

**Neotropical Scolopini
(Hemiptera: Heteroptera: Anthocoridae):
new taxa, diagnostic characters
and a key to the genera of the tribe**

Diego Leonardo CARPINTERO^{1,3)} & Pablo Matías DELLAPÉ^{2,3)}

¹⁾División Entomología, Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”, Av. Ángel Gallardo 470, C1405DJR, Ciudad Autónoma de Buenos Aires, Argentina; e-mail: dcarpint@macn.gov.ar

²⁾División Entomología, Museo de Ciencias Naturales de La Plata, U.N.L.P. Paseo del Bosque s/n, B1900FWA, La Plata, Buenos Aires, Argentina; e-mail: pdellape@fcnym.unlp.edu.ar

³⁾Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET)

Abstract. The tribe Scolopini is characterized by having males with uradenia consisting of paired glands with either a single or paired openings on abdominal sternum III or IV (exceptionally on V), and females with copulatory tubes (not in Calliodina), and by a midventral abdominal copulatory site. The tribe is composed of two subtribes, Scolopina with four genera and Calliodina with seven genera. Two new genera of Scolopini are proposed: *Guayascoris foreroi*, a new genus and species of Calliodina from Ecuador, and *Ameroscolopa*, a new genus of Scolopina including the two American species of *Scoloposcelis* Fieber, 1864: *Ameroscolopa flavicornis* (Reuter, 1871) comb. nov. and *A. basilicus* (Drake & Harris, 1926) comb. nov. Diagnostic characters, geographic distribution, species included, and a key to all Neotropical genera of the tribe are also given.

Key words. Heteroptera, Anthocoridae, Scolopini, key, *Guayascoris foreroi*, *Ameroscolopa*, new genera, new species, Neotropical Region

Introduction

The knowledge of the diversity of the Anthocoridae sensu lato in the Neotropical Region is far from complete, with many undescribed taxa in collections. This family contains approximately 400–600 species distributed worldwide (JUNG et al. 2010). CARPINTERO (2002) catalogued the Neotropical fauna and listed 36 genera and 130 species. Only one new genus

and species, *Pehuencoris gurguliophagus* Carpintero & Dellapé, 2006, have been published from Neotropical Region after the catalogue (CARPINTERO & DELLAPÉ 2006).

The tribe Scolopini was erected by CARAYON (1954) and is characterized by having male with uradenia, which consists of paired glands with either a single or paired openings on abdominal sternum III or IV, exceptionally on V (in *Opisthypseus* Reuter, 1909), and female with copulatory tubes (absent in Calliodina), and by a midventral abdominal copulatory site (SCHUH & SLATER 1995).

CARAYON (1972) established two subtribes, Scolopina with four genera and Calliodina with seven genera. In this paper a new genus and species of Calliodina from Ecuador are described and illustrated, and a new genus of Scolopina is proposed to include the two American species of *Scoloposcelis* Fieber, 1864. Also, diagnostic characters, geographic distribution, lists of included species, and a key to all Neotropical genera of the tribe are given.

Materials and methods

Specimens examined in our studies are deposited in the following collections:

- BMNH Natural History Museum, London, United Kingdom;
 MACN Museo Argentino de Ciencias Naturales "Bernardino Rivadavia", Buenos Aires, Argentina;
 UNCB Universidad Nacional De Colombia, Bogotá, Colombia.

Where possible, we worked with the type species of each genus. This does not mean we have not seen specimens of nearly all known Neotropical species of the group.

The scanning electron micrographs were taken with Jeol 6360 LV scanning electron microscope. The holotype male of *Guayascoris foreroi* gen. & sp. nov., mounted on a slide, was photographed using Nikon DXM 1200 digital camera with Nikon SMZ 1500 stereomicroscope. Because a small but relevant distortion occurs, this specimen was not measured. Measurements are given in millimeters.

