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A Revision of the Subfamily Coelidiinae (Homoptera: Cicadellidae)

V. New tribes Hikangiini, Youngolidiini, and Gabritini

By M. W. Nielson

Pacific Insects Monograph 40

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By M. W. Nielson[1]

CONTENTS

1. Research Entomologist, USDA, SEA/AR, 2000 East Allen Road, Tucson, Arizona 85719, USA, and Adjunct Professor, Department of Entomology, University of Arizona, Tucson, Arizona 85721, USA.

Abstract. This paper is the 5th and last part of a worldwide revision of the subfamily Coelidiinae. The first 4 parts covered the tribes Tinobregmini, Sandersellini, and Tharrini (Part 1), Thagriini (Part 2), Teruliini (Part 3), and Coelidiini (Part 4). Three new tribes, Hikangiini, Youngolidiini, and Gabritini, are described. A revised key to all of the known tribes is given to show a more reasonable phylogenetic relationship than has been presented heretofore. Keys, descriptions, and illustrations are provided for 41 species in 8 genera. Two genera and 6 species are treated in the tribe Hikangiini, all from the Ethiopian Region. Five genera, 2 from the Ethiopian Region and 3 from the Neotropical Region, with 31 species are elucidated in the tribe Youngolidiini. In the tribe Gabritini, 1 genus and 4 species are treated. A separate checklist, with synonyms, is given for the genera and species of each tribe.

INTRODUCTION

After my preliminary study of the tribe Coelidiini (Nielson 1982), I removed a large number of species that did not fully meet all of the taxonomic qualifications of the tribe. Although a majority of these taxa lack a complete median longitudinal clypeal carina, a salient feature of Coelidiini, they possess other significant tribal characters that I believe justify their removal and relegation to 3 new tribes.

This paper treats the new tribes Hikangiini, Youngolidiini, and Gabritini as the 5th and last part of the revision of the subfamily Coelidiinae. The Hikangiini and Gabritini are not closely related to the other tribes, but members of Youngolidiini bear features that ally them with the Tharrini. The head characters, particularly the elevated, striate crown, are similar in both groups, but the genitalia, especially the aedeagus, are differentially diagnostic.

Hikangiini is restricted to the Ethiopian Region, Gabritini occurs only in the Neotropical Region and Youngolidiini is found in both regions but much more abundantly in the Neotropical Region. Among 52 valid taxa treated, 3 are new tribes, 7 are new genera, 26 are new species, 1 is an old genus, and 15 are old species. One generic name is reinstated in synonymy, 1 specific name is retained in synonymy, and 1 specific name is suppressed.

With the completion of this study, a worldwide taxonomic revision of the subfamily Coelidiinae treating 9 tribes, 104 genera, and 641 species and subspecies is finished (Nielson 1975, 1977, 1979, 1982). It is hoped that these works will be useful to leafhopper taxonomists in the classification and identification of the species in all regions of the world.

SYSTEMATICS

The systematics of the new tribes Hikangiini, Youngolidiini, and Gabritini are historically limited. All of the taxa (2 genera and 6 species) in the Hikangiini are new and therefore require no further comment. Youngolidiini has 12 previously described

species among 30 presently known, and all are relegated to 5 new genera. Six species were transferred from the genus *Jassus* sensu Germar to *Coelidia* Germar by Metcalf (1964) and Evans (1955), and 4 were described originally in the genus *Coelidia* by various authors prior to their present placement in Youngolidiini. All except 2 species were previously retained in the tribe Coelidiini. These remaining 2 species, *Pilosana circularis* (Fabricius) and *Pilosana gratiosa* (Spångberg), were previously held in the subfamilies Cicadellinae and Neocoelidiinae, respectively, and their present allocation to Coelidiinae represents a new subfamily assignment.

The tribe Gabritini is established with *Gabrita* Walker designated as the type-genus, the only valid genus represented in the tribe. Walker (1858) described the genus and its attendant species *annulivena,* but later Stål (1864) suppressed the name as a junior synonym of *Coelidia eburata* Walker. Oman (1936) subsequently designated *Gabrita annulivena* Walker as the type-species of the genus.

The genus *Petalopoda* with its attendant species, *annulipes,* was erected by Spångberg (1879). Kirkaldy (1907) suppressed the name as a generic synonym of *Gabrita,* then Metcalf (1964) resurrected the genus and placed it in the tribe Coelidiini. I have resuppressed *Petalopoda* as a junior synonym of *Gabrita* after examination of the type specimens of the type-species of both genera proved that they are congeneric. Four species, 3 old and 1 new, are treated in the genus.

All new genera, except as noted, are arbitrary combinations of letters. Those ending in "a" and "us" are feminine and masculine, respectively.

MORPHOLOGY

The general morphology of 6 previously treated tribes of the subfamily Coelidiinae has been documented (Nielson 1975, 1977, 1979, 1982). This paper will discuss the general morphology of the new tribes Hikangiini, Youngolidiini and Gabritini, the last 3 remaining tribes to be dealt with in this revisionary study of Coelidiinae of the world. Because the 3 tribes are widely diverse morphologically, each will be treated separately.

Hikangiini species range from 4.80–10.20 mm in length; thus the relatively small number of known species vary considerably in size. The larger species are very robust and all have heads that are produced, i.e., distal length of crown extends from ⅓ to over ½ its entire dorsal median length. The elytra are cuneate apically in several species, a unique character not found in other tribes of Coelidiinae. Most species are well marked with yellow or orange and black coloration, particularly on the elytra.

The head of hikangiine leafhoppers is markedly narrower than the pronotum, and is distinctly wedge-shaped in dorsal view. The crown is narrow, slightly elevated above level of eyes but not carinate laterally. It is markedly produced anteriorly in *Boulardus,* n. gen. The eyes are large, usually elongate-ovoid and occupying less than ⅔ of the entire dorsal area of head.

The pronotum is unusually short and possesses a median longitudinal carina in all

species. On the surface, bullae are conspicuously absent. In all species the scutellum is short, about as long as the pronotum.

The elytra are elongate, cuneate apically in all species of *Boulardus,* n. gen. and in a few species of *Hikangia,* n. gen. Venation is somewhat obscured and the appendix is poorly developed, which is unusual for members of the subfamily.

On the face, the clypeus is elongate, somewhat tumid, and usually with a median longitudinal carina in *Hikangia,* n. gen. In *Boulardus,* n. gen., the clypeus is flattened, without a median longitudinal carina and is concave in lateral aspect. The clypellus is short in both genera.

The male genitalia of Hikangiini are symmetrical. A caudodorsal process is present on the pygofer and is sometimes well developed. The aedeagus is simple, somewhat tubular throughout, with single or paired apical or subapical processes. It is fused basally to the connective, which is U-shaped with very broad lateral arms. The gonopore is situated subapically on the ventral surface. The styles are well developed, often with numerous fine, short setae.

Youngolidiini leafhoppers are uniformly medium sized and slender and range from 5.00–7.50 mm in length. Several species are beautifully colored; sexual dimorphism is evident in some genera, particularly in *Pilosana,* n. gen.

The head of this group is always narrower than the pronotum but varies considerably in length; it is usually short in *Pilosana,* n. gen., and *Youngolidia,* n. gen., but well produced in *Rikana,* n. gen. The crown is broad, distinctly elevated above level of eyes in all species except a few of *Youngolidia,* and is longitudinally or radially striate on the dorsal surface. Lateral carina are lacking. In general, the head is remarkably similar to members of the tribe Tharrini that occur exclusively in the Oriental and Australian regions. The eyes are large but, because of the broad crown, occupy less than ⅔ of the entire dorsal area of the head.

The pronotum is short, equal to or less than length of the crown. A median longitudinal carina is evident in *Afridonus,* n. gen., *Drordana,* n. gen., and *Rikana,* n. gen., although much reduced in the latter genus, and absent in *Pilosana,* n. gen., and *Youngolidia,* n. gen. The triangulate scutellum is short, about equal in length to the pronotum.

The elytra are elongate and rounded apically. Venation is pronounced with 5 apical and 3 anteapical cells. The appendix is well developed.

The clypeus is broad anteriorly and narrowed posteriorly in all genera. The clypeal carina is absent and the anterior margin is transversely rugulose, a character common in the Tharrini. The clypellus is short and narrow.

The male genitalia of Youngolidiini are diverse among all the genera and asymmetrical in 3 of the 5 known genera. Males are unknown in the new genus *Afridonus.* The pygofer bears caudal processes, usually on the caudoventral margin, and is extensively pilose on the lateral lobes in the new genera *Drordana, Rikana* and *Pilosana.* The aedeagus is diverse, varying from a symmetrical, elongate, laterally compressed structure to an asymmetrical, long, tubular extrusion with processes or flanges on

the shaft. Basally it articulates freely with the connective, which is typically Y-shaped with long narrow arms and very short stem. The styles vary from very short in *Youngolidia,* n. gen., to very long and slender in *Pilosana.* The plate is variable, from long and slender to long and very broad at the apical ½ and profusely setose, particularly in the genera *Pilosana* and *Youngolidia.*

Gabritini comprises medium sized, robust leafhoppers that range from 6.00–9.00 mm in length. The forelegs are enlarged, giving a raptorial-like appearance. All of the species are fuscous to piceous with numerous small yellow or ivory bullae on the pronotum, scutellum and veins of elytra.

The head of gabritine leafhoppers is small, considerably narrower than the pronotum. The crown is slightly produced anteriorly, narrow to broad, and depressed medially below level of eyes with the lateral margins slightly carinate. The eyes are very large, subglobular to elongate-ovoid and occupy more than ⅔ of the dorsal area of the head.

The pronotum and scutellum are very large, which accentuates the smallness of the head. The elytra are elongate, broad subapically, and somewhat narrowed apically. Venation is prominent as veins are covered with small yellow or ivory bullae. The appendix is usually well developed and greatly enlarged basally.

The clypeus and clypellus are protuberant. The ocellocular area is carinate laterally, which is an unusual character for coelidiine leafhoppers. A median longitudinal carina is present on the clypeus in 4 known species but is fully developed in only 1 species.

The male genitalia are partially asymmetrical based on known male specimens of 3 species. The pygofer is large and free of caudal processes. The aedeagus is very long and needlelike with several teeth scattered along the dorsal margin. Basally it freely articulates with the connective, which has long arms and a short stem. The style is short and robust. The plate is long, narrow, and broadly curved with several setae apically.

The female 7th sternum in all 3 tribes is typical of most other species of coelidiine leafhoppers and is not diagnostic for separating the species of the group.

ZOOGEOGRAPHY

The following discussion is confined to the new tribes Hikangiini, Youngolidiini and Gabritini. The reader should consult my earlier (Nielson 1975) work for an overview of the distribution of the entire subfamily Coelidiinae.

Hikangiini, Youngolidiini, and Gabritini are distributed in 2 zoogeographical regions. Hikangiini is restricted to the Ethiopian Region, Youngolidiini occupies both the Ethiopian and Neotropical regions, and Gabritini is confined to the Neotropical Region.

Members of the genera of Hikangiini occur in western Africa from Liberia on the NW coast to Zaire in the south. All species are rarely collected except *Boulardus concinnus,* n. sp., which is common in the Central Africa Republic.

Two genera (*Drordana,* n. gen., and *Afridonus,* n. gen.) of Youngolidiini found in the Ethiopian Region are widely distributed from Cameroon east to Uganda and Kenya. The remaining 3 genera (*Rikana,* n. gen., *Pilosana,* n. gen., and *Youngolidia,* n. gen.) are widely distributed in South America from Guyana west to Peru. Only 1 species occurs in Central America and as far north as Mexico. Most of the species of *Pilosana* occur in eastern South America whereas *Youngolidia* is more common in western South America.

Gabritini is known only in Brazil and is represented by 1 genus and 4 species.

TECHNIQUES

The details of preparation of genital structures of leafhoppers for dissection and study are given by Oman (1949). I have followed his method with some modifications. The bodies of most coelidiine leafhoppers are heavily sclerotized and a long time is required for KOH to clear the internal viscera. A system was devised in which the abdomens of 40–50 coded leafhoppers were cleared simultaneously by allowing the structures to soak overnight at room temperature in a saturated solution of KOH. The following day, individual abdomens were washed in distilled H_2O, transferred to 10% acidulated H_2O, again washed in distilled H_2O before examination, and stored in microvials with glycerine.

ILLUSTRATIONS

All illustrations were prepared freehand with the aid of an ocular grid. The concealed male structures were drawn at ocular magnifications of 90× to 120× and the exposed structures at lesser magnification, depending upon the size of the species. The characters illustrated are not always shown in detail, particularly setae which were too numerous on the male pygofer and plate for an exact rendition. The female 7th sternum and head are included whenever they are diagnostic.

DEPOSITORIES

The following acronyms are used for depository institutions or personal collections holding specimens.

AMNH	American Museum of Natural History, New York
BPBM	Bishop Museum, Honolulu
BMNH	British Museum (Natural History), London
CAS	California Academy of Sciences, San Francisco
CU	Cornell University, Ithaca
IRSNB	Institute Royale des Sciences Naturelles de Belgique, Brussels
LTF	Collection of Dr Rauno Linnavuori, Turku, Finland
MMB	Moravian Museum, Brno, Czechoslovakia
MNHN	Museum National D'Histoire Naturelle, Paris
MNHU	Museum für Naturkunde der Humboldt-Universität zu Berlin

NCSR	North Carolina State University, Raleigh
NM	Naturhistorisches Museum, Vienna
NR	Naturhistorika Riksmuseum, Stockholm
OSUC	Ohio State University, Columbus
UCB	University of California, Berkeley
UK	University of Kansas, Lawrence
USNM	National Museum of Natural History, Washington
UZM	Universitetes Zoologiske Museum, Copenhagen

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KEY TO THE TRIBES OF COELIDIINAE

1. Base of elytra exposed; brachyptery rare or absent in one or both sexes . . . (Old and New World) 2
   Base of elytra concealed (except *Tantulidia*); brachyptery common in one or both sexes . . . (New World) ..... **Tinobregmini** Oman
2 (1). Pronotum unicarinate laterally . . . (Old and New World) 3
   Pronotum bicarinate laterally . . . (New World) ..... **Sandersellini** DeLong
3 (2). Crown always elevated above level of eyes, frequently produced beyond anterior margin of eyes, surface distinctly striate longitudinally or nearly so; ♂ plate frequently segmented subbasally or nearly so, often appressed laterally and often profusely setose 4
   Crown rarely elevated above level of eyes, rarely produced beyond anterior margin of eyes, surface usually faintly striate; ♂ plate never segmented subbasally, appressed to pygofer and usually sparsely setose 6
4 (3). Aedeagus bipendulate (unipendulate in *Neotharra*) or asymmetrical; plate appressed laterally and profusely setose . . . (Old and New World) 5
   Aedeagus unipendulate and symmetrical; plate appressed to pygofer and sparsely setose . . . (Old World) ..... **Hikangiini, n. tribe**
5 (4). Aedeagus bipendulate (unipendulate in *Neotharra*); style clawed or hooked apically . . . (Old World) ..... **Tharrini** Nielson
   Aedeagus unipendulate; style never clawed apically, sometimes hooked apically . . . (Old and New World) ..... **Youngolidiini, n. tribe**
6 (3). Aedeagus with large ventral paraphysis articulated basally with connective or with paired long ventral processes arising from base of aedeagus . . . (Old World) ..... **Thagriini** Distant
   Aedeagus without ventral paraphysis or paired ventral processes . . . (Old and New World) 7
7 (6). Clypeus with complete median longitudinal carina . . . (New World except *Biadorus*) ..... **Teruliini** Nielson
   Clypeus without median longitudinal carina or with partially complete carina . . . (Old and New World) 8
8 (7). Forelegs normal, femur and tibia narrow . . . (Old and New World) ..... **Coelidiini** Dohrn
   Forelegs raptorial-like, femur and tibia flattened or foliaceous and very broad . . . (New World) ..... **Gabritini, n. tribe**

Hikangiini, **new tribe**

Type-genus: *Hikangia,* new genus.

Medium-sized to large, robust leafhoppers.

Head distinctly narrower than pronotum; crown long, produced distally beyond anterior margin of eyes, distal length ⅓ to over ½ as long as entire median length, elevated above level of eyes, longitudinally striate; ocelli small, situated near lateral margins of crown on dorsal surface of short-headed species, laterally on long-headed species; eyes large, elongate-ovoid; pronotum short, with prominent median longitudinal carina; scutellum small; elytra elongate, apex of costa usually obliquely and shallowly concave, veins obscure, 3 anteapical cells present, outer one short and closed, appendix poorly developed; clypeus long, tumid to concave in lateral aspect, usually with median longitudinal carina; clypellus short; setal arrangement on hind femur 2:2:1.

♂. Genitalia symmetrical; pygofer large, with 1–2 caudal processes; 10th segment well developed, without ventral processes; aedeagus symmetrical, short, robust, with a single or paired, short to long, processes distad of middle of shaft; connective U-shaped, fused to base of aedeagus; style well developed, long, frequently with short setae medially; plate fused basally to pygofer, enlarged at apical ⅔, surface with numerous, fine setae.

The tribe Hikangiini is restricted to the Ethiopian Region. Two genera are recognized, both of which are described as new. The tribe appears to be fairly well isolated, although the species have characters possessed by some species in the tribes Tharrini, Sandersellini, and Youngolidiini. Hikangiini can be separated from all other tribes of Coelidiinae by the aedeagus, which is fused basally to the connective.

Key to the genera of Hikangiini

1. Clypeus tumid in lateral view with median longitudinal carina ..... **Hikangia, n. gen.**
   Clypeus not tumid in lateral view, without median longitudinal carina ..... **Boulardus, n. gen.**

Hikangia Nielson, **new genus**

Type-species: *Hikangia liberiensis,* n. sp.

Medium-sized, somewhat robust leafhoppers. Similar in general habitus to *Boulardus,* n. gen., but with tumid, carinate clypeus. General color deep fuscous to piceous with yellow to orange markings subapically on elytra, sometimes with 2 longitudinal orange or yellow stripes from crown to apex of clavus.

Head distinctly narrower than pronotum; crown narrow, produced considerably beyond anterior margin of eyes, distal length ⅓ to ½ as long as entire median length, elevated above level of eyes, longitudinally striate, about as wide as eyes; ocelli small, situated near lateral margins of crown on dorsal or lateral surface; eyes large, elongate-ovoid; pronotum short, about equal to median length of crown, with distinct median longitudinal carina; scutellum small, about equal to median length of pronotum; elytra elongate, apices usually cuneate, veins slightly obscured, venation as in description of tribe, appendix poorly developed; clypeus long, somewhat broad, tumid, with median longitudinal carina; clypellus short, lateral margins slightly concave.

♂. Genitalia symmetrical; pygofer large, with caudodorsal or with caudodorsal and cau-

doventral processes; 10th segment long and broad, without ventral processes; aedeagus short, broad basally, slightly tapered apically, with short apical processes; gonopore apical; connective fused to base of aedeagus, arms long; style long, robust; plate long, broad at apical ⅔, surface covered with numerous fine setae.

Hikangia is known from 4 species, all described as new from Africa. From *Boulardus*, n. gen., to which it is similar in general habitus and certain male genital characteristics, *Hikangia* can be separated by the tumid, carinate clypeus.

KEY TO THE SPECIES OF *Hikangia* (♂)[2]

1. Pygofer with a single caudal process (Fig. 4) ..... **liberiensis, n. sp.**
   Pygofer with 2 caudal processes (Fig. 10) 2
2 (1). Pygofer with caudodorsal process long, narrow, and bladelike (Fig. 10) .....
   ..... **carinata, n. sp.**
   Pygofer with caudodorsal process short and robust, apex enlarged and toothed ventrally (Fig. 16) ..... **delta, n. sp.**

Hikangia liberiensis Nielson, **new species** Fig. 1–9

Length: ♂ 4.80–5.10 mm, ♀ 6.00–6.30 mm.

General color deep fuscous to piceous with transverse orange subapical band on elytra and with small yellow spot near middle of clavus.

Head large, distinctly narrower than pronotum, anterior margin acutely angled; crown broad, produced distally beyond anterior margin of eyes, distal length about ⅓ entire median length, elevated above level of eyes, slightly broader than width of eyes, longitudinally striate, lateral margins slightly convex; eyes large, elongate-ovoid, occupying less than ⅔ of entire dorsal area of head; pronotum short, median length about equal to median length of crown, with prominent median longitudinal carina, surface smooth; scutellum small, median length about equal to median length of pronotum; elytra elongate, apices slightly convex, veins slightly obscured, venation as in description of genus, appendix poorly developed; clypeus long and rather broad, with median longitudinal carina, carina not reaching transclypeal suture, lateral margins broadly convex, surface finely granulose; clypellus short, slightly tumid, lateral margins nearly parallel.

♂. Pygofer in lateral aspect with prominent curved caudodorsal process, process curved ventrally; 10th segment long and narrow, without ventral processes; aedeagus symmetrical, short, rather robust, broad, slightly curved apically in lateral aspect, dorsal surface nearly flattened, with short, sharply pointed subapical spine on dorsal surface arising laterally and projecting basally, apex with 2 very short spines; gonopore apical; connective short, fused to base of aedeagus, arms short; style rather long and robust, exceeding length of aedeagus, nearly straight, slightly sinuate throughout, slightly broader at basal $^1/_5$ with row of very short, fine setae subapically; plate long and very broad at apical ⅔, surface covered with many fine setae.

♀. 7th sternum large, about 1½× as long as penultimate sternum, caudal margin broadly convex.

Holotype ♂, LIBERIA: Toppita, 23.IX.1952, Blickenstaff (USNM). Allotype ♀, LIBERIA: Gibi, 1940, W.M. Mann (USNM). Paratypes. LIBERIA: 1♂,1♀, same data as holotype; Grand

2. *Hikangia tumosa* is known from ♀ only and is not keyed.

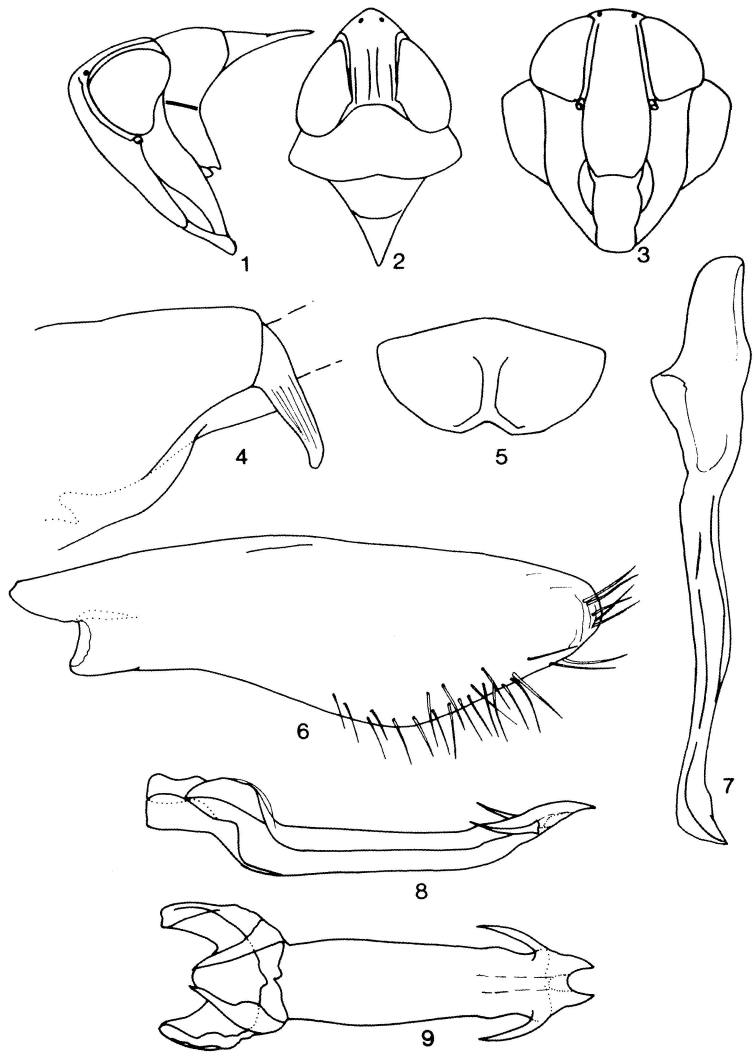


FIG. 1–9. *Hikangia liberiensis:* **1,** head, pronotum and scutellum, lateral view; **2,** head, pronotum and scutellum, dorsal view; **3,** face, ventral view; **4,** ♂ pygofer, lateral view; **5,** ♀ 7th sternum, ventral view; **6,** plate, ventral view; **7,** style, dorsal view; **8,** aedeagus and connective, lateral view; **9,** aedeagus and connective, dorsal view.

Gedeh County, 25 km N Swedrew, 11.VII–20.VII.1971, J.A. Grewell, 9♂,5♀ (USNM, author's collection); Ifan, Revuke, 1♀, 1948, Hulas & DeKeeper (MNHN).

Remarks. Hikangia liberiensis is similar in certain male genital characteristics to *carinata,* n. sp., but can be easily distinguished from it by the presence of a single caudodorsal process on the pygofer.

Hikangia carinata Nielson, **new species** Fig. 10–15

Length: ♂ 5.70 mm, ♀ 6.30 mm.

General color deep fuscous to piceous with ivory to orange subapical markings on elytra.

Head large, distinctly narrower than pronotum, anterior margin acutely angled; crown narrow, distinctly produced beyond anterior margin of eyes, distal length about ⅓ entire median length, apex bluntly pointed; crown elevated above level of eyes, lateral margins slightly carinate, narrower than width of eyes, surface longitudinally striate; ocelli small, situated laterally on crown near anterior margin; eyes large, elongate-ovoid, occupying less than ⅔ of entire dorsal area of head; pronotum small, with prominent median longitudinal carina, median length less

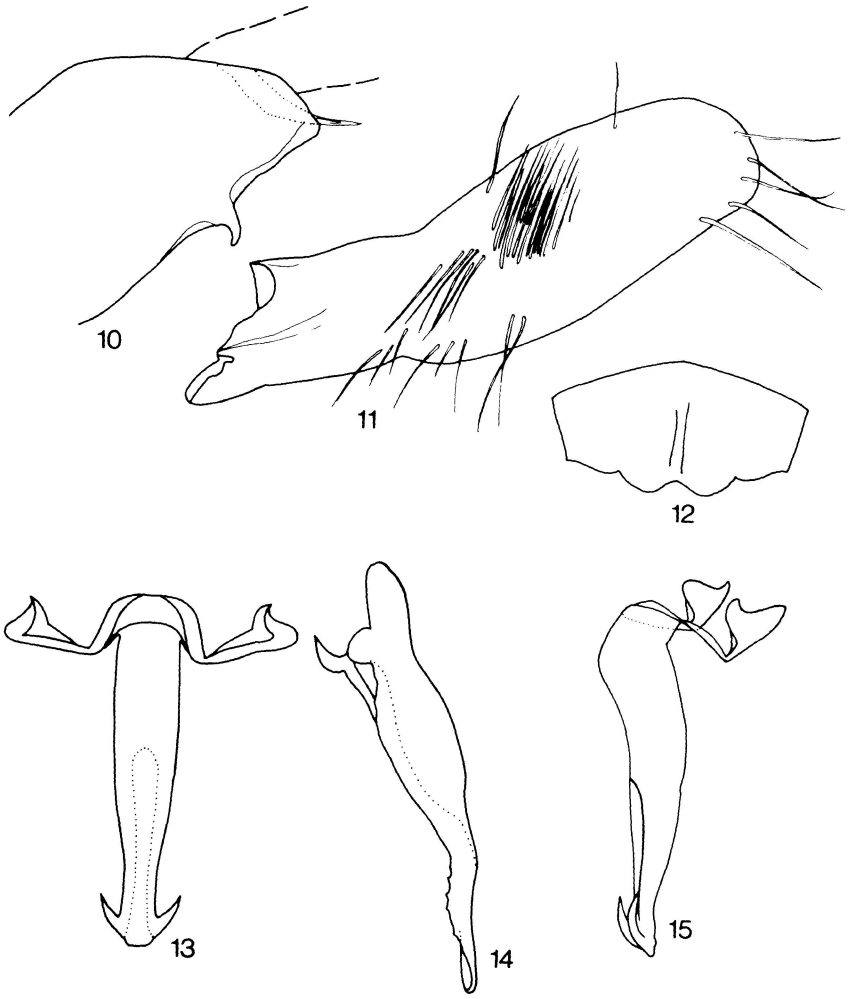


FIG. 10–15. *Hikangia carinata:* **10,** ♂ pygofer, lateral view; **11,** plate, ventral view; **12,** ♀ 7th sternum, ventral view; **13,** aedeagus and connective, dorsal view; **14,** style, lateral view; **15,** aedeagus and connective, lateral view.

than median length of crown, surface smooth; scutellum small, median length about equal to median length of pronotum; elytra elongate, apices slightly cuneate, veins slightly obscured, venation as in description of genus, appendix poorly developed; clypeus long and narrow, tumid, with median longitudinal carina, lateral margins broadly convex, surface finely granulose; clypellus short, slightly tumid, lateral margins nearly parallel.

♂. Pygofer in lateral aspect with short, slender bladelike caudodorsal process and a very short, curved process about middle of caudal margin; 10th segment long and narrow, without ventral processes; aedeagus symmetrical, short, rather stout, broad at basal ¾ in lateral aspect and gradually tapered at apical ¼ with short, sharply pointed apical process on either side of middle in dorsal aspect, processes directing laterobasally; gonopore large, occupying ventral margin at apical ½ of aedeagus; connective fused to base of aedeagus, arms long; style long, longer than aedeagus, sinuate, gradually tapered apically and with several teeth on lateral margin at apical ⅓; plate long, rather robust, apical ¾ enlarged, with numerous long, fine setae on surface.

