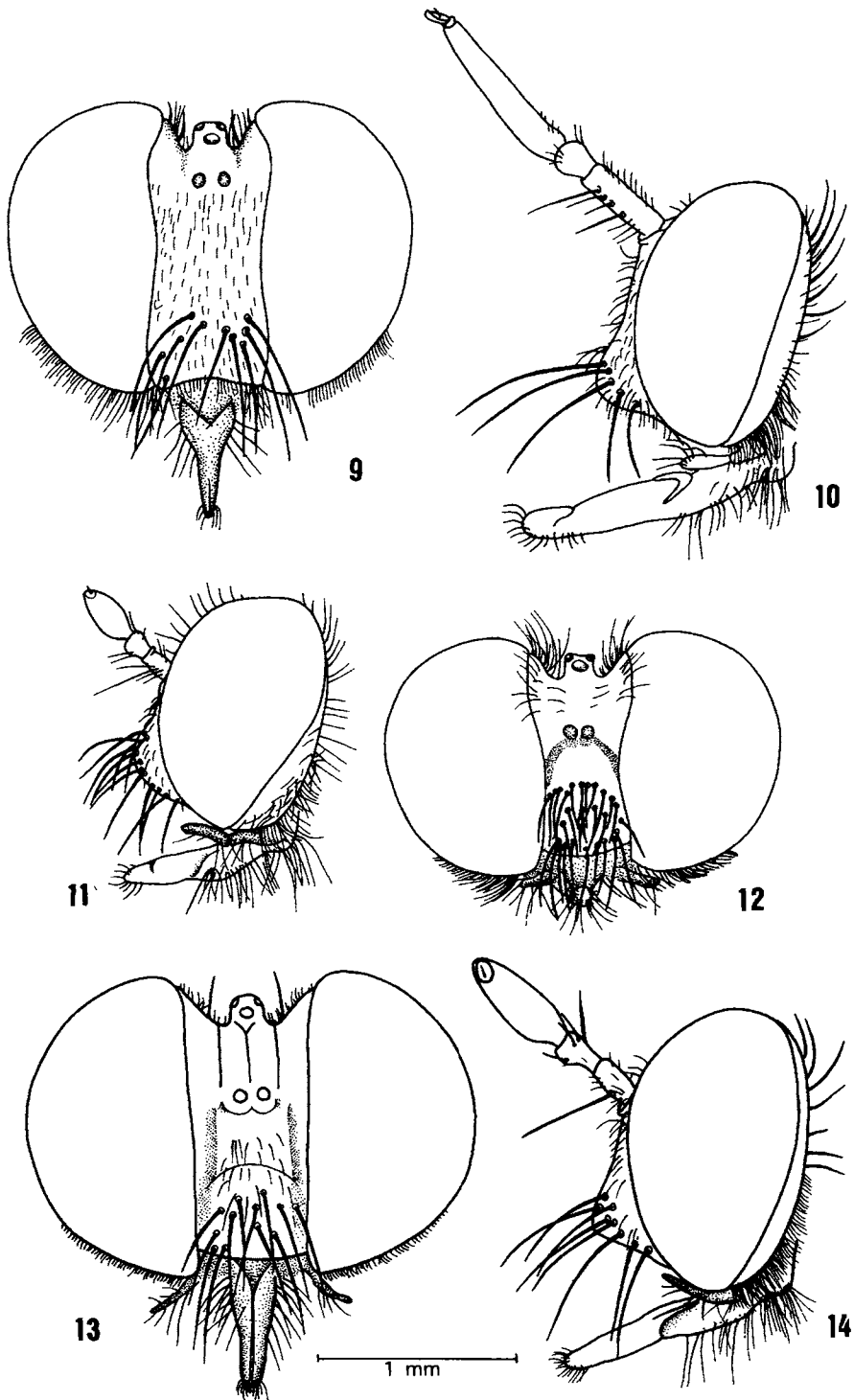
Orthonuromyia Williston, 1893: 67. Type-species, *modesta* Williston (mon.).



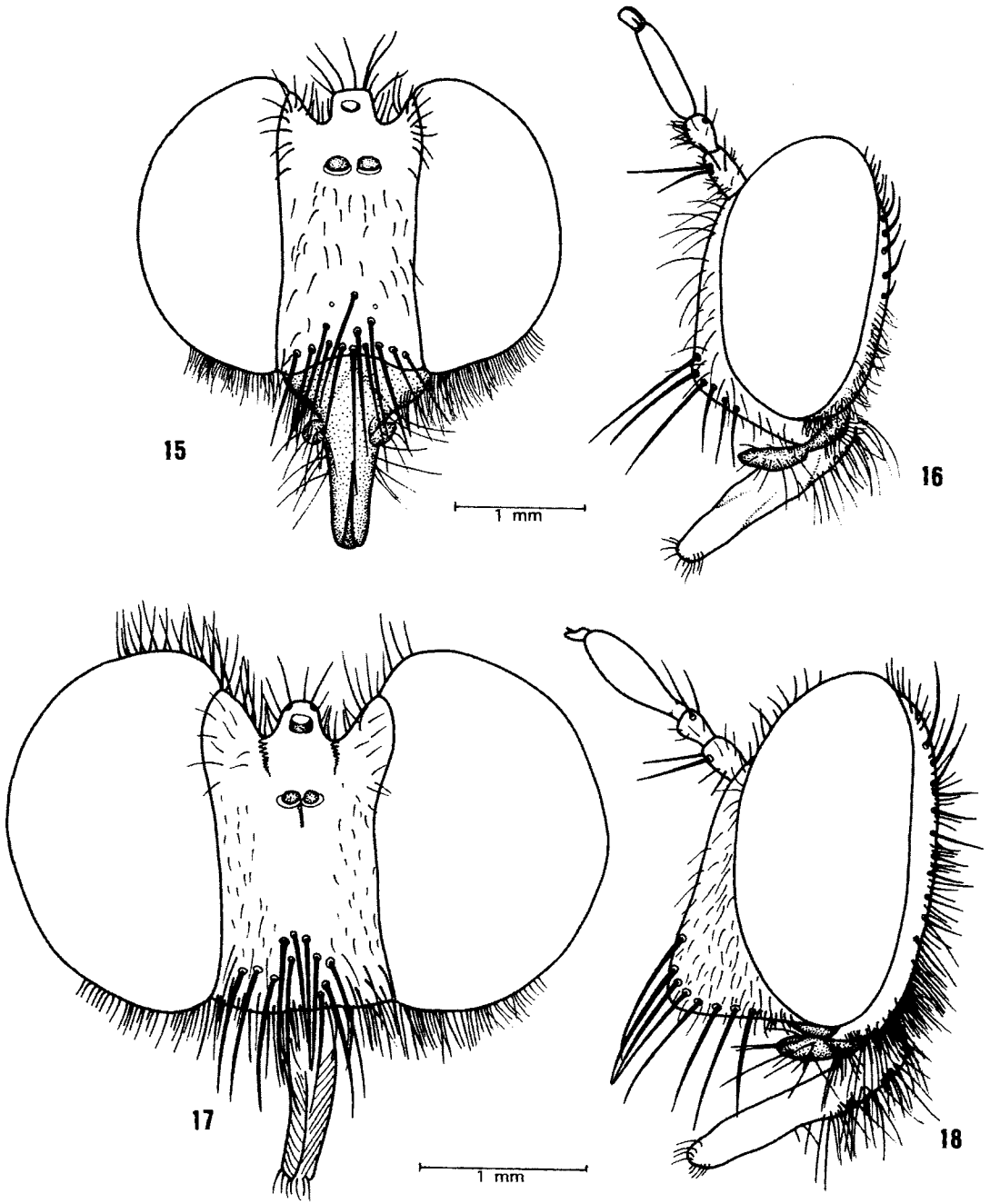
Figs. 1-4. Head, frontal (1, 3) and lateral (2, 4) views. 1-2, *Zabrops tagax* (Williston); 3-4, *Hexameritia micans* (Philippi).



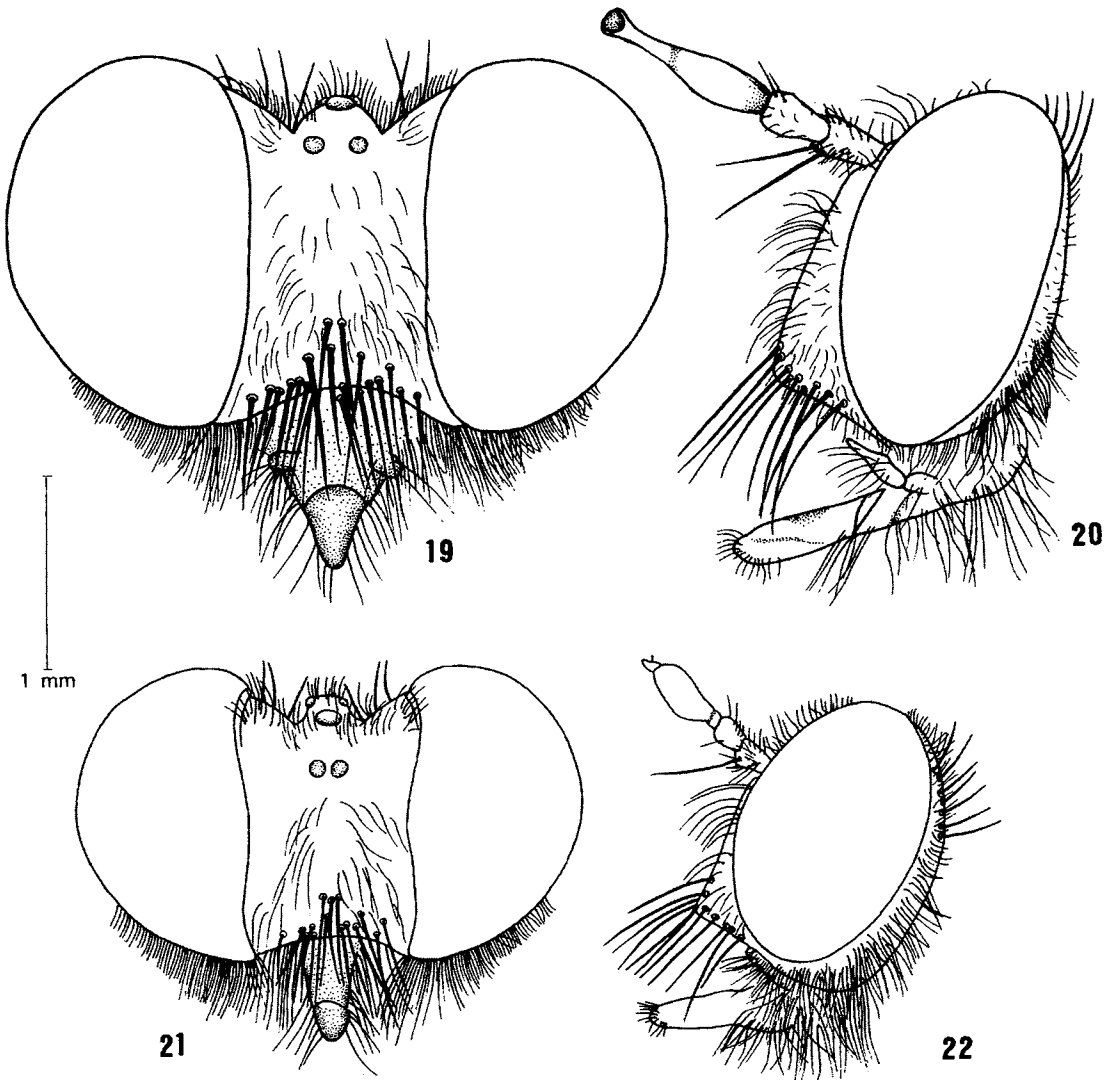
Figs. 5-8. Head, frontal (6, 7) and lateral (5, 8) views. 5-6, *Helolaphytis* sp.; 7-8, *Apoxyria americana* Carrera.



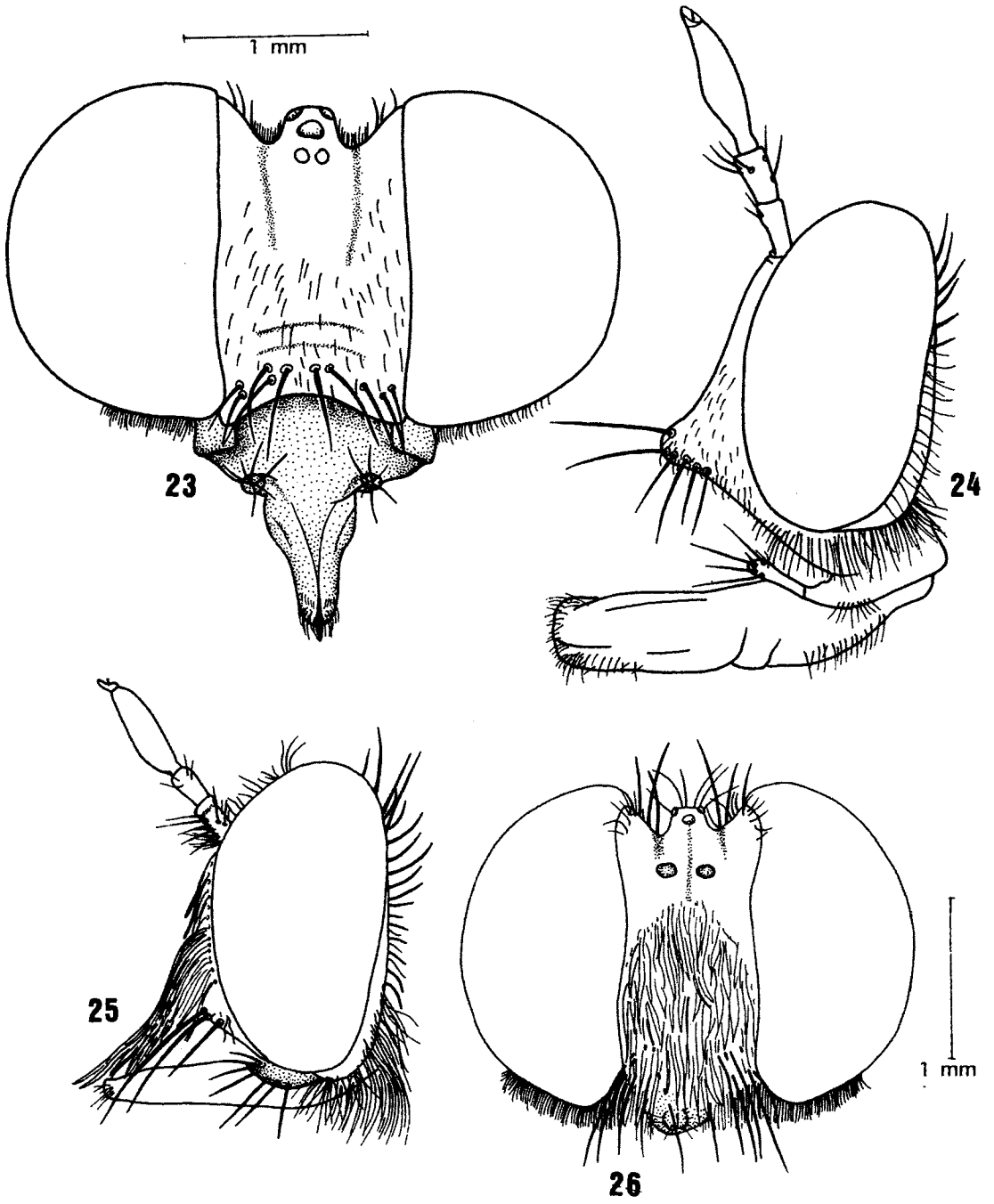
Figs. 9-14. Head, frontal (9, 12, 13) and lateral (10, 11, 14) views. 9-10, *Laphygmolestes flavipes* Hull; 11-12, *Cymbipyga cymbafera* (Artigas); 13-14, *Psilocurus* sp.



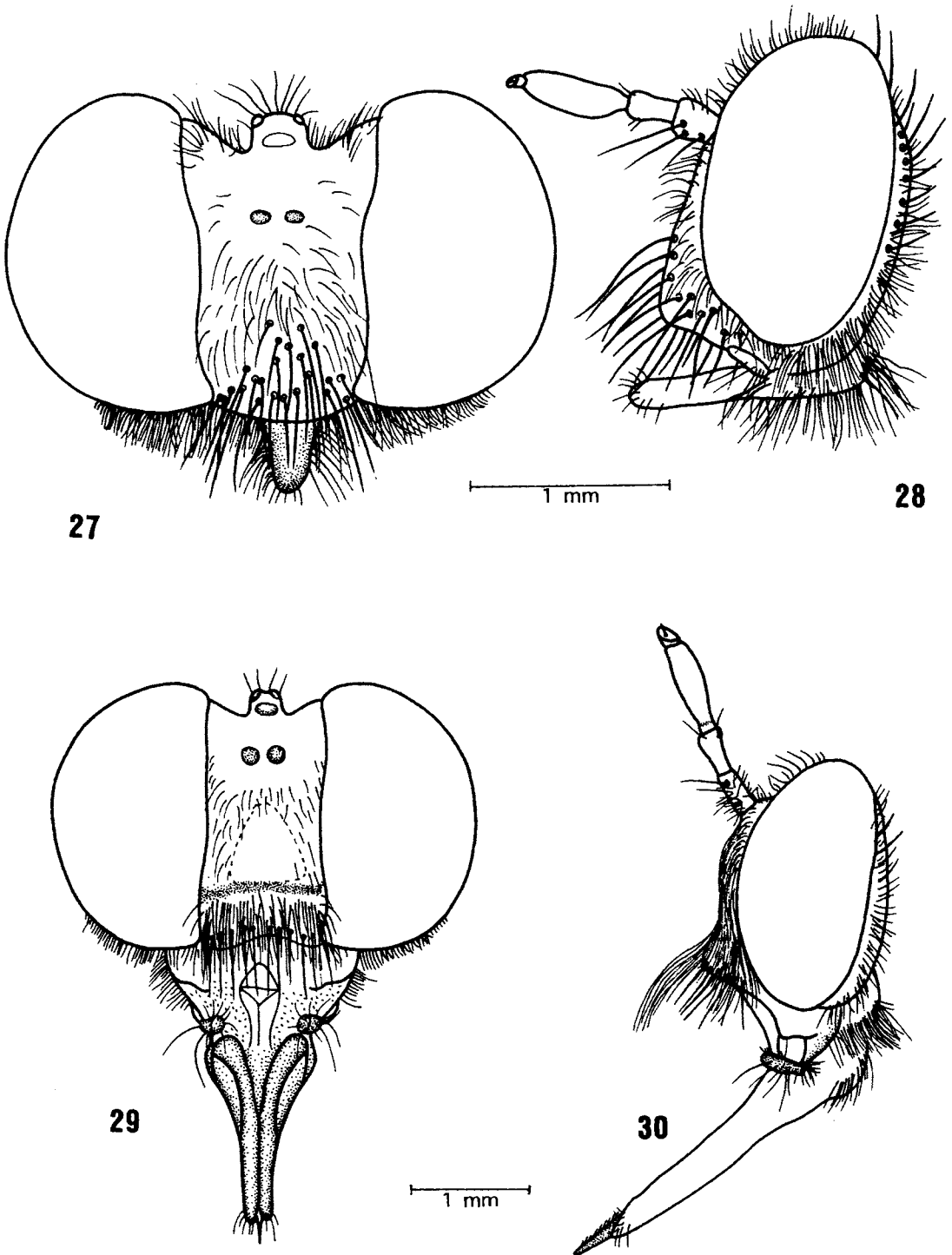
Figs. 15-18. Head, frontal (15, 17) and lateral (16, 18) views. 15-16, *Macahyba nordestina* Carrera; 17-18, *Martinia* sp.