The following distributional abbreviations, based on CARPINTERO'S (2002) catalogue, were used:

- | | | | |
|-----|------------------------|----|--------------------------|
| CA | Central America; | | |
| CI | Caribbean Islands; | | |
| NA | North America; | | |
| PC | Pacific Islands; | | |
| SA | South America; | | |
| AR | Argentina; | CH | Chile; |
| bue | Buenos Aires; | CO | Colombia; |
| cba | Cordoba; | CR | Costa Rica; |
| juj | Jujuy; | GA | Galapagos Is. (Ecuador); |
| mis | Misiones; | GD | Guadalupe (France); |
| sal | Salta; | GN | Grenade; |
| BO | Bolivia; | GT | Guatemala; |
| BR | Brazil; | GY | Guyana; |
| CB | Cuba; | JM | Jamaica; |
| CC | Coco Is. (Costa Rica); | MX | Mexico; |
| | | NC | Nicaragua; |
| | | PN | Panama; |
| | | SV | St. Vincent; |
| | | TT | Trinidad-Tobago; |
| | | UR | Uruguay; |
| | | US | United States; |
| | | VG | Virgin Is. (USA and UK); |
| | | VN | Venezuela. |

Taxonomy

Scolopini Carayon, 1954

Scolopini Carayon, 1954: 601. Type genus: *Scolopa* Carayon, 1954.

Diagnostic characters. Characterized by a complex glandular system in male, the ‘ura-denia’, term used by CARAYON (1954) and compared with the homologous structures in Pentatomomorpha. It ends on the ventral surface of sternum III or IV, exceptionally on V (in *Opisthyselus* Reuter, 1909). Left paramere usually simple, curved, with a longitudinal median sulcus. Females with ovipositor well developed (sometimes reduced, but never vestigial). Ovipositor triangular, located in the middle of posterior edge of seventh sternum (absent in *Eulasiocolpus* Champion, 1900, and *Lepidonannella* Poppius, 1913). Tegumentary copulation, on ventral side. Ectospermalege usually present. A well defined transversal sulcus behind ocelli, with some short and erected hairs, not aligned as in Cardistethini (CARPINTERO & DELLAPÉ 2008). Species of this tribe live under bark of trees (CARAYON 1972).

Key to Neotropical genera of Scolopini

- 1 Ocelli placed between eyes, before imaginary line that passes through posterior margin of eyes (Fig. 10). Metasternum with median longitudinal carina. Ectospermalege not shaped as copulatory tubes. Subtribe **Calliodina**. 2
 - Ocelli placed behind imaginary line that passes through posterior margin of eyes (Fig. 9). Metasternum without median longitudinal carina. Ectospermalege shaped as copulatory tubes. Subtribe **Scolopina**. 10
- 2 Ant-mimetic species. Lateral sides of pronotum strongly sinuated (Figs. 3, 6, 12). Abdomen constricted at base. 3
 - Not ant-mimetic species. Lateral sides of pronotum straight or only slightly sinuated (Figs. 1, 2, 4, 5, 7, 8, 9). Abdomen not constricted at base. 4
- 3 Head before eyes curved downward. Legs long and slender. Dorsal half of metapleura smooth (Fig. 23). Tibiae unarmed. Fossula spongiosa absent. Brazil, Nicaragua. *Opisthyselus* Reuter, 1909
 - Head before eyes flat, straight (Fig. 10). Legs short, femora enlarged. Dorsal half of metapleura sculptured. Fore tibiae in males with row of teeth on inner margin (Fig. 11). Fossula spongiosa present. Ecuador. **Guayascoris gen. nov.** (Fig. 3)
- 4 Lateral margins of pronotum and hemelytra explanate. Female with ovipositor reduced. 5
 - Lateral margins of pronotum and hemelytra not explanate. Female with well developed ovipositor. 6
- 5 Pronotum and head with a series of wide and whitish setae (Fig. 19). Ostiolar peritreme curved, apex slender, acute (Fig. 20); metapleura wholly sculptured (Fig. 21). South America. **Lepidonannella** Poppius, 1913 (Fig. 4)