♀. 7th sternum large, slightly longer than penultimate sternum, caudal margin slightly produced medially and sinuate.

Holotype ♂, CAMEROON [no data] (USNM). Allotype ♀, CAMEROON: Mugli, 27.I.1958, 560 m, A. Kanorr (USNM).

Remarks. *Hikangia carinata* is similar in male genital characteristics to *delta,* n. sp., but it can be separated by the short bladelike caudodorsal process of the pygofer.

Hikangia delta Nielson, **new species** Fig. 16–20

Length: ♂ 6.70 mm.

General color deep piceous with markings on elytra and with 2 longitudinal ivory or yellow stripes from apex of crown to apex of clavus.

Head large, distinctly narrower than pronotum, anterior margin acutely angled; crown long, produced considerably beyond anterior margin of eyes, distal length about ½ entire median length, slightly depressed medially, slightly carinate laterally, about as wide as eyes, longitudinally striate, lateral margins broadly convex; ocelli small, situated laterally near anterior margin of crown; eyes large, elongate-ovoid, occupying less than ⅔ of entire dorsal area of head; pronotum short, median length less than median length of crown with prominent median longitudinal carina, surface smooth; scutellum small, median length about equal to median length of pronotum; elytra elongate, apices cuneate, veins slightly obscured, venation as in description of genus, appendix poorly developed; clypeus long and narrow, with prominent median longitudinal carina, lateral margins broadly convex, surface finely granulose; clypellus short, slightly tumid, lateral margins nearly parallel.

♂. Pygofer in lateral aspect with very broad caudodorsal process and with very short, narrow curved process near middle of caudal margin, caudodorsal process expanded apically, very broad and toothed along ventral margin; 10th segment long and narrow, without ventral processes; aedeagus symmetrical, rather long and somewhat tubular, tapered apically, with 2 small ventral subapical spines or processes, processes directed ventrally; gonopore very large, ventral, occupying apical ½ of aedeagus; connective fused to base of aedeagus, arms long; style long, exceeding length of aedeagus, broad at basal ½ and gradually narrowed at apical ½, sinuate in lateral aspect, with small teeth along ventral margin at apical ½, apex slightly curved laterally; plate long, very broad at basal ¾ and covered with numerous, fine, long setae.

♀. Unknown.

Holotype ♂, ZAIRE: Tshuata Ikela, 6.III.1956, R. Deguide (IRSNB).

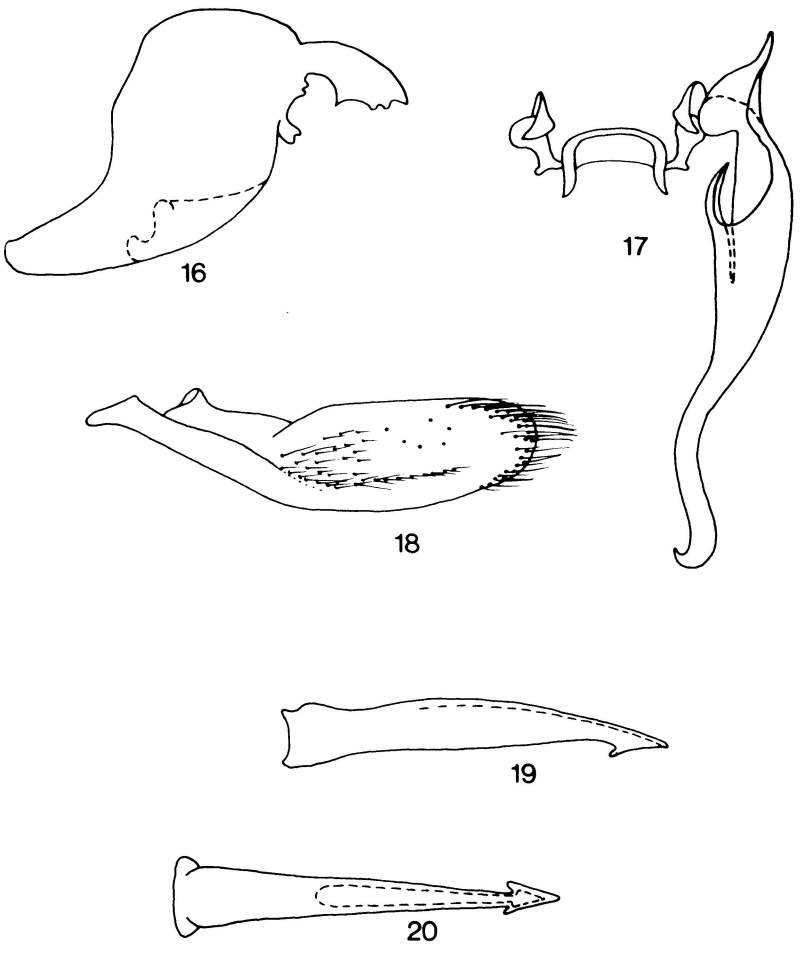


FIG. 16–20. *Hikangia delta:* **16,** ♂ pygofer, lateral view; **17,** connective and style, dorsal view; **18,** plate, ventral view; **19,** aedeagus, lateral view; **20,** aedeagus, ventral view.

Remarks. *Hikangia delta* is similar in general habitus to *tumosa,* n. sp., and in male genital characteristics to *carinata* but can be distinguished from those species by the aedeagus, which has a pair of very short ventral processes on its apex, and by the long crown, which extends distally about ½ its entire length.

Hikangia tumosa Nielson, **new species** Fig. 21–23

Length: ♀ 7.50 mm.

General color piceous with ivory to yellow markings on elytra and with a pair of yellow to ivory stripes from apex of crown to apex of clavus.

In the absence of a male specimen, the following description is based on the female holotype.

Head large, distinctly narrower than pronotum, anterior margin acutely angled; crown nar-

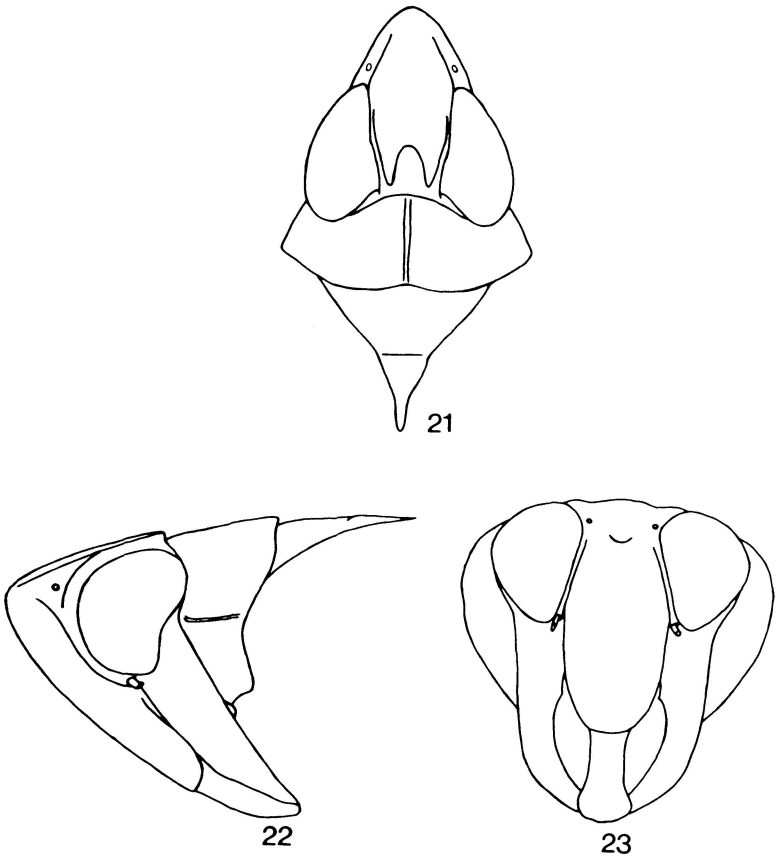


FIG. 21–23. *Hikangia tumosa:* **21,** head, pronotum and scutellum, dorsal view; **22,** head, pronotum and scutellum, lateral view; **23,** face, ventral view.

row, produced considerably beyond anterior margin of eyes, distal length nearly ½ entire median length, slightly depressed medially, slightly elevated above level of eyes, slightly carinate laterally, narrower than width of eyes, lateral margins slightly convex; ocelli small, situated laterally near anterior margin of crown; eyes large, semiglobular, occupying less than ⅔ of entire dorsal area of head; pronotum short, median length less than median length of crown with prominent median longitudinal carina, surface smooth; scutellum short, median length about equal to median length of pronotum; elytra elongate, apices cuneate, veins obscure, venation as in description of genus, appendix poorly developed; clypeus long and rather broad, tumid, with prominent median longitudinal carina; lateral margins broadly convex, surface finely granulose; clypellus short, slightly tumid, lateral margins nearly parallel.

♂. Unknown.

♀. 7th sternum large, about 2× as long as penultimate sternum, caudal margin produced slightly at middle.

Holotype ♀, ZAIRE: Dimonika (Mayube), I.1964, A. Descarpentries & A. Villiers (MNHN).

Remarks. This species, known only from the holotype female, is sufficiently diagnostic to describe as a new species and to distinguish it from previously described species of *Hikangia.* It is most closely related to *delta* but can be separated from that species by the shorter blunt crown and by the markings on the elytra.

Boulardus Nielson, **new genus**

Type-species: *Boulardus concinnus,* n. sp.

Medium-sized to large, robust species. Similar in general habitus to *Hikangia* but with somewhat concave clypeus. General color piceous with several longitudinal orange markings or stripes on body.

Head distinctly narrower than pronotum, anterior margin acutely angled; crown long, acutely pointed, produced considerably beyond anterior margin of eyes, distal length ⅓–½ as long as entire median length, elevated above level of eyes, longitudinally striate; ocelli small, situated laterally near anterior margin of crown; eyes large, elongate-ovoid, occupying less than ⅔ of entire dorsal area of head; pronotum short, median length less than median length of crown, with prominent median longitudinal carina; scutellum small; elytra elongate, apices cuneate, 3 anteapical cells present, outer one closed, 5 apical cells present, appendix poorly developed; clypeus long and narrow, slightly to strongly concave in lateral view, without median longitudinal carina; clypellus short.

♂. Genitalia symmetrical; pygofer large, with prominent caudodorsal process; 10th segment broad, without ventral processes; aedeagus symmetrical, elongate but stout, with apical or subapical processes; connective fused to base of aedeagus; style long, sinuate with subapical setae; plate large with numerous setae on ventral surface.

Two species are known in the genus; both are new and from Africa. *Boulardus* is closely related to *Hikangia* and can be distinguished by the lack of a median longitudinal carina on the clypeus.

I dedicate the genus to Dr Michel Boulard, Paris Museum, for his work on the Homoptera of Zaire (Congo).

Key to the species of *Boulardus* (♂)

1. Aedeagus in lateral view with single long, apical, decurved process; dorsal margin of aedeagus simple (Fig. 31) ..... **recurvatus, n. sp.**
   Aedeagus in lateral view with pair of short decurved hooks; dorsal margin of aedeagus with short processes on distal ½ (Fig. 40) ..... **concinnus, n. sp.**

Boulardus recurvatus Nielson, **new species** Fig. 24–31

Length: ♂ 7.10 mm, ♀ 7.70 mm.

General color deep piceous with orange longitudinal stripes on body.

Head large, distinctly narrower than pronotum, anterior margin acutely angled; crown long, produced distally beyond anterior margin of eyes, distal length about ⅓ entire median length, elevated above level of eyes, depressed medially, narrower than width of eyes, longitudinally striate, lateral margins nearly parallel and slightly carinate; ocelli small, situated laterally near anterior margin of crown; eyes large, elongate-ovoid, occupying less than ⅔ of entire dorsal area of head; pronotum short, median length less than median length of crown, with prominent median longitudinal carina, surface smooth; scutellum small, median length less than median

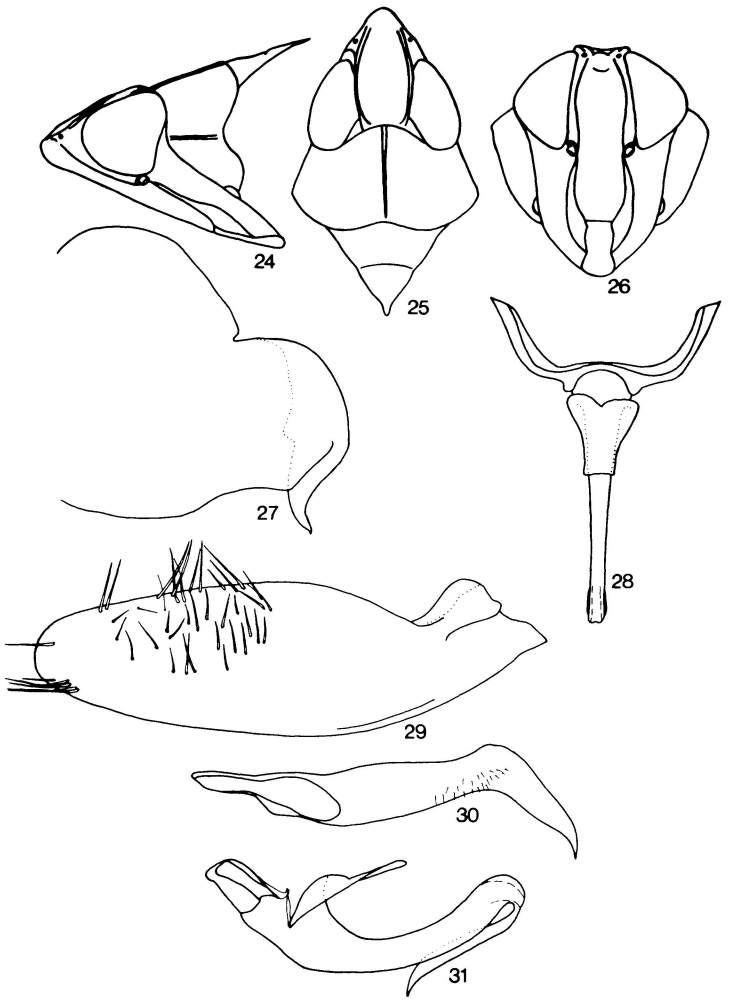


FIG. 24–31. *Boulardus recurvatus:* **24,** head, pronotum and scutellum, lateral view; **25,** head, pronotum and scutellum, dorsal view; **26,** face, ventral view; **27,** ♂ pygofer, lateral view; **28,** connective and aedeagus, dorsal view; **29,** plate, ventral view; **30,** style, lateral view; **31,** connective and aedeagus, lateral view.

length of pronotum; elytra elongate, apices cuneate, veins obscured, venation as in description of genus, appendix poorly developed; clypeus long and narrow, without median longitudinal carina, slightly concave in lateral aspect, lateral margins broadly convex, surface finely granulose; clypellus short, narrow, lateral margins nearly parallel.

♂. Pygofer in lateral aspect with short, stout, curved caudodorsal process; 10th segment missing on holotype; aedeagus symmetrical, rather stout but elongate, curved in lateral aspect with single long apical process, process recurved and extending basally to about ½ length of shaft; gonopore apical; connective fused to base of aedeagus, arms long; style long, exceeding length of aedeagus, sinuate, curved at apical ¼ and sharply pointed apically with many short,

fine setae subapically on shaft; plate long and robust, broad medially and covered with numerous fine, long setae along ventral surface.

♀. 7th sternum large, about 1½× as long as penultimate sternum, caudal margin slightly produced medially.

Holotype ♂, GHANA: nr Begoro, 12.V.1943, H.E. Box (BMNH). Allotype ♀, GHANA: Bunsu, 9.VII.1943, H.E. Box (BMNH). Paratypes. GHANA: Mt Atewa, 1♀, 4.I.1973, M. Edmunds (BMNH).

Remarks. *Boulardus recurvatus* is similar in general habitus to *concinnus,* n. sp., but can be easily distinguished from that species by the presence of a single long, apical decurved process on the aedeagus.

Boulardus concinnus Nielson, **new species** Fig. 32–40

Length: ♂ 8.80–9.30 mm, ♀ 9.90–10.20 mm.

General color piceous with narrow longitudinal orange stripes or markings on body.

Head large, distinctly narrower than pronotum, anterior margin acutely angled; crown long, narrow, produced considerably beyond anterior margin of eyes, this distal length about ½ entire median length, slightly narrower than width of eyes, elevated above level of eyes and nearly flat, lateral margins slightly carinate and nearly parallel; ocelli small, situated on lateral margins of crown; eyes large, elongate-ovoid, occupying less than ⅔ of entire dorsal area of head; pronotum short, median length less than median length of crown, with prominent median longitudinal carina, surface smooth; scutellum short, median length about equal to or less than median length of pronotum; elytra elongate, apices cuneate, veins obscured, venation as in description of genus, appendix poorly developed; clypeus long and narrow, distinctly concave in lateral aspect, without median longitudinal carina, lateral margins broadly convex, surface finely granulose; clypellus short, lateral margins nearly parallel.

♂. Pygofer in lateral aspect with very long, narrow caudodorsal process, process expanded subapically and narrowed apically, caudal margin of pygofer membranous at apical ⅓; 10th segment very broad, without ventral processes; aedeagus symmetrical, long, somewhat tubular, narrow, with pair of medial short, blunt, lateral processes on dorsal surface, apex with pair of short decurved ventral processes; gonopore large, just distad of middle of shaft, exiting ventrally; connective fused to base of aedeagus, arms broad and long; style long, slender, slightly curved and tapered apically, with numerous long setae along margin at middle of shaft; plate large, expanded at apical ¾ and covered with numerous fine setae on ventral surface.

♀. 7th sternum large, nearly 2× as long as penultimate sternum, caudal margin produced distally at middle.

Holotype ♂, CENTRAL AFRICAN REPUBLIC: Boukoko, 22.I.1969, Michel Boulard (MNHN). Allotype ♀, same locality as holotype, 19.VII.1969, Boulard (MNHN). Paratypes. 19♂,20♀, same data as holotype (MNHN, USNM, author's collection).

Remarks. This species is similar to *recurvatus* but can be distinguished by 2 pairs of short spines on the aedeagus: 1 pair on the dorsal margin and 1 apical pair on the ventral margin.

YOUNGOLIDIINI, **new tribe**

Type-genus: *Youngolidia,* new genus.

Small, slender species.

Head large, narrower than pronotum, anterior margin acutely to obtusely angulate; crown

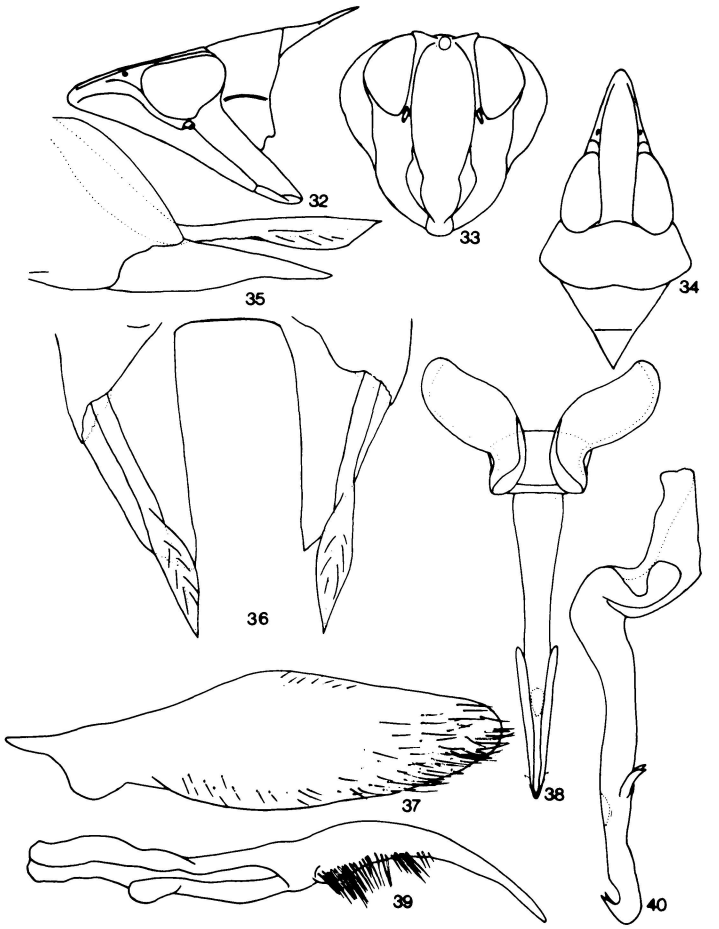


FIG. 32–40. *Boulardus concinnus:* **32,** head, pronotum and scutellum, lateral view; **33,** face, ventral view; **34,** head, pronotum and scutellum, dorsal view; **35,** ♂ pygofer, lateral view; **36,** ♂ pygofer, dorsal view; **37,** plate, ventral view; **38,** connective and aedeagus, dorsal view; **39,** style, lateral view; **40,** connective and aedeagus, lateral view.

short to long, produced distally beyond anterior margin of eyes, this distal length ¼–⅓ entire median length, elevated above eyes, distinctly striate radially or longitudinally; ocelli small, situated near anterior margin of crown; eyes moderately large, occupying less than ⅔ of entire dorsal area of head; pronotum short, median length about equal to median length of crown, longitudinally carinate medially in *Drordana,* n. gen., *Rikana,* n. gen., and *Youngolidia swensoni,* n. gen., n. sp.; scutellum short, median length about equal to median length of pronotum; elytra elongate, apices rounded, 3 anteapical cells present, outer one closed, 5 apical cells present, appendix well developed; clypeus elongate, usually narrow, very broad anteriorly in *Drordana,* without median longitudinal carina but faint and incomplete in *Drordana,* anterior margin transversely striate; clypellus long and narrow; setal arrangement 2:2:1.

♂. Genitalia in part asymmetrical; pygofer heavily setose and/or with distinctive caudal

processes; 10th segment long and narrow, without ventral processes; aedeagus asymmetrical, frequently compressed laterally, with apical, ventral or dorsal processes or flanges; gonopore apical or ventral; connective broadly Y-shaped; style short to long; plate long, partially segmented subbasally in *Pilosana,* n. gen., and *Youngolidia,* n. gen., frequently setose on ventral margin.

Members of this tribe resemble the tribe Tharrini in general habitus, particularly by the shape of the head, by the elevated, striate crown, and by the partially segmented base of the plate. Five genera are represented in the tribe Youngolidiini.

KEY TO THE GENERA OF YOUNGOLIDIINI

1. Pronotum with median longitudinal carina . . . (Ethiopian and Neotropical genera) 2
   Pronotum without median longitudinal carina . . . (Neotropical genera) 4
2 (1). Clypeus with faint, partially complete median longitudinal carina; ♂ pygofer profusely setose, setae extremely long (Fig. 44) ..... **Drordana, n. gen.**
   Clypeus without such carina; ♂ pygofer sparsely setose, setae very short (Fig. 63) 3
3 (2). Ethiopian species ..... **Afridonus, n. gen.**
   Neotropical species ..... **Rikana, n. gen.**
4 (1). Pygofer profusely setose (Fig. 78); style very long, nearly as long as aedeagus .. .. **Pilosana, n. gen.**
   Pygofer not setose (Fig. 161); style very short, much shorter than aedeagus .... **Youngolidia, n. gen.**

Drordana Nielson, **new genus**

Type-species: *Jassus limus* Jacobi.

Small, slender species. Similar in general habitus to *Afridonus,* n. gen., but with partially complete median longitudinal carina on clypeus and distinctive ♂ genitalia. Color piceous throughout except for orange markings subapically on elytra.

Head large, distinctly narrower than pronotum, anterior margin angulate; crown broad, produced beyond anterior margin of eyes, distinctly elevated above level of eyes and striate; ocelli small; eyes small, occupying less than ½ of entire dorsal area of head; pronotum short, with median longitudinal carina; scutellum short; elytra elongate, 3 anteapical cells present, outer one closed, 5 apical cells present, appendix well developed; clypeus long and very broad anteriorly, with faint, partially complete, median longitudinal carina, surface finely granulose; clypellus short.

♂. Genitalia symmetrical; pygofer large, with broad, twisted caudodorsal process and with numerous extremely long setae on middle of lateral lobes; aedeagus symmetrical, elongated, broadly compressed with dorsal and lateral membranous flanges; gonopore apical; connective broadly Y-shaped; style long and broad, with short, narrow, lateral subapical projection; plate long and narrow, partially segmented subbasally, with numerous long setae.

Drordana is known from a single species from Africa. From *Afridonus,* to which it is similar in general habitus, *Drordana* can be separated by the presence of a partially complete, median longitudinal carina on the clypeus and by the distinctive male genitalia.

Drordana lima (Jacobi), **new combination** Fig. 41–48

Jassus limus Jacobi, 1912: 39. Holotype ♂ (MNHU) [examined].
Coelidia lima (Jacobi): Metcalf, 1964: 57.

Length: ♂ 6.00 mm, ♀ 6.40–6.70 mm.

General color fuscous to deep piceous throughout except for small, transverse, narrow ochraceous band subapically on elytra.

Head large, distinctly narrower than pronotum, anterior margin obtusely angled; crown produced beyond anterior margin of eyes, this distal length more than ¼ entire median length, distinctly elevated above level of eyes, much broader than width of eyes, surface distinctly striate longitudinally, lateral margins nearly parallel; ocelli distinct, situated near anterior mar-

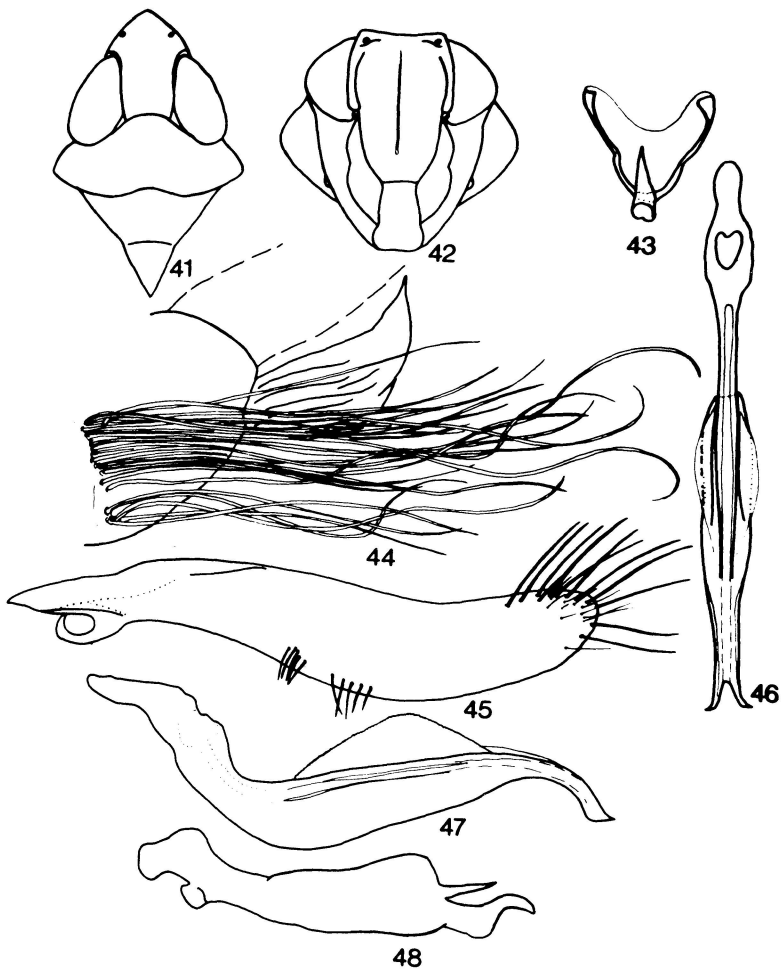


FIG. 41–48. *Drordana lima:* **41,** head, pronotum and scutellum, dorsal view; **42,** face, ventral view; **43,** connective, dorsal view; **44,** ♂ pygofer, lateral view; **45,** plate, ventral view; **46,** aedeagus, dorsal view; **47,** aedeagus (inverted), lateral view; **48,** style, dorsal view.

gin of crown; eyes small, occupying much less than ½ of entire dorsal area of head, semiglobular; pronotum short, median length less than median length of crown, with median longitudinal carina; scutellum short, median length about equal to median length of pronotum; elytra elongate, apices narrowly rounded, veins distinct, venation as in description of genus, appendix very well developed; clypeus long, very broad anteriorly, with a faint, incomplete median longitudinal carina, originating anteriorly and extending basally to about ½ length of clypeus, surface finely granulose, lateral margins broadly convex; clypellus short and narrow, lateral margins nearly parallel.

♂. Genitalia symmetrical; pygofer large, with a large triangulate membranous caudodorsal process and with numerous extremely long setae arising submarginally from basal margin of pygofer and extending distally beyond apex of 10th segment; aedeagus symmetrical, long, somewhat compressed, sigmoid, shaft narrow apically and slightly curved dorsally with a pair of lateral membranous flanges ventrally about middle of shaft, flanges toothed along basal margin, with a membranous flange on either side of middle about midlength of shaft in dorsal view, flanges with lateral margins finely toothed; gonopore apical; connective broadly Y-shaped, arms long, stem extremely short; style elongate, with 2 apical ventral processes; plate long and narrow, slightly curved, weakly segmented subbasally with numerous short to long setae apically.

♀. 7th sternum large, about 1½× as long as penultimate sternum, caudal margin slightly produced medially.