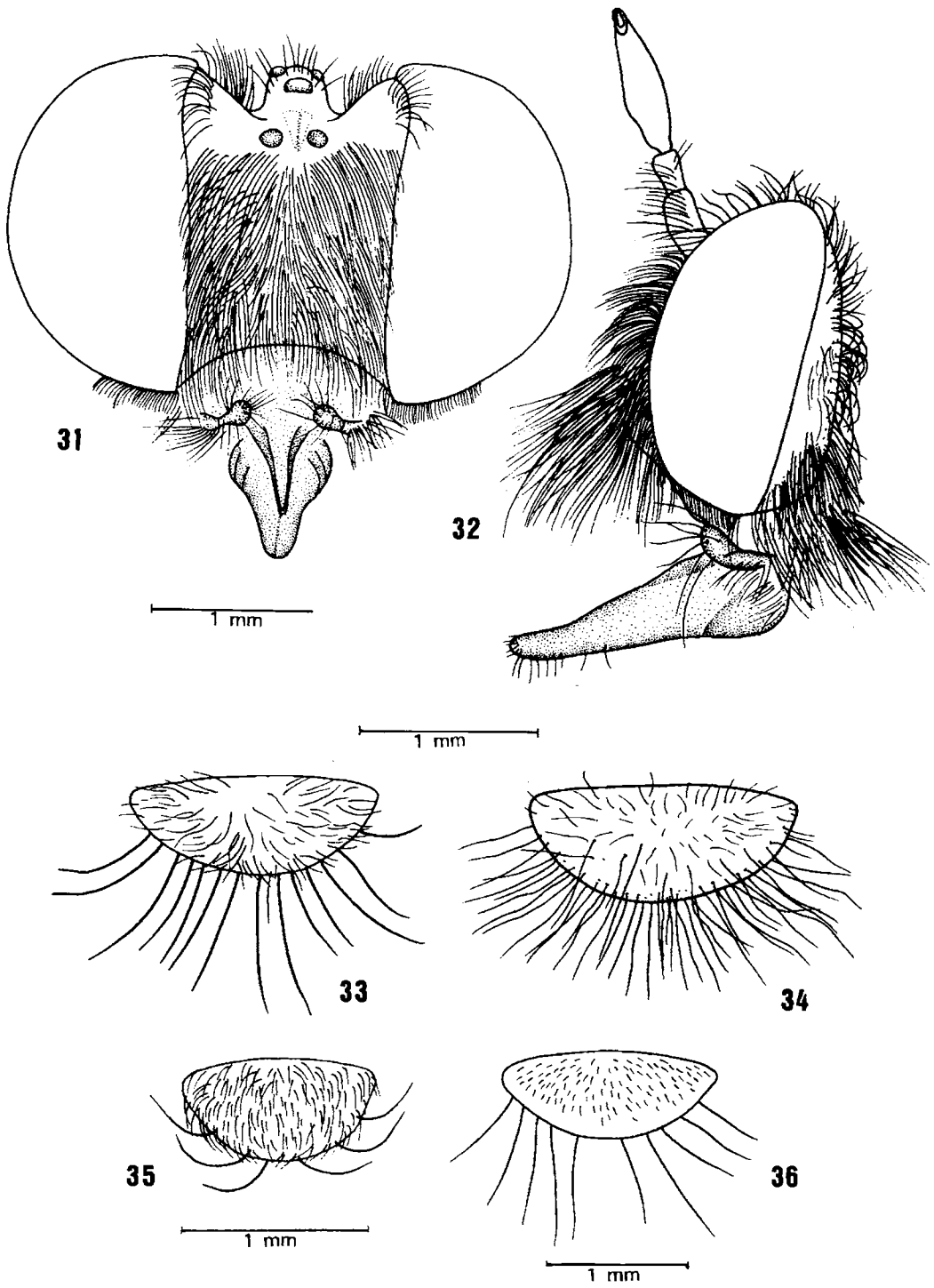
Figs. 19-22. Head, frontal (19, 21) and lateral (20, 22) views. 19-20, *Cochleariocera neusae*, gen. n., sp. n.; 21-22, *Protometer evae*, gen. n., sp. n.



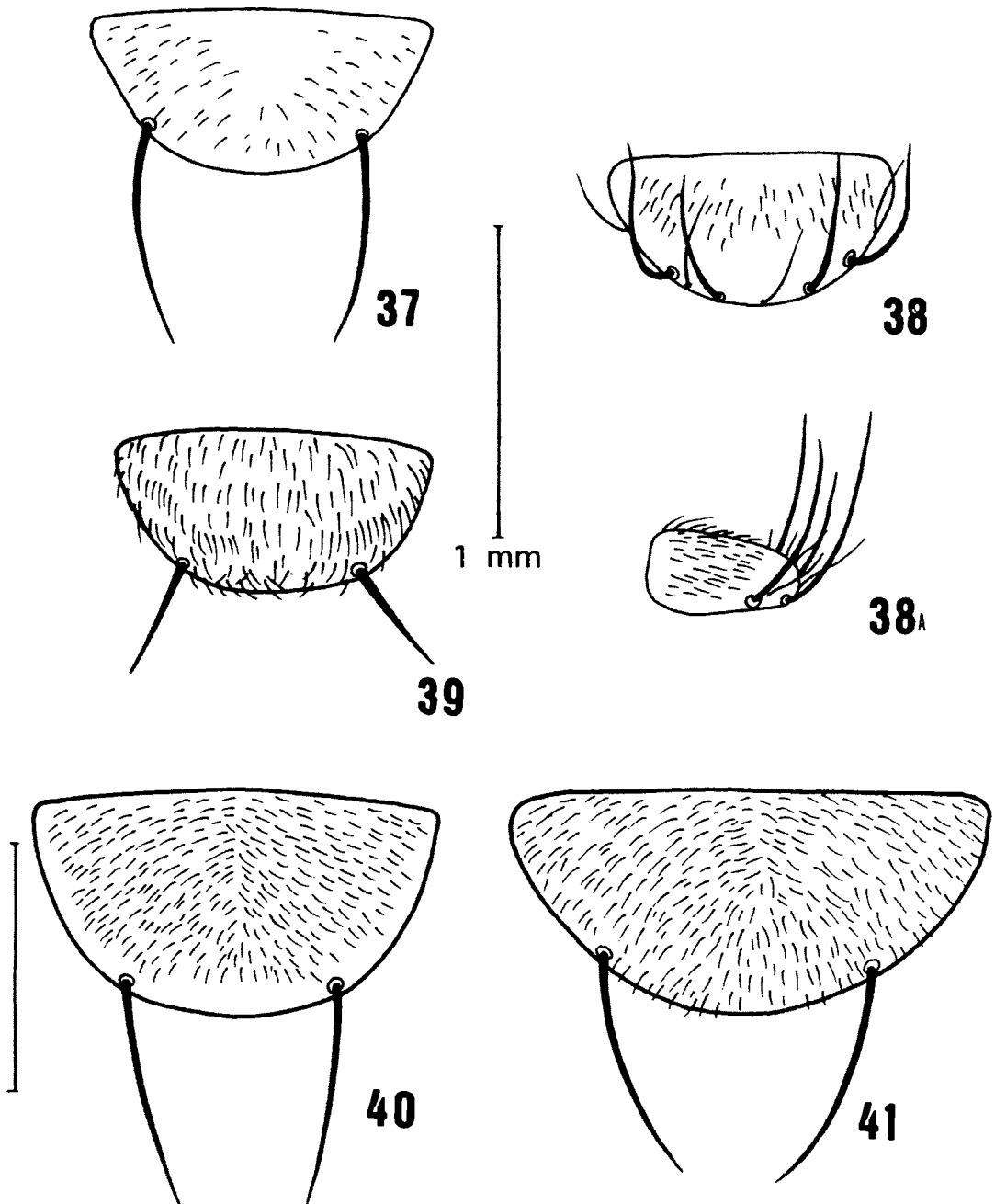
Figs. 23-26. Head, frontal (23, 26) and lateral (24, 25) views. 23-24, *Trichioscelis femorata* Roeder; 25-26, *Perasis* sp.



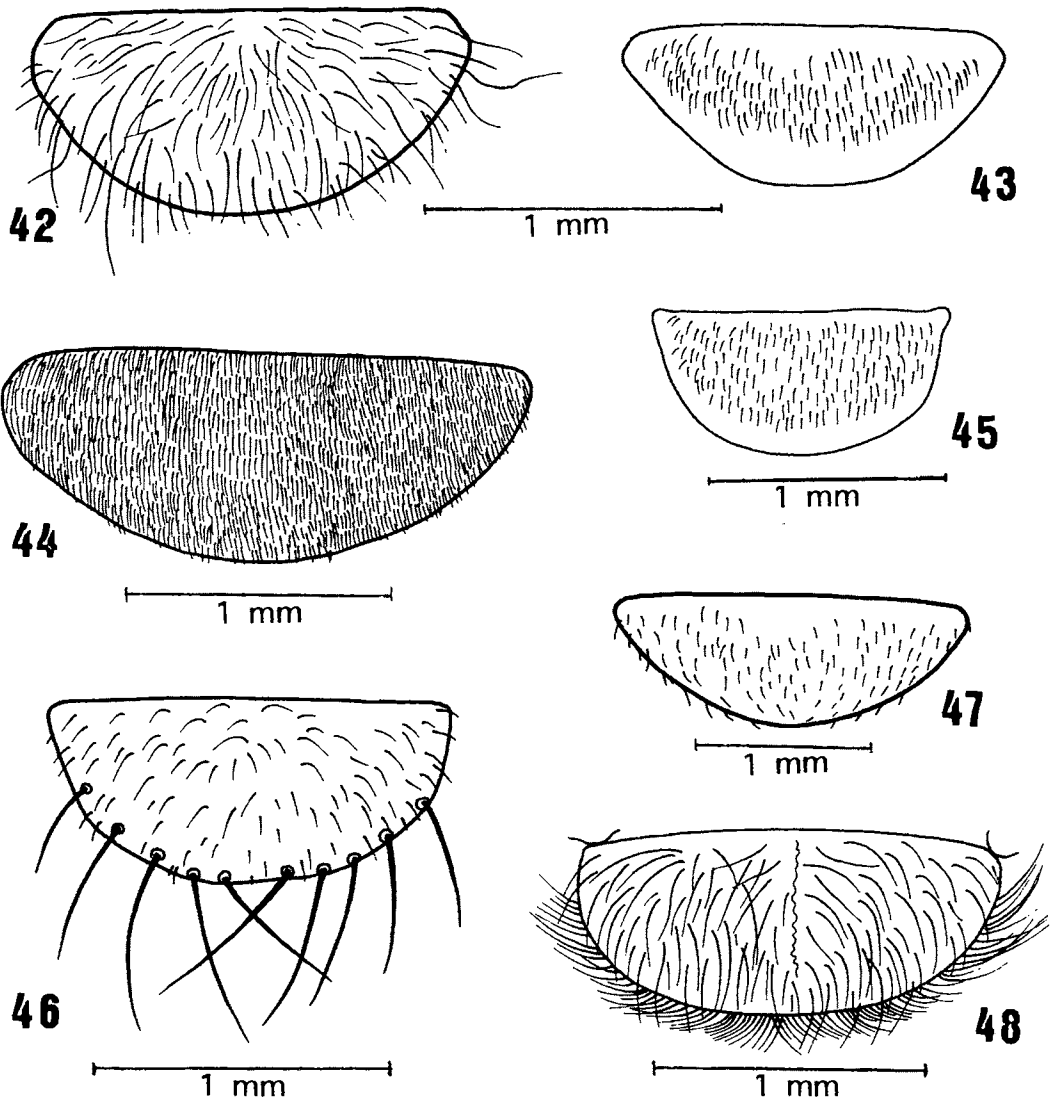
Figs. 27-30. Head, frontal (27, 29) and lateral (28, 30) views. 27-28, *Asicya* sp.; 29-30, *Gymnotriclis coscaronorum*, gen. n., sp. n.



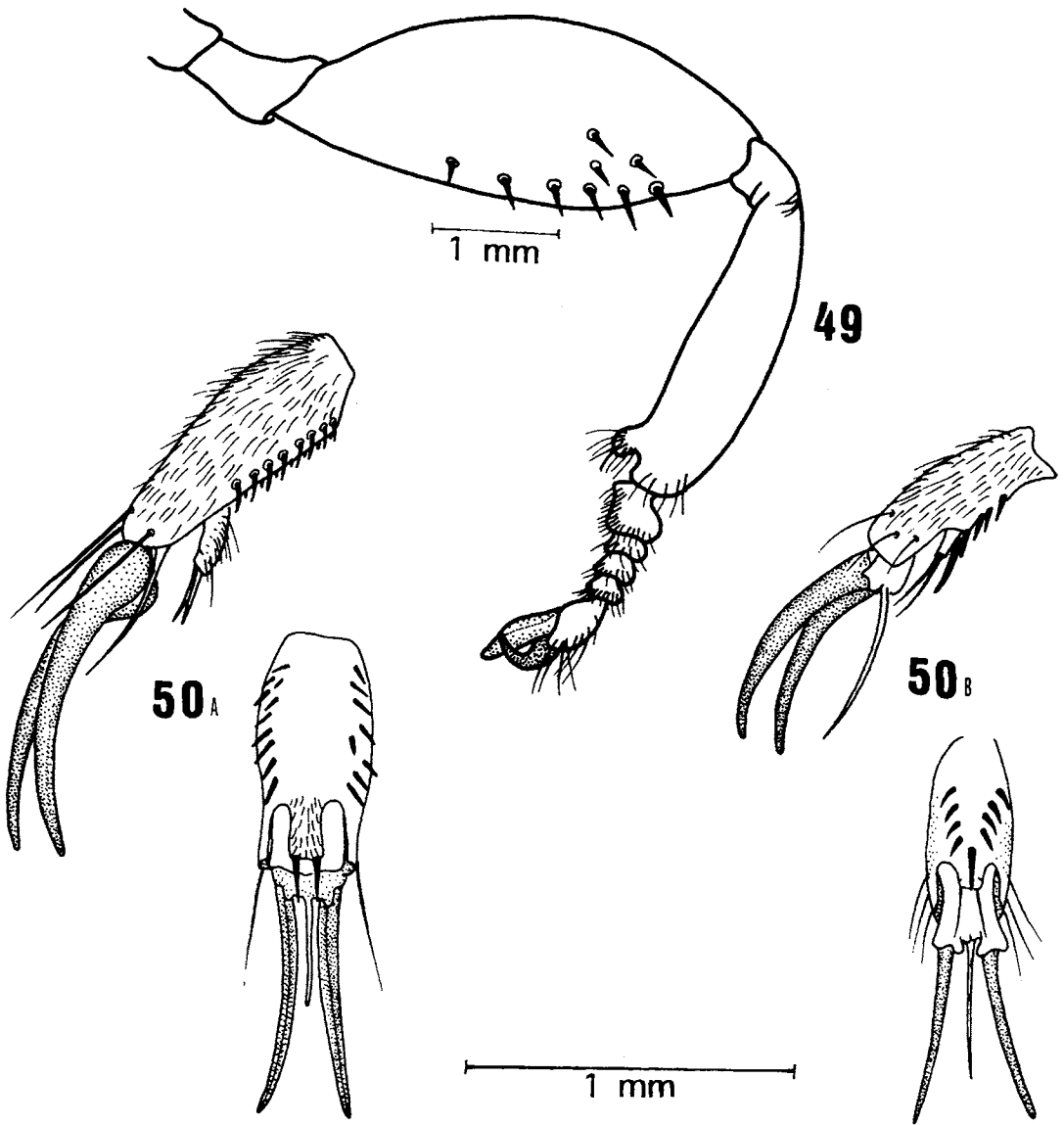
Figs. 31-36. Head, in frontal and lateral views (31-32), *Chrysotriclis willinkorum*, gen. n., sp. n.; scutellum, dorsal view (33, 34, 35, 36). 33, *Zabrops tagax* (Williston); 34, *Hexameritia micans* (Philippi); 35, *Helolaphyctis* sp.; 36, *Apoxyria americana* Carrera [all scales = 1 mm].



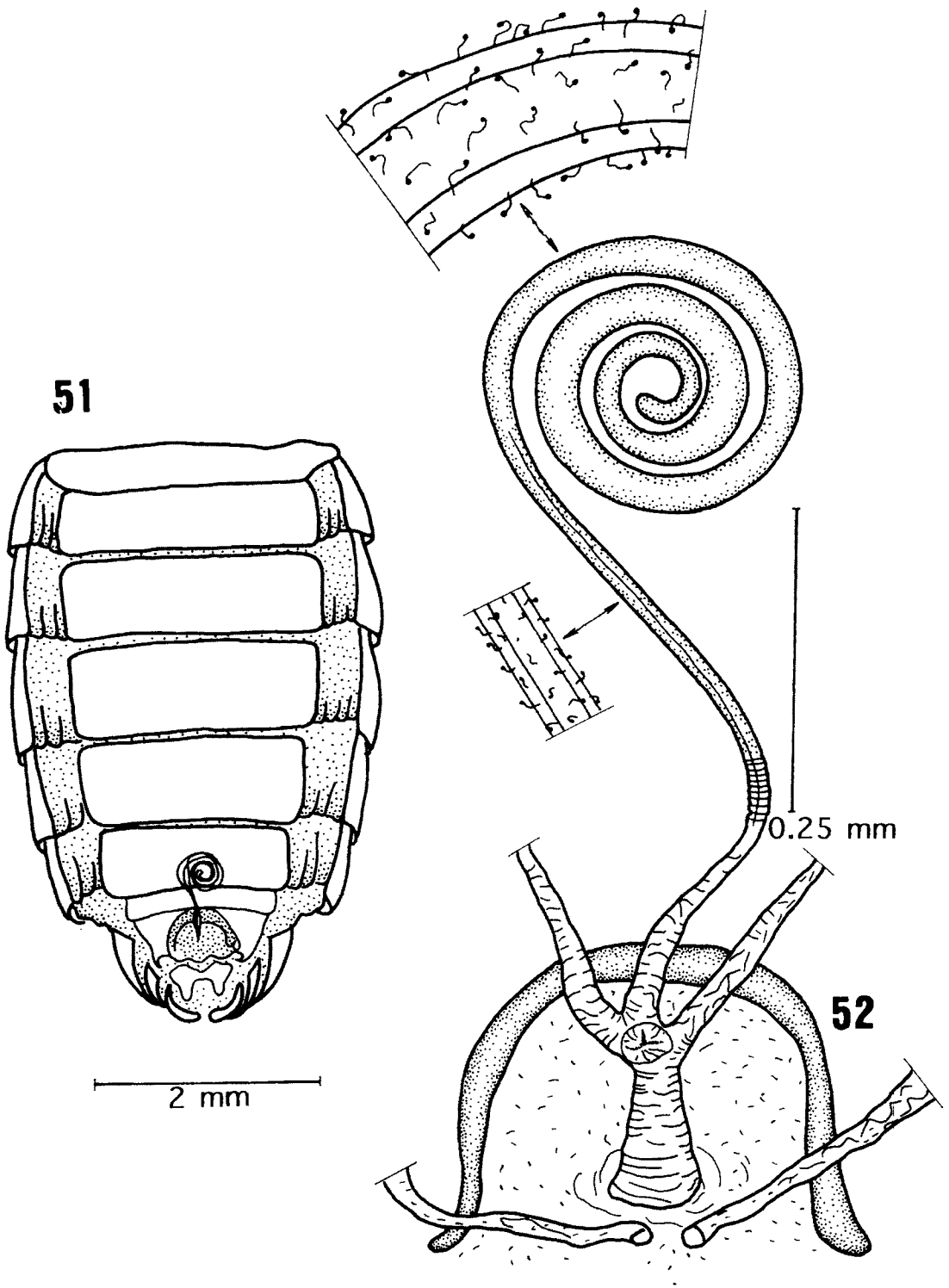
Figs. 37-41. Scutellum, dorsal (37, 38, 39, 40, 41) and lateral (38A) views. 37, *Laphygmolestes flavipes* Hull; 38-38A, *Cymbipyga cymbafera* (Artigas); 39, *Psilocurus* sp.; 40, *Macahyba nordestina* Carrera; 41, *Martinia* sp.