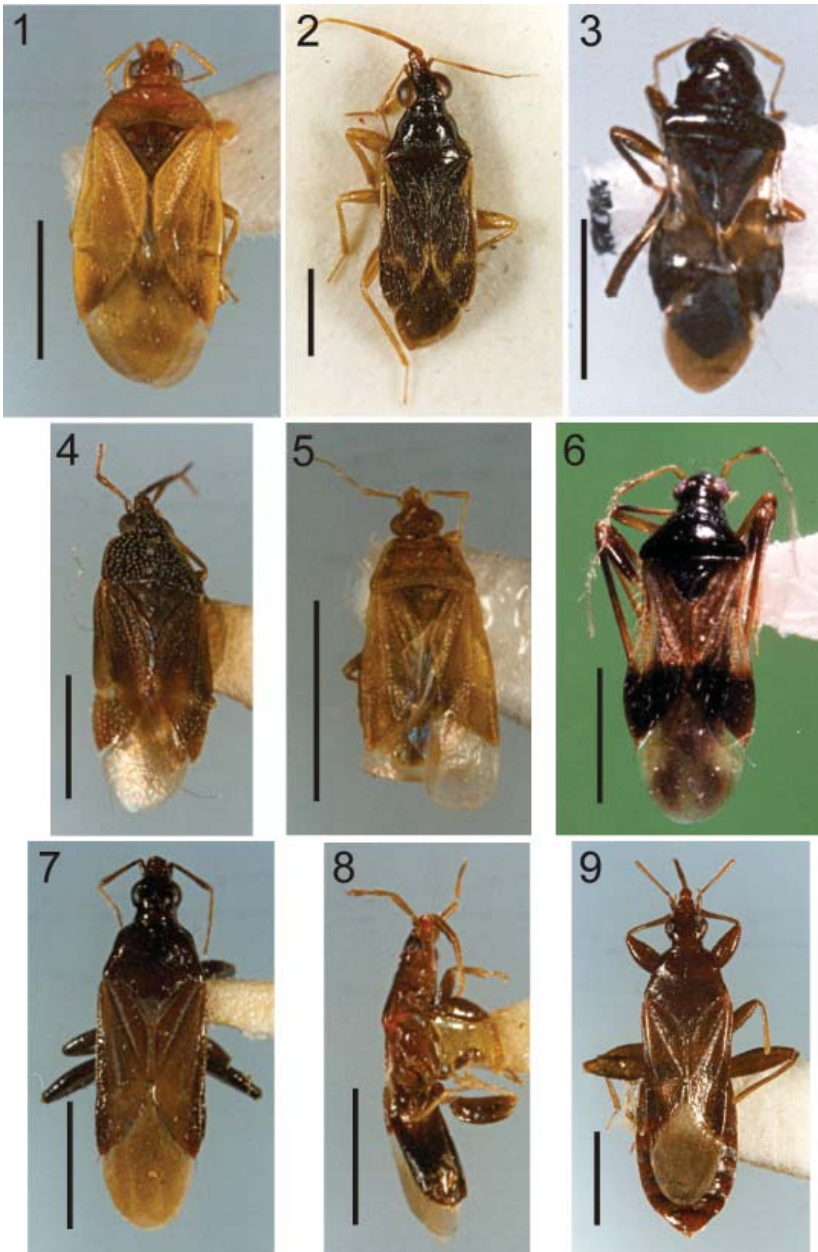
- Pronotum and head without a series of wide and whitish setae. Ostiolar peritreme slightly curved, apically rounded, dorsal margin of metapleura smooth (Fig. 22). North and Central America. *Nidicola* Harris & Drake, 1941 (Fig. 5)
- 6 Hemelytra smooth (Fig. 7). Male fore femora armed with a series of long spines (Fig. 24). *Zopherocoris* Reuter, 1871
- Hemelytra punctured. Male fore femora unarmed. 7
- 7 Eyes large, occupying 3/4 of head length. Hemelytra with only a row of punctures over endo-exocorial suture and claval-endocorial suture.
..... *Eulasiocolpus* Champion, 1900 (Fig. 2)
- Eyes smaller, occupying no more than 1/2 of head length. Hemelytra with many sparse punctures on clavus, corium and cuneus. 8
- 8 Ostiolar peritreme strongly curved in apical quarter. Rostrum slightly surpassing fore coxae. All femora incrassate. *Lasiocolpoides* Champion, 1900
- Ostiolar peritreme curved in all its length (Fig. 16). Rostrum reaching mid coxae. All femora slender (Fig. 1). *Calliodis* Reuter, 1871
- 9 All femora armed with spines on inner margin (Fig. 28). Ostiolar peritreme (Fig. 29, 30) very long, folded (as in *Xylocoris* Dufour, 1831) (Fig. 9).
..... *Scolopocoris* Carayon, 1972
- Femora unarmed, or only fore femora armed with spines. Ostiolar peritreme shorter, more or less curved. 10
- 10 Fore femora spinose. Rostrum reaching middle of mesosternum or reaching mid coxae. 11
- Fore femora unarmed. Rostrum never reaching fore coxae. 12
- 11 Ostiolar peritreme long and strongly curved; punctures on dorsum deep, evident.
..... *Lasiochiloides* Champion, 1900
- Ostiolar peritreme short and gently curved; finely punctured on dorsum, appearing to be smooth. *Ameroscolopa* gen. nov.
- 12 Body slender, subparallel-sided. Rostrum stout, nearly reaching the fore coxae. Membrane longer than corium (Fig. 8). *Scolopella* Carayon, 1954
- Body thicker, sinuate-sided. Rostrum slender, not surpassing the base of head. Membrane shorter than corium. *Scolopa* Carayon, 1954