Distribution. East Africa; new records: Republic of Central Africa, Cameroon, Zaire, Uganda.

Specimens examined. *Jassus limus* Jacobi, holotype ♂, EAST AFRICA: Kutschuru, Ebeue, II.1908, K. Graver (MNHU). CENTRAL AFRICAN REPUBLIC: Boukoko, La Maboke, Routembale, 7♂,4♀, 24.I.1967–13.XII.1969, Michel Boulard (MNHN). ZAIRE: Kivu, Mabuita, 1♂, XII.1935, Boutakoff (IRSNB); 16 km S of Mambasa, 950 m, 1♀, 1.X.1957, E.S. Ross & R.E. Leech (CAS). CAMEROON: Malende, Meleteke Riv, 725 m, 1♂, 12.XII.1957, H. Knorr (LTF); Yaounde, 776 m, 1♂, 1936, Van Zwaluwenburg & McGough (USNM); Johann-Albrechtshohe, 1♀, 1896, L. Conradt (MMB). UGANDA: Mabira Forest, 1♂, 2.V.1957, T.R. Odhiambo (BMNH).

Remarks. *Drordana lima* is the only known species of the genus. It can be distinguished from the species of its related genus *Afridonus,* n. gen., by the presence of a partially complete median longitudinal carina on the clypeus.

Afridonus Nielson, **new genus**

Type-species: *Jassus piceolus* Melichar.

Small, slender species. Similar in general habitus to *Drordana* but without median longitudinal carina on clypeus and with narrower clypeus. General color light to deep fuscous with markings subapically on elytra.

Head large, subconical, much narrower than pronotum; crown broad, distinctly produced beyond anterior margin of eyes and distinctly elevated above level of eyes, prominently striate longitudinally; ocelli small; eyes large, occupying about ⅔ of entire dorsal area of head, elongate-ovoid; pronotum short with median longitudinal carina, length less than median length of crown, surface smooth; scutellum small, slightly longer than median length of pronotum; elytra elongate, broadly rounded apically, 3 anteapical cells present, outer one closed, 5 apical cells present, appendix well developed; clypeus long, broadened distally, without median longitudinal carina, surface finely granulose; clypellus short.

♂. Unknown.

Afridonus is known from 4 species, all from Africa, and known only from females. Because of the distinctiveness of the group, I have elected to describe the 4 species based on female specimens at hand. *Afridonus* can be distinguished from its nearest relative, *Drordana,* by the lack of median longitudinal clypeal carina and by the conically shaped head and longer crown.

KEY TO THE SPECIES OF *Afridonus* (♀)

1.	Crown narrow, distance between eyes at base about as wide as width of eyes	2
	Crown broad, base wider than width of eyes	**quinquelineatus, n. sp.**
2 (1).	Elytra with a few markings in apical ½	3
	Elytra with numerous markings in apical ½	**gemellus, n. sp.**
3 (2).	General color deeply piceous	**piceolus**
	General color ochraceous	**elongatus, n. sp.**

Afridonus quinquelineatus Nielson, **new species** Fig. 49–51

Length: ♀ 6.00 mm.

General color deep fuscous throughout, with 2 longitudinal ochraceous narrow stripes on either side of crown, 4 longitudinal narrow ochraceous stripes on pronotum, with numerous ochraceous spots subapically on elytra and with large, narrow, ochraceous band about middle of elytra on costa.

Head large, distinctly narrower than pronotum, anterior margin subconically angled; crown produced beyond anterior margin of eyes, this distal length a little more than ¼ entire median length, distinctly elevated above level of eyes, prominently striate longitudinally, much broader than width of eyes, lateral margins nearly parallel; ocelli prominent, situated near anterior margin of crown; eyes small, semiglobular, occupying about ½ of entire dorsal area of head; pronotum short, median length about equal to median length of crown with prominent median longitudinal carina, surface smoothly knobbed; scutellum large, slightly longer than median length of pronotum; elytra elongate, apices broadly rounded, veins distinct, venation as in description of genus, appendix well developed; clypeus long, broad anteriorly, without median longitudinal carina, lateral margins convergent basally, surface finely granulose; clypellus short, lateral margins expanded apically.

♂. Unknown.

♀. 7th sternum nearly 2× as long as penultimate sternum, caudal margin produced medially.

Holotype ♀, CENTRAL AFRICAN REPUBLIC: Boukoko, 15.II.1968, M. Boulard (MNHN). Paratypes. CENTRAL AFRICAN REPUBLIC: Boukoko, 4♀, 18.I–16.XII.1968, Boulard (MNHN, LTF); La Maboke, 2♀, 15.IX.1967–20.III.1970, Boulard (MNHN); Motouka, 1♀, 8.I.1968, Boulard (author's collection). ZAIRE: Mongbwalu (Kilo), 1♀, 1939, Mme Scheitz (IRSNB).

Remarks. This species is similar in general habitus to *gemellus,* n. sp., and can be distinguished from it by the presence of 4 prominent longitudinal ochraceous stripes on the pronotum, by the numerous subapical spots on the elytra, and by the much broader crown.

Afridonus gemellus Nielson, **new species** Fig. 52–54

Length: ♀ 6.00 mm.

General color deep fuscous with clavus light ochraceous, elongate spot on either side of apex of clavus and large curved ochraceous band subapically on elytra.

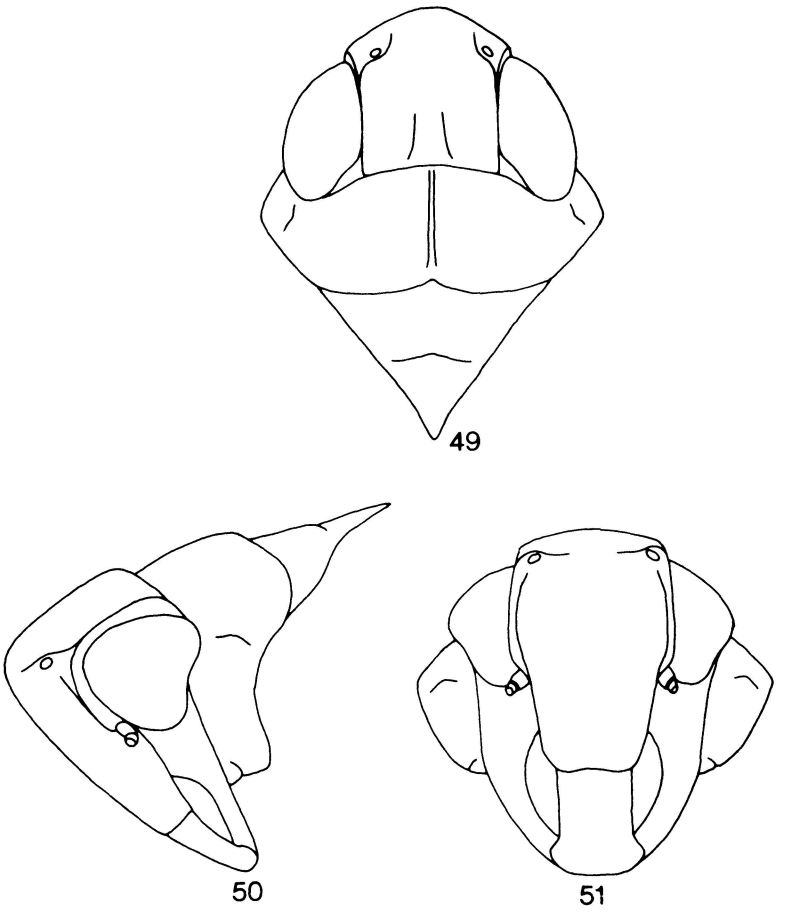


FIG. 49–51. *Afridonus quinquelineatus:* **49,** head, pronotum and scutellum, dorsal view; **50,** head, pronotum and scutellum, lateral view; **51,** face, ventral view.

Head large, distinctly narrower than pronotum, anterior margin conically rounded; crown produced considerably beyond anterior margin of eyes, distal length about ⅓ entire median length, distinctly elevated above level of eyes and prominently striate longitudinally, slightly wider than width of eyes, lateral margins nearly parallel; pronotum short, median length less than median length of crown, with a prominent median longitudinal carina, surface smooth; scutellum large, median length greater than median length of pronotum; elytra elongate, apices broadly rounded, veins distinct, venation as in description of genus, appendix well developed; clypeus long, broad anteriorly, without median longitudinal carina, lateral margins slightly excised near base of antennal sockets, surface finely granulose; clypellus short, lateral margins parallel.

♂. Unknown.

♀. 7th sternum large, about 2× as long as penultimate sternum, caudal margin slightly produced medially.

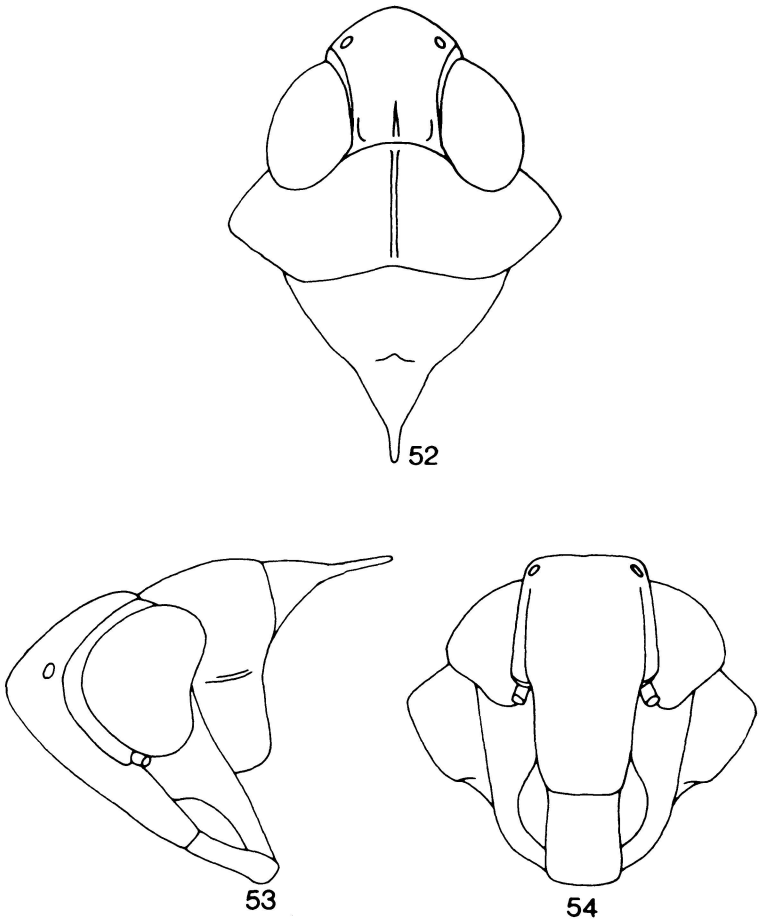


FIG. 52–54. *Afridonus gemellus:* **52,** head, pronotum and scutellum, dorsal view; **53,** head, pronotum and scutellum, lateral view; **54,** face, ventral view.

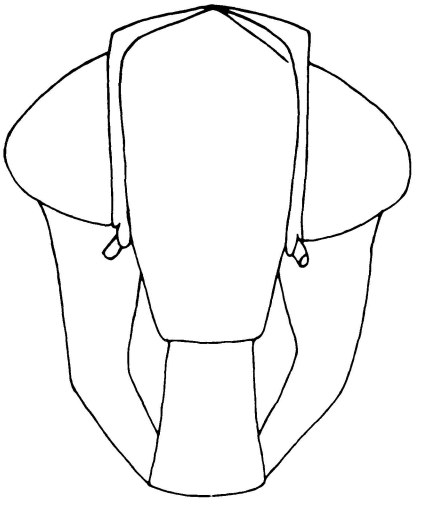
Holotype ♀, KENYA: Diani Beach, VIII.1951, N.L.H. Krauss (BMNH).

Remarks. This species is known only from the holotype female. It is similar in general habitus to *quinquelineatus* and can be distinguished from that species by the deeply fuscous or piceous pronotum and by the very broad, subapical ochraceous band on the elytra.

Afridonus piceolus (Melichar), **new combination** Fig. 55–56

Jassus piceolus Melichar, 1905: 302. Holotype ♀ (MMB) [examined].
Coelidia piceola (Melichar): Evans, 1955: 26.

Length: ♀ 6.60 mm.



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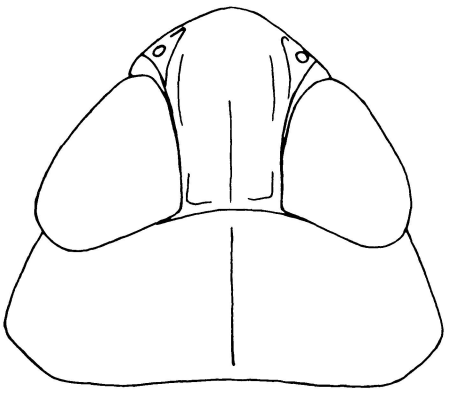

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FIG. 55–56. *Afridonus piceolus:* **55,** face, ventral view; **56,** head and pronotum, dorsal view.

General color deep fuscous throughout except for light fuscous transverse subapical markings on elytra.

Head small, distinctly narrower than pronotum, anterior margin conically angled; crown produced beyond anterior margin of eyes, distal length about ⅓ entire median length, distinctly elevated above level of eyes, radially striate, slightly wider than width of eyes, lateral margins nearly parallel; pronotum large, median length about equal to median length of crown, surface smooth; scutellum large, median length slightly greater than median length of pronotum; elytra elongate, veins obscured, venation as in description of genus, appendix well developed; clypeus long, broad anteriorly, slightly tumid, without median longitudinal carina, narrowly rugulose along anterior margin, finely granulose below, lateral margins nearly parallel; clypellus short, lateral margins expanded distally.

♂. Unknown.

♀. 7th sternum large, about 1½× as long as penultimate sternum, caudal margin slightly sinuate.

Distribution. Tanzania.

Specimen examined. [TANZANIA] *Jassus piceolus,* holotype ♀, Amani, Bomole (MMB).

Remarks. This species, known only from the holotype female, is similar in general habitus to *gemellus* but can be distinguished from it by the strongly produced crown, which is acutely pointed anteriorly, and by the general fuscous color throughout.

Afridonus elongatus Nielson, **new species** Fig. 57–59

Length: ♀ 6.50 mm.

General color ochraceous throughout, with large fuscous spot subapically on costa, large subapical fuscous band on elytra and with deep fuscous markings on apex of crown.

Head large, distinctly narrower than pronotum, anterior margin conically angled; crown produced beyond anterior margin of eyes, this distal length about ⅓ entire median length, distinctly elevated above level of eyes, about as wide as width of eyes, prominently striate dorsally, lateral margins nearly parallel; ocelli prominent, situated near anterior margin of crown; eyes large, elongate-ovoid, occupying about ⅔ of entire dorsal area of head; pronotum short, median length less than median length of crown with median longitudinal carina, surface smooth; scutellum large, median length greater than median length of pronotum; elytra elongate, veins slightly obscured, venation as in description of genus, appendix well developed; clypeus long and narrow, without median longitudinal carina, lateral margins broadly convex, surface finely granulose; clypellus short, lateral margins expanded distally.

♂. Unknown.

♀. 7th sternum large, about 1½× as long as penultimate sternum, caudal margin slightly produced medially.

Holotype ♀, TANZANIA: Tanganyika Ty, Morogoro, 22.VI[no year], A.H. Ritchie (BMNH).

Remarks. Afridonus elongatus is a distinct species and can be separated from all other known species of *Afridonus* by the long, narrow crown and by the general ochraceous color throughout (except for fuscous spots apically on the elytra and crown).

Rikana Nielson, **new genus**

Type-species: *Rikana larseni,* n. sp.

Small, slender species. Similar in general habitus to *Pilosana* but with longer crown and distinctive ♂ genitalia. General color piceous to ochraceous with numerous markings on body.

Head large, distinctly narrower than pronotum, anterior margin acutely angulate; crown narrow, produced considerably beyond anterior margin of eyes, distinctly elevated above level of eyes; ocelli small; eyes large, occupying ½ to ⅔ of entire dorsal area of head; pronotum short, with median longitudinal carina; scutellum short; elytra elongate, 3 anteapical cells present, outer one closed, 5 apical cells present, appendix well developed; clypeus elongate, without median longitudinal carina, surface finely granulose; clypellus short.

♂. Genitalia asymmetrical; pygofer large, with short, stubby caudodorsal process and with

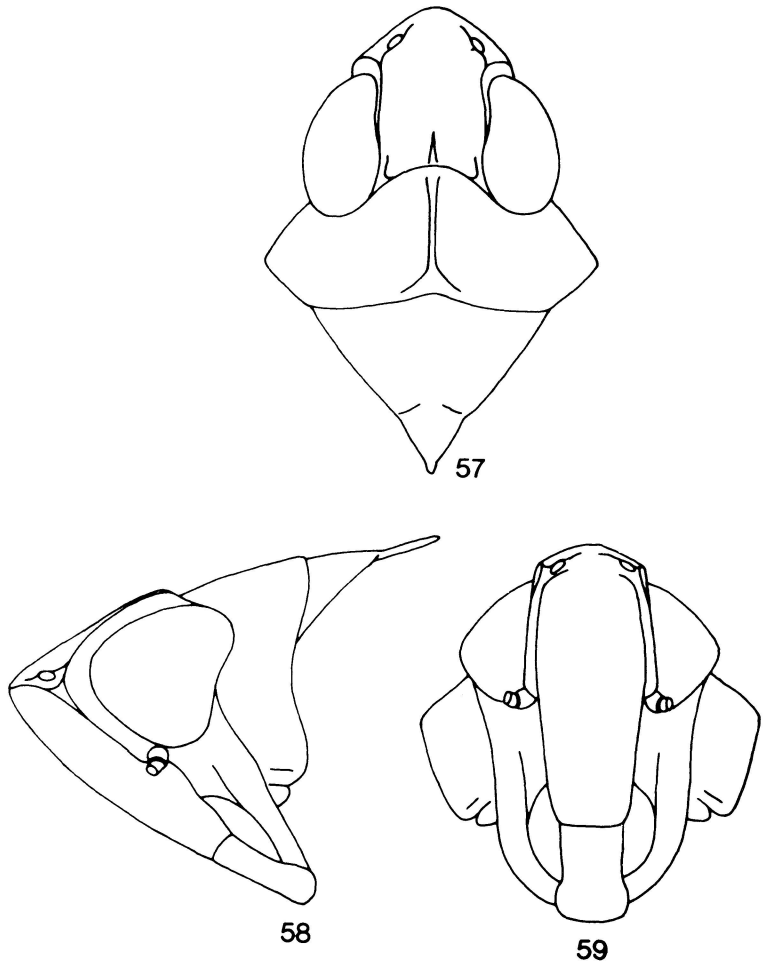


FIG. 57–59. *Afridonus elongatus:* **57,** head, pronotum and scutellum, dorsal view; **58,** head, pronotum and scutellum, lateral view; **59,** face, ventral view.

a long, slender, curved caudoventral process, caudoventral margin with numerous long setae; aedeagus asymmetrical, long, slender, tubelike, with paired apical processes; gonopore subapical; connective broadly Y-shaped, stem short, arms long; style short; plate long, expanded subapically, profusely setose.

Rikana is known from 2 species from South America. The genus can be separated from its nearest relative, *Pilosana,* n. gen., by the long crown and by the very short style.

No key to the species is presented here because one species is known only from 3 female specimens and the other only from a single male specimen.

Rikana larseni Nielson, **new species** Fig. 60–69

Length: ♂ 5.20 mm.

General color fuscous with crown, pronotum and scutellum deeply marked, veins of elytra pale ivory, light ochraceous markings on apex of elytra.

Head large, narrower than pronotum, anterior margin acutely angled; crown very long, produced considerably beyond anterior margin of eyes, this distal length nearly ½ entire median length, distinctly elevated above level of eyes, about as wide as eyes, lateral margins

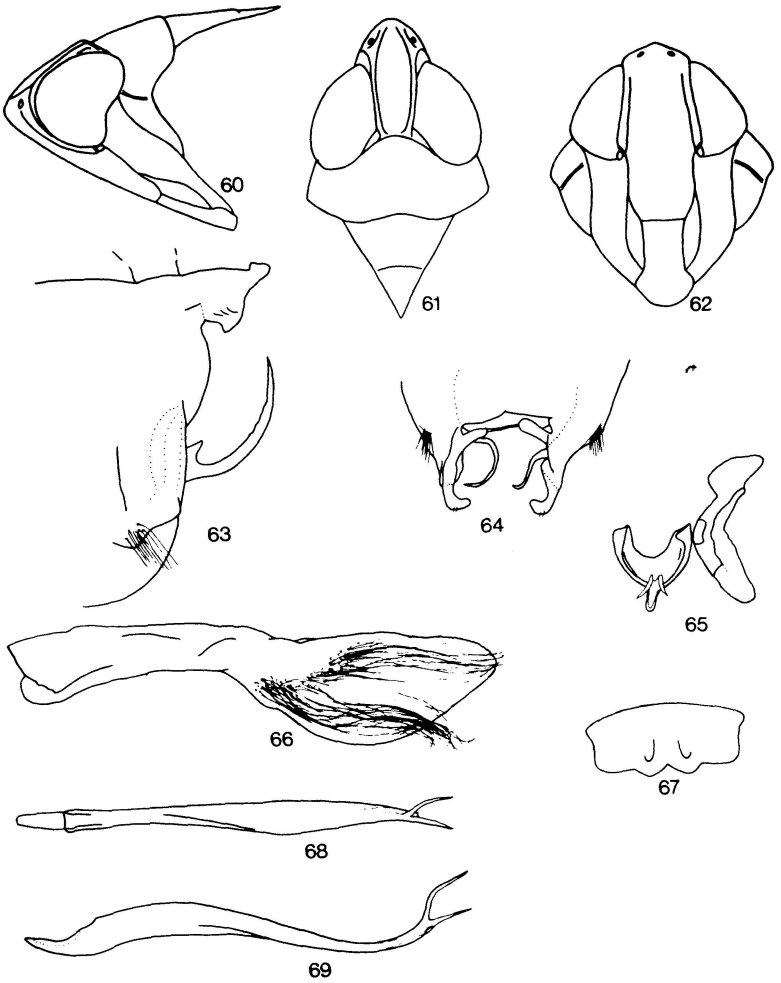


FIG. 60–69. *Rikana larseni:* **60,** head, pronotum and scutellum, lateral view; **61,** head, pronotum and scutellum, dorsal view; **62,** face, ventral view; **63,** ♂ pygofer, lateral view; **64,** ♂ pygofer, dorsal view; **65,** connective and plate, dorsal view; **66,** plate, ventral view; **67,** ♀ 7th sternum, ventral view; **68,** aedeagus, dorsal view; **69,** aedeagus, lateral view.

convergent basally, surface strongly striate; eyes large, elongate-ovoid, occupying less than ⅔ of entire dorsal area of head; pronotum large, median length nearly as long as median length of crown, with prominent median longitudinal carina; scutellum large, median length about equal to median length of pronotum; elytra elongate, veins distinct, venation as in description of genus, apices nearly rounded, appendix well developed; clypeus elongate, narrow, without median longitudinal carina, lateral margins broadly convex, surface finely granulose; clypellus long, narrow, expanded apically.

♂. Pygofer in lateral aspect with a short, stubby caudodorsal process and with a very narrow, recurved, sharply pointed caudoventral process, caudoventral process with a short, stubby basal secondary process, tuft of short setae submarginally on caudoventral margin; aedeagus asymmetrical, long, narrow, tubelike, broadly curved in lateral aspect, with 2 short, sharply pointed apical processes; gonopore subapical, exiting ventrally, connective broadly Y-shaped, arms long, stem short; style very short, narrow and curved in lateral aspect; plate long, broad subapically, with numerous setae along margin at apical ½.

♀ Unknown.

Holotype ♂, PERU: Tingo Maria, 30.VI.1948, E.J. Hambelton (USNM).

Remarks. *Rikana larseni* is known only from a male specimen and cannot be differentiated because the only congeneric species lacks males.

I name this species for my first grandson, Richard Scott Larsen.

Rikana williamsi Nielson, **new species** Fig. 70–72

Length: ♀ 5.60 mm.

General color deep fuscous throughout with numerous pale ivory markings on crown, pronotum, and elytra.

Head large, distinctly narrower than pronotum, anterior margin acutely rounded; crown long, produced beyond anterior margin of eyes, this distal length about ⅓ entire median length, foveate medially, slightly carinate laterally, about as wide as width of eyes, lateral margins convergent basally, striate radially; ocelli prominent, situated near anterior margin of crown; eyes large, elongate-ovoid, occupying about ⅔ of entire dorsal area of head; pronotum large, median length about equal to median length of crown, with a prominent median longitudinal carina, surface smooth; scutellum large, length about equal to midlength of pronotum; elytra elongate, apices broadly rounded, veins distinct, venation as in description of genus, appendix well developed; clypeus elongate, narrow, without median longitudinal carina, lateral margins broadly convex, surface finely granulose; clypellus long, narrow, lateral margins slightly expanded apically.

♂ Unknown.

♀. 7th sternum large, about 1½× as long as penultimate sternum, caudal margin with a short protrusion medially.

Holotype ♀, GUYANA: Tumatumari, 19.VII.1923, F.X. Williams (BPBM). Paratypes. GUYANA, 2♀, Maroni (NCSR, author's collection).

Remarks. This species is named for F. X. Williams, who is credited with collecting much leafhopper material from South America.

Pilosana Nielson, **new genus**

Type-species: *Jassus gratiosus* Spångberg.

Small, slender species. Similar in general habitus to *Youngolidia,* n. gen., but with distinctive

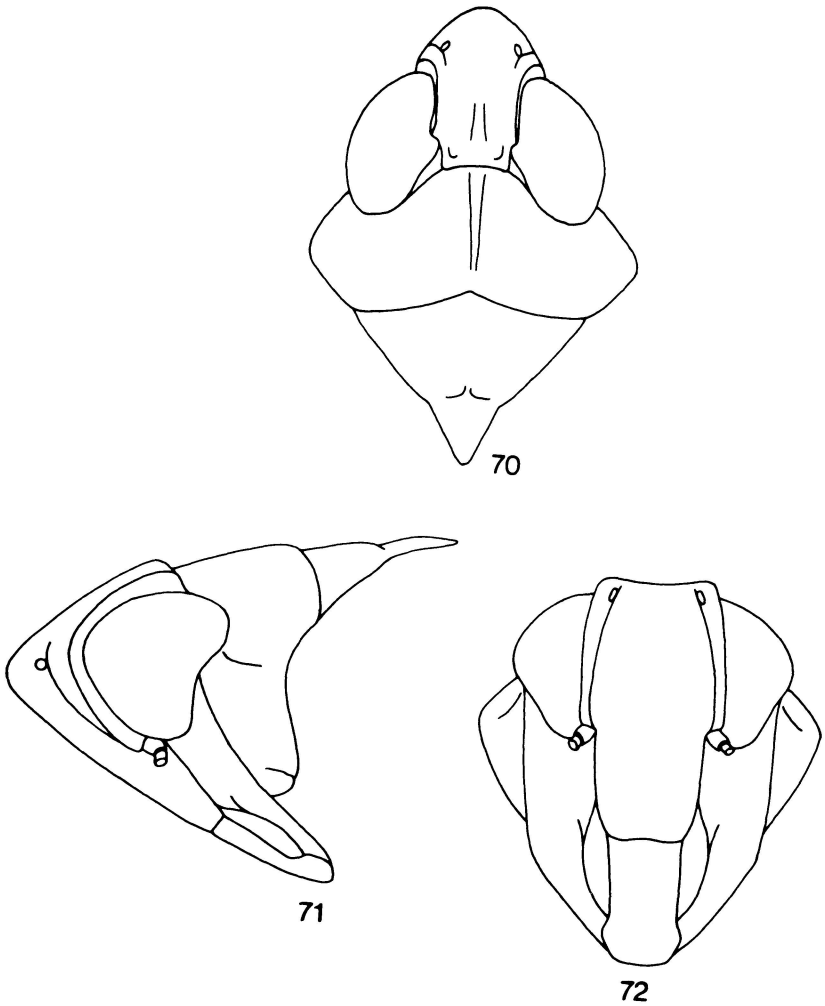


FIG. 70–72. *Rikana williamsi:* **70,** head, pronotum and scutellum, dorsal view; **71,** head, pronotum and scutellum, lateral view; **72;** face, ventral view.

♂ genitalia. General color fuscous to piceous with markings on elytra. Sexual dimorphism apparent in some species.

Head large, distinctly narrower than pronotum, anterior margin conical; crown broad, produced slightly beyond anterior margin of eyes, distinctly elevated above level of eyes and prominently striate longitudinally or radially; ocelli prominent; eyes large, occupying about ⅔ or less of entire dorsal area of head; pronotum short, median length about equal to median length of crown; scutellum short, median length slightly greater than median length of pronotum; elytra elongate, 3 anteapical cells present, 5 apical cells present, appendix well developed; clypeus elongate, broad anteriorly, without median longitudinal carina, surface finely granulose; clypellus short.

♂. Genitalia asymmetrical; pygofer large, highly setose, with prominent caudoventral pro-

cesses; aedeagus asymmetrical, long, narrow, somewhat tubular, with prominent ventral and/or dorsal processes; gonopore subapical, exiting ventrally; connective broadly Y-shaped; style very long, curved apically; plate usually long and narrow and profusely setose.

Pilosana is known from 13 species, all from South America. From *Youngolidia,* n. gen., to which it is similar in general habitus, *Pilosana* can easily be separated by the heavily pilose pygofer, by the long style, which is abruptly curved apically, and by the aedeagus, which possesses ventral or dorsal processes.