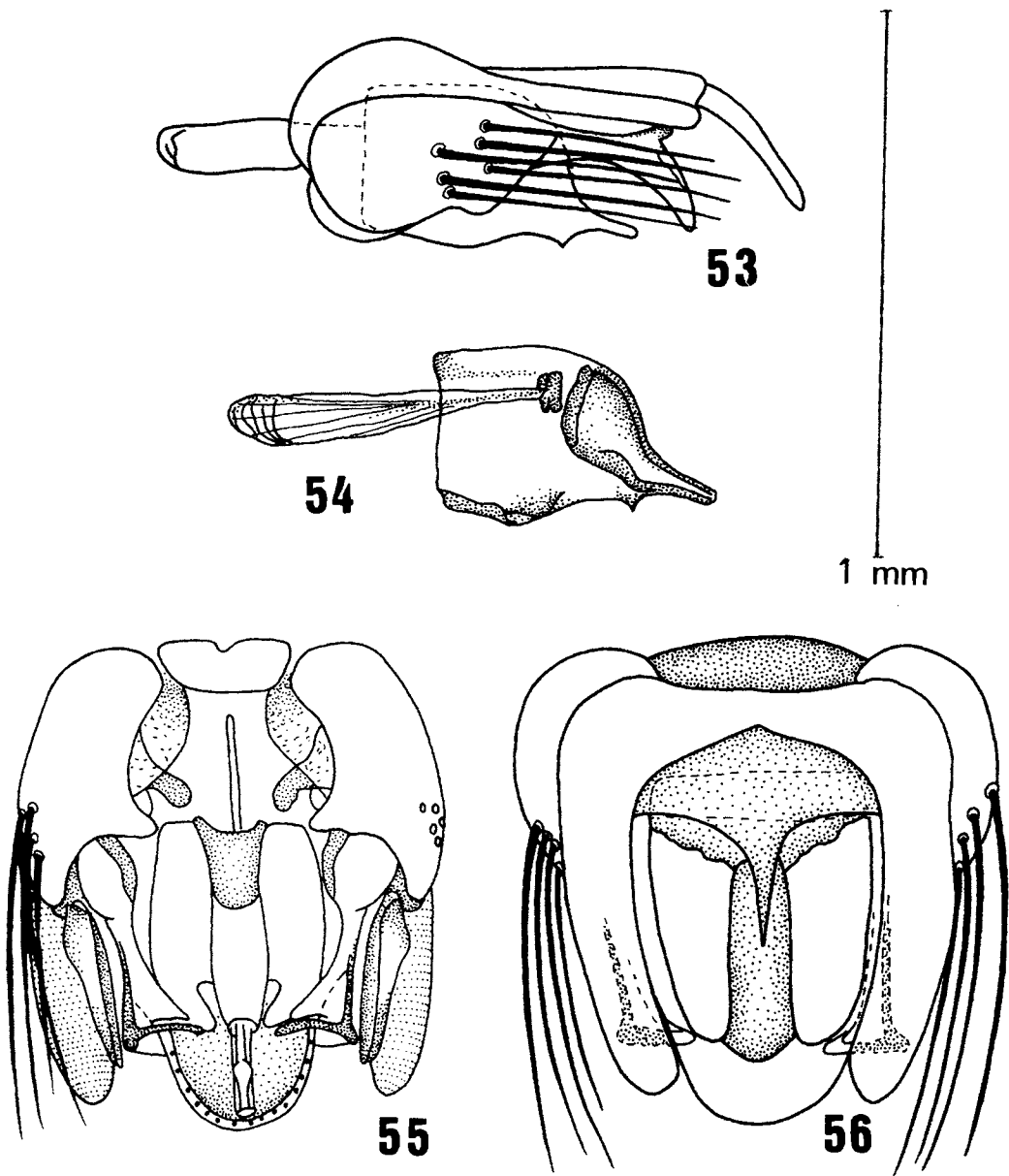
Figs. 42-48. Scutellum, dorsal view: 42, *Cochleariocera neusae*, gen. n., sp. n.; 43, *Protometer evae*, gen. n., sp. n.; 44, *Triclioscelis femorata* Roeder; 45, *Perasis* sp.; 46, *Asicya* sp.; 47, *Gymnotriclis coscaronorum*, gen. n., sp. n.; 48, *Chrysotriclis willinkorum*, gen. n., sp. n.



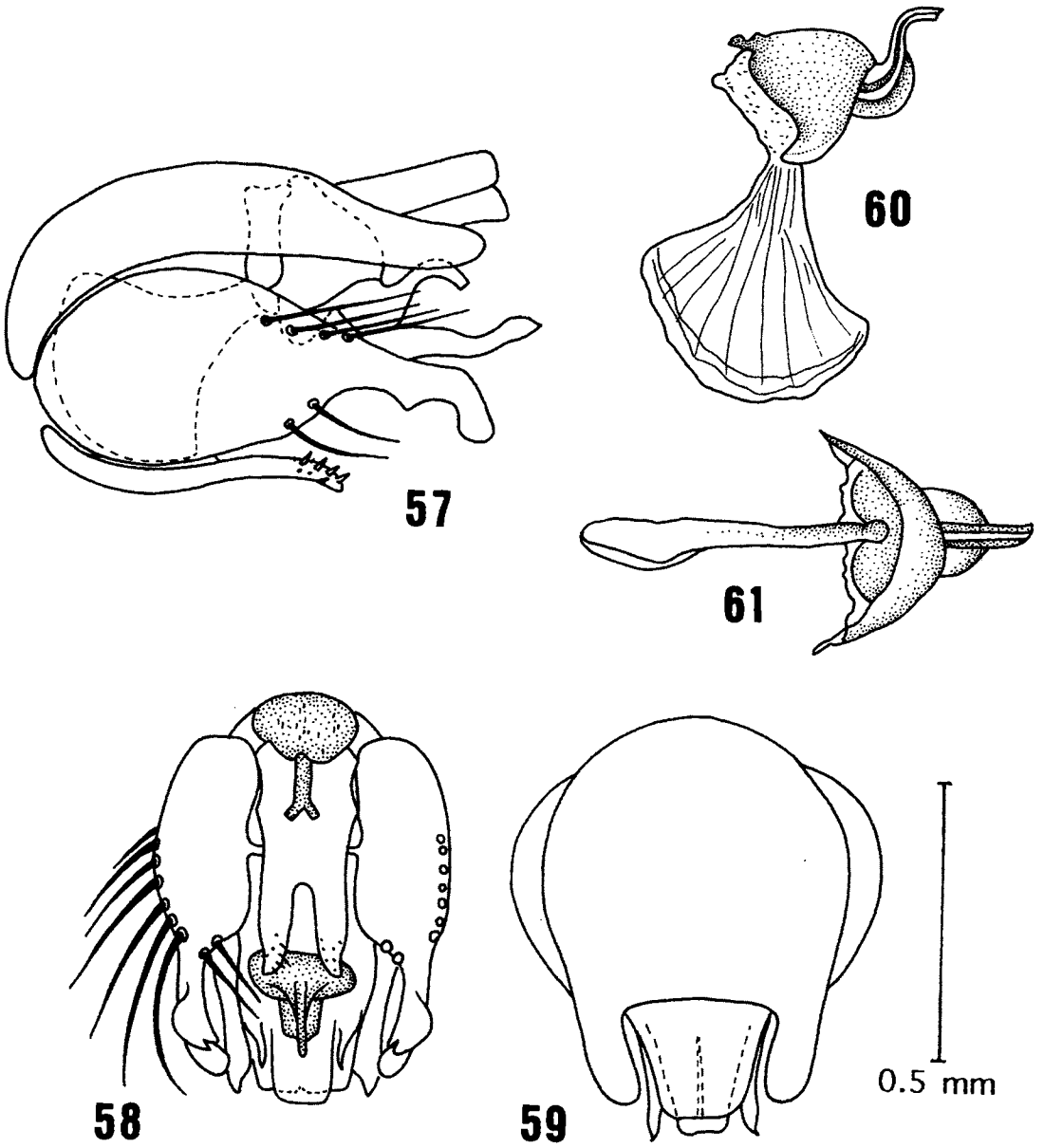
Figs. 49-50B. 49, *Triclistoscelis femorata* Roeder, hind leg; fig. 50A, apical hind tarsomere of *Makahyba nordestina* Carrera, lateral and ventral views; Fig. 50B, apical hind tarsomere of *Asicya* sp., lateral and ventral views.



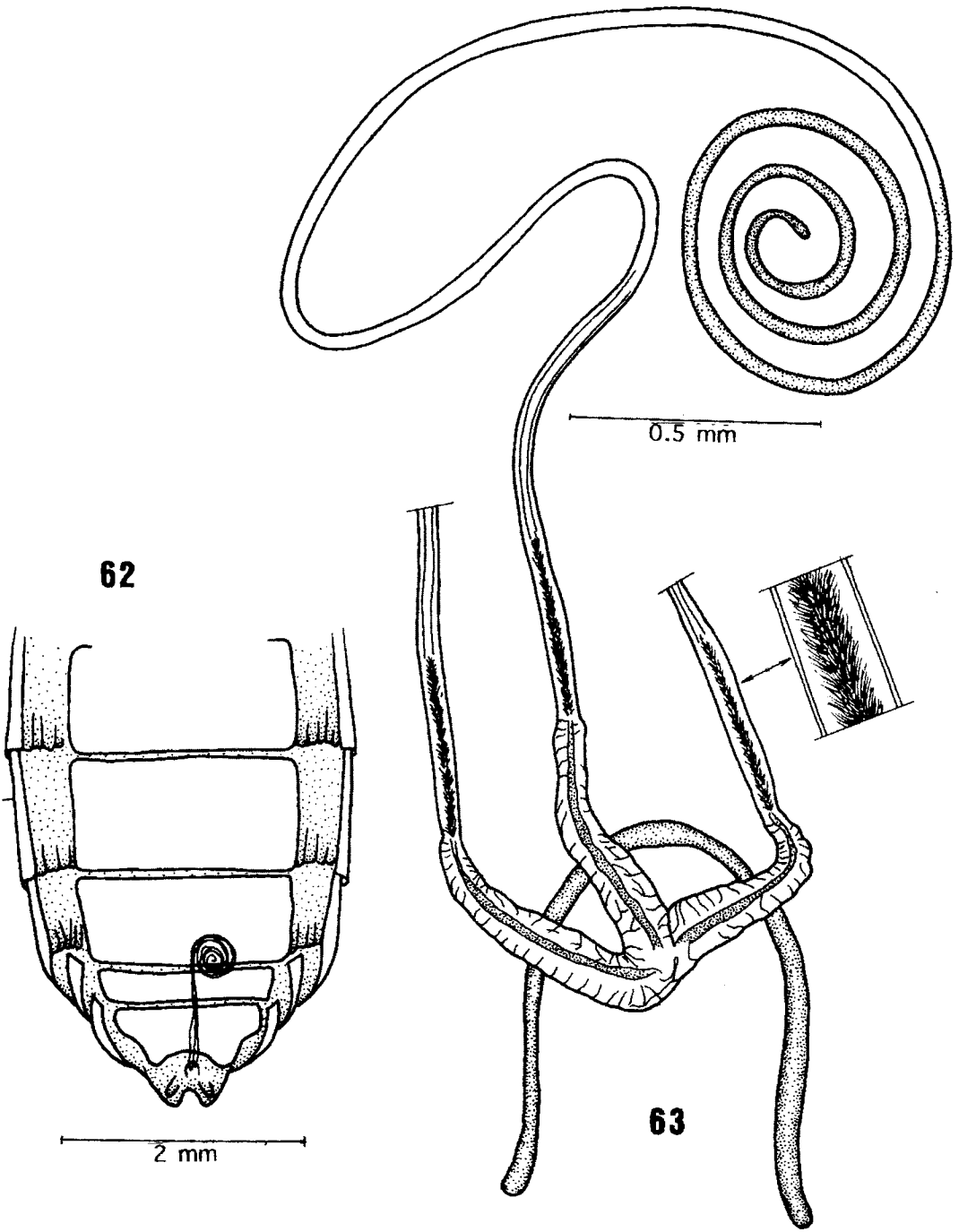
Figs. 51-52. *Zabrops tagax* (Williston), situation of the spermathecae in the abdomen (51) and spermathecae (52).



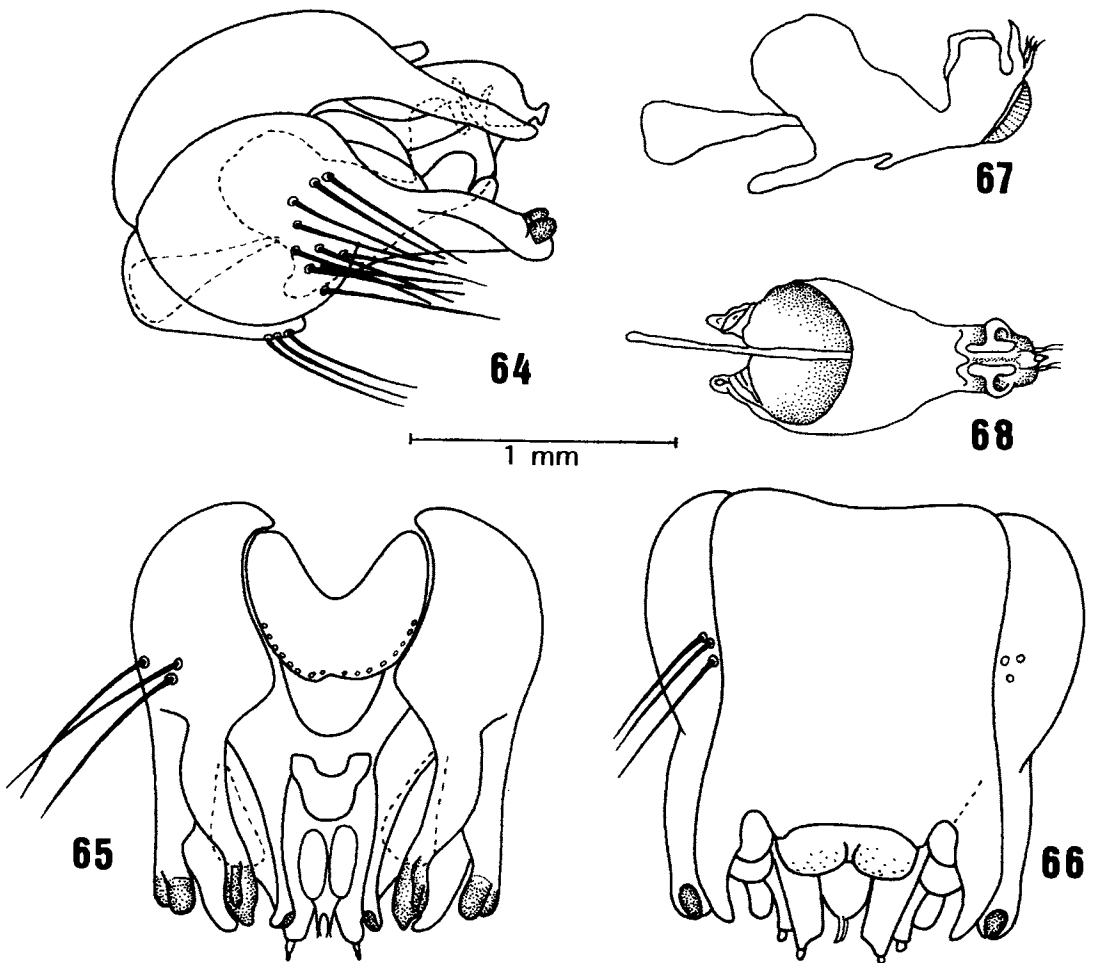
Figs. 53-56. *Hexameritia micans* (Philippi), male terminalia in lateral (53), ventral (55) and dorsal (56) views, and aedeagus in lateral view (54).