Calliodina Carayon, 1972

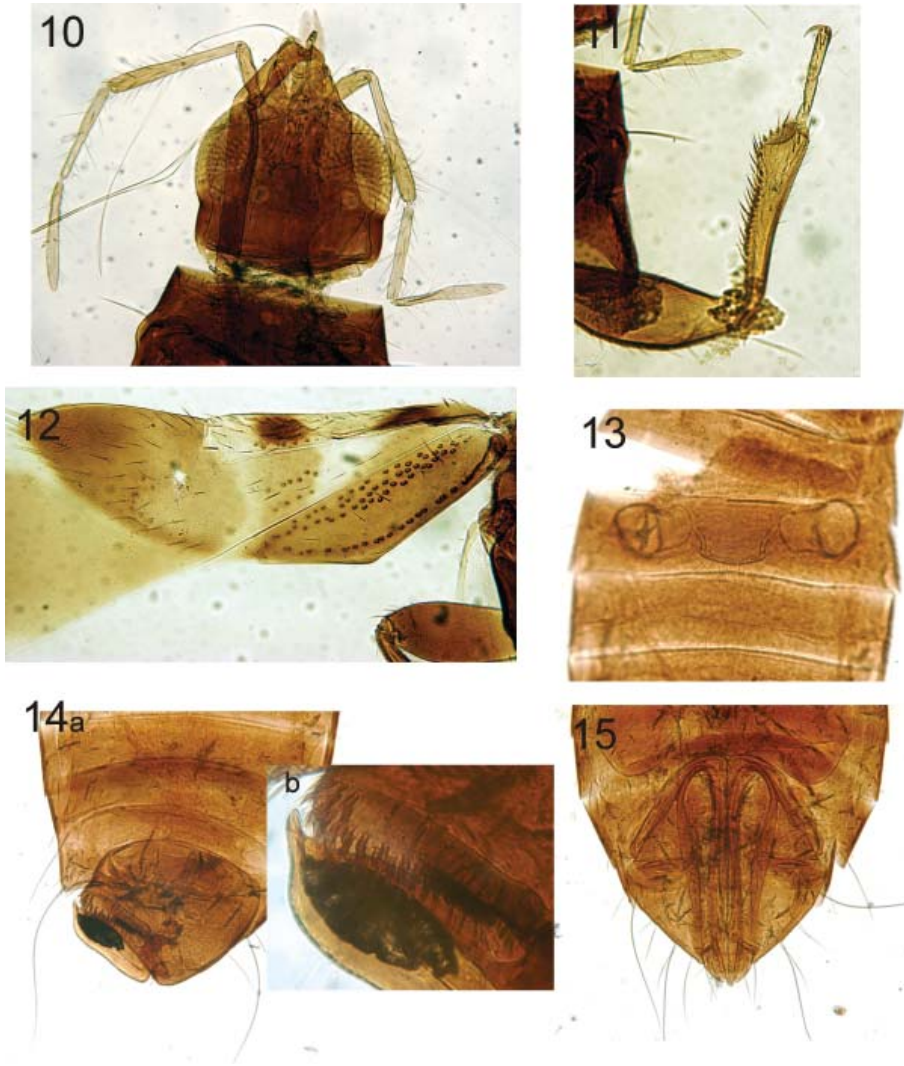
Calliodina Carayon, 1972: 341. Type genus: *Calliodis* Reuter, 1871.