KEY TO THE SPECIES OF *Pilosana* (♂)

1. Aedeagus with dorsal, ventral, or dorsal and ventral processes 2
Aedeagus without such processes 12
2 (1). Aedeagus with dorsal processes only 3
Aedeagus with ventral or dorsal and ventral processes 6
3 (2). Aedeagus in lateral view broad medially, dorsal process irregular in shape with margins serrate or toothed (Fig. 82) 4
Aedeagus in lateral view narrow throughout, dorsal process regular shape, elongate (Fig. 76) ..... **pallidipes**
4 (3). Aedeagus with dorsal process projecting basally or distally in dorsal view, process broad 5
Aedeagus with dorsal process projecting nearly laterally in dorsal view, process narrow (Fig. 82) ..... **plebeja**
5 (4). Aedeagus with dorsal process projecting basally (Fig. 89) ..... **vanna, n. sp.**
Aedeagus with dorsal process projecting distally (Fig. 96) ..... **panna, n. sp.**
6 (2). Aedeagus with a single ventral or single ventral and dorsal processes 7
Aedeagus with an asymmetrical, bifurcate ventral process 8
7 (6). Aedeagus with a single ventral process (Fig. 104) ..... **univentrosa, n. sp.**
Aedeagus with a single ventral and single dorsal process (Fig. 109) ..... **circularis**
8 (6). Pygofer with a single tuft of long setae (Fig. 118) 9
Pygofer with 2 tufts of long setae (Fig. 111) ..... **duocristata, n. sp.**
9 (8). Pygofer with a single short or short asymmetrically bifurcate caudoventral process 10
Pygofer with a long caudoventral process, process with subbasal and subapical secondary processes (Fig. 118) ..... **singularis, n. sp.**
10 (9). Aedeagus in lateral view with a smooth preapical ventral margin 11
Aedeagus in lateral view with a serrate preapical ventral margin (Fig. 133) ... . **gratiosa**
11 (10). Pygofer with caudoventral process narrow and recurved apically (Fig. 136) ... . **longipes**
Pygofer with caudoventral process broad, lobelike, with a short ventral secondary tooth (Fig. 143) ..... **bifurcata, n. sp.**
12 (1). Pygofer with broad, triangulate caudoventral process (Fig. 150) ..... **bicolor**
Pygofer with an elongate, slender, corrugate caudoventral process (Fig. 157) ..... **rugosa, n. sp.**

Pilosana pallidipes (Stål), **new combination** Fig. 73–77

Coelidia pallidipes Stål, 1862: 52. Holotype ♂ (NR) [examined].
Jassus pallidipes (Stål): Spångberg, 1878: 33.

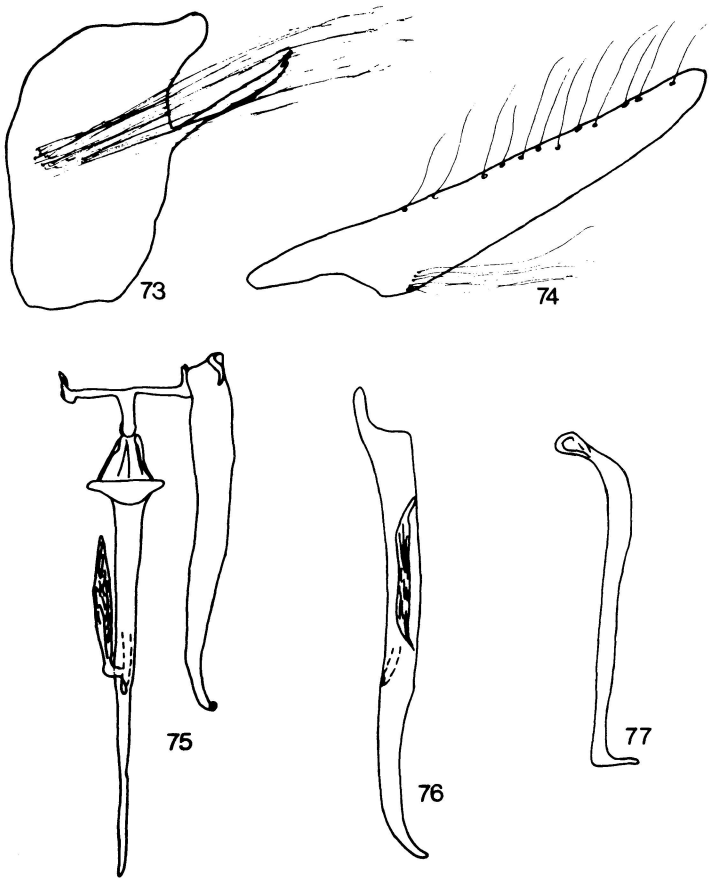


FIG. 73–77. *Pilosana pallidipes:* **73,** ♂ pygofer, lateral view; **74,** plate, ventral view; **75,** connective, style and aedeagus, dorsal view; **76,** aedeagus, lateral view; **77,** style, lateral view.

Length: ♂ 6.30 mm.

The general habitus of this species was taken from the original description.

General color pale fuscous with markings on clavus and costa of elytra.

♂. Pygofer in lateral aspect with a narrow, long, caudoventral process and with large tuft of very long setae originating near base of pygofer and extending beyond 10th segment; aedeagus asymmetrical, long, narrow, somewhat tubular, with long, narrow process arising dorsally and curved basad, process finely striate longitudinally and arising near middle of shaft on dorsal margin; gonopore ventral, exiting near middle of shaft; connective Y-shaped, arms long, stem short; style long, very narrow, apex abruptly curved ventrally; plate long and narrow, with numerous setae along lateral margins.

♀. Unknown.

Distribution. Brazil.

Specimens examined. BRAZIL, holotype ♂ [no data] F. Sahlberg (NR).

Remarks. This species is similar in general habitus to *plebeja* (Stål) but can be distinguished from that species by the presence of a long, narrow pygofer process arising from near the middle of the dorsal margin and extending basad.

Pilosana plebeja (Stål), **new combination** Fig. 78–84

Coelidia plebeja Stål, 1862: 51. Holotype ♀ (NR) [examined].
Jassus plebejus (Stål): Spångberg, 1878: 33.

Length: ♂ 6.10 mm, ♀ 7.30 mm (holotype specimen).

General color light to deep fuscous with large flavous spot subapically on costa and broad flavous curved band apically on elytra.

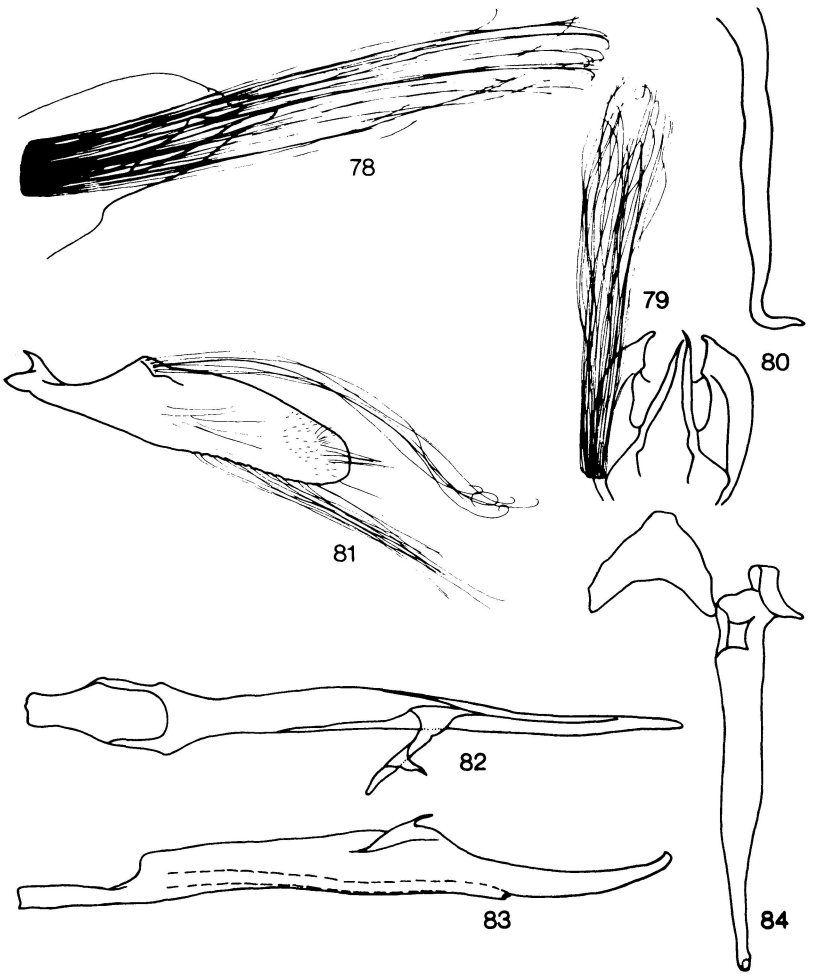


FIG. 78–84. *Pilosana plebeja:* **78,** ♂ pygofer, lateral view; **79,** apex of ♂ pygofer, dorsal view; **80,** apex of style, lateral view; **81,** plate, ventral view; **82,** aedeagus, dorsal view; **83,** aedeagus, lateral view; **84,** connective and style, dorsal view.

Head large, distinctly narrower than pronotum, anterior margin conically rounded; crown distinctly produced beyond anterior margin of eyes, distal length almost ⅓ entire median length, distinctly elevated above level of eyes, slightly broader than width of eyes, lateral margins nearly parallel, surface striate longitudinally; ocelli small, situated near anterior margin of crown; eyes large, semiglobular, occupying nearly ⅔ of entire dorsal area of head; pronotum short, median length about equal to median length of crown, surface smoothly knobbed; scutellum short, median length about equal to median length of pronotum; elytra elongate, veins distinct, venation as in description of genus, appendix well developed; clypeus elongate, broad anteriorly, without median longitudinal carina, anterior margin rugulose, finely granulose below; clypellus short, narrow, lateral margins nearly parallel.

♂. Pygofer in lateral aspect with a long lanceolate caudoventral process and with large tuft of setae originating near base of pygofer and extending beyond apex of 10th segment; 10th segment long, broad, without ventral processes; aedeagus asymmetrical, long, narrow, somewhat tubular, with a prominent process near middle of shaft, situated on dorsal margin, process narrow, slightly twisted with a subapical short process; gonopore distad of middle of shaft, exiting ventrally; connective broadly Y-shaped, stem short, arms long; style very long, narrow, apex abruptly curved ventrally; plate long and narrow, profusely setose along lateral margins.

♀. 7th sternum undescribed because it was not examined on type specimens nor were other ♀ available.

Distribution. Brazil.

Specimens examined. Holotype ♀, BRAZIL [no data] F. Sahlberg (NR). BRAZIL: Mafra S. Cath, 1♂, XII.1929, A. Maller (NCSR).

Remarks. *Pilosana plebeja* is similar in general habitus to *vanna,* n. sp., but can be easily distinguished by the narrow process on the middle of the dorsal margin of the aedeagus, which has a short subapical secondary process.

Pilosana vanna Nielson, **new species** Fig. 85–91

Length: ♂ 6.00 mm, ♀ 6.40 mm.

General color piceous throughout in ♂ except for flavous costa, piceous in ♀ with yellow or ivory longitudinal markings on clavus and small, yellow spot near middle of elytra and flavous on costa. A beautifully colored species; sexual dimorphism apparent.

Head large, distinctly narrower than pronotum, anterior margin conically rounded; crown produced beyond anterior margin of eyes, this distal length nearly ⅓ entire median length, distinctly elevated above level of eyes, width about as wide as eyes, lateral margins nearly parallel, surface distinctly longitudinally striate; ocelli small, situated near anterior margin of crown; eyes large, semiglobular, occupying a little less than ⅔ of entire dorsal area of head; pronotum short, median length about equal to median length of crown, surface smoothly knobbed; scutellum short, median length about equal to median length of pronotum; elytra elongate, apices rounded, veins slightly obscured, venation as in description of genus, appendix well developed; clypeus elongate, broad anteriorly, without median longitudinal carina, rugulose along anterior margin, finely granulose below; clypellus short, lateral margins nearly parallel.

♂. Pygofer in lateral aspect with a long lanceolate caudoventral process and with large tuft of long setae originating near base of pygofer and extending beyond 10th segment; 10th segment long and broad, without ventral processes; aedeagus asymmetrical, long, narrow, somewhat tubular, with ornate process medially on dorsal margin, process fan-shaped in dorsal aspect and projecting basally; gonopore just distad of midlength of shaft, exiting ventrally;

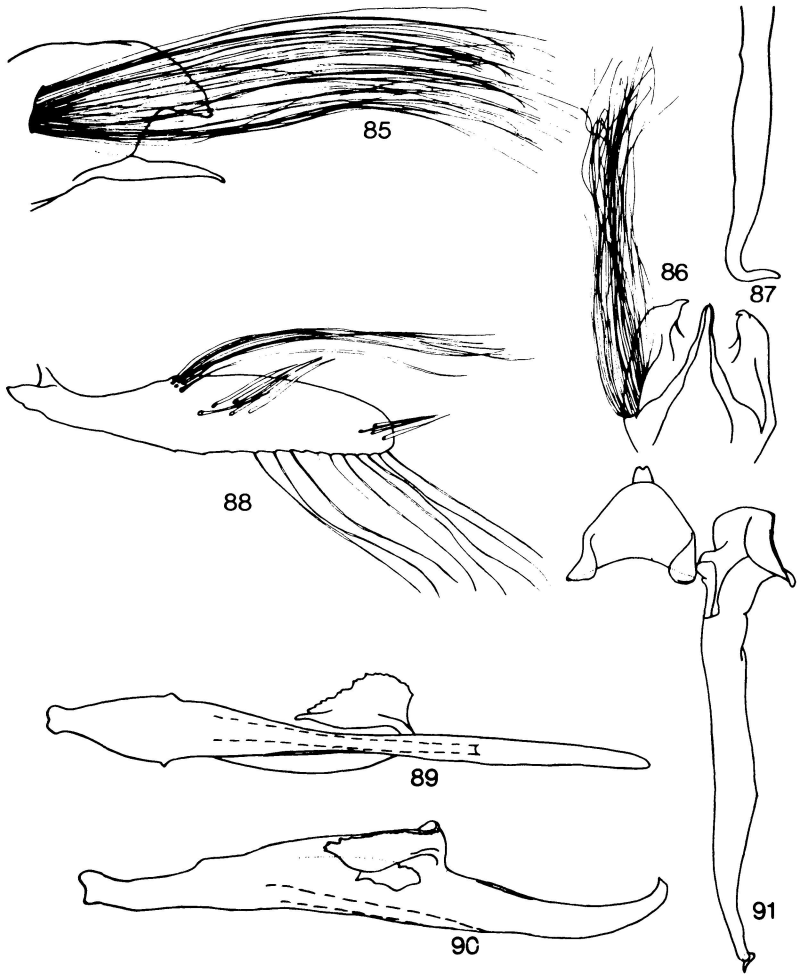


FIG. 85–91. *Pilosana vanna:* **85,** ♂ pygofer, lateral view; **86,** apex of ♂ pygofer, dorsal view; **87,** apex of style, lateral view; **88,** plate, ventral view; **89,** aedeagus, ventral view; **90,** aedeagus, lateral view; **91,** connective and style, dorsal view.

connective broadly Y-shaped, arms long, stem short; style long and narrow, apex abruptly curved ventrally; plate long and narrow, with numerous very long setae along lateral margins.

♀. 7th sternum large, about 1½× as long as penultimate sternum, caudal margin produced to a short median lobe.

Holotype ♂, BRAZIL: Barueri, Est S Paulo, XII.1966, K. Lenko (OSUC). Allotype ♀, BRAZIL: same data as holotype (OSUC). Paratype. BRAZIL: Brasilien, 1♀, 30.IV.1894, H. Brauns (MMB).

Remarks. Pilosana vanna is similar in certain male genital characteristics to *panna,* n. sp., but can be distinguished from it by the long lanceolate caudoventral process of the pygofer and by the fan-shaped process on the dorsal margin of the aedeagus.

Pilosana panna Nielson, **new species** Fig. 92–98

Length: ♂ 5.20 mm, ♀ 6.00 mm.

General color pale ochraceous with veins of elytra deeply marked, particularly in ♀; ♂ more deeply fuscous throughout; sexual dimorphism apparent.

Head large, slightly narrower than pronotum, anterior margin broadly and conically rounded; crown produced beyond anterior margin of eyes, distal length about ¼ entire median length, much broader than width of eyes, elevated above level of eyes, lateral margins nearly parallel, surface striate longitudinally; ocelli small, situated near anterior margin of crown; eyes small, elongate-ovoid, occupying less than ⅔ of entire dorsal area of head; pronotum short, median length about equal to median length of crown, surface smoothly knobbed; scutellum short, median length about equal to median length of pronotum; elytra elongate, apices rounded, veins slightly obscured, venation as in description of genus, appendix well developed; clypeus elongate, broad anteriorly, narrowed posteriorly, without median longitudinal carina,

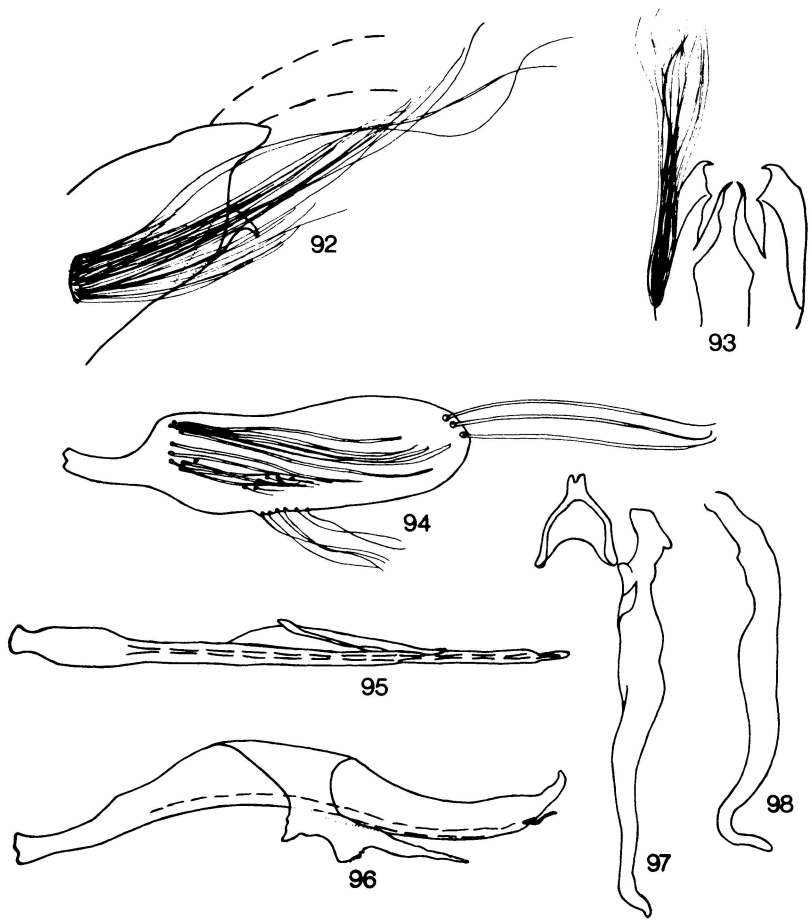


FIG. 92–98. *Pilosana panna:* **92,** ♂ pygofer, lateral view; **93,** apex of ♂ pygofer, dorsal view; **94,** plate, ventral view; **95,** aedeagus, ventral view; **96,** aedeagus, lateral view; **97,** connective and style, dorsal view; **98,** apex of style, lateral view.

anterior margin rugulose, finely granulose below; clypellus short, lateral margins nearly parallel.

♂. Pygofer in lateral aspect with a long, abruptly curved caudoventral process, large tuft of very long setae originating near base of pygofer and extending beyond 10th segment; 10th segment long and broad, without ventral processes; aedeagus asymmetrical, long, narrow, nearly tubelike, with large medial process on dorsal margin, process curved laterally and ventrally, irregularly shaped and projecting distally; gonopore subapical, exiting ventrally; connective broadly Y-shaped, arms long, stem short; style very long, narrow, abruptly curved ventrally at apex; plate long and narrow, with numerous very long setae along lateral margins.

♀. 7th sternum large, about 1½× as long as penultimate sternum, caudal margin produced medially to a short lobe.

Holotype ♂, GUYANA: New River, 250 m, 26.III–2.IV.1938, G.A. Hudson (BMNH). Allotype ♀, GUYANA: same data as holotype (BMNH). Paratypes. GUYANA: 2♂,4♀, same data as holotype, except 10.III–5.V.1938; GUYANA: upper Courantyne Riv, 1♀, IX.1935, G.A. Hudson (BMNH, author's collection); 2♀, Maroni (NCSR).

Remarks. *Pilosana panna* is similar in certain male genital characteristics to *rugosa,* n. sp., but can be distinguished from that species by the long, abruptly curved caudoventral process of the pygofer and by the very large ornate process on the dorsal margin of the aedeagus.

Pilosana univentrosa Nielson, **new species** Fig. 99–105

Length: ♂ 5.00 mm.

General color piceous throughout except for 2 very small yellow spots just distad of clavus and with narrow suffused yellow markings subapically.

Head large, distinctly narrower than pronotum, anterior margin conically rounded; crown produced beyond anterior margin of eyes, this distal length a little more than ¼ of entire median length, about as wide as width of eyes, distinctly elevated above level of eyes, lateral margins nearly parallel, surface striate longitudinally; ocelli small, situated near anterior margin of crown; eyes large, semiglobular, occupying about ⅔ of entire dorsal area of head; pronotum short, median length about equal to median length of crown, surface smooth; scutellum short, median length slightly longer than median length of pronotum; elytra elongate, apices broadly rounded, veins slightly obscured, venation as in description of genus, appendix well developed; clypeus elongate, broad anteriorly, without median longitudinal carina, anterior margin rugulose, surface finely granulose below; clypellus short, lateral margins slightly expanded apically.

♂. Pygofer in lateral aspect with a long twisted caudoventral process and with a large tuft of very long setae extending beyond apex of 10th segment; 10th segment long and broad, without ventral processes; aedeagus asymmetrical, long, narrow, tubular, with a distinctive subapical curved process on ventral margin, process directed distally; gonopore subapical on ventral margin; connective broadly Y-shaped, arms long, stem short; style very long, slender, abruptly curved ventrally at apex; plate long and narrow, adorned with numerous long setae along lateral margins.

♀. Unknown.

Holotype ♂, BRAZIL: Jacareacanga, Para, X.1959, M. Alvarenga (USNM). Paratype. 1♂, same data as holotype (author's collection).

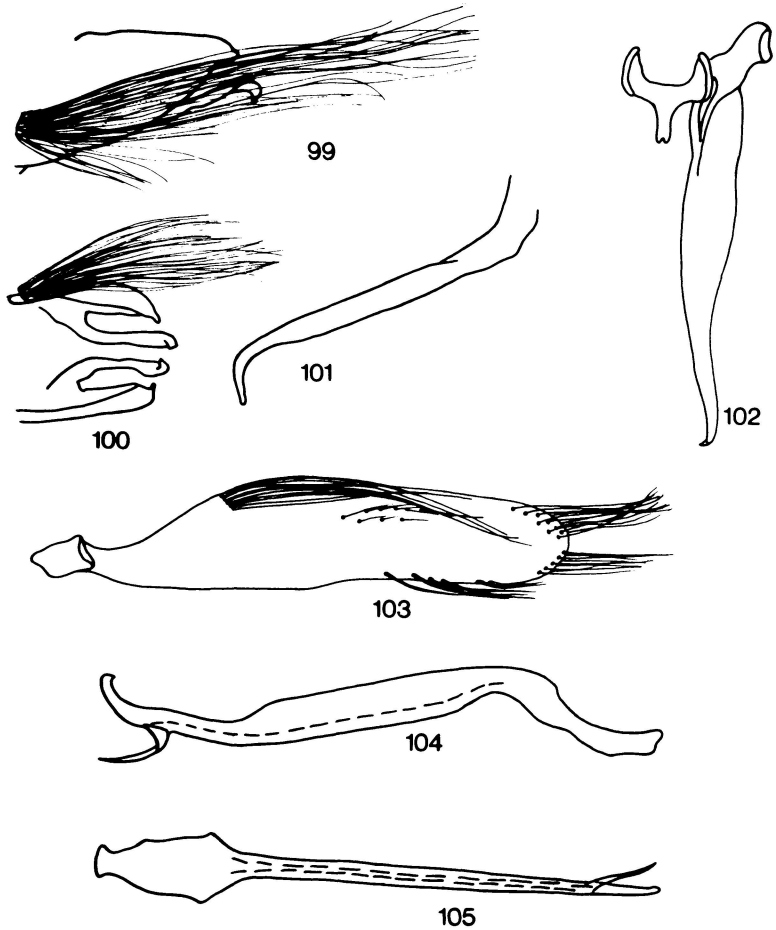


FIG. 99–105. *Pilosana univentrosa:* **99,** ♂ pygofer, lateral view; **100,** apex of ♂ pygofer, dorsal view; **101,** apex of style, lateral view; **102,** connective and style, dorsal view; **103,** plate, ventral view; **104,** aedeagus, lateral view; **105,** aedeagus, ventral view.

Remarks. This species is similar in male genital characteristics to *bicolor* (Stål) but can be distinguished from that species by the long slender twisted caudoventral process of the pygofer and by its uniformly piceous color throughout (except for small yellow markings subapically on the elytra).

Pilosana circularis (Fabricius), **new combination** Fig. 106–110

Cicada circularis Fabricius, 1803: 75. Holotype ♂ (UZM) [examined].
Tettigonia circularis (Fabricius): Signoret, 1853: 357.
Jassus circularis (Fabricius): Stål, 1869: 81.
Erythrogonia circularis (Fabricius): Melichar, 1926: 388.

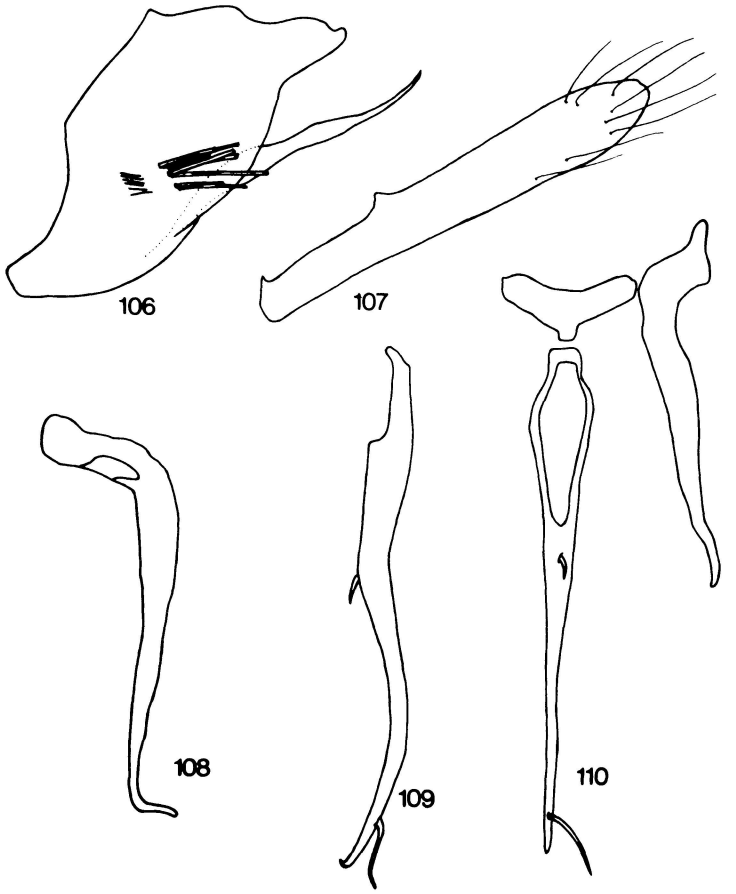


FIG. 106–110. *Pilosana circularis:* **106,** ♂ pygofer, lateral view; **107,** plate, ventral view; **108,** style, lateral view; **109,** aedeagus, lateral view; **110,** aedeagus, connective and style, dorsal view.

The description of *circularis* is limited to observations made on the holotype male, the only specimen available to me at this writing. Although not measured, this is one of the smallest species of Coelidiinae that I have seen from South America, probably less than 4 mm in length. It is a colorful species; nearly ½ of the costa is hyaline medially and an orange chevron marking along the clavus curves diagonally toward the subapical portion of the costa.

♂. Pygofer in lateral aspect with very long slender caudoventral process and with tuft of long setae situated about middle of pygofer; aedeagus asymmetrical, long, narrow, nearly tubelike, becoming attenuated apically with a short, curved dorsal spine about middle of shaft and single long, curved ventral spine subapically, spine extending beyond apex of aedeagal shaft; gonopore ill defined; connective broadly Y-shaped, arms long, stem very short; style long, slender, abruptly curved ventrally at apex; plate long and narrow with numerous long setae along margins.

Distribution. South America.

Specimens examined. American Meridian [SOUTH AMERICA], holotype ♂ (Schmidt) (UZM).

Remarks. This species is unusual and can be distinguished from all other species of *Pilosana* by the presence of a single short curved process on the middle of the dorsal margin of the aedeagus, by the subapical ventral process on the aedeagus, and by its small size and distinctive coloration.

Pilosana duocristata Nielson, **new species** Fig. 111–117

Length: ♂ 6.40 mm, ♀ 6.60 mm.