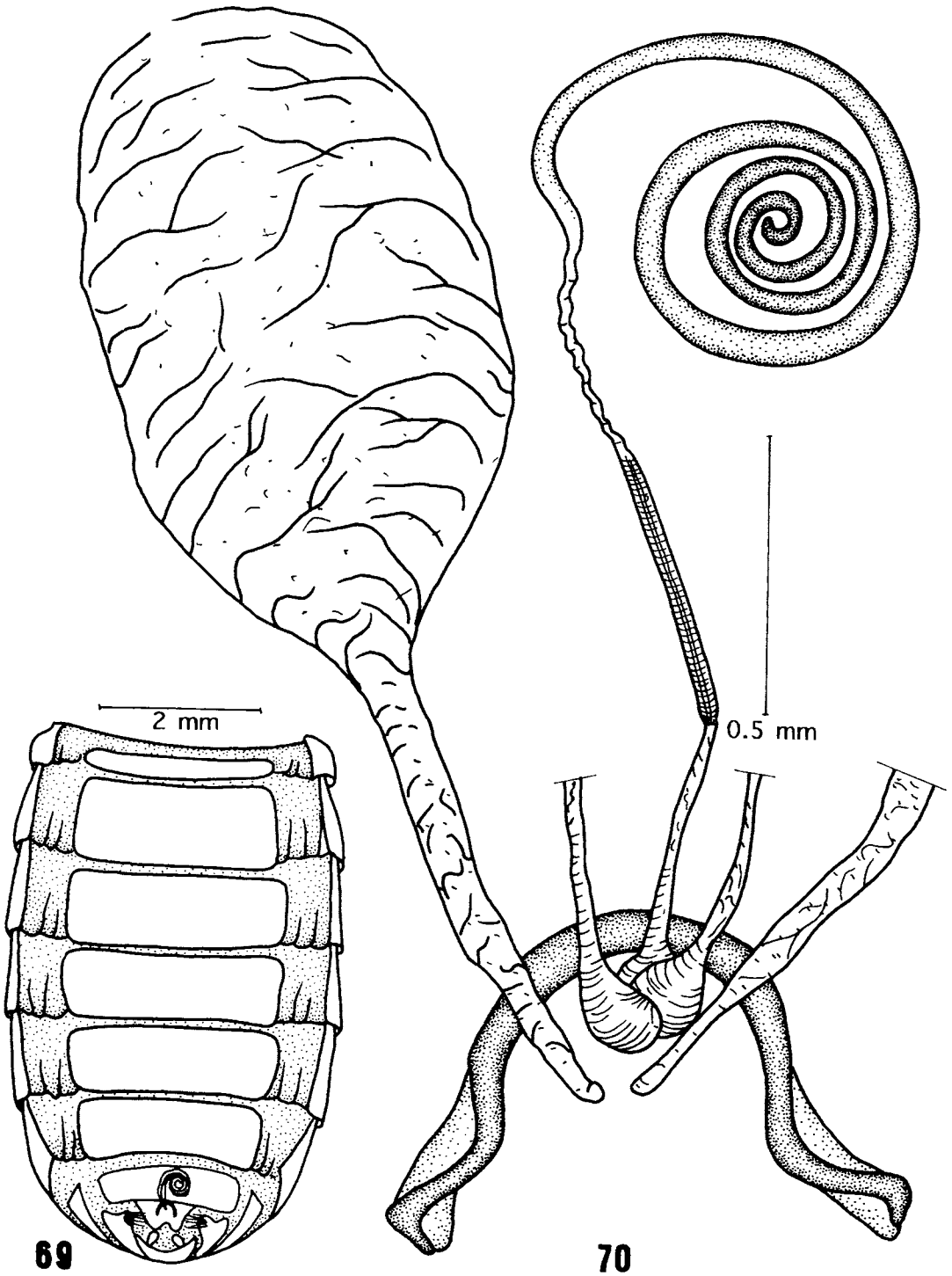
Figs. 57-61. *Helolaphycitis* sp., male terminalia in lateral (57), ventral (58) and dorsal (59) views, and aedeagus in lateral (60) and dorsal (61) views.



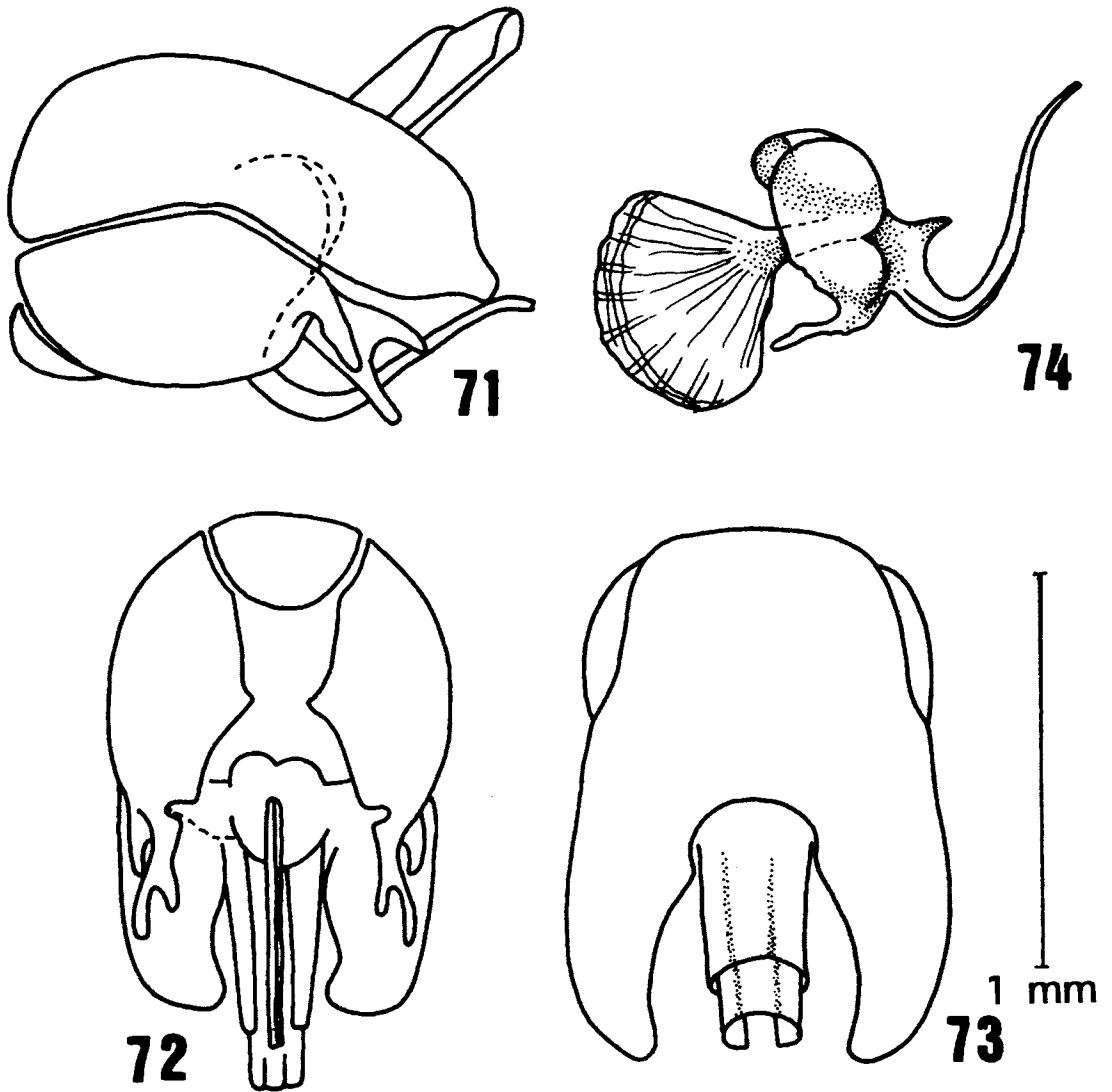
Figs. 62-63. *Helolaphycitis* sp., situation of spermathecae in the abdomen (62) and spermathecae (63).



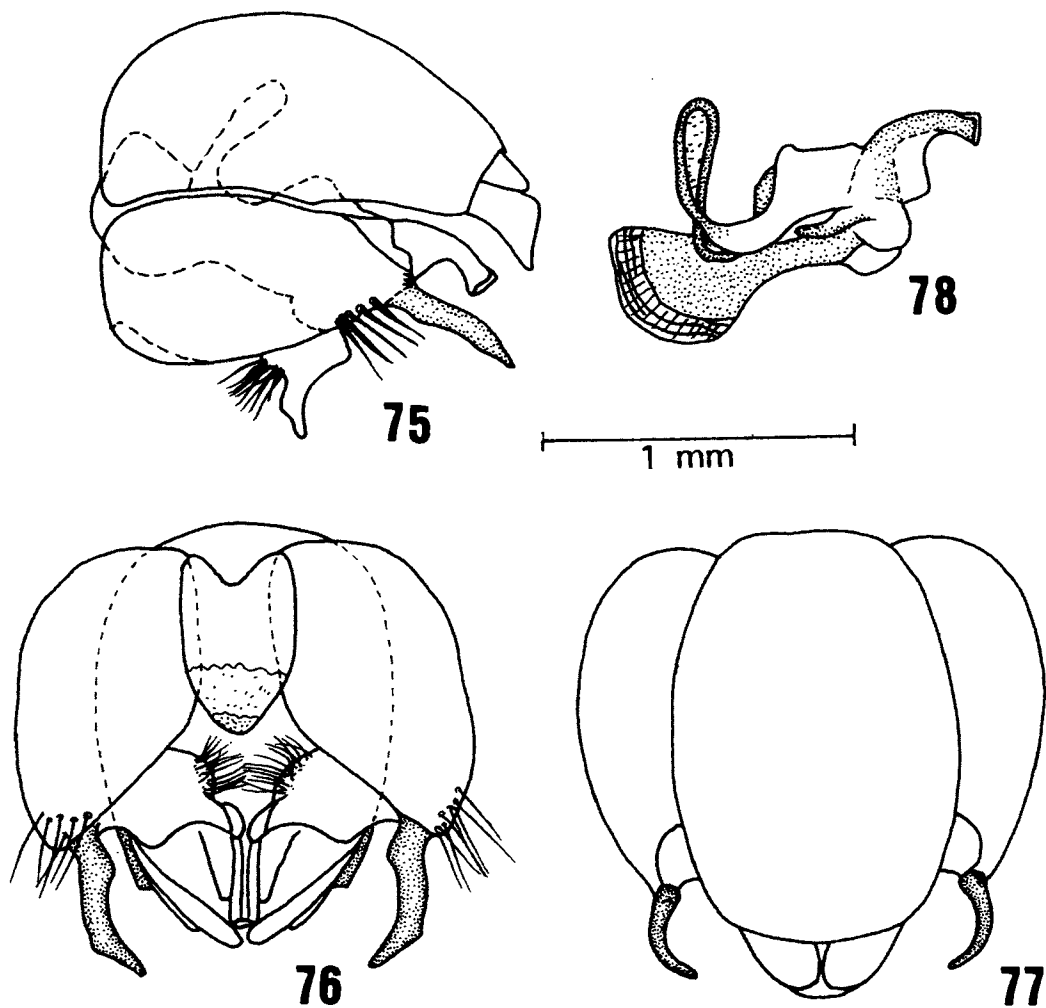
Figs. 64-68. *Apoxyria americana* Carrera, male terminalia in lateral (64), ventral (65) and dorsal (66) views, and aedeagus in lateral (67) and dorsal (68) views.



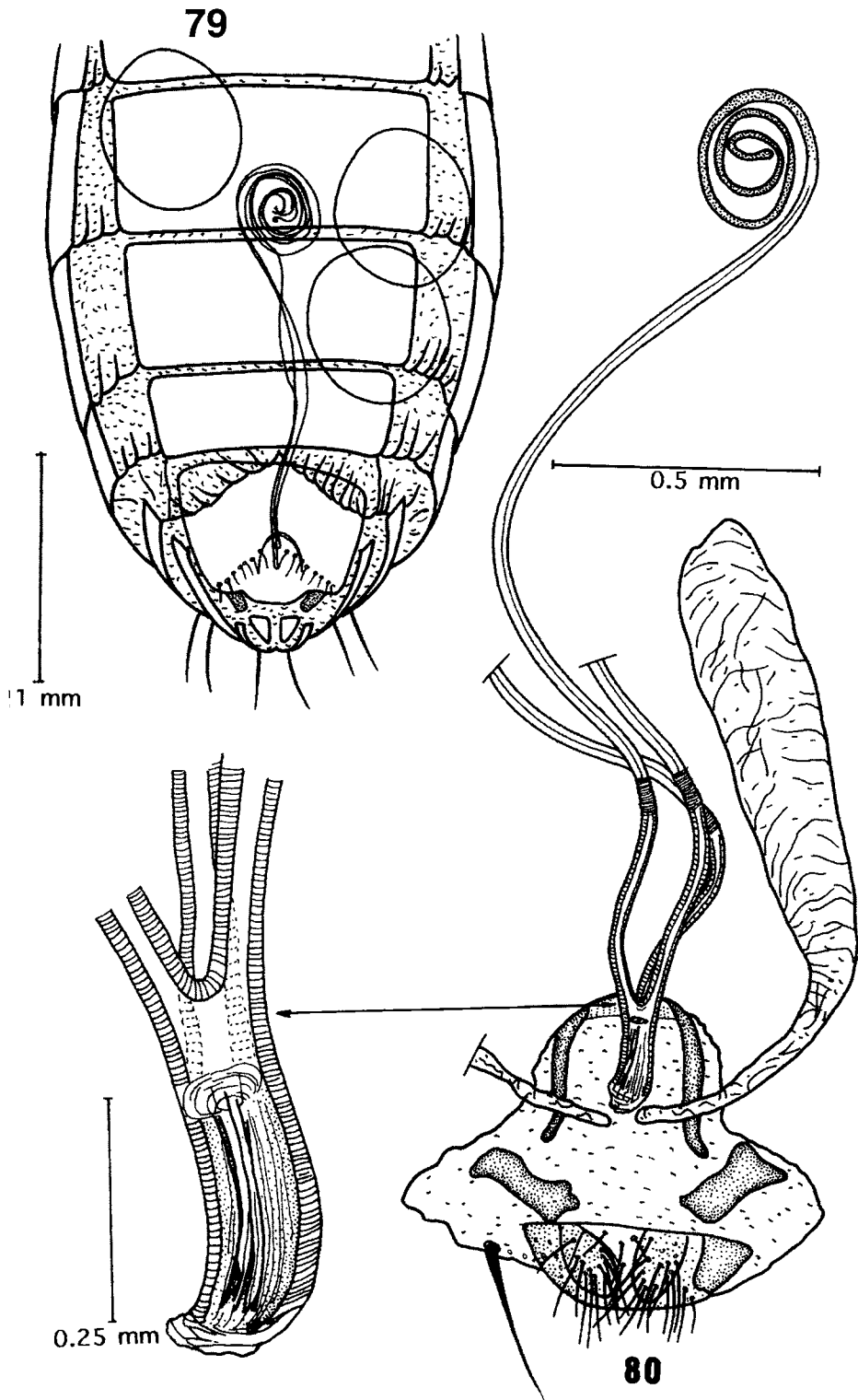
Figs. 69-70. *Apoxyria americana* Carrera, situation of the spermathecae in the abdomen (69) and spermathecae (70).



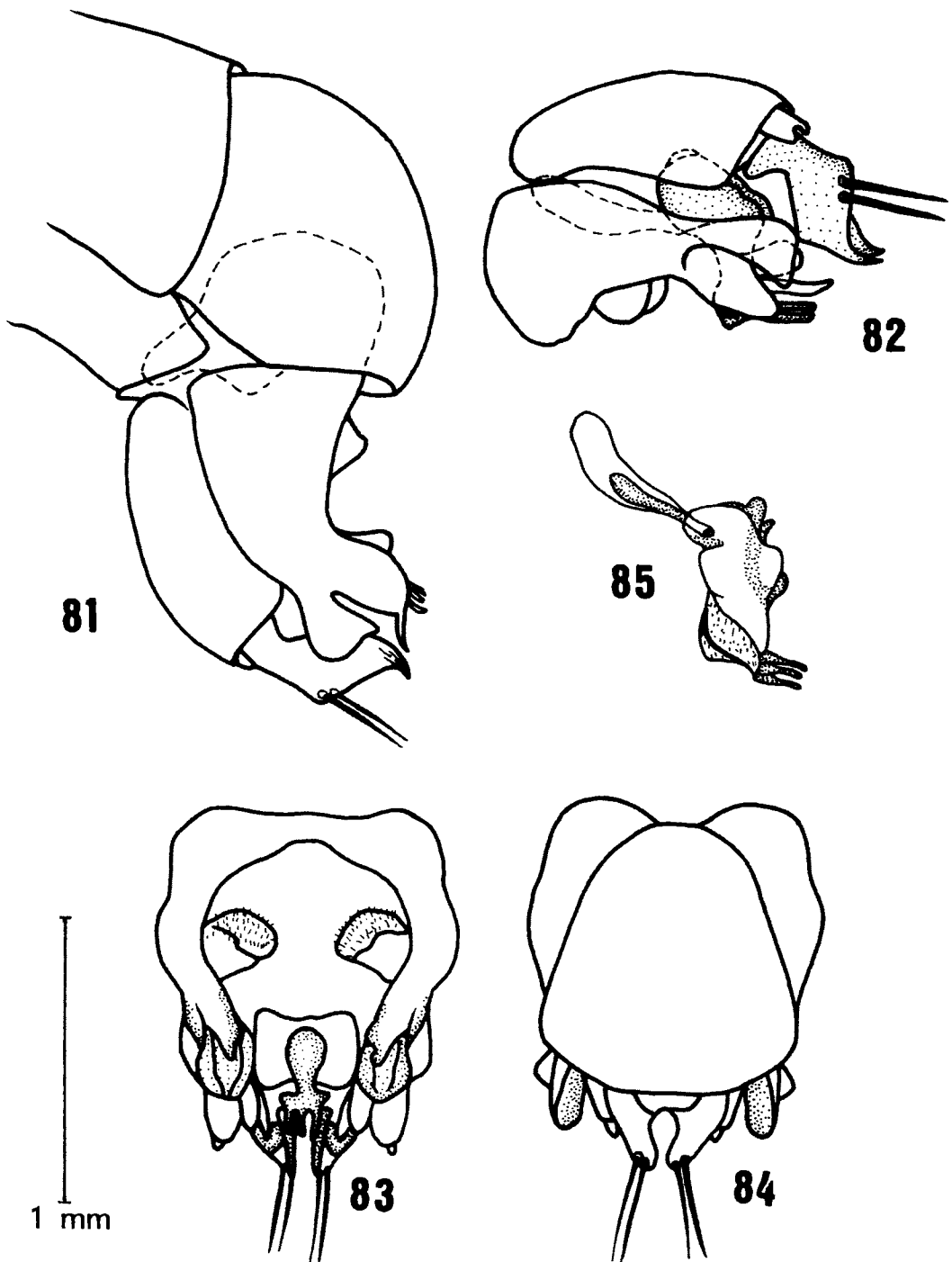
Figs. 71-74. *Laphygmolestes flavipes* Hull, male terminalia in lateral (71), ventral (72) and dorsal (73) views, and aedeagus in lateral view (74).