Diagnostic characters. Body not flattened dorso-ventrally. Ocelli placed between eyes, before imaginary line that passes through posterior margin of eyes. Corium punctured (in *Eulasiocolpus* is smooth). Metasternum carinated medially. Ectospermalege not shaped as copulatory tube.

Discussion. CARAYON (1972) mentioned the enlarged femora of the Scolopina, usually with an irregular row of spines on their inner margin, as a character that differentiates the two subtribes. This character is variable within the subtribe Calliodina. The femora are enlarged



Figs. 1–9. 1 – *Calliodis pallescens* (Reuter, 1884); 2 – *Eulasiocolpus megalops* Champion, 1900; 3 – *Guayascoris foreroi* gen. & sp. nov.; 4 – *Lepidonannella opaca* (Poppius, 1909); 5 – *Nidicola mitra* Drake & Herring, 1964; 6 – *Opisthyselus punctaticollis* Reuter, 1908; 7 – *Zopherocoris armatus* (Stål, 1860); 8 – *Scolopella brasiliensis* Carayon, 1954; 9 – *Scolopocoris gracilicornis* (Poppius, 1909). Scale bars = 1 mm.



Figs. 10–15. *Guayascoris foreroi* gen. & sp. nov. 10–14 – holotype, male: 10 – head; 11 – fore tibia; 12 – hemelytron; 13 – abdominal uradenia; 14a – pygophore; 14b – detail of left paramere. 15 – paratype, female, abdomen.

in all legs in *Guayascoris* gen. nov. and *Lasiocolpoides*. At least *Zopherocoris armatus* (Stål, 1860) has a row of spines on the fore femora, and also, unlike the other genera, *Opisthypeselus* lacks fossula spongiosa on both fore and mid tibiae. Despite the characters above, we will retain the Carayon's subtribes based on the combination of the rest of the characters and the relative position of the ocelli.

Neotropical genera of Calliodina

Calliodis Reuter, 1871

(Figs. 1, 16)

Calliodis Reuter, 1971: 558. Type species: *Calliodis picturatus* Reuter, 1871.