General color piceous to deep fuscous in ♂; deep ochraceous in ♀; light ochraceous markings on elytra in ♂. Sexual dimorphism apparent.

Head large, narrower than pronotum, anterior margin conically rounded; crown produced beyond anterior margin of eyes, this distal length about ¼ entire median length, elevated above level of eyes, slightly narrower than width of eyes, surface strongly striate longitudinally; ocelli small, situated near anterior margin of crown; eyes large, elongate-ovoid, occupying more than ⅔ of entire dorsal area of head; pronotum large, median length greater than median length of crown, surface smooth; scutellum short, median length less than median length of pronotum; elytra elongate, apices broadly rounded, veins slightly obscured, venation as in description of genus, appendix well developed; clypeus elongate, broad anteriorly, narrowed posteriorly, without median longitudinal carina, anterior margin rugulose, surface finely granulose below; clypellus short, lateral margins slightly expanded apically.

♂. Pygofer in lateral aspect with lobelike caudoventral process, small tuft of very long setae originating near base of pygofer and extending beyond 10th segment, with 2nd tuft of long setae originating near caudoventral margin of pygofer; 10th segment long and broad, without processes; aedeagus asymmetrical, long, narrow, somewhat tubular, with asymmetrical bifurcate process subapically on ventral margin of shaft; gonopore subapical, exiting ventrally near base of process; connective broadly Y-shaped, arms long, stem very short; style very long, narrow, abruptly curved apically at apex and directed ventrally; plate long and very broad at apical ¾ with numerous tufts of long setae along lateral margins.

♀. 7th sternum large, nearly 2× as long as penultimate segment, caudal margins slightly produced medially.

Holotype ♂, VENEZUELA: Trujillo State, E of Mesa, 2750 m, 28.III.1947, H.E. Box (BMNH). Allotype ♀, VENEZUELA: same data as holotype (BMNH). Paratypes. 1♂,2♀, same data as holotype (BMNH, author's collection).

Remarks. *Pilosana duocristata* is similar in general habitus to *singularis,* n. sp., but can be distinguished from that species by the 2 tufts of long setae on the pygofer, by the distinct asymmetrically bifurcate ventral processes of the aedeagus, and by the lobelike caudoventral process on the pygofer.

Pilosana singularis Nielson, **new species** Fig. 118–124

Length: ♂ 5.10 mm, ♀ 5.60 mm.

General color piceous in ♂ with several small ochraceous spots subapically on elytra, ochraceous in ♀ except for deep fuscous markings subapically on elytra. Sexual dimorphism apparent.

Head large, narrower than pronotum, anterior margin smoothly rounded; crown distinctly

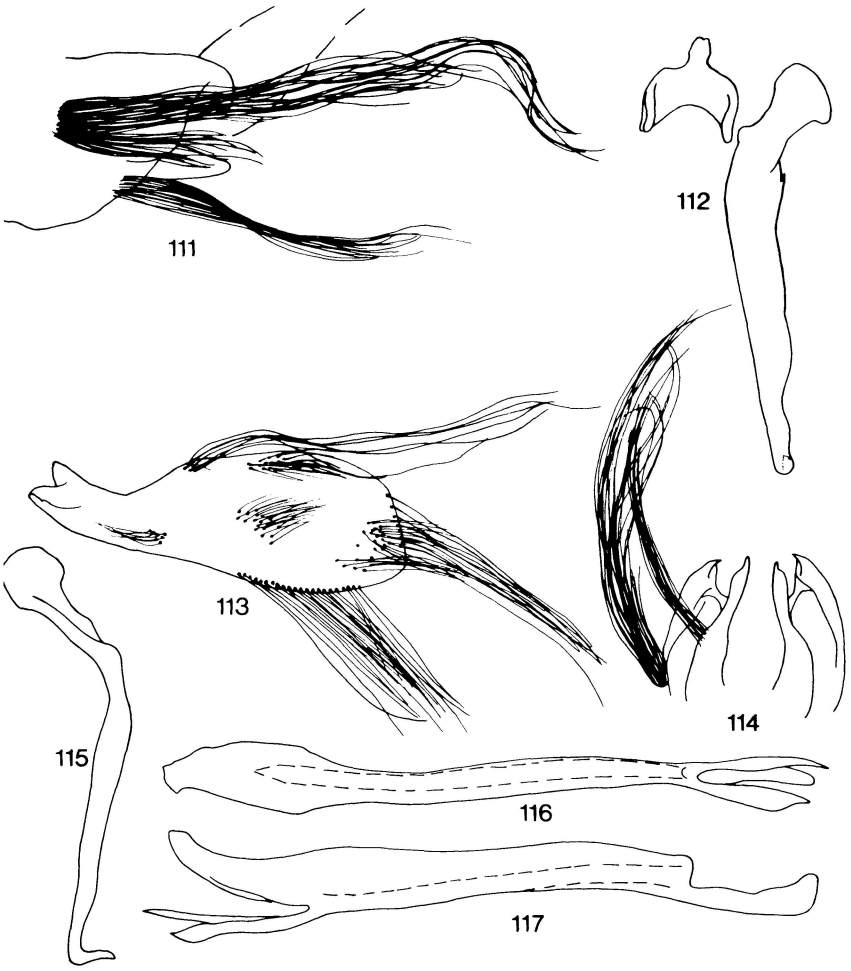


FIG. 111–117. *Pilosana duocristata:* **111,** ♂ pygofer, lateral view; **112,** connective and style, dorsal view; **113,** plate, ventral view; **114,** apex of ♂ pygofer, dorsal view; **115,** style, lateral view; **116,** aedeagus, ventral view; **117,** aedeagus, lateral view.

produced beyond anterior margin of eyes, distal length about ¼ entire median length, distinctly elevated above level of eyes, about as wide as eyes, lateral margins nearly parallel, surface striate longitudinally; ocelli small, situated near anterior margin of crown; eyes large, elongate-ovoid, occupying a little less than ⅔ of entire dorsal area of head; pronotum short, median length less than median length of crown, surface smooth; scutellum short, median length about equal to median length of pronotum; elytra elongate, apices rounded, veins slightly obscured, venation as in description of genus, appendix well developed; clypeus elongate, broad anteriorly, narrowed posteriorly, without median longitudinal carina, anterior margin rugulose, surface finely granulose below; clypellus short, lateral margins nearly parallel.

♂. Pygofer in lateral aspect with ornate caudoventral process, process sharply pointed

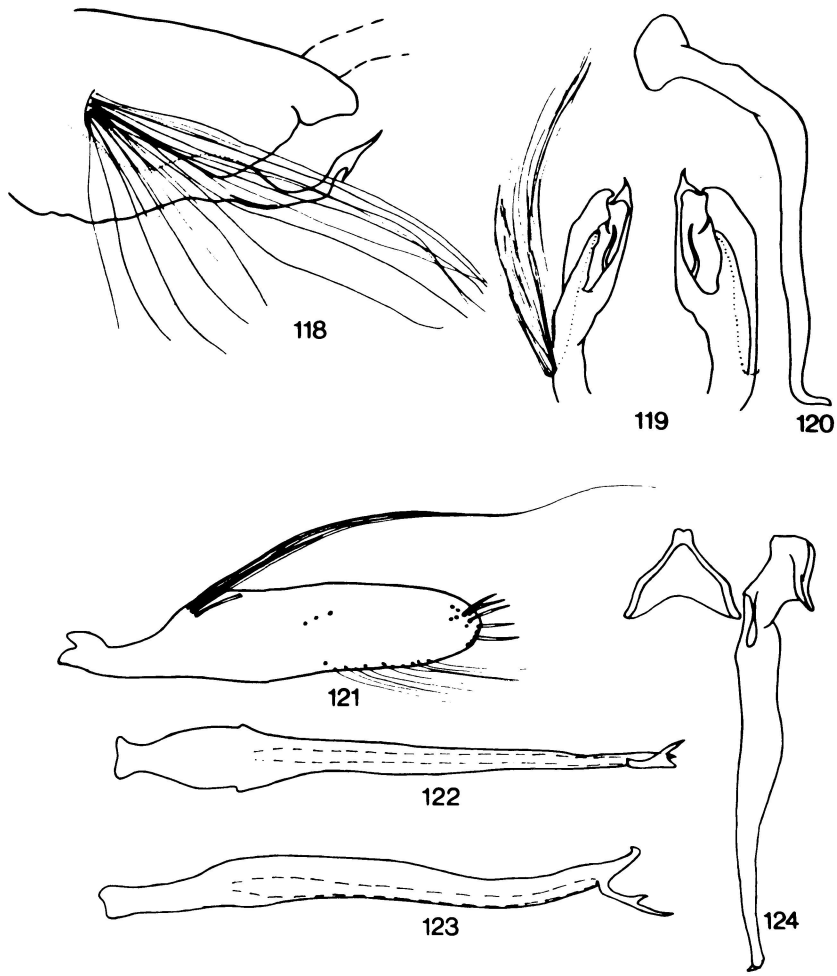


FIG. 118–124. *Pilosana singularis:* **118,** ♂ pygofer, lateral view; **119,** apex of ♂ pygofer, dorsal view; **120,** style, lateral view; **121,** plate, ventral view; **122,** aedeagus, ventral view; **123,** aedeagus, lateral view; **124,** connective and style, dorsal view.

apically with secondary subapical process and long, narrow subbasal process, with small tuft of very long setae originating near middle of pygofer and extending beyond 10th segment; 10th segment long, broad, without ventral processes; aedeagus asymmetrical, long, narrow, somewhat tubelike, with subapical process on ventral margin, process with secondary, short medial tooth or asymmetrically bifurcate; gonopore subapical, exiting ventrally at base of process; connective broadly Y-shaped, arms long, stem short; style long and narrow, apex abruptly curved ventrally; plate long and narrow, with numerous long setae along lateral margins.

♀. 7th sternum undescribed because abdomen is missing.

Holotype ♂, GUYANA: Kutari Sources, I–II.1936, G.A. Hudson (BMNH). Allotype ♀, GUY-

ANA: same data as holotype (BMNH). Paratypes. GUYANA: 2♂, same data as holotype (BMNH, author's collection).

Remarks. *Pilosana singularis* is similar in general habitus to *gratiosa* (Spångberg) but can easily be distinguished from that species by the ornate caudoventral process of the pygofer and by the aedeagal process, which is subapical and has a short medial secondary process.

Pilosana gratiosa (Spångberg), **new combination** Fig. 125–135

Jassus gratiosus Spångberg, 1879: 25. Holotype ♂ (NM) [examined].
Neocoelidia gratiosa (Spångberg): Baker, 1898: 292.

Length: ♂ 5.30–5.80 mm, ♀ 6.00–6.30 mm.

General color piceous in ♂ with ochraceous markings subapically on elytra, deep ochraceous with veins deeply marked and fuscous markings subapically on elytra of ♀. Sexual dimorphism apparent.

Head large, narrower than pronotum, anterior margin conically rounded; crown produced beyond anterior margin of eyes, distal length about ¼ entire median length, distinctly elevated above level of eyes, about as wide as width of eyes, lateral margins nearly parallel, distinctly striate longitudinally; ocelli prominent, situated near anterior margin of crown; eyes large, semiglobular, occupying about ⅔ of entire dorsal area of head; pronotum short, median length about equal to median length of crown, surface smoothly knobbed; scutellum short, median length slightly longer than median length of pronotum; elytra elongate, apices rounded, veins distinct, venation as in description of genus, appendix well developed; clypeus elongate, broad anteriorly, narrowed posteriorly, without median longitudinal carina, anterior margin rugulose, surface finely granulose below; clypellus short, narrow, lateral margins slightly expanded apically.

♂. Pygofer in lateral aspect with distinct short, asymmetrically bifurcate caudoventral process and with large tuft of very long setae originating in the middle of pygofer and extending beyond 10th segment; 10th segment long and broad, without ventral processes; aedeagus asymmetrical, long, broad subapically in lateral aspect, somewhat tubelike, with ventral asymmetrically bifurcate process subapically and with preapical ventral margin toothed; gonopore subapical, exiting ventrally near base of ventral process; connective broadly Y-shaped, arms long, stem short; style very long, narrow, apex abruptly curved ventrally; plate long and very narrow, with numerous setae along lateral margins.

♀. 7th sternum large, about 1½× as long as penultimate sternum, caudal margin produced slightly medially.

Distribution. Mexico; new records: Panama, Honduras, Nicaragua, Guatemala, Costa Rica.

Specimens examined. *Jassus gratiosus* Spångberg, holotype ♂, MEXICO: Salle (NM). MEXICO: misc. locs.: Palomares, Oaxaca, Teapa, Tabasco, 3♂, 5–21.IX.1961, R. & K. Dreisbach (BMNH, author's collection). PANAMA: Mojinga Swp, 34♂,19♀, 28.VIII.1951–15.I.1953, F.S. Blanton (USNM, NCSR, author's collection); misc. locs: Barro Colorado, Gatun Lake, Bugaba, Polega, Cerro Campana, Ft. Gulick, Paja, Las Crules, Arraijan, Madden Dam, 12♂,7♀, VI.1928–II.1955, Champion, T.O. Zschokke, C. Rettenmeyer, C.H. Curran, F.S. Blanton, S.W. Frost (USNM, NCSR, AMNH, BMNH, CAS, UKL). HONDURAS: Punta Gorda, 1♂, V.1934, J.L. Buys (USNM); La Ceiba, 1♀, 18.X.1916, F.J. Dyer (AMNH). COSTA RICA: misc. locs.: Rincon, Osa Pen, Waldeck, Hamburg Farm, San Isidro del General, 8♂,11♀, III.1931–VIII.1966, D.L. Bounds, C.P. Dodge, S. & C.H. Ballou (USNM, NCSR, author's collection). GUATEMALA: Mazatenango, 1♂, 3.II.1905 (NCSR). NICARAGUA: Masawas, Waspuc River, 3♂, 13–19.X.1955, B. Malkin (UCB).

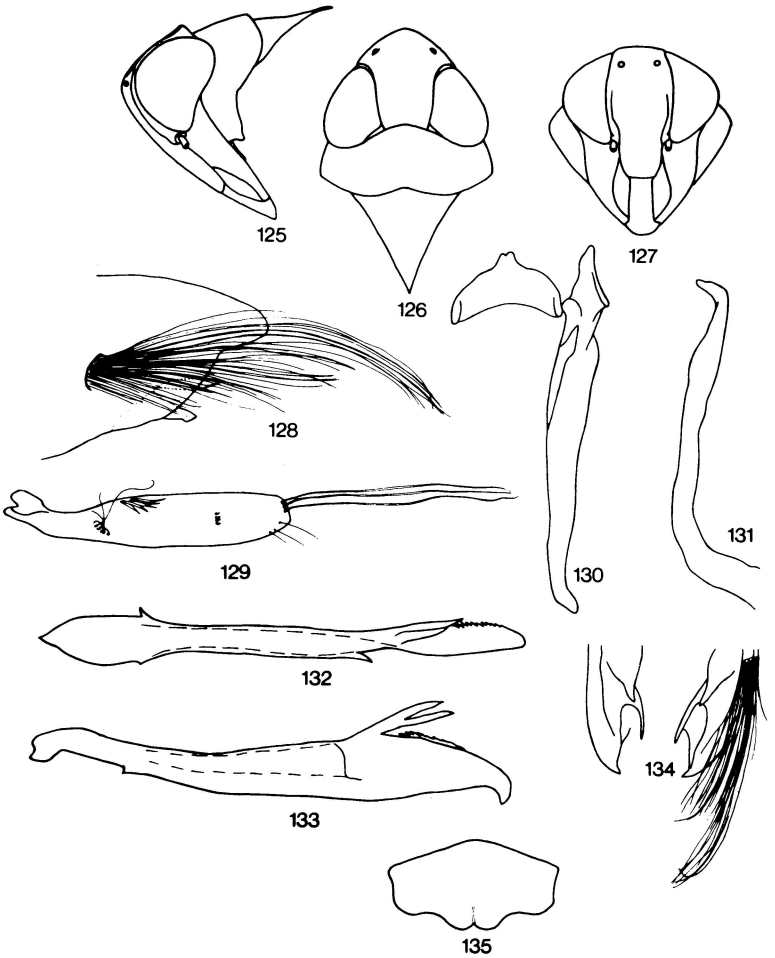


FIG. 125–135. *Pilosana gratiosa:* **125,** head, pronotum and scutellum, lateral view; **126,** head, pronotum and scutellum, dorsal view; **127,** face, ventral view; **128,** ♂ pygofer, lateral view; **129,** plate, ventral view; **130,** connective and style, dorsal view; **131,** apex of style, lateral view; **132,** aedeagus, ventral view; **133,** aedeagus (inverted), lateral view; **134,** apex of ♂ pygofer, dorsal view; **135,** ♀ 7th sternum, ventral view.

Remarks. *Pilosana gratiosa* is similar in general habitus and male genital characteristics to *longipes* but can be distinguished from that species by the presence of a serrated apical margin on the ventral surface of the aedeagal shaft.

Pilosana longipes (Fabricius), **new combination** Fig. 136–142

Cicada longipes Fabricius, 1803: 76. Holotype ♂ (UZM) [examined].
Tettigonia longipes (Fabricius): Signoret, 1855: 801.
Jassus longipes (Fabricius): Stål, 1869: 81.
Coelidia longipes (Fabricius): Metcalf, 1964: 57.

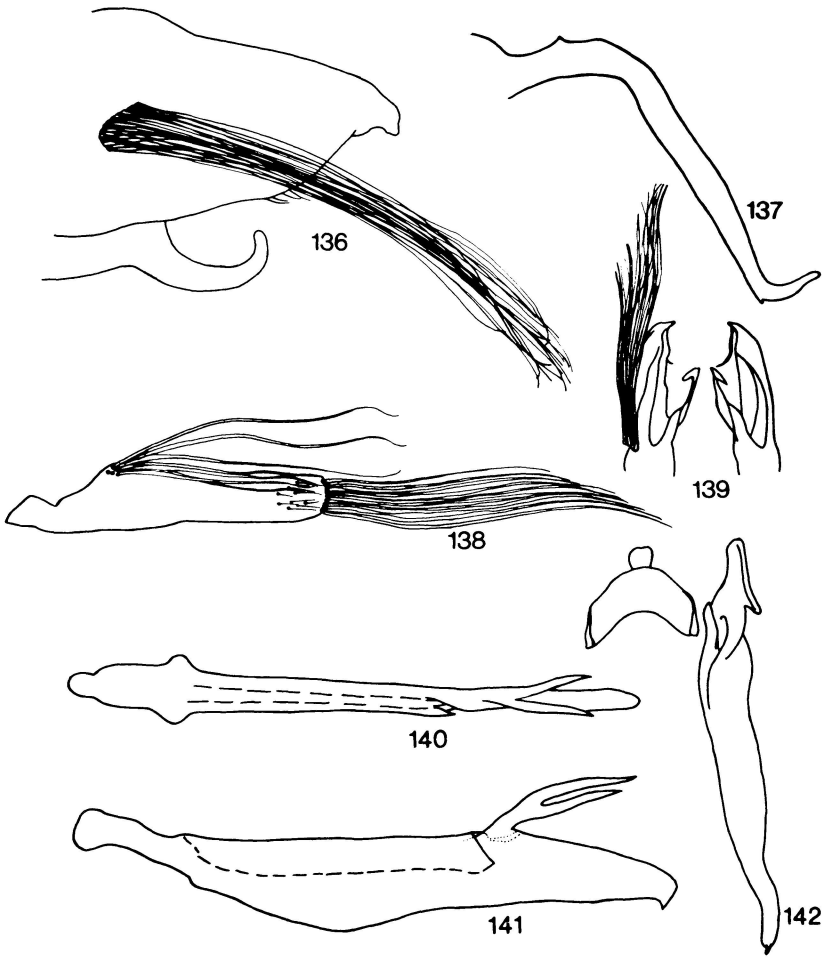


FIG. 136–142. *Pilosana longipes:* **136,** ♂ pygofer, lateral view; **137,** apex of style, lateral view; **138,** plate, ventral view; **139,** apex of ♂ pygofer, dorsal view; **140,** aedeagus, ventral view; **141,** aedeagus (inverted), lateral view; **142,** connective and style, dorsal view.

Length: ♂ 6.00 mm, ♀ 6.70 mm.

General color deep fuscous with large ochraceous to yellow spot on clavus and small yellow spot near middle of costa and subapically on elytra in ♂. ♀ deeply ochraceous throughout except for small fuscous spots subapically on elytra. Sexual dimorphism apparent.

Head large, narrower than pronotum, anterior margin conically rounded; crown produced beyond anterior margin of eyes, distal length about ¼ entire median length, distinctly elevated above level of eyes, about as wide as width of eyes, lateral margins nearly parallel, surface striate longitudinally; ocelli prominent, situated near anterior margin of crown; eyes large, elongate-ovoid, occupying a little less than ⅔ of entire dorsal area of head; pronotum short, median length about equal to median length of crown, surface smoothly knobbed; scutellum short, median length slightly greater than median length of pronotum; elytra elongate, apices

broadly rounded, veins partially obscured, venation as in description of genus, appendix well developed; clypeus elongate, broad anteriorly, narrow posteriorly, without median longitudinal carina, anterior margin rugulose, surface below finely granulose; clypellus short, lateral margins nearly parallel.

♂. Pygofer in lateral aspect with long, narrow, twisted caudoventral process abruptly recurved apically and with small tuft of setae originating near base of pygofer and extending beyond apex of 10th segment; 10th segment long and broad, without ventral processes; aedeagus asymmetrical, long, narrow, somewhat broadened medially, slightly flattened laterally, with asymmetrical bifurcate process subapically on ventral margin; gonopore subapical, exiting ventrally near base of process; connective broadly Y-shaped, arms long, stem short; style long and narrow, apex curved ventrally; plate long and narrow, covered with long setae along lateral margins.

♀. 7th sternum long, about 1½× as long as penultimate sternum, caudal margin produced at middle.

Distribution. Guyana.

Specimens examined. Cicada longipes Fabricius, holotype probably ♂ (abdomen missing on specimen), GUYANA [Schmidt] (UZM). GUYANA: Yarikita, 1♂, III.1931, J.G. Meyers (BMNH); Essequibo Riv, Moraballi Crk, Wineperu, 2♂, 4.X.1929, Oxford Univ. Exped. (BMNH); Essequibo Riv, 1♂, 24.III.1969, Duckworth & Dietz (USNM); Demerara Riv, 2♂,2♀, 18–31.III.1913 [no coll.] (CU, author's collection).

Remarks. This species is similar in certain male genital characteristics to *bifurcata,* n. sp. It can be distinguished by the long flattened and twisted caudoventral process of the pygofer, which is curved abruptly apically.

Pilosana bifurcata Nielson, **new species** Fig. 143–149

Length: ♂ 5.50–5.80 mm, ♀ 6.00–6.30 mm.

General color deep fuscous to piceous in ♂ with clavus suffused with light fuscous and with subapical markings on elytra; ♀ deep ochraceous to deep fuscous with clavus, scutellum and pronotum deep ochraceous on dark specimens. Sexual dimorphism apparent; color patterns highly variable.

Head large, narrower than pronotum, anterior margin conically rounded; crown produced beyond anterior margin of eyes, distal length more than ¼ entire median length, distinctly elevated above level of eyes, about as wide as eyes, lateral margins nearly parallel, surface longitudinally striate; ocelli small, situated near anterior margin of crown; eyes large, elongate-ovoid, occupying a little less than ⅔ of entire dorsal area of head; pronotum short, median length less than median length of crown, surface smoothly knobbed; scutellum short, median length a little greater than median length of pronotum; elytra elongate, apices rounded, veins distinct, venation as in description of genus, appendix well developed; clypeus elongate, broad anteriorly, narrow posteriorly, without median longitudinal carina, anterior margin rugulose, finely granulose below; clypellus short, lateral margins slightly expanded apically.

♂. Pygofer in lateral aspect with broad asymmetrically bifurcate caudoventral process and with large tuft of long setae originating near base of pygofer and extending beyond apex of 10th segment; 10th segment long and broad, without ventral processes; aedeagus asymmetrical, long, somewhat narrow, slightly flattened laterally, with asymmetrically bifurcate subapical process on ventral margin; gonopore subapical, exiting ventrally near base of process; connective broadly Y-shaped, arms long, stem short; style long and narrow, abruptly curved ventrally at apex; plate long and narrow, with numerous long setae along lateral margin and apex.

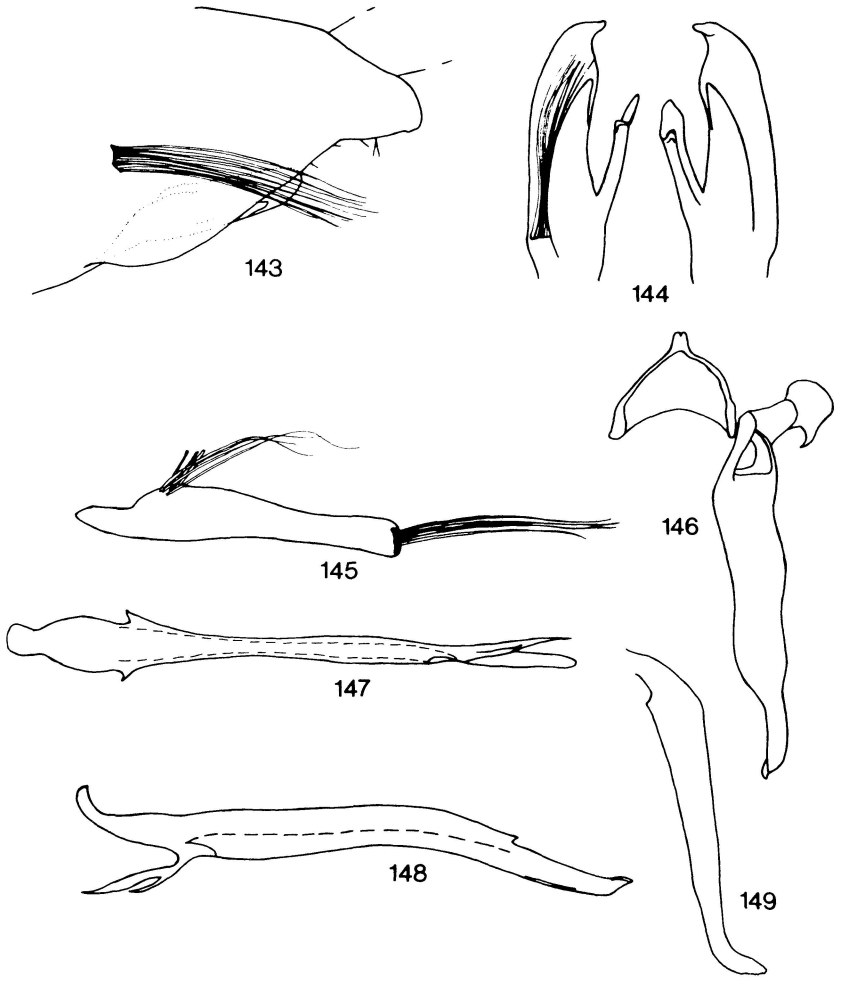


FIG. 143–149. *Pilosana bifurcata:* **143,** ♂ pygofer, lateral view; **144,** apex of ♂ pygofer, dorsal view; **145,** plate, ventral view; **146,** connective and style, dorsal view; **147,** aedeagus, ventral view; **148,** aedeagus, lateral view; **149,** apex of style, lateral view.

♀. 7th sternum large, about 1½× as long as penultimate sternum, caudal margin produced medially.

Holotype ♂, VENEZUELA: San Esteban, 22–30.XI.1939, P. Anduze (USNM). Allotype ♀, VENEZUELA: same data as holotype (USNM). Paratypes. VENEZUELA: 12♂,7♀, same data as holotype (USNM, author's collection). BRITISH WEST INDIES: misc. locs.: Dominica, St. Vincent, St. Lucia, Pont Casse, d'Leau Gommier, Saltoun Estate, 8♂,7♀, 21.V.1911–3.III.1965, H.H. Smith, O.S. Flint, Jr, W.W. Wirth, R.G. Fennah, J.F.G. Clarke (USNM, AMNH). COSTA RICA: Waldeck, 2♂, 8.II.1935, P. Schild, Sofia & C.H.B. (USNM). ECUADOR: Bucay, 330 m, 1♀, 7.X.1922, F.X. Williams (BPBM). PANAMA: Portrerillos, 1♂, 14.V.1939 (NCSR).

Remarks. *Pilosana bifurcata* is most closely related to *longipes* and can easily be distinguished from that species by the broad, lobelike, asymmetrically bifurcate caudoventral process of the pygofer.

Pilosana bicolor (Stål), **new combination** Fig. 150–156

Coelidia bicolor Stål, 1862: 51. Holotype (probably ♂) (NR) [examined].
Jassus bicolor (Stål): Spångberg, 1878: 32.

Length: ♂ 4.80 mm, ♀ 5.30 mm.

General color deep fuscous to piceous with broad yellow to orange longitudinal stripe on clavus and with 2 large yellow or ivory triangulate spots at apex of clavus, extending to costa.