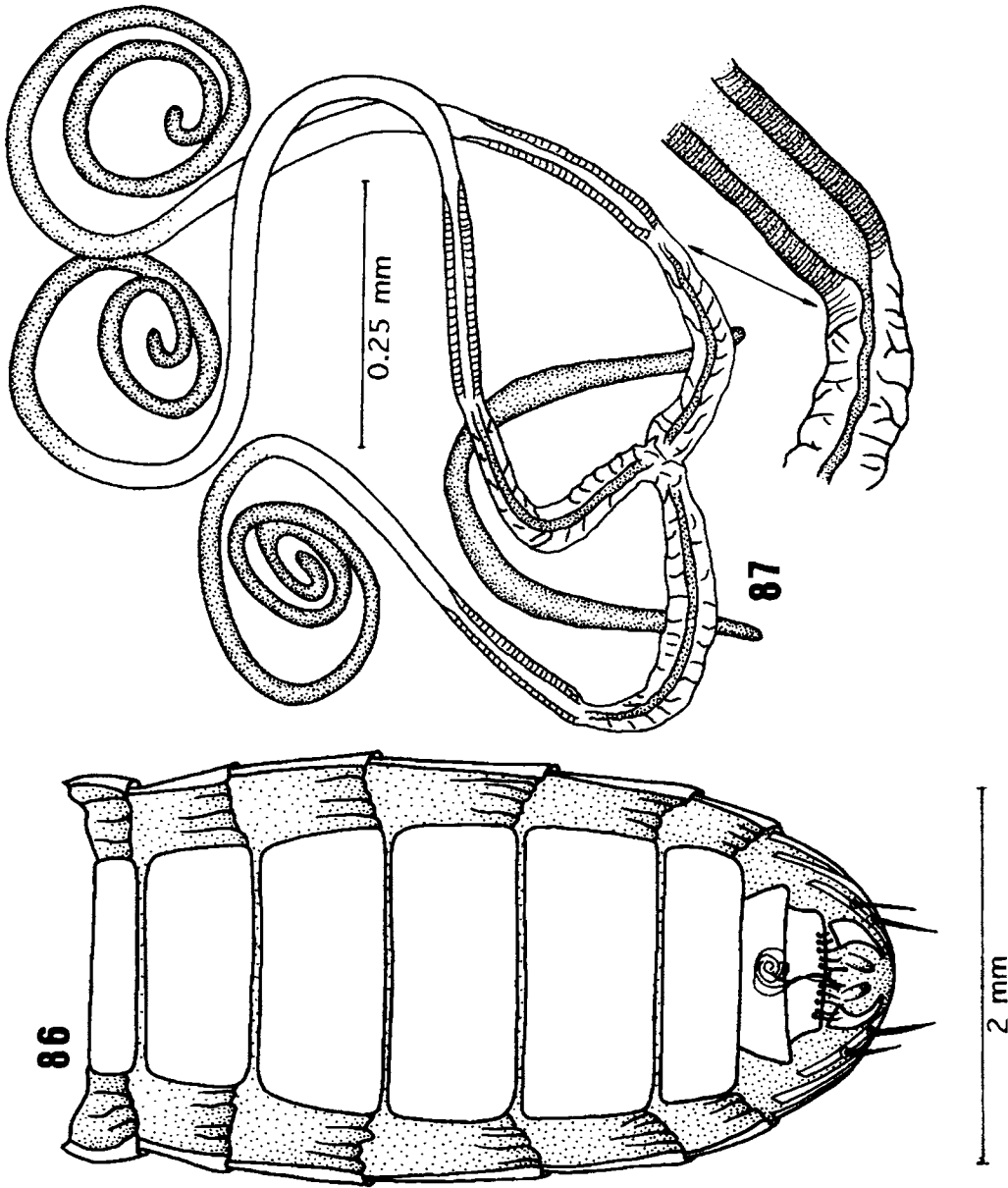
Figs. 75-78. *Cymbipyga cymbafera* (Artigas), male terminalia in lateral (75), ventral (76) and dorsal (77) views, and aedeagus in lateral view (78).



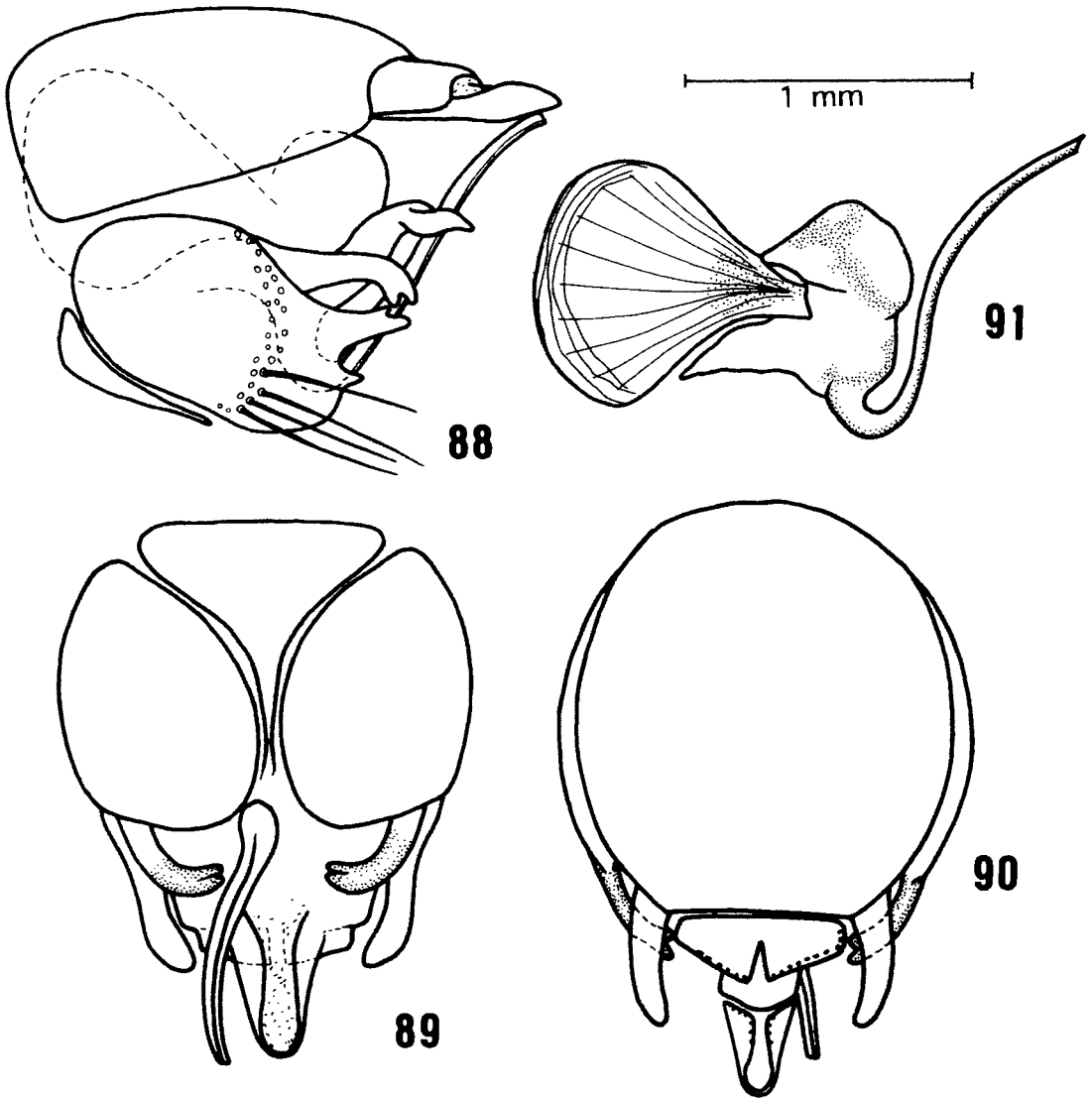
Figs. 79-80. *Cymbipyga cymbafera* (Artigas), situation of the spermathecae in the abdomen (79) and spermathecae (80).



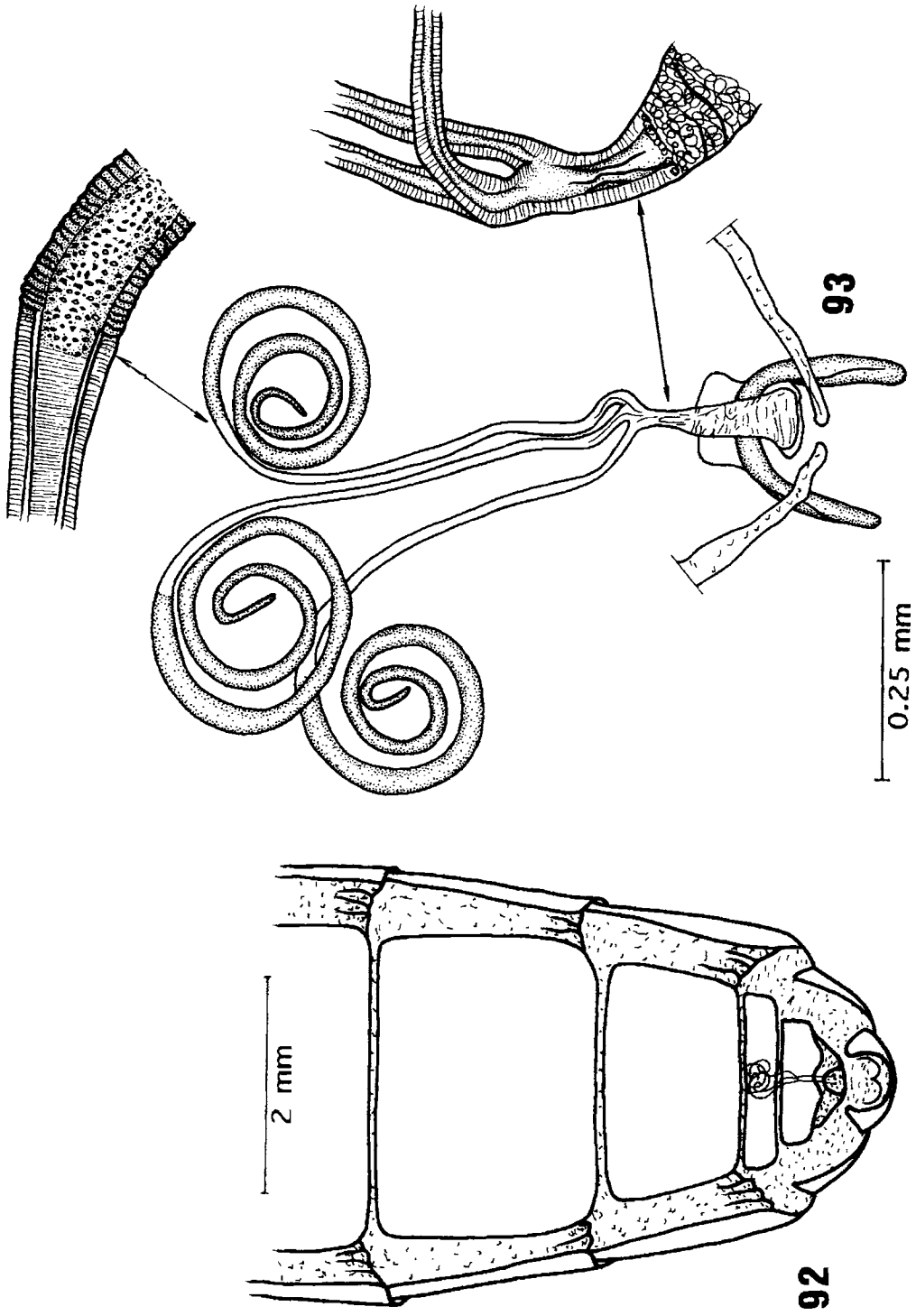
Figs. 81-85. *Psilocurus* sp., male terminalia 'in loco' (81), and in lateral (82), ventral (83) and dorsal (84) views, and aedeagus in lateral view (85).



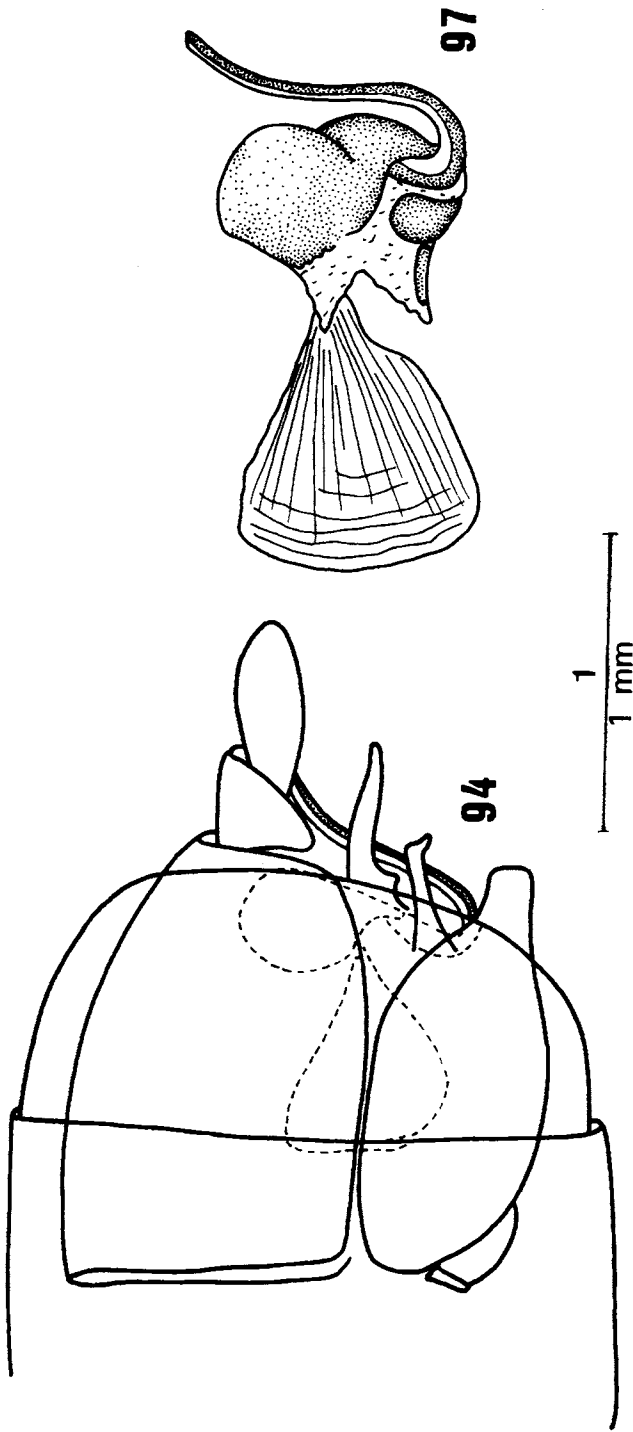
Figs. 86-87. *Psilococcus* sp., situation of the spermathecae in the abdomen (86) and spermathecae (87).



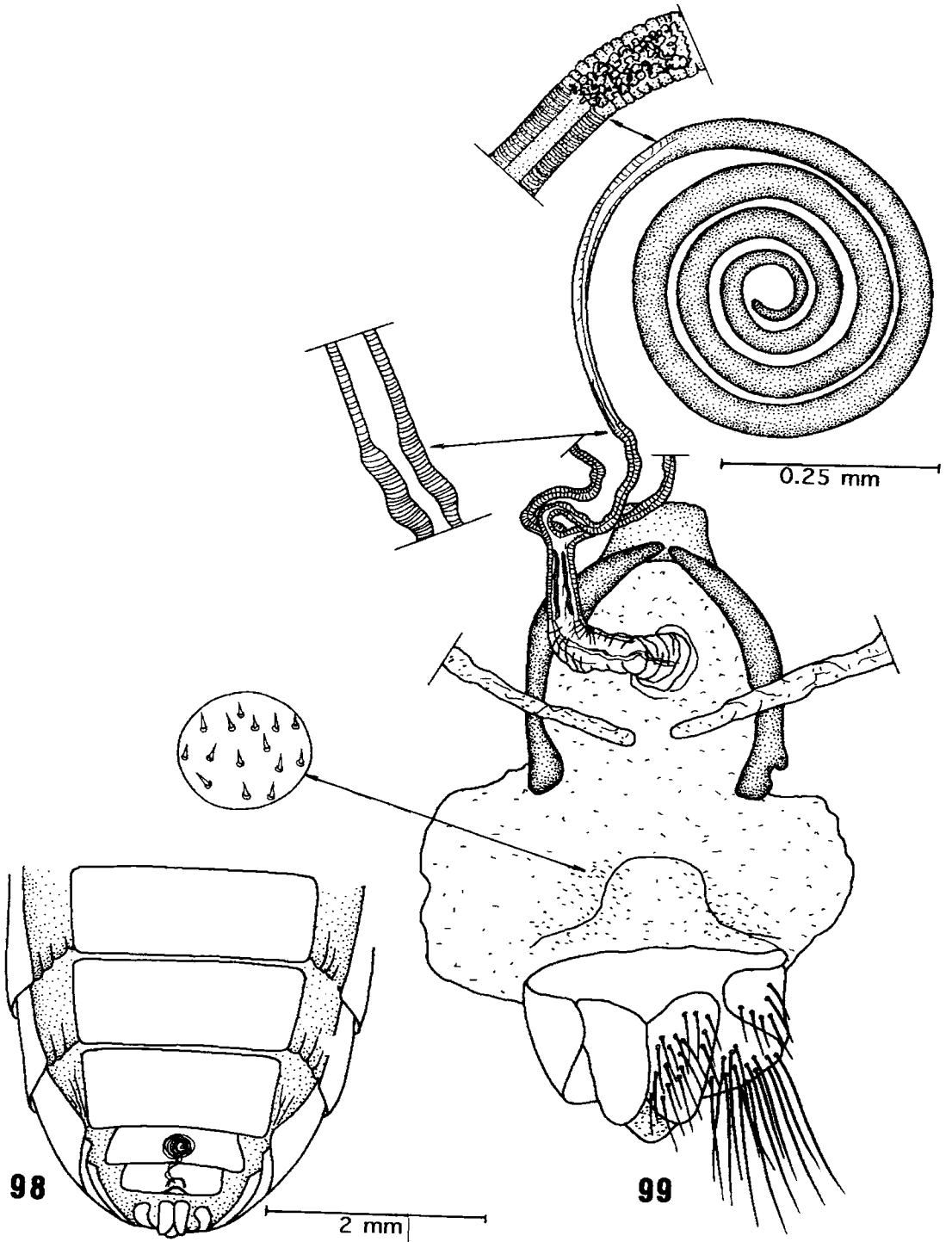
Figs. 88-91. *Makahyba nordestina* Carrera, male terminalia in lateral (88), ventral (89) and dorsal (90) views, and aedeagus in lateral view (91).