Diagnostic characters. Head short, shiny. Rostrum reaching median coxae. Pronotum rugose, punctured, shiny; lateral margins carinated; scutellum shiny on basal half and pruinose on apical half. Hemelytra punctured, pruinose, and with long and dense pubescence. Metasternum rounded, medially carinated. Legs long, femora not enlarged, fore tibiae with fossula spongiosa. Left paramere slightly curved, knife-shaped with apex acute having a deep median groove. Ostiolar peritreme short and curved forward; apically rounded with an excentric small acute tip. Median sulcus nearly reaching the apical portion of peritreme (Fig. 16).

Studied material. *Calliodis picturatus* Reuter, 1871: **ARGENTINA:** BUENOS AIRES: Tigre, I-1938, on mushroom, 10 ♂♂ 7 ♀♀, Viana lgt. (MACN). **CÓRDOBA:** La Serranita, I-1981, 1 ♀, Carpintero lgt. (MACN). **MISIONES:** Dto. Concepción, Santa María, X-1947, 1 ♀, M. J. Viana lgt. (MACN).

List of species and their distribution

<i>C. bifasciatus</i> (Champion, 1900)	CA: NC PN. CI: TT. SA: VN.
<i>C. clarus</i> (Buchanan-White, 1879)	SA: BR.
<i>C. coloratus</i> (Poppius, 1909)	SA: BR.
<i>C. crawfordi</i> (Poppius, 1913)	CA: MX.
<i>C. maculipennis</i> (Reuter, 1884)	CI: CB GD JM VG.
<i>C. nebulosus</i> (Uhler, 1894)	CA: GT PN. CI: GN JM. PC: CC.
<i>C. pallescens</i> (Reuter, 1884)	CA: CR GT MX NC. CI: GN. SA: AR (cor juj mis sal) BO BR.
<i>C. picturatus</i> Reuter, 1871	SA: AR(bue cba mis) BR GY.
<i>C. pictus</i> (Uhler, 1894)	CA: MX NC. CI: GN SV.
<i>C. punctatostriatus</i> (Reuter, 1884)	CA: MX PN. SA: AR(mis) BO CO.
<i>C. signatus</i> (Poppius, 1909)	CI: GD.

Eulasiocolpus Champion, 1900

(Figs. 2, 17–18)

Eulasiocolpus Champion, 1900: 313. Type species: *Eulasiocolpus megalops* Champion, 1900.

Diagnostic characters. Head width across eyes wider than pronotum distally, broadly produced in front; eyes very large, oval, contiguous to pronotum; rostrum long, reaching mid coxae. Pronotum shiny, lateral margins slightly carinated; a distinct collar present; anterior lobe smooth and convex, separated from posterior lobe by deep transverse groove; scutellum deeply and transversely sulcate beyond the middle. Hemelytra with only a row of punctures on inner margin of exocorium and clavus; exocorium moderately wide. Fore and hind femora enlarged, unarmed; male with fore tibiae with row of spines on their inner margin; fossula spongiosa well developed. Ostiolar peritreme curved, apically acute (Fig. 17). Median sulcus reaching tip of peritreme (Fig. 18).

Studied material. *Eulasiocolpus megalops* Champion, 1900: **BOLIVIA:** Cochabamba, II-1962, 1 ♂ (MACN). **BRAZIL:** Tijuca, Gb., VII-1960, 1 ♀, H. Schubart lgt. (MACN).

List of species and their distribution

E. megalops Champion, 1900

CA: GT PN. SA: BO BR.

Guayascoris gen. nov.