Head large, distinctly narrower than pronotum, anterior margin conically rounded; crown

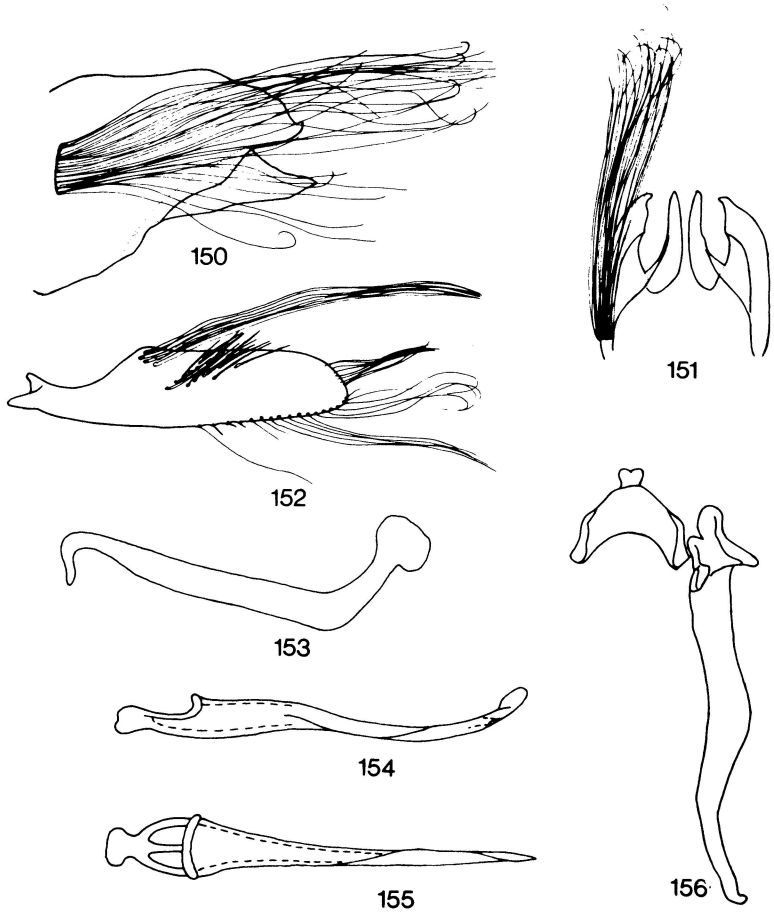


FIG. 150–156. *Pilosana bicolor:* **150,** ♂ pygofer, lateral view; **151,** apex of ♂ pygofer, dorsal view; **152,** plate, ventral view; **153,** style, lateral view; **154,** aedeagus, lateral view; **155,** aedeagus, dorsal view; **156,** connective and style, dorsal view.

broad, produced beyond anterior margin of eyes, this distal length a little over ¼ entire median length, distinctly elevated above level of eyes, prominently striate longitudinally, slightly narrower than width of eyes, lateral margins nearly parallel; ocelli prominent, situated near anterior margin of crown; eyes large, semiglobular, occupying about ⅔ of entire dorsal area of head; pronotum short, median length about equal to median length of crown, surface smooth; scutellum short, median length about equal to median length of pronotum; elytra elongate, apices broadly rounded, veins slightly obscured, venation as in description of genus, appendix well developed; clypeus elongate, very broad anteriorly, without median longitudinal carina, anterior margin rugulose, surface finely granulose below, lateral margins convergent basally; clypellus short, lateral margins nearly parallel.

♂. Pygofer in lateral aspect large, with prominent, large triangulate caudoventral process and with large tuft of extremely long setae originating near basal margin of pygofer and extending beyond apex of 10th segment; 10th segment long and broad, without ventral processes; aedeagus asymmetrical, long, narrow, slightly twisted apically and without ventral or dorsal processes; gonopore subapical, exiting ventrally; connective broadly Y-shaped, stem very short, arms long; style long, narrow, abruptly curved ventrally at apex in lateral aspect; plate long and very narrow, profusely setose.

♀. 7th sternum large, nearly 2× as long as penultimate sternum, caudal margin slightly produced at middle.

Distribution. Brazil.

Specimens examined. BRAZIL: Nictheroy, Rio de Janeiro, 1♂, 15.X.1919, Cornell Univ. Exped. (CU); Mafra, S. Cath., 1♀, XII.1930, A. Maller (NCSR); Rio, 1♂ [no date, no coll.] (BMNH).

Remarks. *Pilosana bicolor,* a beautifully marked species, is similar in general habitus to *vanna* but can easily be distinguished by the presence of a large triangulate caudoventral process of the pygofer and by the lack of processes on the aedeagus.

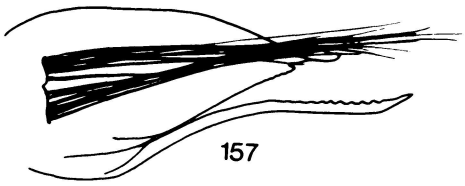
Pilosana rugosa Nielson, **new species** Fig. 157–160

Length: ♂ 5.40 mm, ♀ 6.00 mm.

General color deep fuscous throughout except for ochraceous markings subapically on elytra in both sexes.

Head large, narrower than pronotum, anterior margin conically rounded; crown produced beyond anterior margin of eyes, distal length more than ¼ entire median length, distinctly elevated above level of eyes, about as wide as width of eyes, lateral margins nearly parallel, surface longitudinally striate; ocelli small, situated near anterior margin of crown; eyes large, semiglobular, occupying a little less than ⅔ of entire dorsal area of head; pronotum short, median length less than median length of crown, surface smooth; scutellum short, median length about equal to median length of pronotum; elytra elongate, apices rounded, veins slightly obscured, venation as in description of genus, appendix well developed; clypeus elongate, broad anteriorly, narrowed posteriorly, without median longitudinal carina, anterior margin rugulose, surface below finely granulose; clypellus short, lateral margins nearly parallel.

♂. Pygofer in lateral aspect with long narrow rugulose caudoventral process and with large tuft of long, fine setae originating near base of pygofer and extending beyond 10th segment; aedeagus asymmetrical, long, narrow, slightly flattened laterally, without ventral or dorsal processes; gonopore subapical, exiting ventrally; connective broadly Y-shaped, arms long, stem short; style long, very narrow, abruptly curved ventrally at apex; plate long and narrow, with numerous long, fine setae along lateral margins.



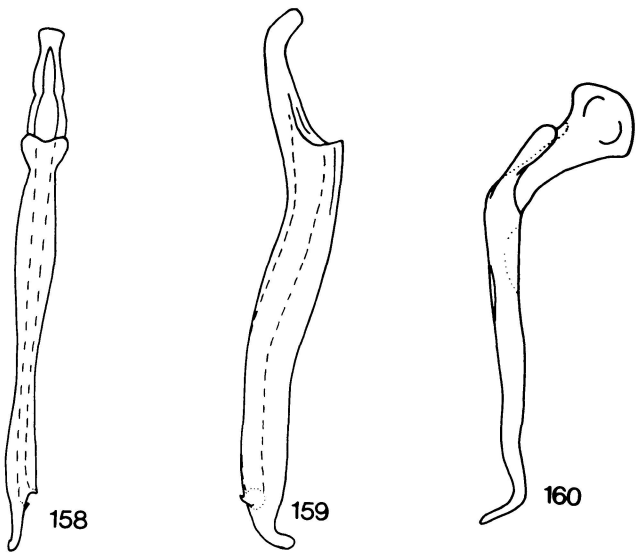


FIG. 157–160. *Pilosana rugosa:* **157,** ♂ pygofer, lateral aspect; **158,** aedeagus, dorsal view; **159,** aedeagus, lateral view; **160,** style, lateral view.

♀. 7th sternum large, about 1½× as long as penultimate sternum, caudal margin produced at middle.

Holotype ♂, GUYANA: upper Courantyne Riv, IX.1935, G.A. Hudson (BMNH). Allotype ♀ (BMNH), 2♂ paratypes, same data as holotype (BMNH, author's collection).

Remarks. *Pilosana rugosa* is similar in male genital characteristics to *bicolor* but can easily be distinguished from that species by the presence of a long rugulose narrow caudoventral process of the pygofer and by the distinctive color pattern, which is fuscous with ochraceous markings subapically on the elytra.

Youngolidia Nielson, **new genus**

Type-species: *Youngolidia latula,* n. sp.

Medium-sized, moderately robust leafhoppers. Similar in general habitus to *Pilosana,* but with distinctive ♂ genitalia. General color light to deep fuscous.

Head narrower than pronotum; crown produced beyond anterior margin of eyes, distinctly elevated above level of eyes, striate radially or longitudinally from anterior margin; ocelli small, situated near anterior margin of crown; eyes large, semiglobular, occupying less than ⅔ of entire dorsal area of head; pronotum short, length about equal to length of crown; scutellum short, length about equal to or slightly longer than pronotum; elytra elongate, apices rounded, 3 anteapical cells present, 5 apical cells present, appendix well developed; clypeus elongate, without median longitudinal carina, broad anteriorly, narrowed posteriorly, surface finely granulose; clypellus short, narrow.

♂. Genitalia asymmetrical; pygofer large, with 1–3 pairs of caudal processes; 10th segment well developed, without ventral processes; aedeagus asymmetrical, with a single process or flange on shaft; connective Y-shaped; style very short; plate broad, profusely setose on ventral surface.

The genus *Youngolidia* is found only in the Neotropical Region. Ten species are recognized, 6 of which are described as new. From *Pilosana,* to which it is similar in certain male genital characteristics, *Youngolidia* can be separated by the very short style and heavily pilosed plate.

I take great pleasure in naming this genus after Dr David A. Young, a long time colleague, who has dedicated his life to the advancement of systematics of the Cicadellidae.

Key to the species of *Youngolidia* (♂)

1. Pygofer in lateral view with 2 caudal processes, caudodorsal process shallowly or deeply bifurcate (Fig. 161) 2
   Pygofer in lateral view with 2 caudal processes, caudodorsal process not bifurcate (Fig. 201) 7
2 (1). Aedeagus with a distinctive short to long, narrow to robust process on shaft (Fig. 165) 3
   Aedeagus without such processes, sometimes with lateral flange (Fig. 182) 5
3 (2). Aedeagus in lateral view with a long narrow or long robust subapical process on ventral margin, margins of shaft smooth (Fig. 170) 4
   Aedeagus in lateral view with a short subbasal process on dorsal margin, dorsal and ventral margin of shaft toothed (Fig. 165) ..... **dentata, n. sp.**
4 (3). Aedeagus with long, robust subapical process on lateral margin, process not reaching midlength of shaft, directed nearly laterad, not appressed to shaft (Fig. 170) ..... **hasta, n. sp.**
   Aedeagus with long narrow subapical process on ventral margin, process reaching to midlength of shaft, directed basad, somewhat appressed to shaft (Fig. 178) ..... **ampla, n. sp.**
5 (2). Aedeagus with ventral, serrate flange on shaft (Fig. 182); pygofer with caudodorsal process shallowly bifurcate (Fig. 179) ..... **latula, n. sp.**
   Aedeagus without ventral flange (Fig. 192); pygofer with caudodorsal process deeply bifurcate (Fig. 188) 6
6 (5). Aedeagus in lateral view very broad medially, dorsal margin flanged laterally basad of middle (Fig. 192) ..... **lynnea, n. sp.**
   Aedeagus in lateral view narrow throughout middle, dorsal margin not flanged (Fig. 198) ..... **parallela**

7 (1). Aedeagus with spine or process 8
Aedeagus with flanges (Fig. 205) ..... **swensoni, n. sp.**
8 (7). Aedeagus with a spine arising from ventral or dorsal margin 9
Aedeagus with a spine arising from lateral margin (Fig. 211) ..... **lateralis, n. sp.**
9 (8). Pygofer with caudodorsal process long and narrow 10
Pygofer with caudodorsal process short and broad, process with secondary process (Fig. 213) ..... **sordidula**
10 (9). Aedeagus with a prominent subapical process arising near ventral margin (Fig. 220) ..... **patruelis**
Aedeagus with a prominent supramedial process on dorsal margin (Fig. 225) ..... **areata**

Youngolidia dentata Nielson, **new species** Fig. 161–166

Length: ♂ 6.00 mm, ♀ 6.30 mm.

General color light to deep ochraceous with deep fuscous markings or spots on head, pronotum, and scutellum, veins of elytra deep fuscous.

Head narrower than pronotum, anterior margin conical; crown produced beyond anterior margin of eyes, this distal length over ¼ entire median length, broad, wider than width of eyes, distinctly elevated above level of eyes, surface longitudinally rugulose, lateral margins slightly convergent basally; ocelli small, situated near anterior margin of crown; eyes large, semiglobular, occupying less than ⅔ of entire dorsal area of head; pronotum short, slightly longer than median length of crown, surface smoothly and finely knobbed; scutellum short, median length about equal to median length of pronotum; elytra elongate, apices narrowly rounded, veins distinct, venation as in description of genus, appendix very well developed; clypeus elongate, rather broad throughout, lateral margins nearly parallel, without median longitudinal carina, surface finely granulose; clypellus very broad, short, lateral margins nearly parallel.

♂. Pygofer in lateral aspect with 2 caudal processes; caudodorsal process bifurcate, long and robust, caudoventral process very long, robust, sharply pointed apically; 10th segment long and narrow, without ventral processes; aedeagus asymmetrical, long, narrow, with a prominent, curved, subbasal spine on dorsal margin, with a membranous, narrow toothed flange at apical ½ of shaft on dorsal margin and with a narrow membranous flange subapically on ventral margin; gonopore subapical, exiting ventrally; connective broadly Y-shaped, arms long, stem very short; style extremely short; plate long and very broad at apical ⅔, profusely setose.

♀. 7th sternum large, about 2× as long as penultimate sternum, caudal margin convex.

Holotype ♂, BOLIVIA: Tumupasa, XII.1921–1922, Mulford Bio Exped. (USNM). Allotype ♀, BOLIVIA: same data as holotype, M.R. Lopez (USNM).

Remarks. *Youngolidia dentata* is similar in certain male genital characteristics to *hasta,* n. sp., but can easily be distinguished from it by the presence of a subbasal, short, sharply pointed curved spine on the dorsal margin of the aedeagus.

Youngolidia hasta Nielson, **new species** Fig. 167–172

Length: ♂ 5.80 mm.

General color deep fuscous throughout, veins deep fuscous bordered with light ochraceous.

Head narrower than pronotum, anterior margin conically rounded; crown produced beyond

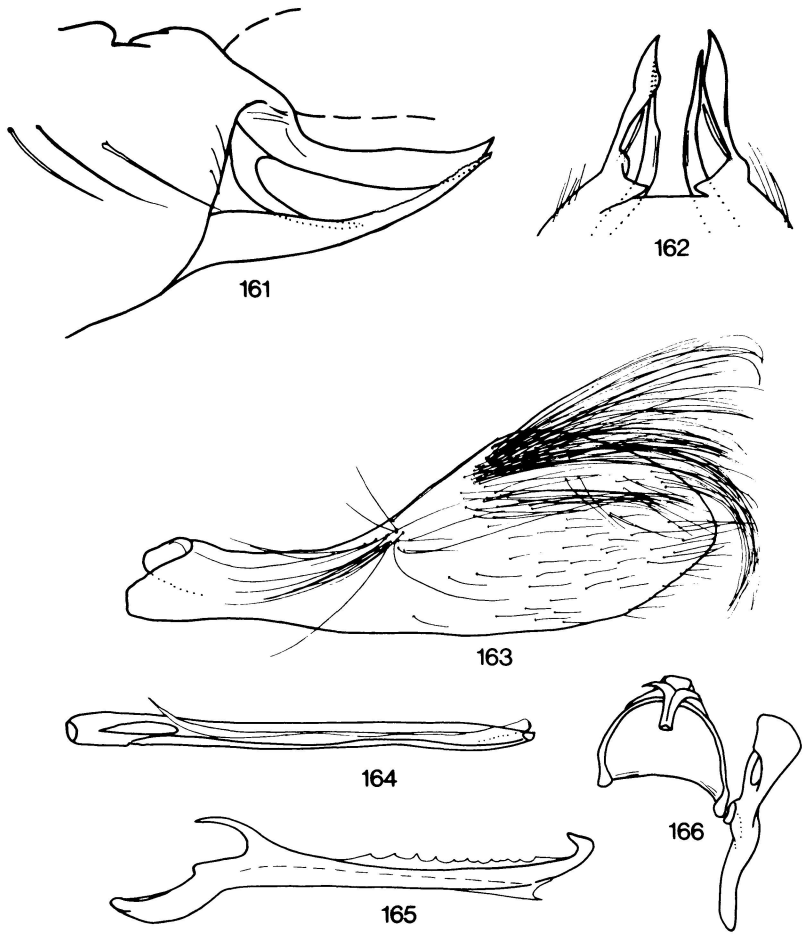


FIG. 161–166. *Youngolidia dentata:* **161,** ♂ pygofer, lateral view; **162,** apex of ♂ pygofer, dorsal view; **163,** plate, ventral view; **164,** aedeagus, dorsal view; **165,** aedeagus, lateral view; **166,** connective and style (inverted), dorsal view.

anterior margin of eyes, distal length about ¼ entire median length, narrow, narrower than width of eyes, distinctly elevated above level of eyes, surface longitudinally rugulose, lateral margins distinctly convergent basally; eyes large, semiglobular, occupying about ⅔ of entire dorsal area of head; pronotum short, median length about equal to median length of crown, surface transversely rugulose; scutellum short, median length slightly greater than median length of pronotum; elytra elongate, apices narrowly rounded, veins distinct, venation as in description of genus, appendix well developed; clypeus elongate, broad anteriorly, narrowed posteriorly, without median longitudinal carina, anterior margin rugulose, finely granulose below; clypellus short, narrow, lateral margins slightly concave medially.

♂. Pygofer with 2 caudal processes, caudodorsal process long, very broad, curved, with a subbasal short process on ventral margin, caudoventral process robust, long, narrow, sharply

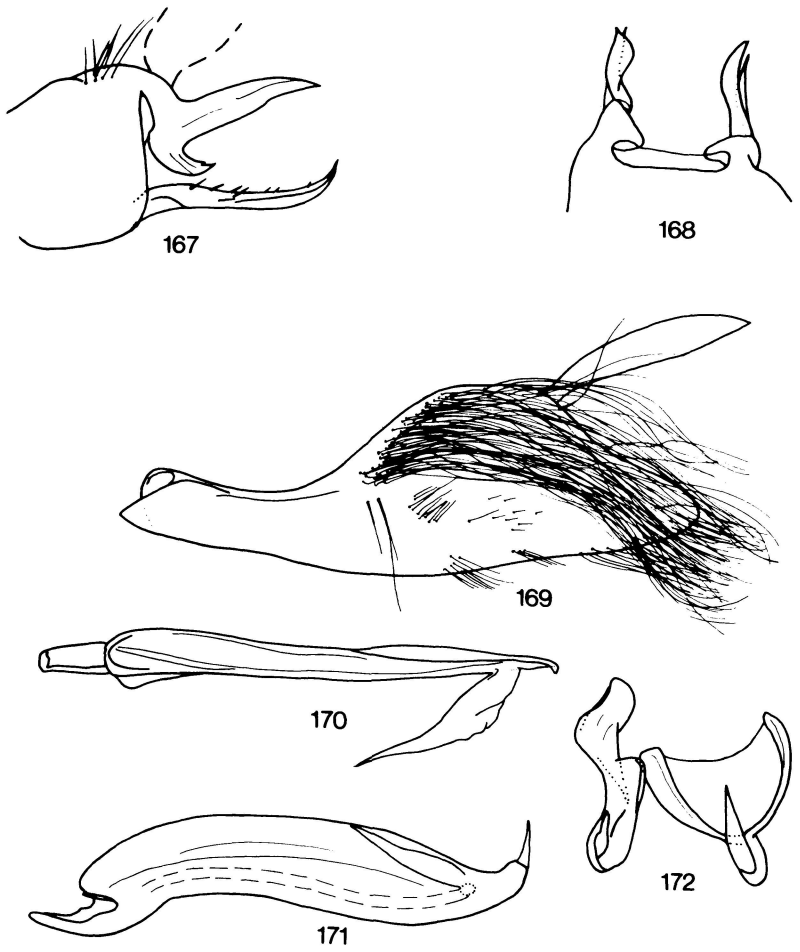


FIG. 167–172. *Youngolidia hasta:* **167,** ♂ pygofer, lateral view; **168,** apex of ♂ pygofer, dorsal view; **169,** plate, ventral view; **170,** aedeagus, dorsal view; **171,** aedeagus, lateral view; **172,** connective and style, dorsal view.

pointed apically; 10th segment long and narrow, without ventral processes; aedeagus asymmetrical, long, somewhat flattened laterally and broad in lateral view, with a prominent subapical process, process broad basally, abruptly pointed at apical ½ and directed basally; gonopore subapical, exiting laterally; connective broadly Y-shaped, arms long, stem very short; style extremely short; plate long and broad at apical ½, expanded medially and profusely setose.

♀. Unknown.

Holotype ♂, PERU: Colonia, Rio Perene, 1–3.VI.1955, E.I. Schlinger & E.S. Ross (CAS). Paratype. PERU: Chancha Mayo, 1♂, 25.VII.1960, Salazar & Ramirez (NCSR).

Remarks. From *ampla,* n. sp., to which it is similar in male genital characteristics, *hasta* can be distinguished by the short subapical process on the aedeagus, which is

directed basad but does not reach the midlength of the aedeagal shaft, and by the short subbasal process on the caudodorsal process of the pygofer.

Youngolidia ampla Nielson, **new species** Fig. 173–178

Length: ♂ 6.10 mm.

General color ochraceous, elytra broadly fuscous along costa.

Head narrower than pronotum, anterior margin conically rounded; crown produced beyond anterior margin of eyes, distal length about ¼ entire median length, broad, slightly broader than width of eyes, distinctly elevated above level of eyes, surface radially striate, lateral margins

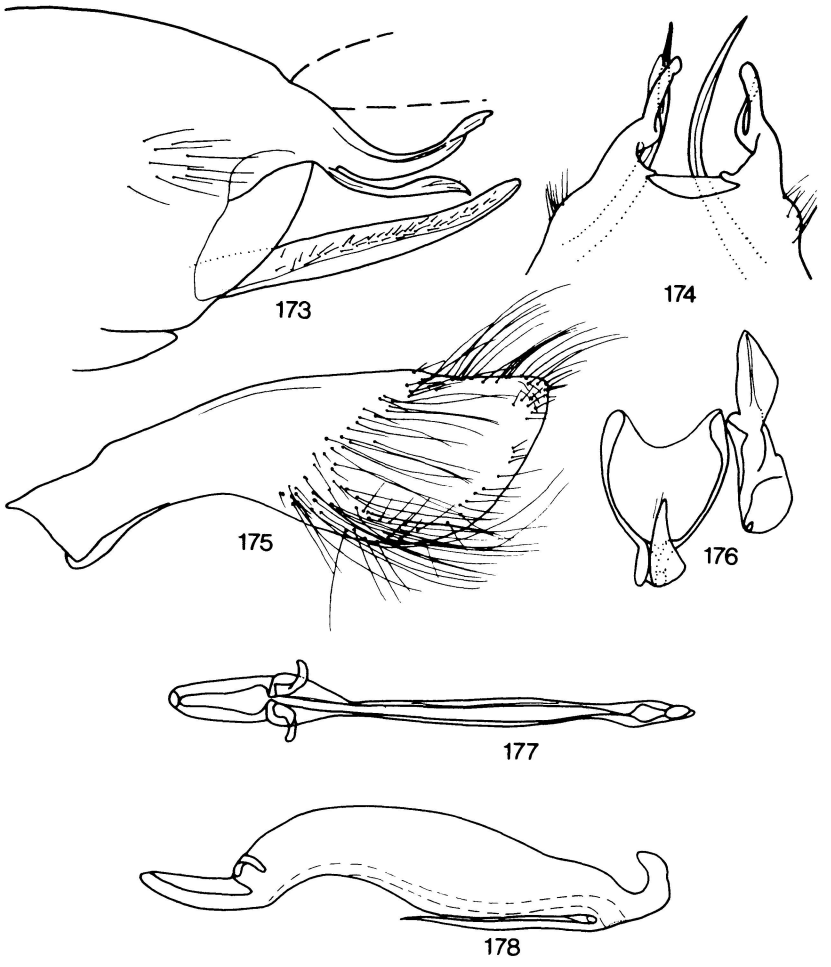


FIG. 173–178. *Youngolidia ampla:* **173,** ♂ pygofer, lateral view; **174,** apex of ♂ pygofer, dorsal view; **175,** plate, ventral view; **176,** connective and style, dorsal view; **177,** aedeagus, dorsal view; **178,** aedeagus, lateral view.

slightly convergent basally; ocelli small, situated near anterior margin of crown; eyes large, semiglobular, occupying a little less than ⅔ of entire dorsal area of head; pronotum short, median length slightly greater than median length of crown, surface minutely and smoothly knobbed; scutellum short, median length less than median length of pronotum; elytra elongate, apices rounded, veins distinct, venation as in description of genus, appendix well developed; clypeus elongate, broad anteriorly, narrow posteriorly, without median longitudinal carina, rugulose along anterior margin, finely granulose below; clypellus broad, short, lateral margins slightly concave.

♂. Pygofer in lateral aspect with 2 caudal processes; caudodorsal process bifurcate, short, each bifurcation narrowed, caudoventral process extremely long, broad and attenuated apically; 10th segment long, narrow, without ventral processes; aedeagus asymmetrical, long, compressed, broad in lateral view, narrowed and curved apically with a prominent, very long, slender, subapical process on ventral margin, process extending basad beyond midlength of aedeagal shaft and sharply pointed; gonopore subapical, exiting ventrally near base of subapical process; connective broadly Y-shaped, arms long, stem very short; style very short; plate long, broad at apical ½ and expanded laterally with numerous long, very fine setae along lateral margins.

♀. Unknown.

Holotype ♂, PERU: Tingo Maria, 18.VI.1962, W.T. Van Velzen (USNM).

Remarks. *Youngolidia ampla* is known only from the holotype. It is similar in certain male genital characteristics to *lateralis,* n. sp., but can be easily distinguished by the presence of a very long, slender, abruptly pointed, narrow, subapical process on the ventral margin of the aedeagus.

Youngolidia latula Nielson, **new species** Fig. 179–184

Length: ♂ 6.00 mm.

General color light ochraceous with veins of elytra deeply marked.

Head narrower than pronotum, anterior margin broadly rounded; crown produced slightly beyond anterior margin of eyes, this distal length a little less than ¼ of entire median length, broad, much broader than width of eyes, distinctly elevated above level of eyes, surface finely rugulose, lateral margins slightly convergent basally; ocelli prominent, situated near anterior margin of crown; eyes large, elongate-ovoid, occupying a little less than ⅔ of entire dorsal area of head; pronotum short, median length slightly greater than median length of crown, surface minutely and smoothly knobbed; scutellum short, median length about equal to median length of pronotum; elytra elongate, apices rounded, veins distinct, venation as in description of genus, appendix well developed; clypeus elongate, rather broad throughout, without median longitudinal carina, surface finely granulose; clypellus short, lateral margins slightly concave medially.

♂. Pygofer in lateral aspect with 2 caudal processes, caudodorsal process very broad, short, shallowly bifurcate, caudoventral process very long, narrow, slender, sharply pointed apically; 10th segment long and narrow, without ventral processes; aedeagus asymmetrical, long, distinctly compressed, broad in lateral view, constricted subapically and recurved apically with a long membranous flange laterally near dorsal margin and a pair of short unequal lobes basally on ventral margin; gonopore subapical, exiting laterally; connective broadly Y-shaped, arms long, stem extremely short; style very short; plate long and extremely broad at apical ⅔ and profusely setose.

♀. Unknown.

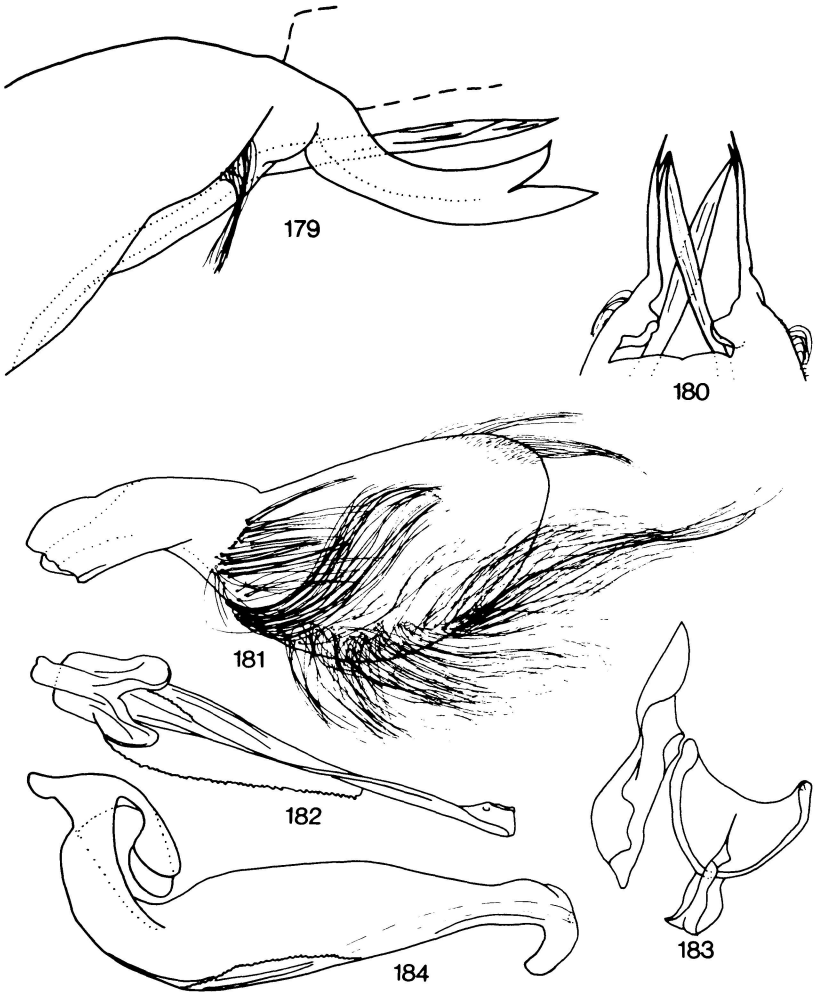


FIG. 179–184. *Youngolidia latula:* **179,** ♂ pygofer, lateral view; **180,** apex of ♂ pygofer, dorsal view; **181,** plate, ventral view; **182,** aedeagus, dorsal view; **183,** connective and style, lateral view; **184,** aedeagus (inverted), dorsal view.