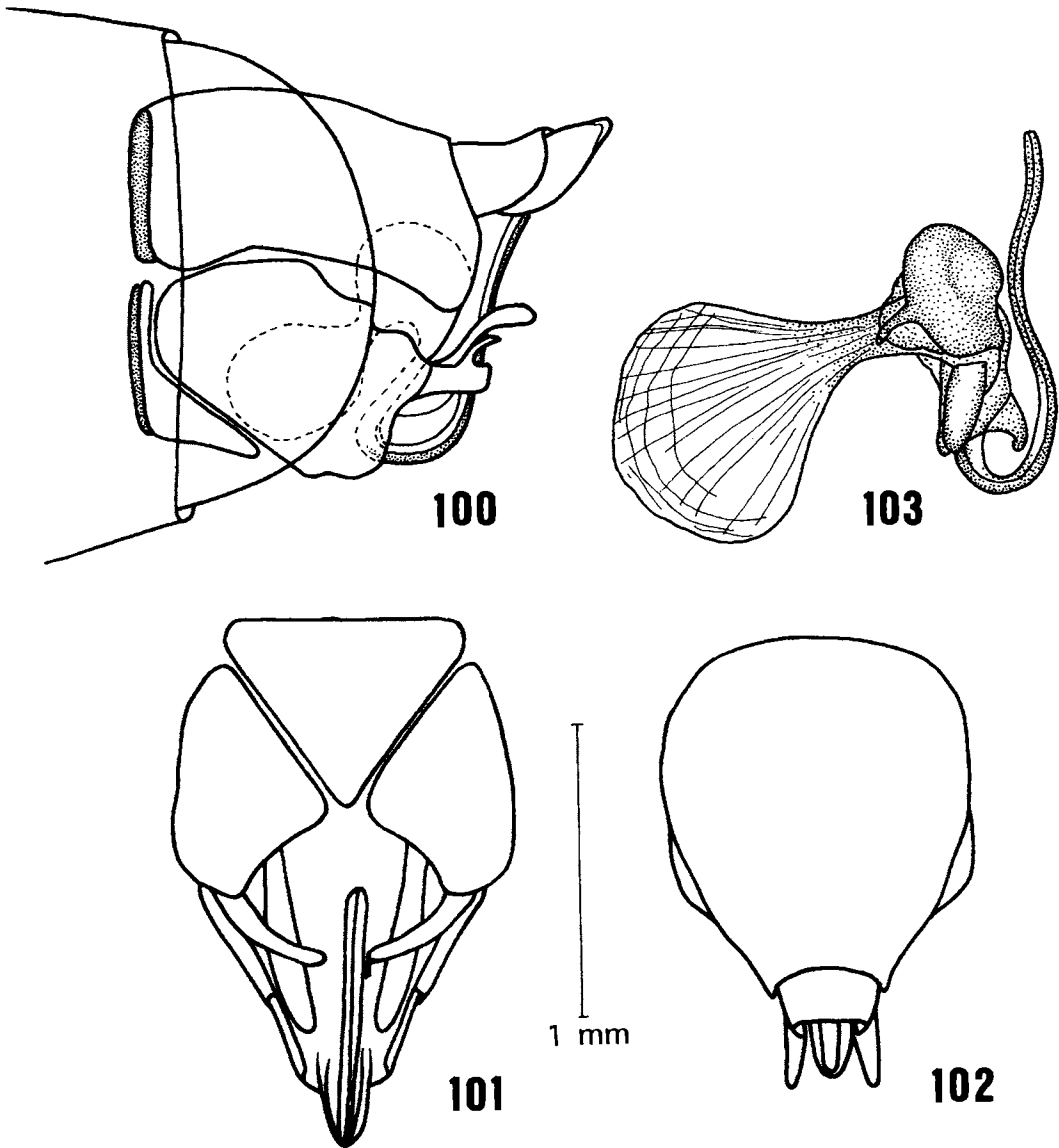
Figs. 92-93. *Macachyba nordestina* Carrera, situation of the spermathecae in the abdomen (92) and spermathecae (93).



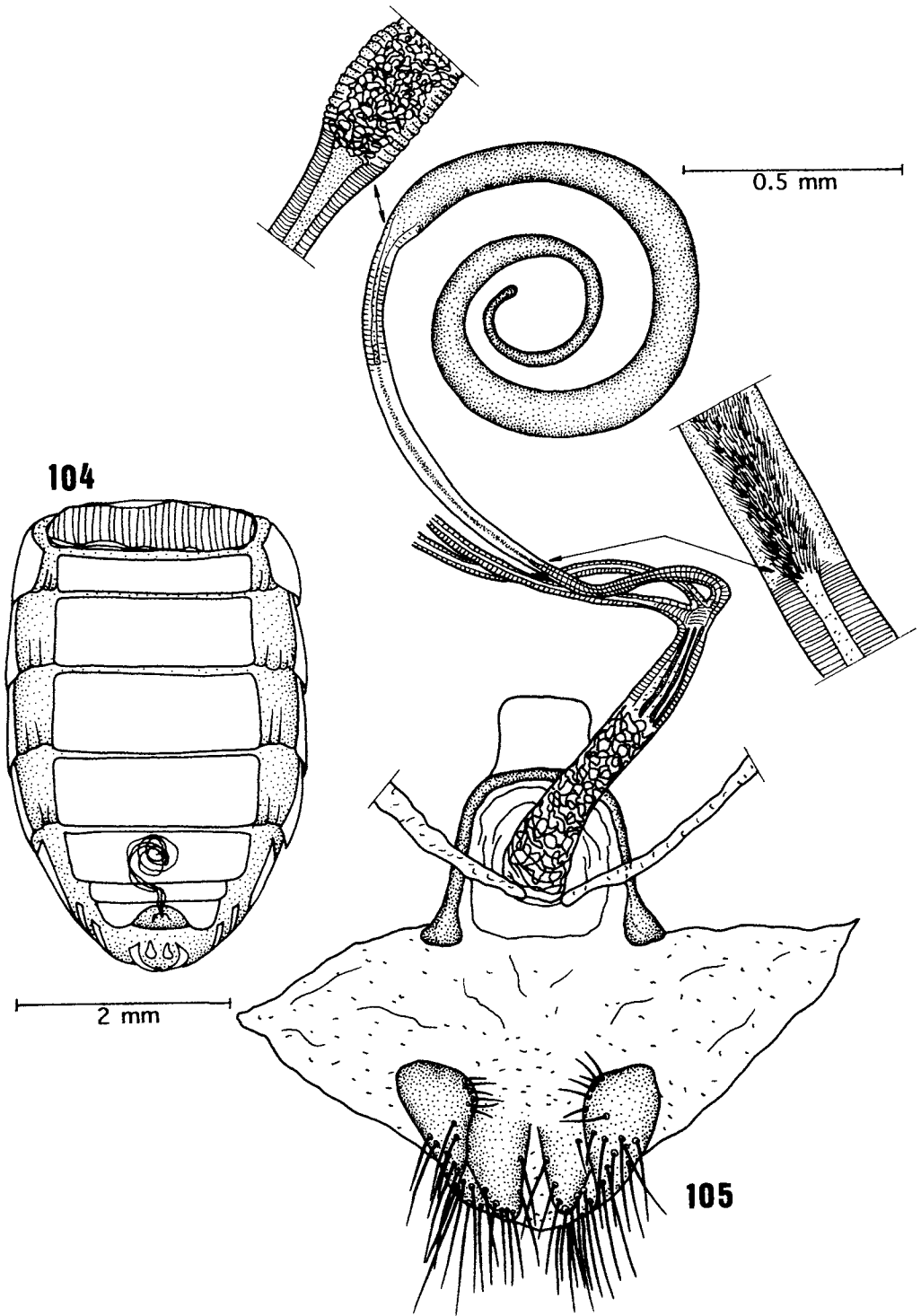
Figs. 94-97. *Martinia* sp., male terminalia 'in loco', lateral view (94) and in ventral (95) and dorsal (96) views, and aedeagus in lateral view (97).



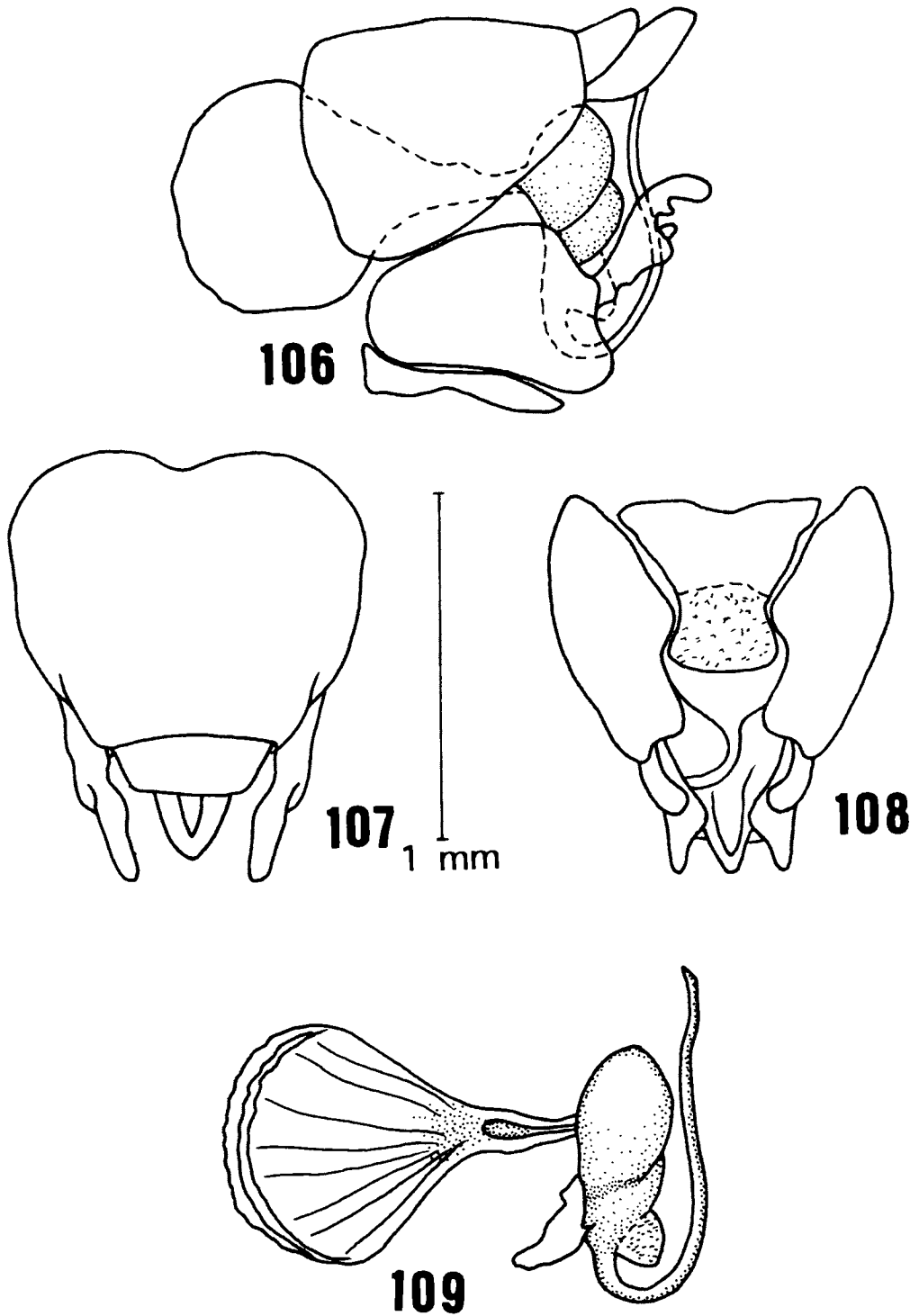
Figs. 98-99. *Martinia* sp., situation of the spermathecae in the abdomen (98) and spermathecae (99).



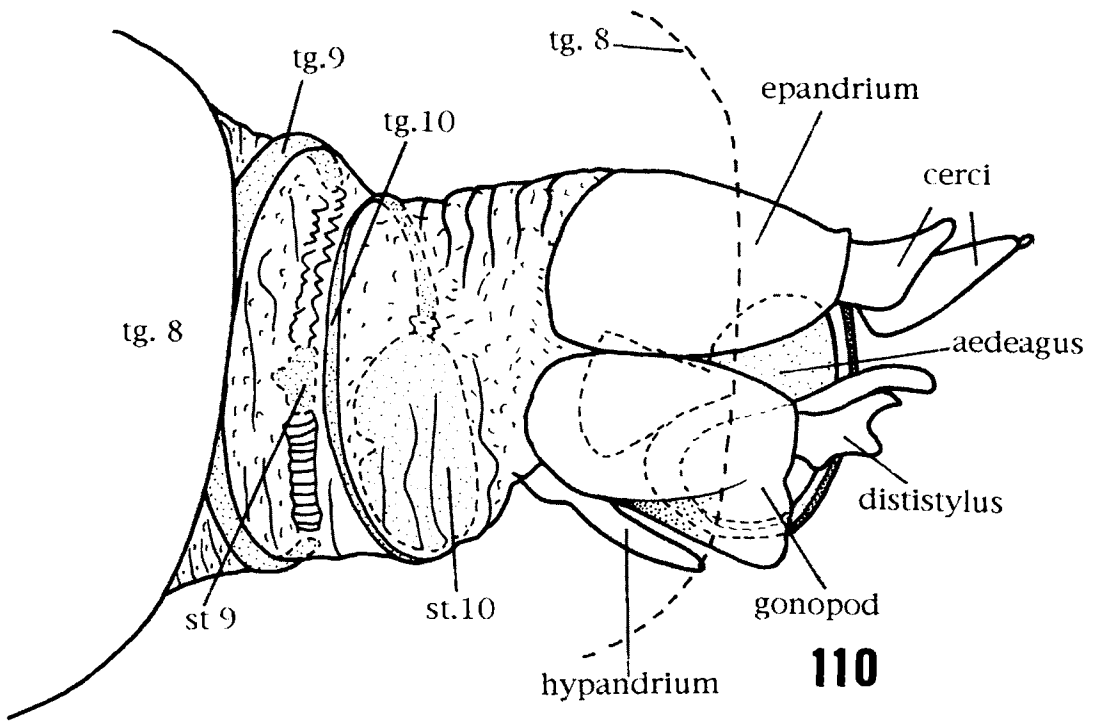
Figs. 100-103. *Cochleariocera neusae*, gen. n., sp. n., male terminalia 'in loco', lateral view (100), and in ventral (101) and dorsal (102) views, and aedeagus in lateral view (103).



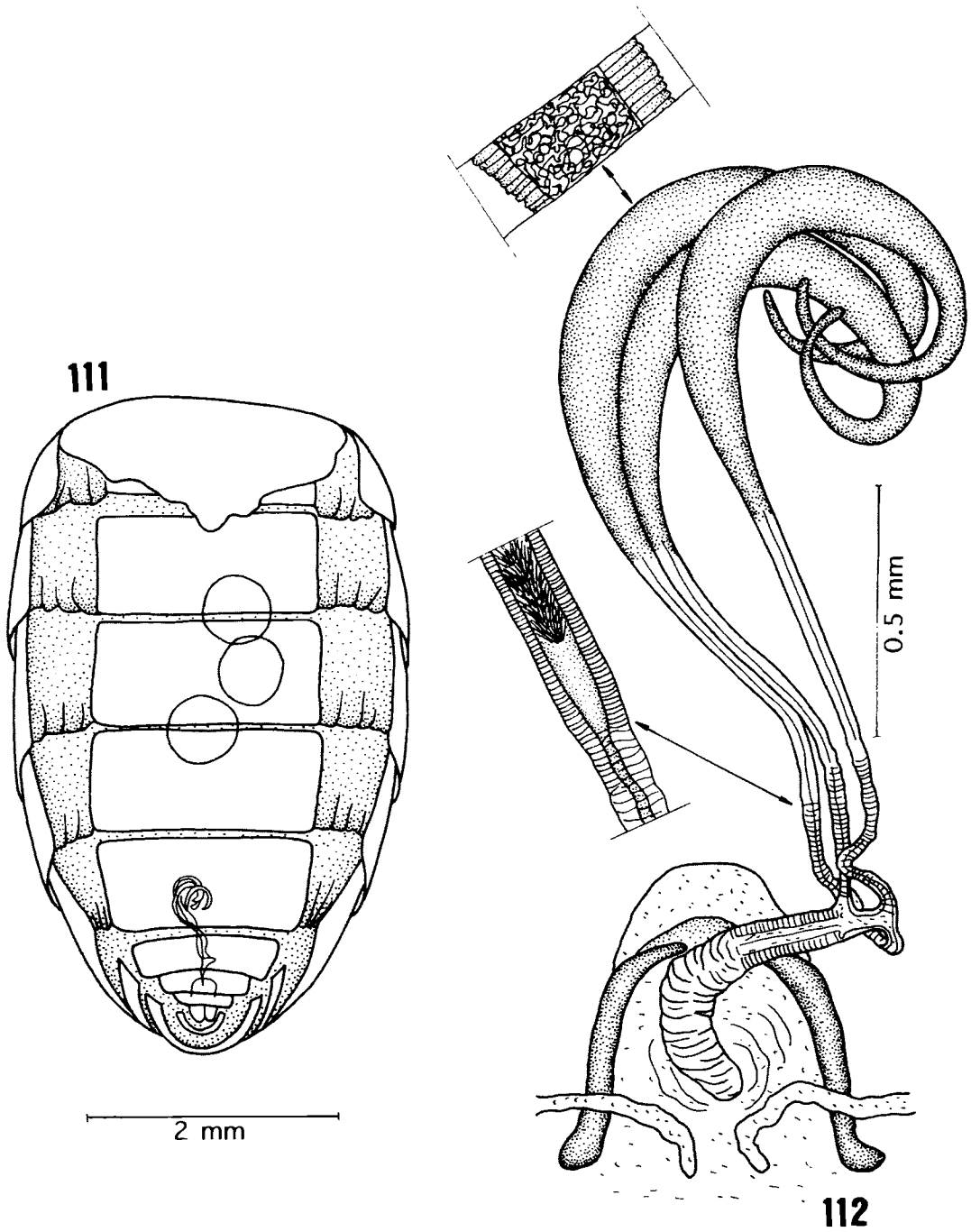
Figs. 104-105. *Cochleariocera neusae*, gen. n., sp. n., situation of the spermathecae in the abdomen (104) and spermathecae (105).



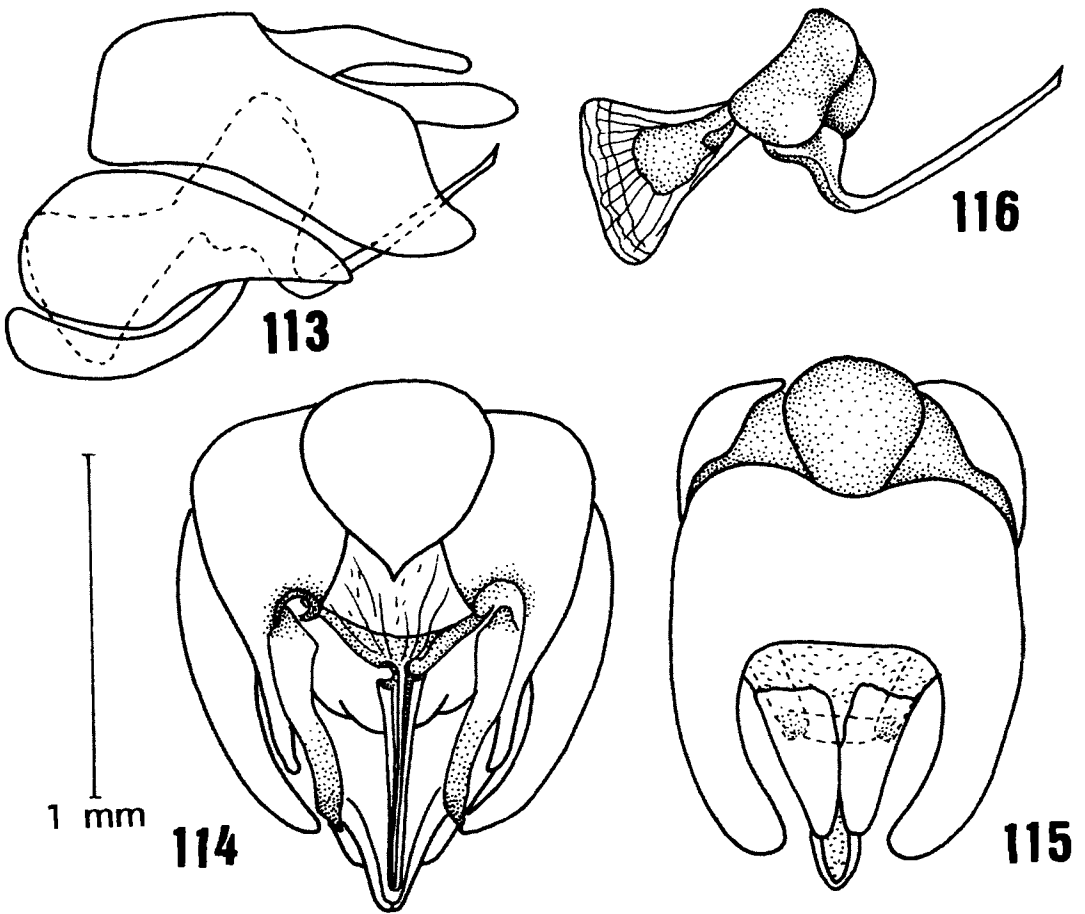
Figs. 106-109. *Protometer evae*, gen. n., sp. n., male terminalia in lateral (106), dorsal (107) and ventral (108) views, and aedeagus in lateral view (109).