(Figs. 3, 10–15)

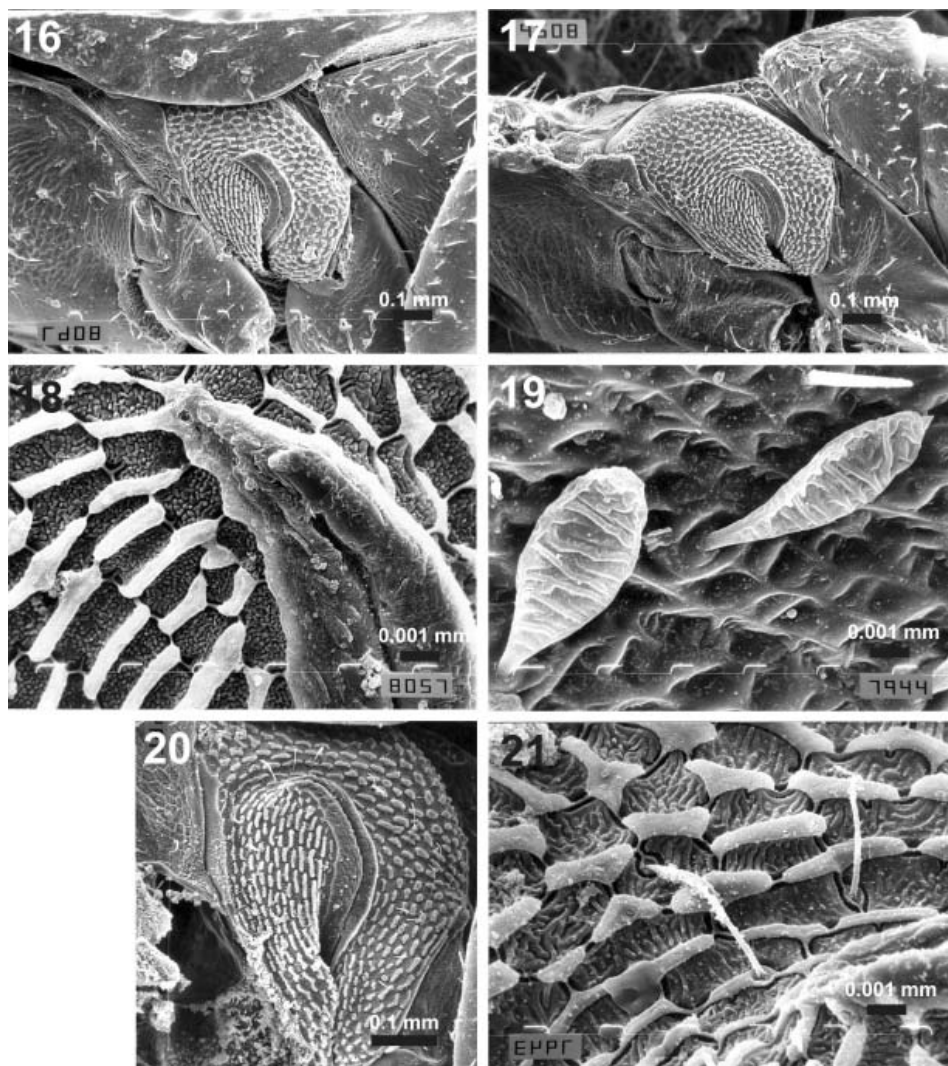
Type species. *Guayascoris foreroi* sp. nov., here designated.

Diagnosis. Ant-mimetic shape, with lateral margins of hemelytra 3-sinuate. Ostiolar peritreme short, wide, slightly curved forward (nearly straight), apically rounded; left paramere biapiculate, pygophore with secretory teeth.