Holotype ♂, BOLIVIA (USNM). Paratype. BOLIVIA: 1♂, 1956, Pennington & C.J. Drake (author's collection).

Remarks. Youngolidia latula is similar in male genital characteristics to *lynnea,* n. sp., but can easily be distinguished by the presence of a very long membranous flange on the lateral margins and a pair of unequal lobes basally on the ventral margin of the aedeagus.

Youngolidia lynnea Nielson, **new species** Fig. 185–193

Length: ♂ 6.00 mm.

General color testaceous throughout.

Head narrower than pronotum, anterior margin angulate; crown produced beyond anterior margin of eyes, this distal length about ¼ entire median length, narrower than width of eyes, distinctly elevated above level of eyes, slightly foveate medially and slightly carinate laterally, longitudinally rugulose, lateral margins slightly convex; ocelli small, situated near anterior

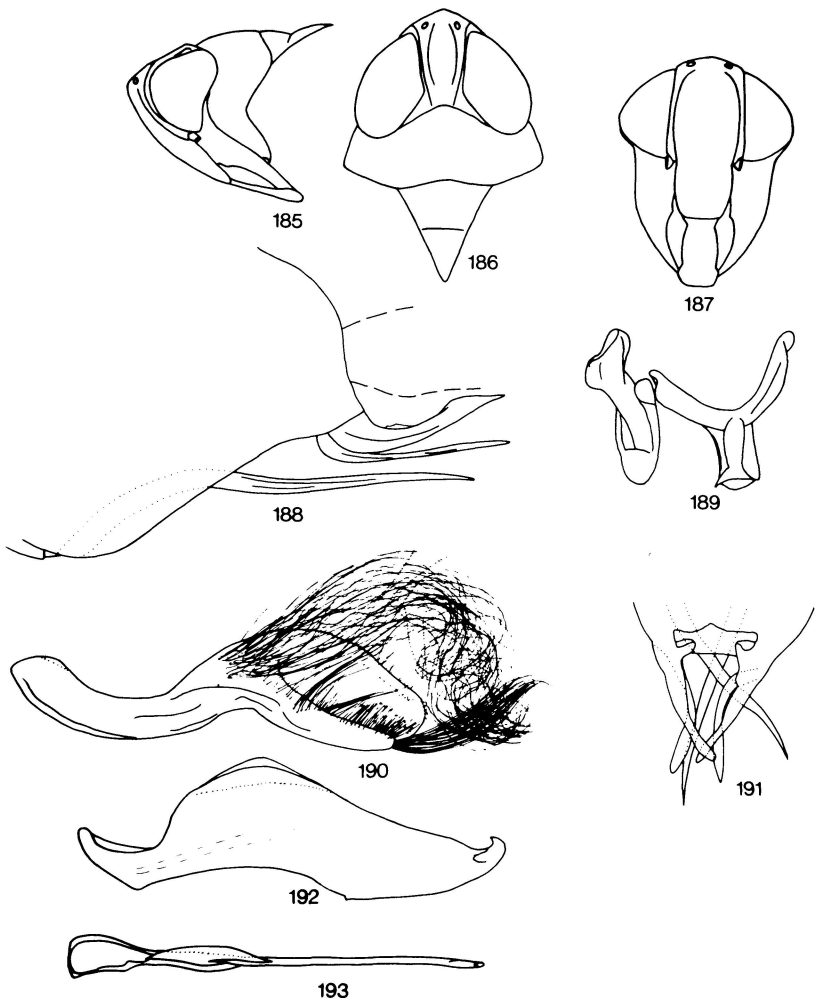


FIG. 185–193. *Youngolidia lynnea:* **185,** head, pronotum and scutellum, lateral view; **186,** head, pronotum and scutellum, dorsal view; **187,** face, ventral view; **188,** ♂ pygofer, lateral view; **189,** connective and style, dorsal view; **190,** plate, ventral view; **191,** apex of ♂ pygofer, dorsal view; **192,** aedeagus, lateral view; **193,** aedeagus, dorsal view.

margin of crown; eyes large, semiglobular, occupying more than ⅔ of entire dorsal area of head; pronotum large, median length slightly longer than median length of crown, surface finely and smoothly knobbed; scutellum short, median length about equal to median length of pronotum; elytra elongate, apices narrowly rounded, veins distinct, venation as in description of genus, appendix well developed; clypeus long, narrow, lateral margins broadly convex, without median longitudinal carina, narrowly rugulose along anterior margin, finely granulose below; clypellus short, narrow, lateral margins expanded apically.

♂. Pygofer with 2 caudal processes, caudodorsal process deeply bifurcate, processes short, somewhat narrowed, caudoventral process very long, slender, and sharply pointed apically; 10th segment long and narrow, without ventral processes; aedeagus asymmetrical, long, distinctly compressed, very broad in lateral aspect, narrowed basally and apically with a short membranous flange laterally near dorsal margin; gonopore subapical, exiting laterally; connective broadly Y-shaped, arms long, stem short; style very short; plate long, very broad at apical ½ and profusely setose at apical ½.

♀. Unknown.

Holotype ♂, COLOMBIA: Bogota [no date] Lindig (NR). Paratypes. COLOMBIA: 2♂, same data as holotype (NR, author's collection).

Remarks. *Youngolidia lynnea* is quite similar in male genital characteristics to *parallela* but can be easily separated from that species by the very broad aedeagus in lateral view.

I dedicate this species to Lynne A. Morgan for her fine assistance on my biosystematic studies of leafhoppers.

Youngolidia parallela (Linnavuori), **new combination** Fig. 194–200

Coelidia parallela Linnavuori, 1956: 31. Holotype ♂ (NR) [examined].

Length: ♂ 6.00 mm.

General color testaceous throughout.

Head narrower than pronotum, anterior margin nearly acutely angled; crown produced beyond anterior margin of eyes, this distal length about ¼ entire median length, narrower than width of eyes, distinctly elevated above level of eyes, longitudinally rugulose, lateral margins convergent basally; ocelli small, situated near anterior margin of crown; eyes large, elongate-ovoid, occupying about ⅔ of entire dorsal area of head; pronotum short, median length about equal to median length of crown, surface finely and smoothly knobbed; scutellum short, median length about equal to median length of pronotum; elytra elongate, apices narrowly rounded, veins distinct, venation as in description of genus, appendix well developed; clypeus long and narrow, without median longitudinal carina, lateral margins nearly parallel, surface finely granulose; clypellus short, narrow, lateral margins parallel.

♂. Pygofer in lateral aspect with 2 caudal processes, caudodorsal process deeply bifurcate, short, curved, caudoventral process very long, narrow, pointed apically; 10th segment long and narrow, without ventral processes; aedeagus slightly asymmetrical, long, rather narrow, slightly compressed, much broader laterally than dorsally, nearly parallel throughout in dorsal aspect, except for triangulate enlargement subbasally on ventral margin; gonopore subapical, exiting laterally; connective broadly Y-shaped, arms long, stem short; style very short; plate long, very broad at apical ½ and profusely setose.

♀. Unknown.

Specimens examined. *Coelidia parallela* Linnavuori, holotype ♂, COLOMBIA: Bogota, Lindig (NR). *Coelidia parallela,* paratype ♂, same data as holotype (LTF).

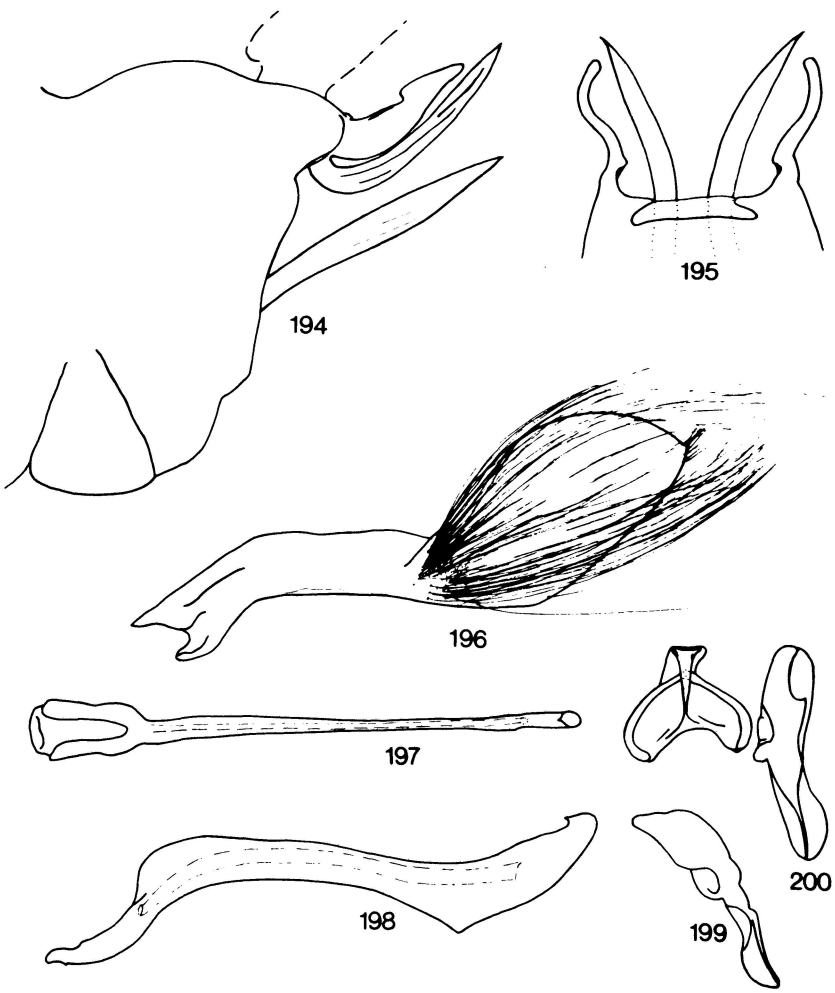


FIG. 194–200. *Youngolidia parallela:* **194,** ♂ pygofer, lateral view; **195,** apex of ♂ pygofer, dorsal view; **196,** plate, ventral view; **197,** aedeagus, dorsal view; **198,** aedeagus, lateral view; **199,** style, lateral view; **200,** connective and style, dorsal view.

Distribution. Colombia.

Remarks. This species is similar in male genital characteristics to *swensoni,* n. sp., but can easily be distinguished from it by the lack of flanges or processes on the aedeagus.

Youngolidia swensoni Nielson, **new species** Fig. 201–206

Length: ♂ 6.00 mm, ♀ 6.30 mm.

General color deep piceous in ♂, deep fuscous in ♀ with ochraceous head, pronotum, scutellum and clavus of elytra. Sexual dimorphism apparent.

Head narrower than pronotum, anterior margin angulate; crown produced beyond anterior

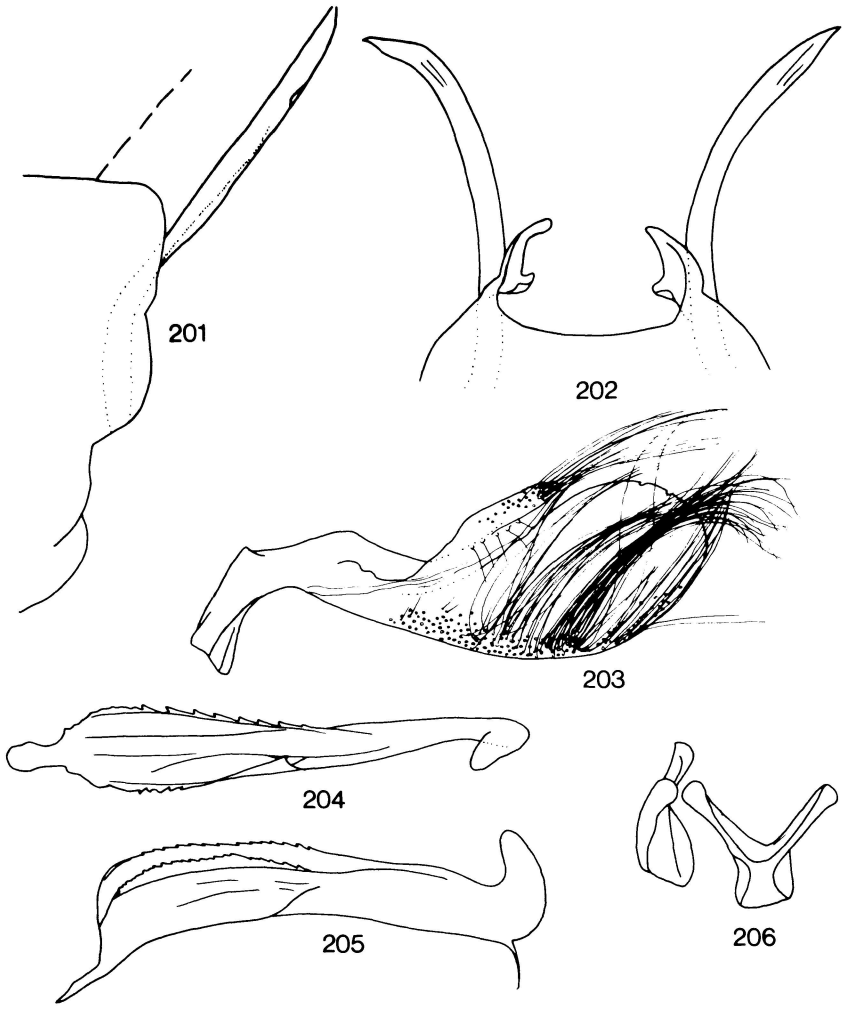


FIG. 201–206. *Youngolidia swensoni:* **201,** ♂ pygofer, lateral view; **202,** ♂ pygofer, dorsal view; **203,** plate, ventral view; **204,** aedeagus, dorsal view; **205,** aedeagus, lateral view; **206,** connective and style, dorsal view.

margin of eyes, this distal length about ¼ entire median length, slightly elevated above level of eyes, narrower than width of eyes, lateral margins convergent basally, surface rugulose; ocelli small, situated near anterior margin of crown; eyes large elongate-ovoid, occupying a little more than ⅔ of entire dorsal area of head; pronotum short, median length about equal to median length of crown, with short median longitudinal carina, surface smooth; scutellum short, median length about equal to median length of pronotum; elytra elongate, apex narrowly rounded, veins distinct, venation as in description of genus, appendix well developed; clypeus elongate, broad anteriorly, narrowed posteriorly, without median longitudinal carina,

anterior margin narrowly rugulose, finely granulose below; clypellus narrow, long, lateral margins nearly parallel.

♂. Pygofer with 2 caudal processes, caudodorsal process very short, caudoventral process very long and narrow; 10th segment long and narrow, without ventral processes; aedeagus slightly asymmetrical, long, broad in lateral view, apex curved dorsally, with lateral flanges along dorsal margins, flanges finely toothed and with a very small sharply pointed curved needlelike process subapically on ventral margin; connective broadly Y-shaped, arms long, stem short; style short; plate long, broad at distal ½ and profusely setose.

♀. 7th sternum undescribed because abdomen is missing on allotype specimen.

Holotype ♂, VENEZUELA: Santa Elena de Uairen, 20.X.1940, P. Anduze (USNM). Allotype ♀, VENEZUELA: same data as holotype (USNM).

Remarks. *Youngolidia swensoni* is an unusual species. The presence of a short median longitudinal carina on the pronotum separates this species from all others of the genus *Youngolidia.*

I dedicate this species to the late Dr Knud Swenson for his outstanding work on insect vectors of plant pathogens and bionomics of leafhoppers.

Youngolidia lateralis Nielson, **new species** Fig. 207–212

Length: ♂ 5.60 mm, ♀ 6.80 mm.

General color testaceous with veins of elytra deeply marked with fuscous and with a broad longitudinal band along costa.

Head distinctly narrower than pronotum, anterior margin conically rounded; crown produced beyond anterior margin of eyes, this distal length about ¼ entire median length, distinctly elevated above level of eyes, narrow, about as broad as width of eyes, longitudinally rugulose, lateral margins distinctly convergent basally; ocelli prominent, situated near anterior margin of crown; eyes large, semiglobular, occupying about ⅔ of entire dorsal area of head; pronotum short, median length about equal to median length of crown, surface smoothly knobbed; scutellum short, median length about equal to median length of pronotum; elytra elongate, apices narrowly rounded, veins distinct, venation as in description of genus, appendix well developed; clypeus elongate, broad anteriorly, narrowed posteriorly, without median longitudinal carina, surface finely granulose; clypellus long, narrow, lateral margins nearly parallel.

♂. Pygofer in lateral aspect with 2 caudal processes, caudodorsal process long, slightly curved, caudoventral process longer, 10th segment long and narrow, without ventral processes; aedeagus asymmetrical, compressed laterally, long, curved apically, nearly parallel-sided in lateral view except for apex and with ventral margin minutely toothed; gonopore subapical, exiting laterally; connective broadly Y-shaped, arms long, stem very short; style very short; plate long, very broad at apical ⅔, expanded medially and profusely setose.

♀. 7th sternum large, about 2½× as long as penultimate sternum, caudal margin produced medially.

Holotype ♂, PERU: Monson Val, Tingo Maria, 23.IX.1954, E.I. Schlinger & E.S. Ross (CAS). Allotype ♀, PERU: same data as holotype, except 9.X.1954 (CAS). Paratypes. PERU: Tingo Maria, Los Cuevos Rd, 1♂, 13.VIII.1971, P.S. & H.L. Broomfield (BMNH); Sinchono, 1♂, IX.1944, D.M. DeLong (OSUC); Puerto Bermudes, Rio Pichis, 12–19.VII.1920, Cornell Univ. Exped. (CU).

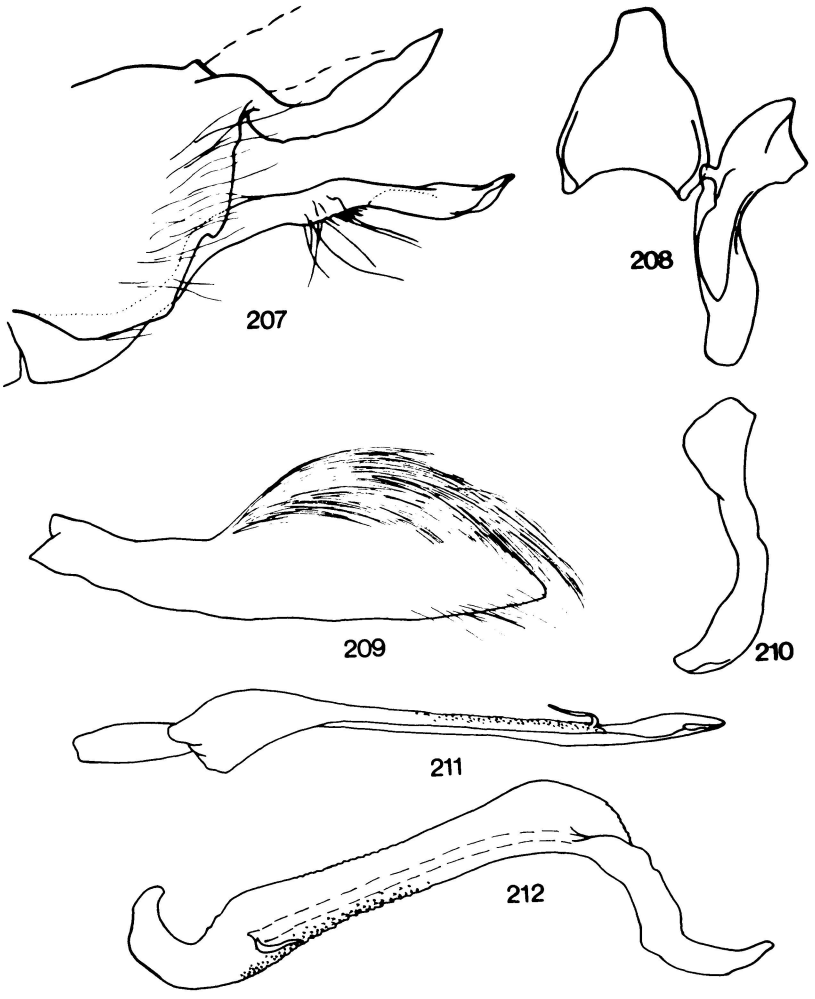


FIG. 207–212. *Youngolidia lateralis:* **207,** ♂ pygofer, lateral view; **208,** connective and style, dorsal view; **209,** plate, ventral view; **210,** style, lateral view; **211,** aedeagus, dorsal view; **212,** aedeagus, lateral view.

Remarks. Youngolidia lateralis is similar in many male genital characteristics to *sordidula* but can be easily distinguished from that species by the presence of very fine teeth on the ventral margin of the aedeagus and by the very small spine arising laterally near the gonopore.

Youngolidia sordidula (Spångberg), **new combination** Fig. 213–216

Jassus sordidulus Spångberg, 1878: 34. Holotype ♀ (NR) [examined].
Coelidia sordidula (Spångberg): Metcalf, 1964: 75.

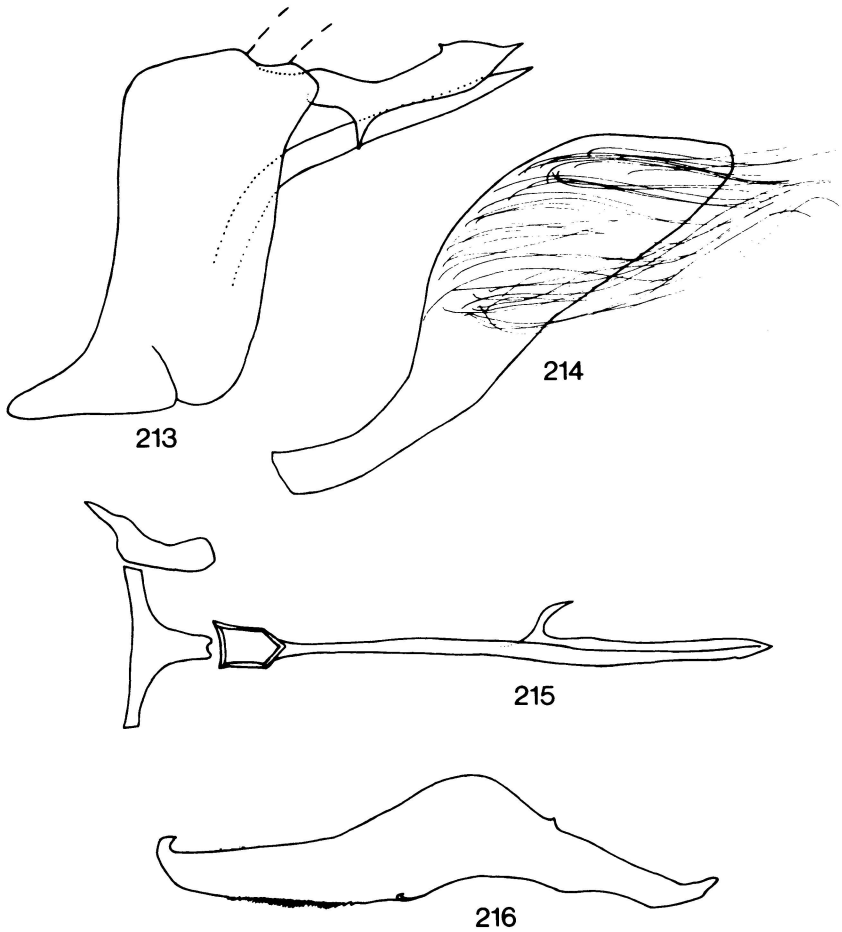


FIG. 213–216. *Youngolidia sordidula:* **213,** ♂ pygofer, lateral view; **214,** plate, ventral view; **215,** aedeagus, connective and style, dorsal view; **216,** aedeagus, lateral view.

The description of the length and general habitus of this species was taken from Spångberg's original description.

Length: ♂ 7.00 mm, ♀ 7.50 mm.

General color deep fuscous to piceous.

♂. Pygofer in lateral aspect with 2 caudal processes, caudodorsal process long, robust, with very short subbasal tooth on ventral margin and very tiny subapical tooth on dorsal margin, caudoventral process long and very narrow, pointed apically; 10th segment long and narrow, without ventral processes; aedeagus asymmetrical, long, compressed, broad medially in lateral aspect, tapered apically, prominently curved process arising near middle of ventral margin, process extending laterally; connective broadly Y-shaped, arms long, stem very short; style extremely short; plate long, very broad at apical ⅔, expanded medially and profusely setose.

♀. 7th sternum large, longer than penultimate sternum, caudal margin sinuate.

Distribution. Colombia.

Specimens examined. *Jassus sordidulus,* holotype ♀, COLOMBIA: Bogota [no date] Lindig (NR). *Jassus sordidulus,* paratype ♂, COLOMBIA: Bogota, Lindig (NR).

Remarks. This species is similar in male genital characteristics to *patruelis* (Spångberg) but can easily be distinguished from that species by the presence of a curved lateral process about middle of the aedeagal shaft on the ventral margin and by the short secondary process on the caudodorsal process of the pygofer.

Youngolidia patruelis (Spångberg), **new combination** Fig. 217–221

Jassus patruelis Spångberg, 1878: 32. Holotype ♂ (NR) [examined].
Coelidia patruelis (Spångberg): Metcalf, 1964: 69.
Jassus vittipennis Spångberg, 1878: 35. Holotype ♀ (NR) [examined]. **New synonymy.**
Coelidia vittipennis (Spångberg): Metcalf, 1964: 80.

The description of the length and general habitus of this species was taken from Spångberg's original description.

Length: ♂ 7.00 mm, ♀ 7.50 mm.

General color deep fuscous to piceous, more deeply marked in ♂. ♀ beautifully colored with yellow chevron band on elytra bordered by fuscous band. Sexual dimorphism apparent.

♂. Pygofer in lateral aspect with 2 caudal processes, caudodorsal process very long, broadly recurved, narrow, sharply pointed apically, caudoventral process long, nearly straight, abruptly pointed apically; 10th segment long and narrow, without ventral processes; aedeagus asymmetrical, long, very broad in lateral view, compressed laterally, with a prominent curved subapical process arising from ventral margin and projecting basad; gonopore subapical, exiting near base of subapical process; connective broadly Y-shaped, arms long, stem very short; style short; plate long, very broad, expanded at apical ½ and profusely setose.

♀. 7th sternum large, about equal to length of penultimate sternum, caudal margin subtruncate.

Distribution. Colombia.

Specimens examined. *Jassus patruelis,* holotype ♂, COLOMBIA: Bogota [no date] Lindig (NR). *Jassus vittipennis,* holotype ♀, COLOMBIA: Bogota, Lindig (NR).

Remarks. *Youngolidia patruelis* is similar in certain male genital characteristics to *areata* but can be easily distinguished from that species by the very broad aedeagus with a prominent subapical process arising from the ventral margin and projecting basad.

Youngolidia areata (Spångberg), **new combination** Fig. 222–225

Jassus areatus Spångberg, 1878: 31. Holotype ♂, Colombia (NR) [examined].
Coelidia areata (Spångberg): Metcalf, 1964: 40.

The length and description of the general habitus of this species were taken from Spångberg's original description.

Length: ♂ 6.00 mm.

General color deep fuscous with markings on elytra.

♂. Pygofer in lateral aspect with 2 caudal processes, caudodorsal process very long, narrow

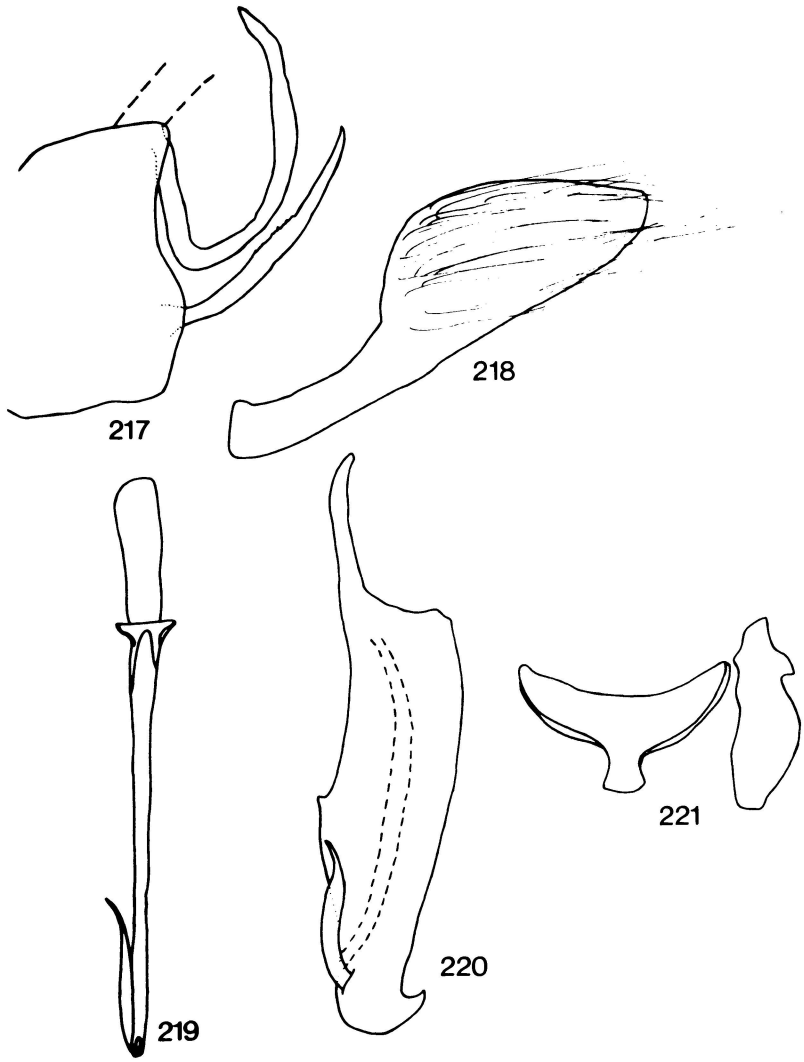


FIG. 217–221. *Youngolidia patruelis:* **217,** ♂ pygofer, lateral view; **218,** plate, ventral view; **219,** aedeagus, dorsal view; **220,** aedeagus, lateral view; **221,** connective and style, dorsal view.

and slender, caudoventral process long and slender, about equal length to caudodorsal process; 10th segment long and narrow, without ventral processes; aedeagus asymmetrical, long, narrow, somewhat tubular, with a very prominent, recurved process arising from distal ½ of dorsal margin and broadly curved ventrally with toothed dorsal margin between process and apex; gonopore subapical, exiting laterally; connective broadly Y-shaped, stem very short; style very short; plate long, very broad at apical ½ and expanded, with numerous fine, hairlike setae.