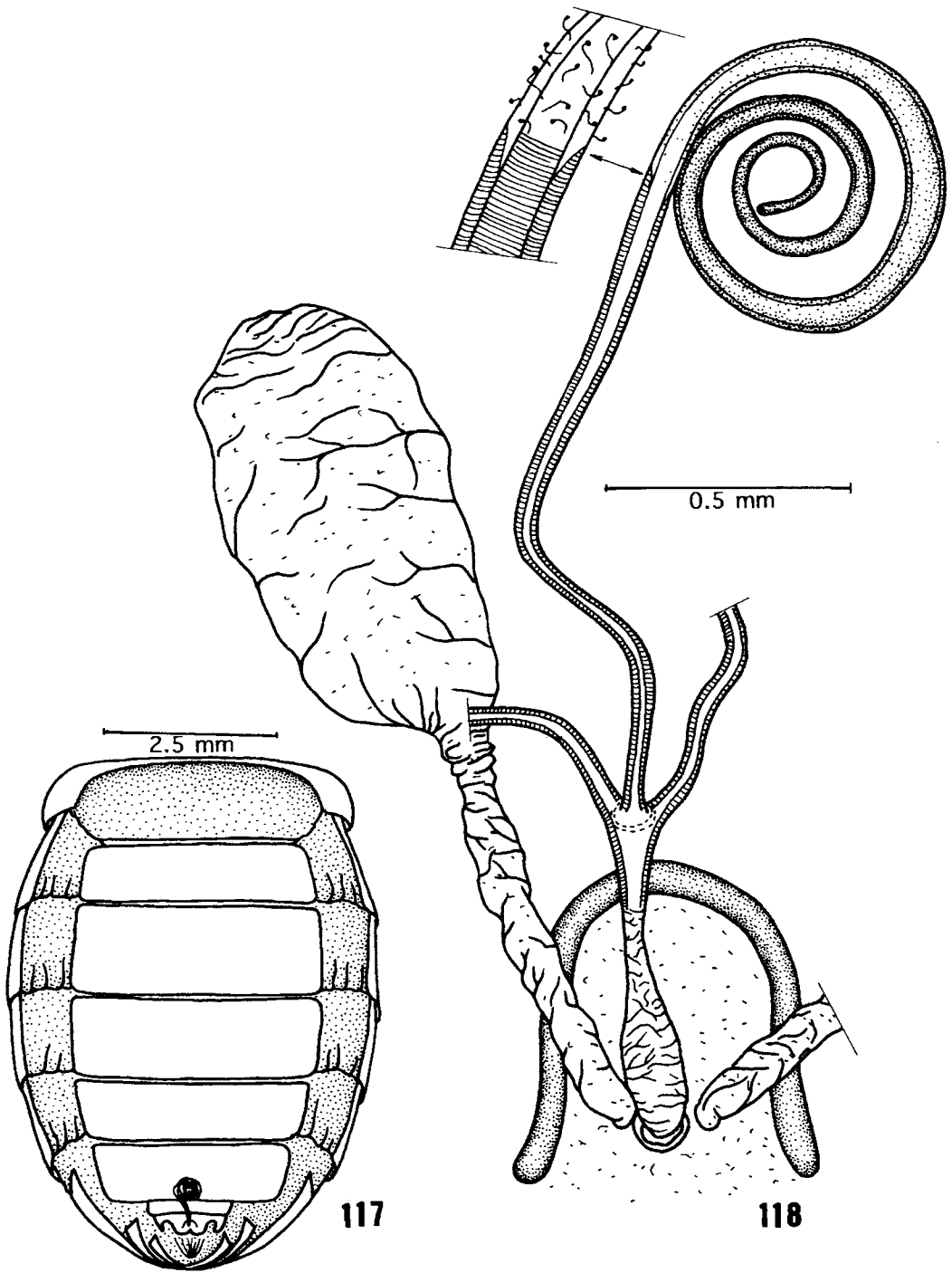
Figs. 110. *Protometer evar*, gen. n., sp. n., male terminalia and apex of abdomen, lateral view. tg 8: tergite 8; tg 9: tergite 9; tg 10: tergite 10; st 9: sternite 9; st 10: sternite 10; epandrium; cerci; aedeagus; hypandrium, gonopods, dististylus.



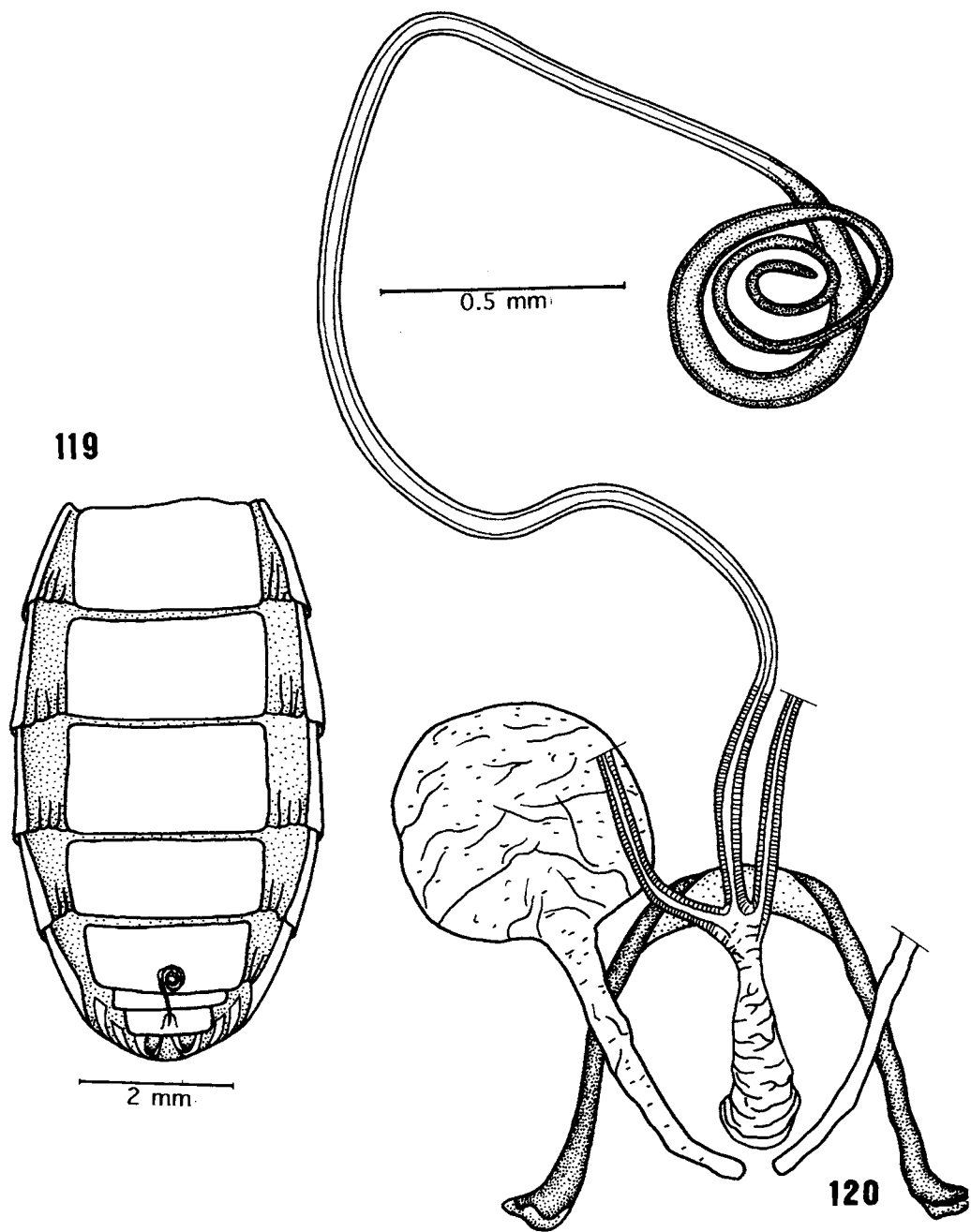
Figs. 111-112. *Protometer evae*, gen. n., sp. n., situation of the spermathecae in the abdomen (111) and spermathecae (112).



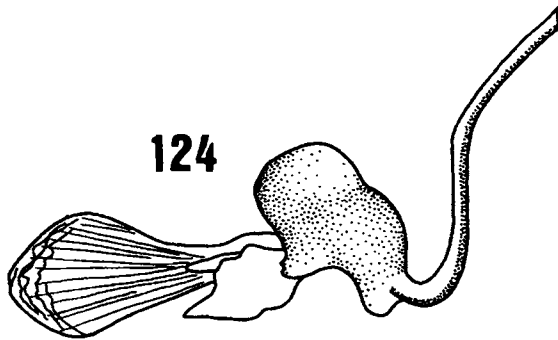
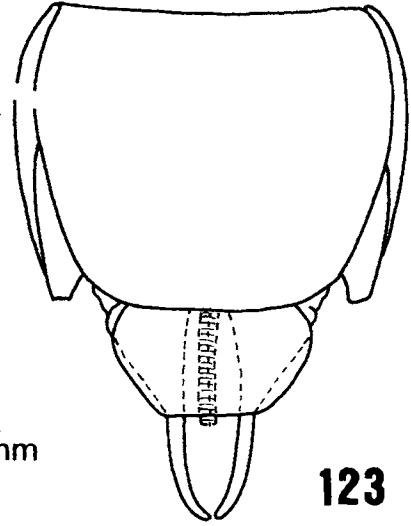
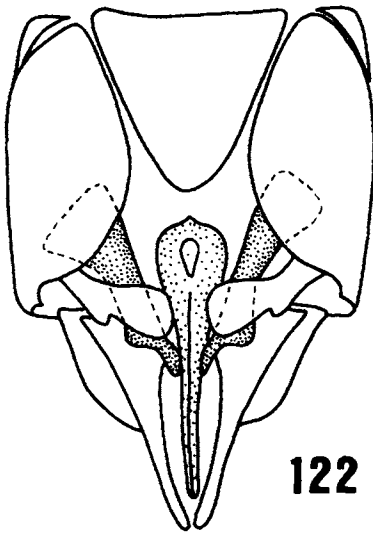
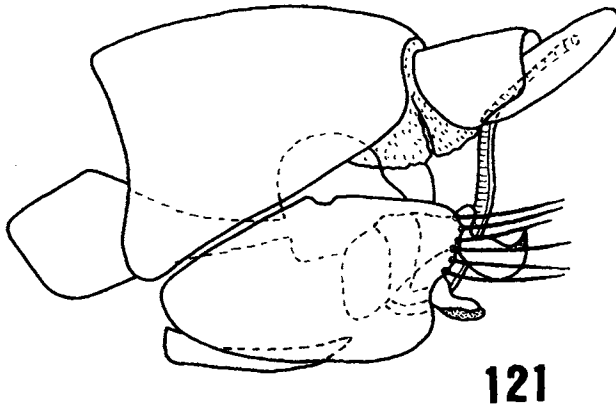
Figs. 113-116. *Trictoscelis femorata* Roeder, male terminalia in lateral (113), ventral (114) and dorsal (115) views, and aedeagus in lateral view (116).



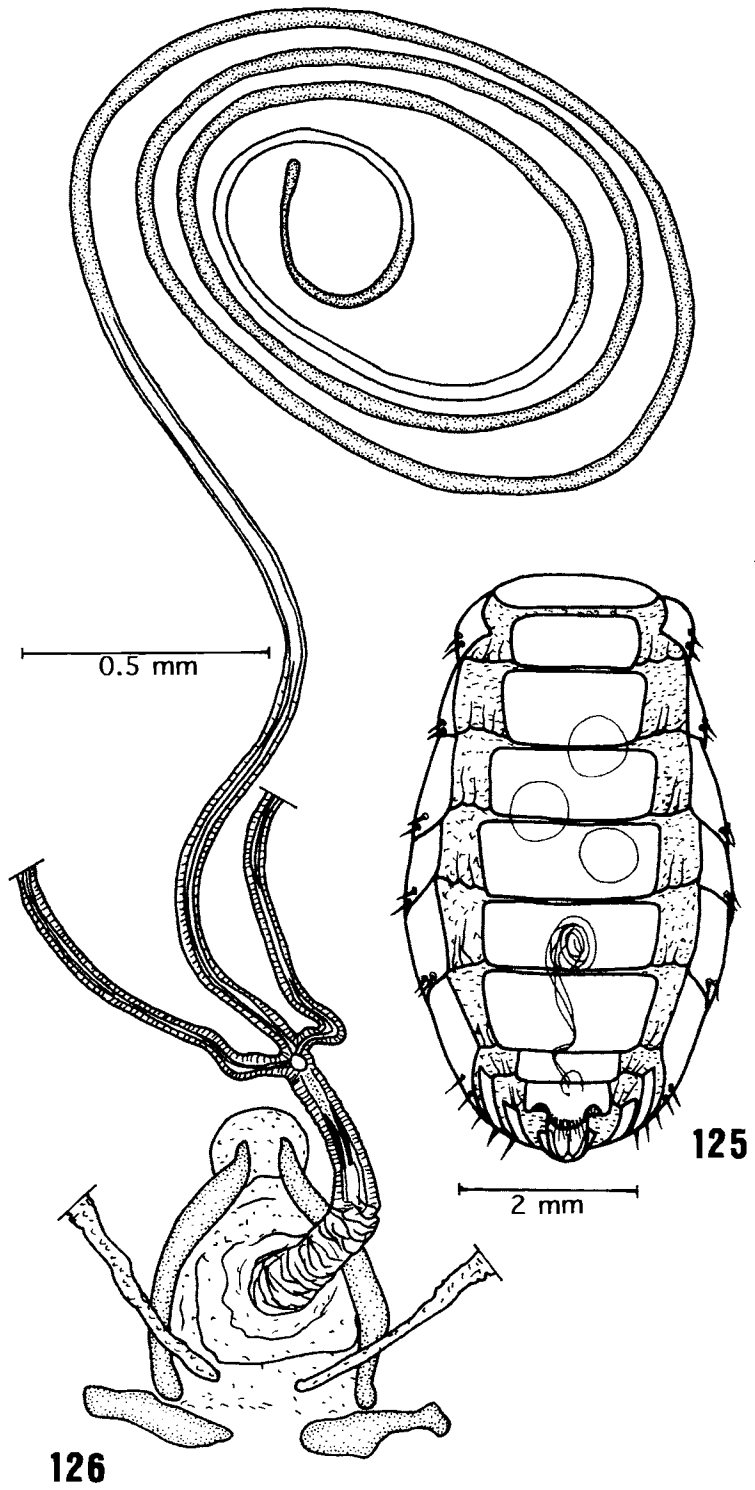
Figs. 117-118. *Triclioscelis femorata* Roeder, situation of the spermathecae in the abdomen (117) and spermathecae (118).



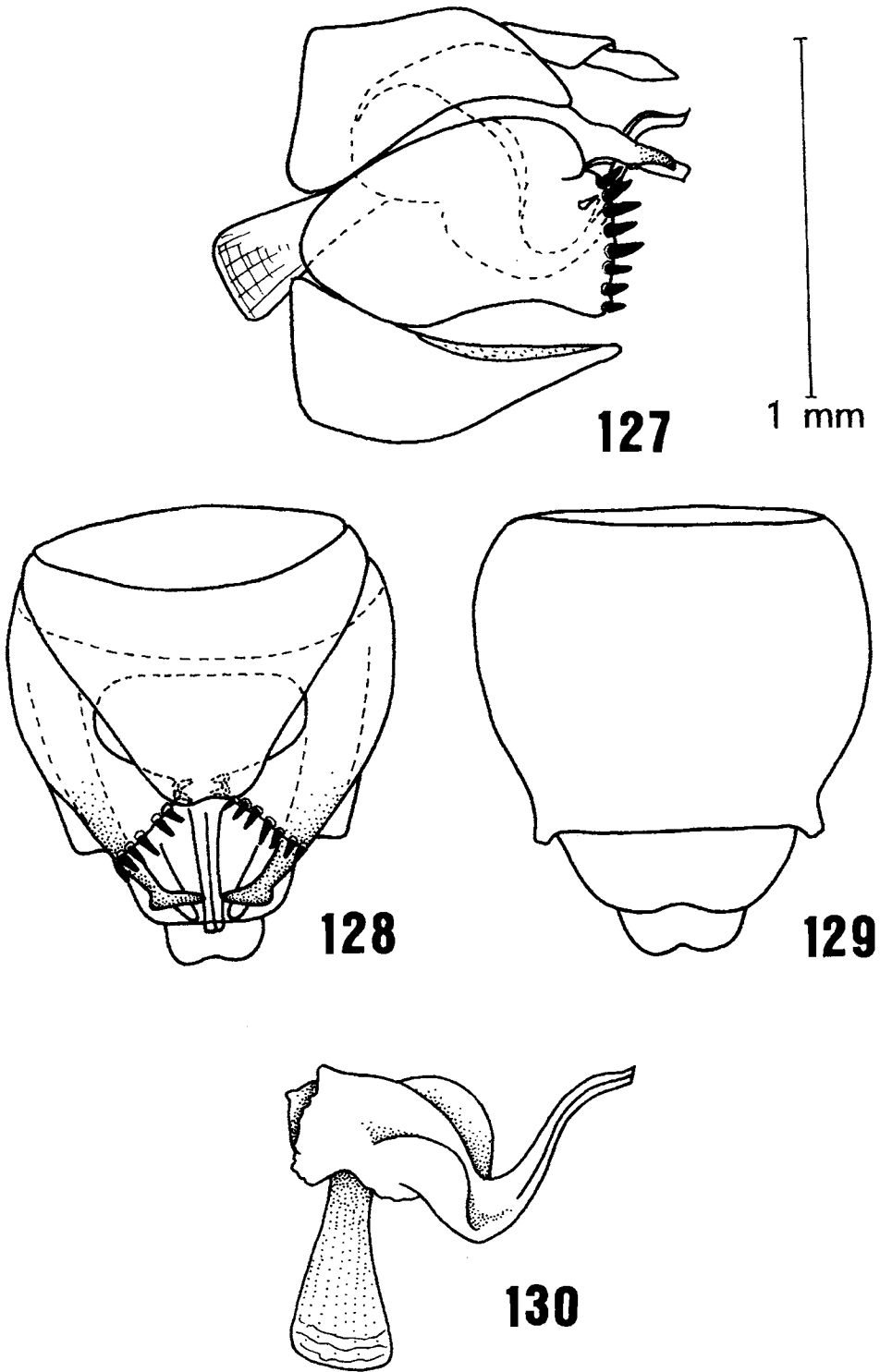
Figs. 119-120. *Perasis* sp., situation of spermathecae in the abdomen (119) and spermathecae (120).



Figs. 121-124. *Asicya* sp., male terminalia in lateral (121), ventral (122) and dorsal (123) views, and aedeagus in lateral view (124).

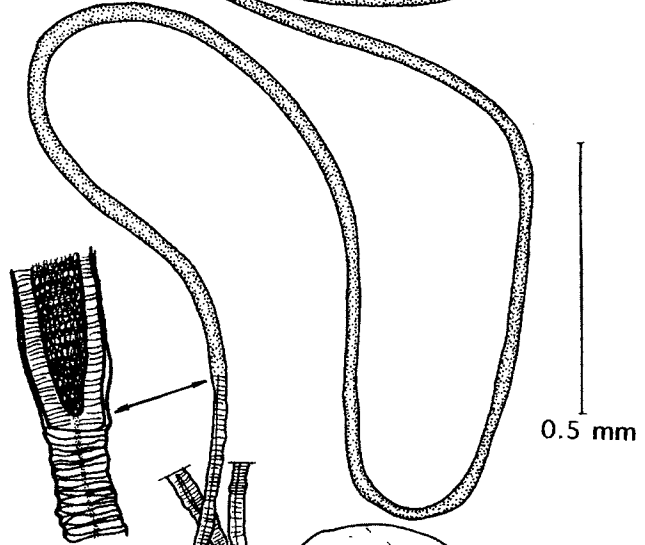
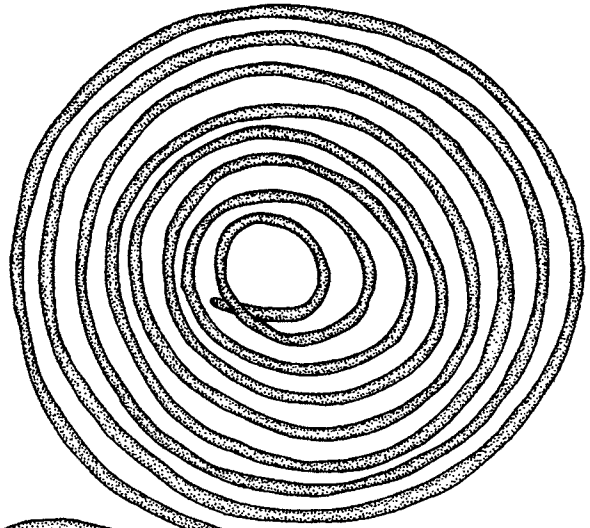
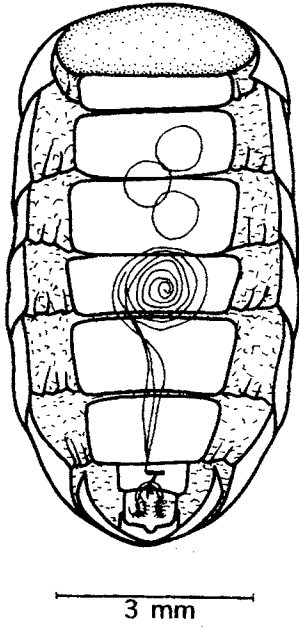


Figs. 125-126. *Asicya* sp., situation of the spermathecae in the abdomen (125) and spermathecae (126).

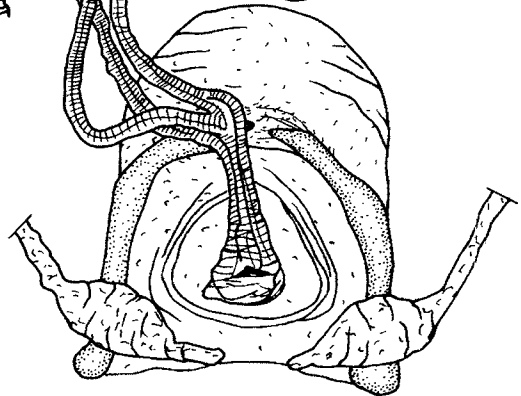


Figs. 127-130. *Gymnotriclis coscaronorum*, gen. n., sp. n., male terminalia in lateral (127), ventral (128) and dorsal (129) views, and aedeagus in lateral view (130).

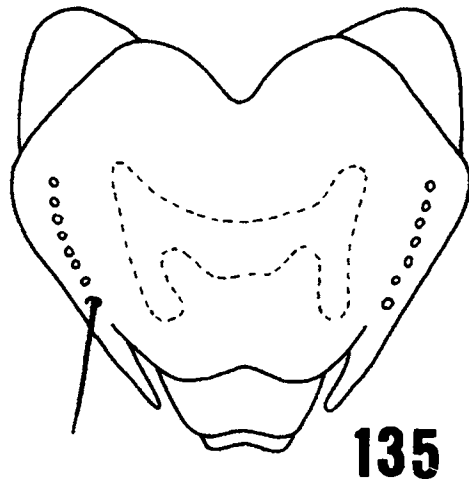
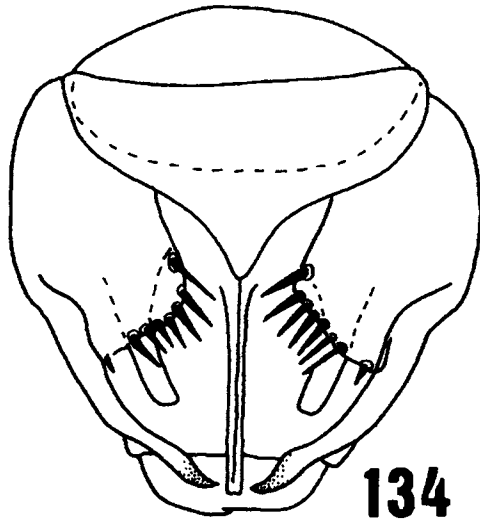
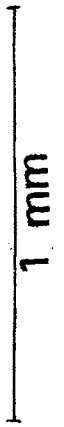
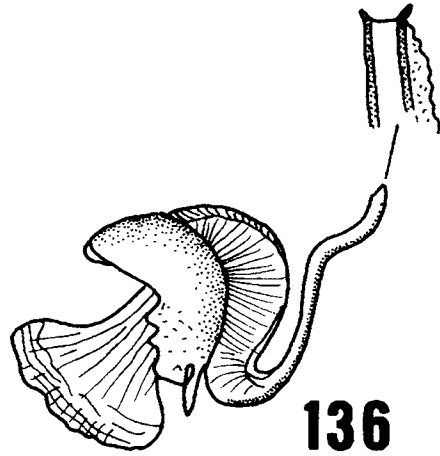
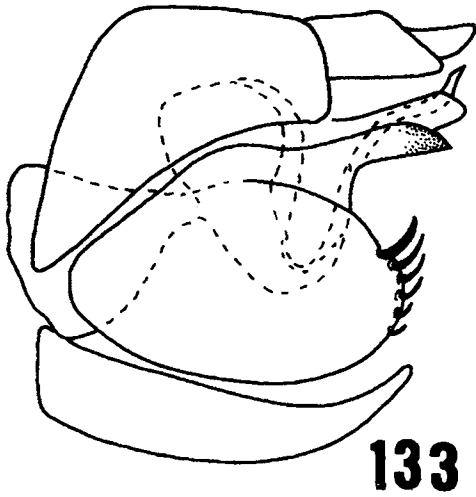
131



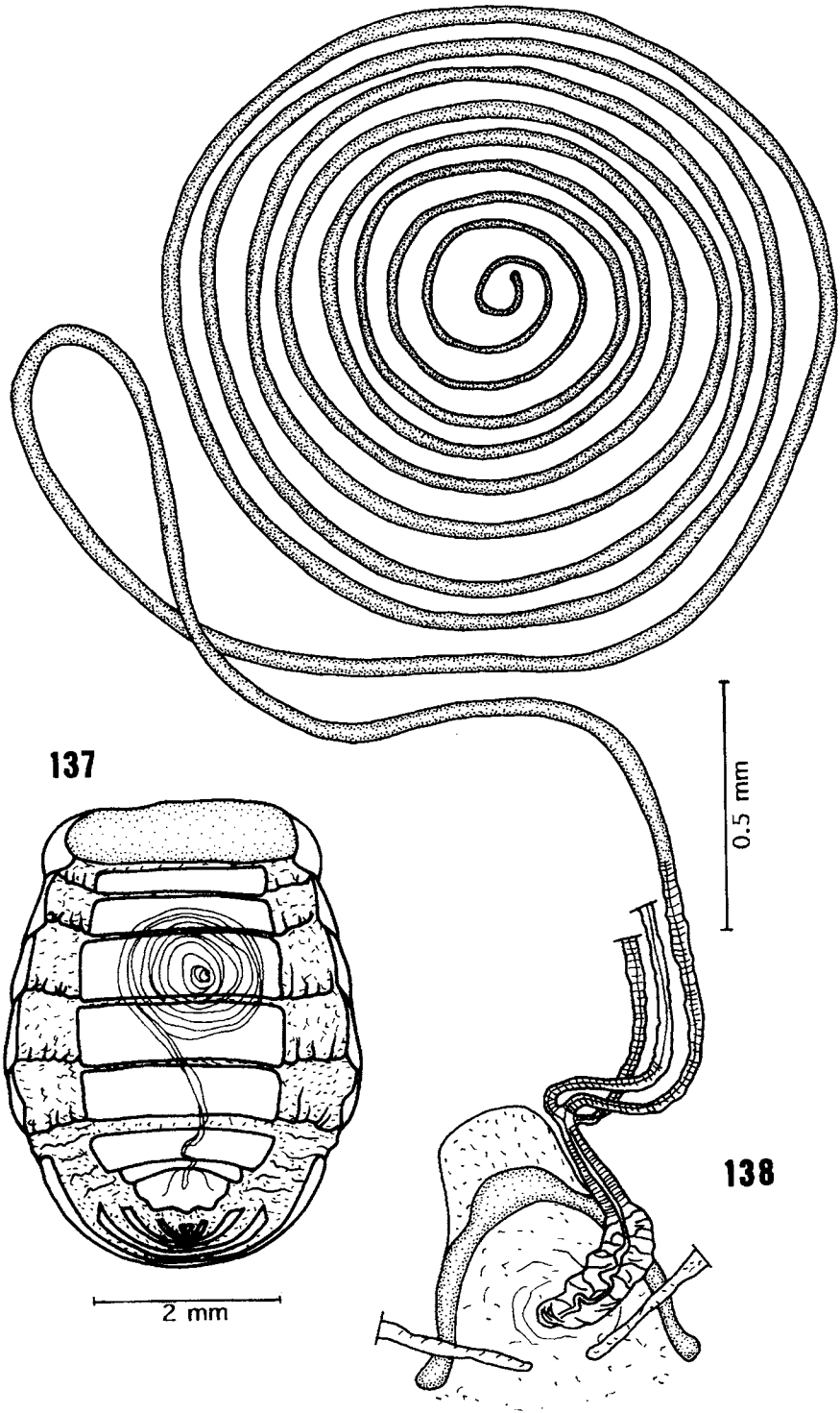
132



Figs. 131-132. *Gymnotriclis coscaronorum*, gen. n., sp. n., situation of the spermathecae in the abdomen (131) and spermathecae (132).



Figs. 133-136. *Chrysotriclis willinkorum*, gen. n., sp. n., male terminalia in lateral (133), ventral (134) and dorsal (135) views, and aedeagus in lateral view (136).



Figs. 137-138. *Chrysoiclis willinkorum*, gen. n., sp. n., situation of the spermathecae in the abdomen (137) and spermathecae (138).

- camposi* Curran, 1931: 8. Type-locality: Ecuador, Guayaquil. HT: AMNH.
caudatus Williston, 1901: 308, pl. 5, fig. 20. Type-locality: Mexico, Guerrero: Chilpancingo, Amula and Tepetlapa. ST: BMNH.
puellus Bromley, 1934: 92. Type-locality: USA, Texas, Bexar Co. HT ?

Genus *Triclioscelis* Roeder

- Triclioscelis* Roeder, 1900: 337. Type-species, *burmeisteri* Roeder (sub. des., Hermann, 1920: 183).
burmeisteri Roeder, 1900: 337. Type-locality: Argentina, Tucumán. HT ?
femorata Roeder, 1900: 339. Type-locality: Argentina, Santa Fe. HT ?
perfecta Curran, 1934: 2. Type-locality: Ecuador, Gulgo de Guayaquil, Puerto Grande, Isla Puná. HT: AMNH.
salti (Curran), 1931: 18 (*Laphystia*). Type-locality: Colombia, Magdalena, Ciénaga. HT: AMNH.

Genus *Zabrops* Hull

- Zabrops* Hull, 1957: 90. Type-species, *Triclis tagax* Williston (orig. des.).
 Ref. - Fisher, 1977 (rev.).
janiceae Fisher, 1977: 211, figs. 55-57, 65, 72-73. Type-locality: Mexico, Baja California, 20 mi. w. of Bahía de Los Angeles. HT: CAS.
tagax Williston, 1883: 9, pl. 1, figs. 6, 6a. Type-locality: USA, California, Kern Co. HT: UK.
tagax argutus Fisher, 1977: 204, figs. 46, 60, 67, 73. Type-locality: Mexico, Baja California, 7 mi. nw. of El Rosario. HT: CAS.
thologaster Fisher, 1977: 210, figs. 52-54, 64, 71, 73. Type-locality: Mexico, Baja California, 0.5 mi. ne. of El Molino, Bahía San Quintín. HT: CAS.

Unplaced Laphystiinae

- columbina* Schiner, 1868: 175 (*Laphystia*). Type-locality: Colombia. ST: WIEN (n° 5616). Marginal cell closed.
robusta Hermann, 1908: 161, fig. 7 (*Laphystia*).

Type-locality: Peru, Urubamba R., Rosalina, 700 m. HT ? (terminalia eaten away) MUN.

ACKNOWLEDGEMENTS

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REFERENCES

- Artigas, J.N., 1970. Los asílidos de Chile (Diptera-Asilidae). Gayana, Zool. 17: 1-472, 504 figs.
 Artigas, J.N., 1971. Las estructuras quitinizadas de la spermatheca y funda del pene de los asílidos y su valor sistemático a través del estudio por taxonomía numérica. Gayana, Zool. 18: 1-106, 138 figs.
 Artigas, J.N., 1983. *Apoxyria cymbafer*, n.sp., nueva especie y primer registro del género para Chile (Diptera, Asilidae). Bol. Soc. Biol. Concepción 54: 27-33, 16 figs.
 Bromley, S.W., 1934. The robber flies of Texas (Diptera: Asilidae). Ann. ent. Soc. Am. 27: 74-113, 2 pls.
 Carrera, M., 1947. Novo genero e nova espécie de Asilidae (Diptera) do nordeste brasileiro. Papéis avulsos Zool., S. Paulo 8(3): 203-208, 9 figs.
 Carrera, M., 1955. Novos generos e novas espécies de Dasyopogoninae neotropicae (Diptera, Asilidae). Papéis avulsos Zool., S. Paulo 12(2): 99-108, 10 figs.
 Coquillett, D.W., 1904. New North American Diptera. Proc. ent. Soc. Wash. 6: 90-98.
 Curran, C.H., 1931. New American Asilidae (Diptera). II. Am. Mus. Novit. 487: 1-25.
 Curran, C.H., 1934. New American Asilidae (Diptera). III. Am. Mus. Novit. 752: 1-18, 1 fig.
 Fisher, E.M., 1977. A review of the North American genera of Laphystiini, with a revision of the genus *Zabrops* Hull (Insecta, Diptera: Asilidae). Proc. Calif. Acad. Sci. (4) 41(5): 183-213, 74 figs., 1 table.
 Hermann, F., 1905. Beitrag zur Kenntnis der Asiliden (Dipt.). Berlin ent. Z. 50: 14-42, 29 figs.
 Hermann, F., 1908. Beitrag zur Kenntnis der Asiliden (IV). Dipt. Berlin ent. Z. 53: 152-170, pl. 4.
 Hermann, F., 1920. Beitrag zur allgemeinen Systematik der Asiliden. Zool. Jahrb. (Abt. Syst.) 43: 161-194.
 Hull, F.M., 1957. Some flies of the family Asilidae (Diptera). Psyche 64: 90-96.
 Hull, F.M., 1958a. A new genus and two new species of Asilidae (Diptera). Bull. Brooklyn ent. Soc. 53: 94-99.
 Hull, F.M., 1958. Some flies of the family Asilidae (Diptera) from Australia and Brazil. Proc. ent. Soc. Lond. (B) 27(9-10): 160-164.

- Hull, F.M., 1962. Robber flies of the world. The genera of the family Asilidae. *Smithson. Inst. Bull.* 224(1): 1-432; (2): 433-907, 2536 figs.
- Loew, H., 1847. Ueber die europäischen Raubfliegen (Diptera-Asilica). *Linnaea ent.* 2: 384-568, 587-591.
- Loew, H., 1858. Bericht über die neueren Erscheinungen auf dem Gebiete der Dipterologie. *Berlin ent. Z.* 2: 325-349.
- Loew, H., 1874. Neue nordamerikanische Dasygogonina. *Berlin ent. Z.* 18: 353-377.
- Lynch Arribáizaga, E., 1880. *Asilides argentinos*. *An. Soc. cient. argent.* 9: 26-36, 49-57, 224-230, 252-265.
- Philippi, R.A., 1865. Aufzählung der chilenischen Dipteren. *Verh. zool.-bot. Ges. Wien* 15: 595-782.
- Roeder, V. von, 1900. *Trichioscelis*, nov. gen. dasygogoninorum (Diptera). *Stettin. ent. Ztg.* 61: 337-340.
- Schiner, I.R., 1866. Die Wiedemann'schen Asiliden interpretiert und in die seither errichteten neuen Gattungen eingereht. *Verh. zool.-bot. Ges. Wien* 16: 649-722, pl. 12; (Nachtrag), pp. 845-848.
- Schiner, I.R., 1868. Diptera, pp. 1-388, 4 pls., *In Reise der österreichische Fregatte Novara um die Erde. Zoologie* 2(1, B). Wien.
- Speiser, P., 1920. *Hexameritia*, nom. nov. für *Eutrichodes* Hermann. *Zool. Jahrb.* 43: 447.
- Wilcox, J., 1960. *Laphystia* Loew in North America (Diptera: Asilidae). *Ann. ent. Soc. Am.* 53: 328-346, pls. 1-2.
- Williston, S.W., 1883. The North American Asilidae (Dasygogoninae, Laphriinae), with a new genus of Syrphidae. *Trans. Am. ent. Soc.* 11: 1-35, 2 pls.
- Williston, S.W., 1893. New or little known Diptera. *Kansas Univ. Qt.* 4: 107-109.
- Williston, S.W., 1901. Supplement (part), pp. 249-264, 265-272, 273-296, 297-328, 329-332, pls. 4-5, and pl. 6, figs. 1-6, *in* F.D. Godman & O. Salvin, eds. *Biologia Centrali-Americana. Zoologia-Insecta-Diptera* 1: 378 pp., 6 pls. London.