♀. Unknown.

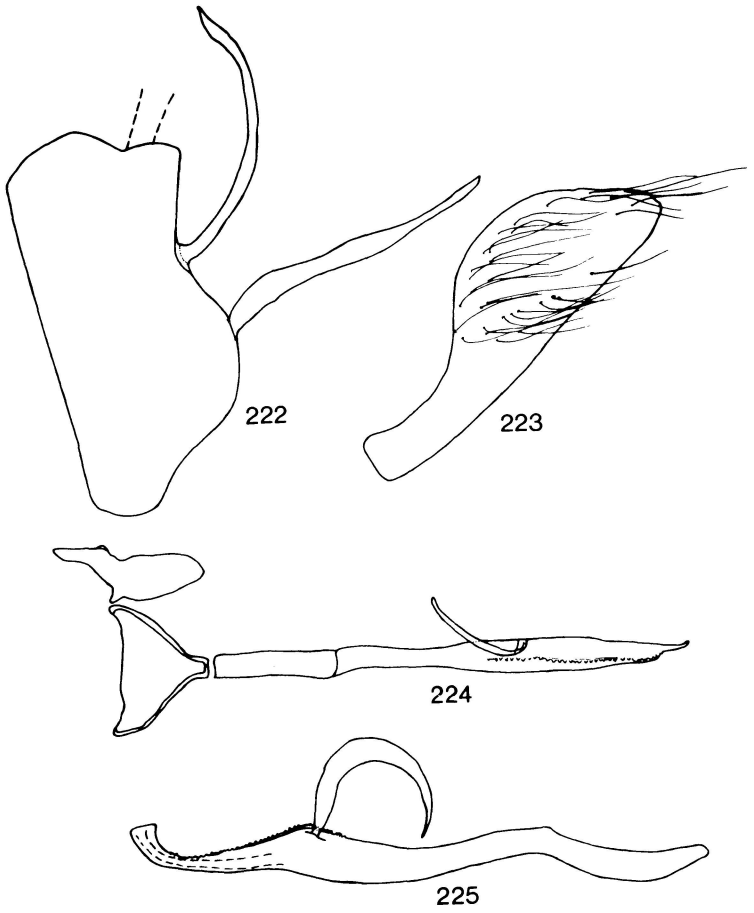


FIG. 222–225. *Youngolidia areata:* **222,** ♂ pygofer, lateral view; **223,** plate, ventral view; **224,** aedeagus, connective and style, dorsal view; **225,** aedeagus, lateral view.

Distribution. Colombia.

Specimens examined. *Jassus areatus,* holotype ♂, COLOMBIA: Bogota [no date] Lindig (NR).

Remarks. This species is similar to *patruelis* but can be easily separated from that species by the prominent, broadly curved process on the dorsal margin near the middle of the shaft of the aedeagus.

GABRITINI, **new tribe**

Type-genus: *Gabrita* Walker.

Medium-sized to large, robust leafhoppers; forelegs raptorial-like; foretibia and forefemora enlarged and flattened.

Head small, distinctly narrower than pronotum, anterior margin usually conically angulate;

crown narrow to broad, produced beyond anterior margin of eyes, distal length about ¼ entire median length, lateral margins convergent basally, sometimes carinate laterally; eyes large, semiglobular, occupying from less than to more than ⅔ of entire dorsal area of head; pronotum very large, median length about equal to or greater than median length of crown, surface smoothly knobbed; scutellum very large, median length equal to or greater than median length of pronotum; elytra elongate, very broad subapically, veins distinctly marked, outer anteapical cell closed, appendix very well developed; clypeus elongate, slightly tumid, broad, sometimes with a short, median longitudinal carina arising from anterior margin; clypellus short, slightly tumid, lateral margins broadly expanded apically; setal arrangement on hind femur 2:2:1.

♂. Genitalia partially asymmetrical. Pygofer large, without processes; aedeagus symmetrical or nearly so, long and needlelike, sometimes with small teeth or spicules on shaft; connective broadly Y-shaped, stem very short; style short, broad basally, narrow apically; dorsal apodeme long and narrow; plate long, narrow, with several long, fine hairlike setae apically.

The tribe is restricted to South America. Only 1 genus and 4 species are recognized. *Gabrita* has no close relatives but can be distinguished from other tribes by the presence of raptorial-like forelegs which are flattened or foliaceous.

Genus **Gabrita** Walker

Gabrita Walker, 1858: 254. Type-species: *Gabrita annulivena* Walker, by subsequent designation (Oman 1936) [synonym of *Coelidia eburata* Walker, 1851].

Petalopoda Spångberg, 1879: 18. Type-species: *Petalopoda annulipes* Spångberg, by subsequent designation (Oman 1936). **Reinstated synonymy.**

Medium-sized, robust leafhoppers. Color deep fuscous to piceous with a very narrow transverse ivory or ochraceous band on elytra just below apex of scutellum; veins of elytra and scutellum and pronotum heavily marked with small yellow or ochraceous bullae, sometimes with a small ochraceous spot about middle of costa of elytra.

Head small, distinctly narrower than pronotum, anterior margin subconical; crown broad to narrow, produced distally beyond anterior margin of eyes, this distal length about ¼ entire median length, depressed medially, slightly to distinctly carinate laterally; eyes large, semiglobular to elongate-ovoid, occupying less than to nearly more than ⅔ of entire dorsal area of head; ocelli prominent, situated near anterior margin of crown; pronotum large, median length about equal to or greater than median length of crown; scutellum large, median length greater than median length of pronotum; elytra elongate, apices somewhat narrowly rounded, 3 anteapical cells present, outer one closed, 5 apical cells present, appendix very well developed; clypeus elongate, narrow to broad, sometimes with short, median longitudinal carina arising from anterior margin, antennal ledge prominent, carinate laterally, surface finely granulose; clypellus short, narrowed basally, slightly protuberant basally, lateral margins divergent apically.

♂. Genitalia symmetrical or nearly so; pygofer large, without caudal process, sometimes caudodorsal margin produced to a lobe; 10th segment long and narrow, without ventral processes; aedeagus symmetrical, long, needlelike, slender, sometimes with short, small teeth or spicules; gonopore subapical, elongate, exiting ventrally, dorsal apodeme sclerotized, long, attached basally to dorsal surface of aedeagus; style short; plate long and narrow, with several short, fine, hairlike setae along lateral margin of apical ½.

I have examined the type specimens of the type-species of *Gabrita* and *Petalopoda* and found them to be congeneric. *Gabrita* is the older name and is therefore the valid name of the genus. Only 4 species are known, all from South America.

KEY TO THE SPECIES OF *Gabrita* (♂ ♀)

1. Crown narrow, interocular width narrower than width of eyes 2
   Crown very broad, interocular width wider than width of eyes (Fig. 226) ..... **pictifrons**
2 (1). Style with apical narrowed extension short, shorter than basal portion (Fig. 244) 3
   Style with apical narrowed extension long, longer than or as long as basal portion (Fig. 230) ..... **fistula, n. sp.**
3 (2). Aedeagus with several short teeth on dorsal margin on apical ½ of shaft (Fig. 243) ..... **eburata**
   Aedeagus with many minute teeth on dorsal margin on apical 1/6 of shaft (Fig. 251) ..... **annulipes**

Gabrita pictifrons (Spångberg), **new combination** Fig. 226–228

Petalopoda pictifrons Spångberg, 1879: 19. Holotype ♀ (NM) [examined].

Length: ♂ 6.60 mm, ♀ 7.50 mm.

General color deep fuscous with numerous ochraceous bullae on veins of elytra and on pronotum and scutellum.

Head small, distinctly narrower than pronotum, anterior margin obtusely rounded; crown broad, produced beyond anterior margin of eyes, this distal length about ¼ entire median length, slightly depressed medially below level of eyes, broader than width of eyes, lateral margins convergent basally; ocelli small, situated near anterior margin of crown; eyes large, semiglobular, occupying less than ⅔ of entire dorsal area of head; pronotum large, median length greater than median length of crown, surface roughly knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, broad subapically, narrowed apically, veins distinct, venation as in description of genus, appendix very well developed; clypeus long and rather broad, somewhat tumid, with very short median longitudinal carina originating from anterior margin, lateral margins broadly convex, surface finely granulose, antennal ledge prominent; clypellus short, narrow, swollen basally, lateral margins concave laterally.

♂ and ♀ genitalia undescribed because abdomens are missing from specimens.

Distribution. South America.

Specimens examined. Petalopoda pictifrons, holotype ♀, BRAZIL: São Paulo (NM). [COUNTRY UNKNOWN]: Lagoa, Santa, 1♂ (probable), Reinhardt (UZM).

Remarks. This species is known only from 2 specimens. In general habitus *pictifrons* is similar to *fistula,* n. sp., and can be distinguished by its smaller size, broader crown, and smaller, semiglobular eyes.

Gabrita fistula Nielson, **new species** Fig. 229–235

Length: ♂ 8.00 mm, ♀ 8.70 mm.

General color deep fuscous with very narrow, ivory or ochraceous, transverse band on elytra just below apex of scutellum; veins of elytra, surface of scutellum and pronotum deeply marked with numerous small yellow bullae.

Head small, distinctly narrower than pronotum, anterior margin conically rounded; crown

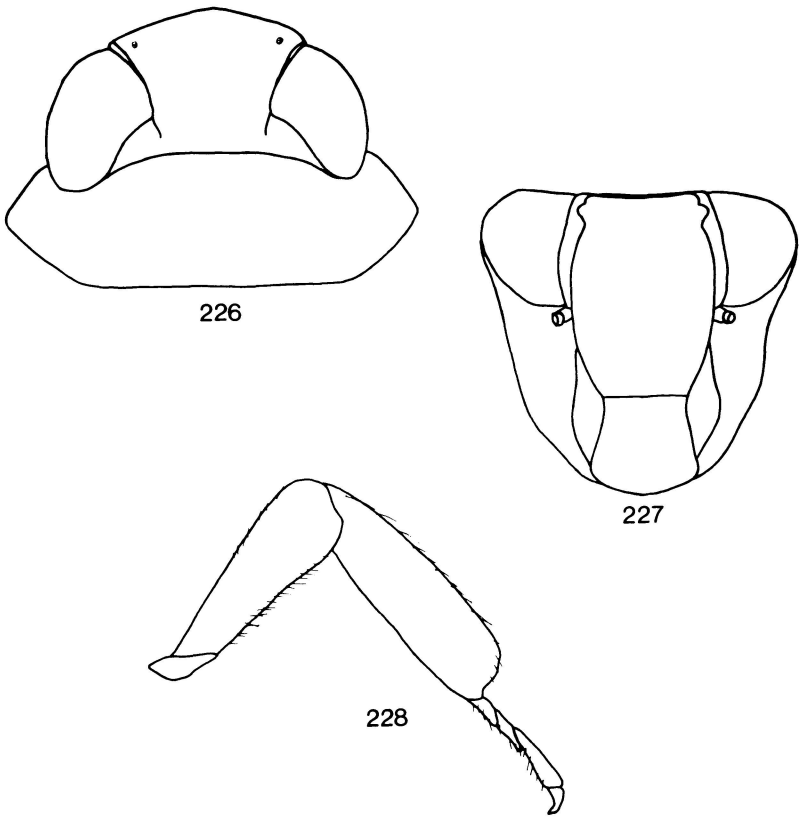


FIG. 226–228. *Gabrita pictifrons:* **226,** head and pronotum, dorsal view; **227,** face (carina not shown), ventral view; **228,** foreleg, lateral view.

narrow, produced beyond anterior margin of eyes, distal length about ¼ entire median length, slightly depressed medially, narrower than width of eyes, lateral margins slightly carinate and broadly convex; ocelli small, situated near anterior margin of crown; eyes large, elongate-ovoid, occupying about ⅔ of entire dorsal area of head; pronotum large, median length equal to median length of crown, surface smoothly knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, veins distinct, venation as in description of genus, appendix very well developed; clypeus long and somewhat narrowed, with median longitudinal carina originating at anterior margin and extending about ¾ length of clypeus, lateral margins broadly convex, surface finely granulose, antennal ledge carinate laterally; clypellus short, slightly swollen basally, lateral margins slightly expanded apically.

♂. Pygofer large, caudodorsal margin produced distally to a short lobe, excised ventrally; aedeagus symmetrical or nearly so, enlarged and curved basally, abruptly narrowed subbasally, with very long needlelike shaft, apex sharply pointed; connective broadly Y-shaped, arms long, stem very short; style moderately long, broad at basal ⅓ and narrowed at apical ⅔; dorsal apodeme very long, with apical extension; plate long and very narrow, with numerous fine, hairlike setae at apical ⅓.

♀. 7th sternum large, about 2× as long as penultimate sternum, caudal margin shallowly concave on either side of middle.

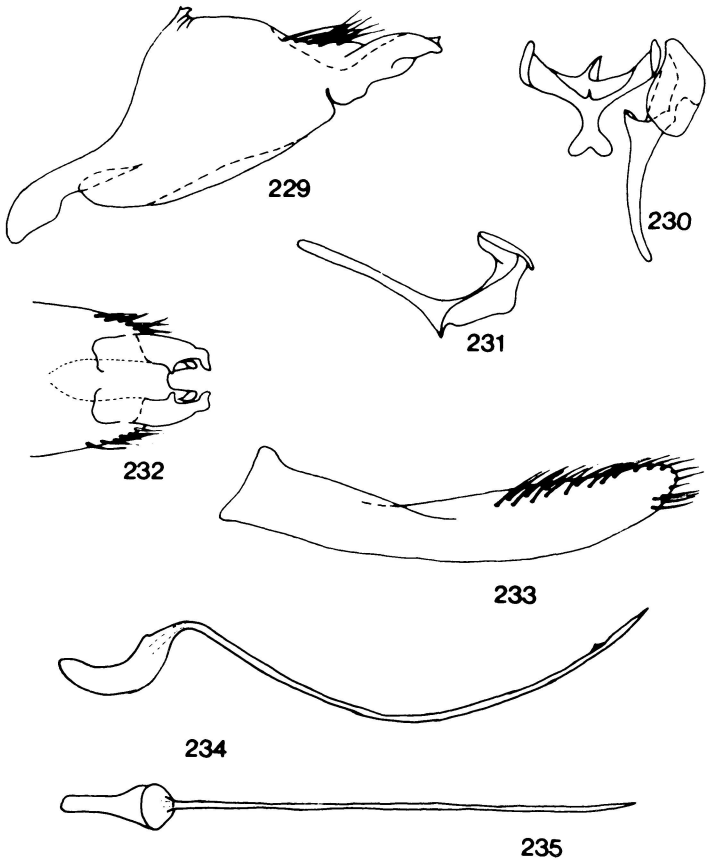


FIG. 229–235. *Gabrita fistula:* **229,** ♂ pygofer, lateral view; **230,** connective and style, dorsal view; **231,** style, lateral view; **232,** apex of ♂ pygofer, dorsal view; **233,** plate, ventral view; **234,** aedeagus, lateral view; **235,** aedeagus, dorsal view.

Holotype ♂, [BRAZIL] Amazones, Teffe (Ega), first trimester 1879, Distant (BMNH). Allotype ♀, same data as holotype (BMNH). Paratypes. BRAZIL: Amazones, Manaus, 1♂, 5.XII.1977, A. Soares; 1♂, same data except 28.III.1977, N.D. Penny (USNM, author's collection).

Remarks. This species is similar in general habitus to *eburata* but can be distinguished from that species by the rather unique dorsal apodeme and by the style, which is long and very slender at apical ½.

Gabrita eburata (Walker) Fig. 236–244

Coelidia eburata Walker, 1851: 855. Holotype ♀ (BMNH) [examined].
Gabrita eburata (Walker): Metcalf, 1964: 29.
Gabrita annulivena Walker, 1858: 254. Holotype ♀ (BMNH) [examined].

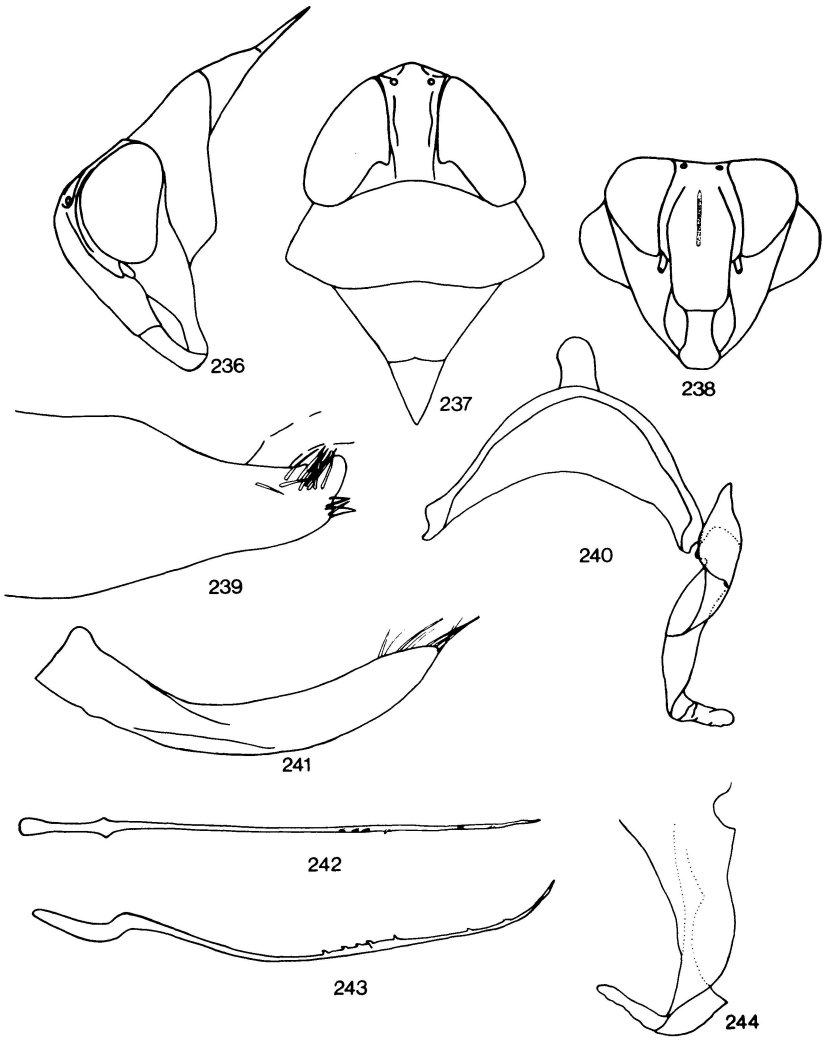


FIG. 236–244. *Gabrita eburata:* **236,** head, pronotum and scutellum, lateral view; **237,** head, pronotum and scutellum, dorsal view; **238,** face, ventral view; **239,** ♂ pygofer, lateral view; **240,** connective and style (inverted), dorsal view; **241,** plate, ventral view; **242,** aedeagus, ventral view; **243,** aedeagus, lateral view; **244,** apex of style, lateral view.

Length: ♂ 6.78–6.90 mm, ♀ 7.20–7.50 mm.

General color deep fuscous to testaceous with very narrow transverse ivory or ochraceous band on elytra, just below apex of scutellum. Veins of elytra, scutellum, and pronotum deeply marked with yellow or ivory spots.

Head distinctly narrower than pronotum, anterior margin conically rounded; crown narrow, produced beyond anterior margin of eyes, this distal length about ¼ entire median length,

foveate medially, narrower than width of eyes, lateral margins slightly convergent basally and slightly carinate; ocelli small, situated near anterior margin of crown; eyes very large, semiglobular, occupying more than ⅔ of entire dorsal area of head; pronotum large, median length about equal to median length of crown, surface smoothly knobbed; scutellum large, median length greater than median length of pronotum; elytra elongate, rather broad subapically, narrowed apically, veins distinct, venation as in description of genus, appendix well developed; clypeus elongate, narrow, with short median longitudinal carina arising from anterior margin, lateral margins broadly convex, antennal ridge prominently carinate; clypellus short, narrow, slightly tumid basally in lateral view, lateral margins slightly expanded apically.

♂. Pygofer in lateral aspect without caudal processes; 10th segment long and narrow, without ventral processes; aedeagus symmetrical or nearly so, very long, slender, needlelike, sometimes with several very small teeth or spicules on shaft; gonopore subapical, large, exiting ventrally; connective broadly Y-shaped, stem very short; style short, broad at basal ½, abruptly narrowed and slender at apical ½; plate long and narrow, with several short, fine, hairlike setae on lateral margins at apical ½.

♀. 7th sternum large, about 2× as long as penultimate sternum, caudal margin broadly and shallowly concave.

Distribution. South America.

Specimens examined. *Coelidia eburata,* holotype ♀, BRAZIL (BMNH). *Gabrita annulivena,* holotype ♀, BRAZIL [no data] (BMNH). *Petalopoda annulipes* Spångberg, holotype ♂ [FRENCH GUIANA] [no data] (NM). GUYANA: Kutari Sources, 1♂, II.1936, G.A. Hudson; New Riv, 1♂, IX.1934, Hudson; upper Courantyne Riv, 1♀, IX.1935, Hudson (BMNH). BRAZIL: Santarem [sex unknown, no date] Baker (USNM). FRENCH GUIANA: 1♂ [no date] Maroni (NCSR); 1♂,1♀, 1898, Noualhier (MNHN).

Remarks. This species is similar in general habitus to *pictifrons* but can be distinguished from that species by the narrow carinate crown. I have examined the types of *eburata* and *annulivena* and found that both were conspecific; *eburata* is the earliest description and therefore the valid name of the species.

Gabrita annulipes (Spångberg) Fig. 245–252

Petalopoda annulipes Spångberg, 1879: 18. Holotype ♂ (NM) [examined].
Gabrita annulipes (Spångberg): Oman, 1936: 399.

Length: ♂ 6.00 mm.

General color piceous with a narrow, transverse ivory band on elytra.

Head narrower than pronotum, anterior margin conically rounded; crown narrow, much narrower than width of eyes, produced beyond anterior margin of eyes, this distal length about ¼ entire median length, depressed medially, lateral margins convergent basally; ocelli prominent, situated on anterior margin of crown; eyes large, semiglobular, occupying more than ⅔ of entire dorsal area of head; pronotum large, median length slightly greater than median length of crown; scutellum large, median length greater than median length of pronotum; elytra elongate, broad subapically, veins distinct, venation as in description of genus, appendix well developed; clypeus elongate, broad, lateral margins broadly convex, with short median longitudinal carina; clypellus long, lateral margins expanded apically.

♂. Pygofer large, without caudal processes; aedeagus very long, narrow, needlelike, broadly curved in lateral aspect, pointed apically, with a row of tiny teeth apically on dorsal margin; gonopore undetected; connective broadly Y-shaped, arms long, stem short; style short, linear,

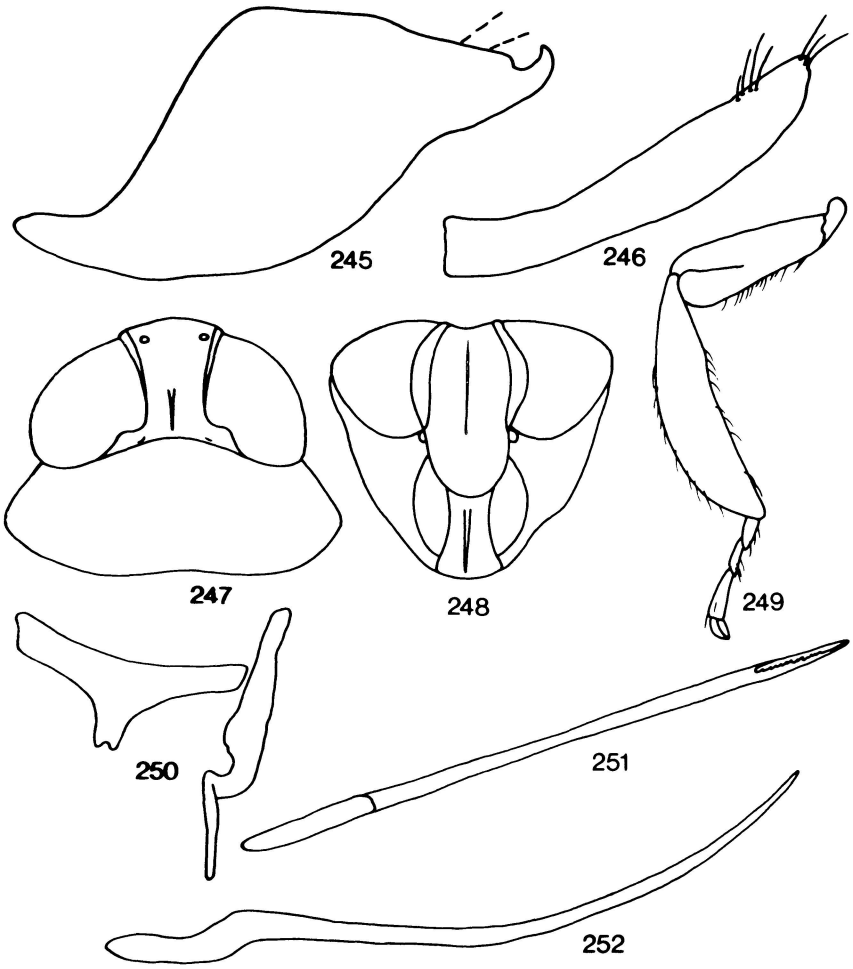


FIG. 245–252. *Gabrita annulipes:* **245,** ♂ pygofer, lateral view; **246,** plate, ventral view; **247,** head and pronotum, dorsal view; **248,** face (carina not shown), ventral view; **249,** foreleg, lateral view; **250,** connective and style, dorsal view; **251,** aedeagus, dorsal view; **252,** aedeagus, lateral view.

apical extension shorter than basal portion; plate long and narrow, with few setae on apical margin.

♀. Unknown.

Distribution. French Guiana.

Specimens examined. Petalopoda annulipes Spångberg, holotype ♂, FRENCH GUIANA (NM).

Remarks. Gabrita annulipes is similar in male genital characteristics to *eburata* but can be distinguished by the row of tiny teeth on the apical $^1/_6$ of the aedeagal shaft.

CHECKLIST OF THE GENERA AND SPECIES OF THE TRIBES HIKANGIINI, YOUNGOLIDIINI AND GABRITINI

HIKANGIINI, n. tribe
Hikangia, n. gen.
liberiensis, n. sp.
carinata, n. sp.
delta, n. sp.
tumosa, n. sp.
Boulardus, n. gen.
recurvatus, n. sp.
concinnus, n. sp.
YOUNGOLIDIINI, n. tribe
Drordana, n. gen.
lima (Jacobi), n. comb.
Afridonus, n. gen.
elongatus, n. sp.
quinquelineatus, n. sp.
gemellus, n. sp.
piceolus (Melichar), n. comb.
Rikana, n. gen.
larseni, n. sp.
williamsi, n. sp.
Pilosana, n. gen.
pallidipes (Stål), n. comb.
plebeja (Stål), n. comb.
vanna, n. sp.
panna, n. sp.
univentrosa, n. sp.
circularis (Fabricius), n. comb.
duocristata, n. sp.
singularis, n. sp.
gratiosa (Spångberg), n. comb.
longipes (Fabricius), n. comb.
bifurcata, n. sp.
bicolor (Stål), n. comb.
rugosa, n. sp.
Youngolidia, n. gen.
dentata, n. sp.
hasta, n. sp.
ampla, n. sp.
latula, n. sp.
lynnea, n. sp.
parallela (Linnavuori), n. comb.
swensoni, n. sp.
lateralis, n. sp.
sordidula (Spångberg), n. comb.
patruelis (Spångberg), n. comb.
vittipennis Spångberg, n. syn.
areata (Spångberg), n. comb.
GABRITINI, n. tribe
Gabrita (Walker)
Petalopoda Spångberg, reinstated syn.
pictifrons (Spångberg), n. comb.
fistula, n. sp.
eburata (Walker), n. comb.
annulivena Walker
annulipes (Spångberg), n. comb.

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New names are indicated by **bold face** type, invalid names by *italics*

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