Description. Male. Head (Fig. 10): Slightly longer than wide, shining on basal half. Eyes large, occupying 2/3 of head length, with transversal sulcus across basal line of eyes. Head covered with long and erect hairs; with three pairs of long setae: on subapical portion of tylus, and on subapical and basal inner margin of eyes. Antennae slender, terete, segment II widened on apical half. Rostrum nearly surpassing mid coxae. **Pronotum:** lateral margins nearly straight, carinated, with a long seta on small concavity between anterior and posterior lobes. Anterior lobe prominent, shiny, smooth, with short pilosity, and two subapical long, erect setae. Posterior lobe flat, shiny (opaque on margins), with small punctures and two lateral and subbasal setae. Scutellum opaque with small punctures (as on posterior lobe) and two mesolateral erect setae. All femora enlarged. Fore femora unarmed. Fore coxae and trochanters with row of small teeth and spines. Fore tibiae (Fig. 11) with row of teeth and long, stout setae (like spines) on inner margin. Fossula spongiosa developed on apex of fore tibiae. Mid and hind tibiae with short hairs and long, stout setae, longer than width of tibiae. Hemelytra (Fig. 12) sparsely covered with short decumbent and sparse hairs, 3-sinuated laterally: near base, at apex of exocorium, and near apex of cuneus. Clavus and cuneus opaque; corium shiny, with row of thick punctures on inner margin, and 3 or 4 irregular ones externally; with row of punctures on inner margin of endocorium and some at apex. Cuneus with some small punctures on inner half. Ostiolar peritreme short, wide, slightly curved forward (nearly straight), apically rounded. Metasternum sulcated medially and acute apically. **Abdomen:** With typical uradenia (Fig. 13), ending on sternites III–V, as in remaining genera of this tribe. Pygophore (Fig. 14) subtriangular, with some very long apical hairs. Left paramere thick, biapiculate, with deep median sulcus. Area contiguous to paramere with numerous secretory teeth.

Female. Anterior tibiae without fossula spongiosa or teeth, but with row of stout spine-like setae on inner margin. Row of small teeth and spines on fore coxae and trochanters present. Abdomen a little more constricted at base than in male. Ectospermalege (Fig. 15) not shaped as copulatory tube.

Differential diagnosis. This genus is similar to *Opisthypselsus*, also an ant-mimetic genus, but differs by ostiolar peritreme shorter and slightly curved forward, the dorsal half of the metapleura sculptured, not smooth, and by armed legs. *Guayascoris* gen. nov. also differs from *Opisthypselsus* by the more constricted pronotum in middle and shorter head and legs.



Figs. 16–21. 16 – *Calliodis pallescens* Reuter, 1884, ostiolar peritreme. 17, 18 – *Eulasiocolpus megalops* Champion, 1900: 17 – ostiolar peritreme; 18 – detail of evaporatorium. 19–21 – *Lepidonannella opaca* (Poppius, 1909): 19 – scales on pronotum; 20 – ostiolar peritreme, 21 – detail of evaporatorium.

Small teeth and spines present on fore coxae and trochanters are probably related to a stridulatory function.

Etymology. The generic name is a compound word consisting of the name of the Ecuadorian province where the specimens were collected – *Guayas*, and of the Greek term for true bug – *coris*. The gender is masculine.

Guayascoris foreroi sp. nov.

Type locality. Ecuador, Guayas, Guayaquil.

Type material. HOLOTYPE: ♂ (slide mounted), **ECUADOR:** ‘Guayas, Guayaquil, 4 m, en sector de manglar, 7 nov 2000, D. Forero leg.’ (UNCB). PARATYPES: 5 ♀♀, same data as holotype (pinned) (MACN, UNCB); 1 ♀ and 4 nymphs, same data as holotype (slide mounted) (MACN, UNCB).

Diagnosis. Characterized by its particular coloration, with two whitish bands, as well as by its male genitalia.

Description. Male. General coloration dark brown. Apex of head, antennae, and basal third of mid and hind femora yellowish. Hemelytra reddish brown, with two whitish transversal fascia on corium, nearly translucent. Cuneus shiny, dark brown. Membrane dark, with a clear spot at base, near the apex of cuneus.

Female. Similar to male in coloration and measurements. *Measurements:* Ratio (maximum–minimum) (n = 5). Total length: 2.24 (2.35–2.13); maximum width at level of cuneus base: 0.75 (0.80–0.71). Head length: 0.36 (0.36–0.35); width: 0.40 (0.41–0.38); interocular space: 0.19 (0.20–0.19). Antennae: length of segments I: 0.10 (0.11–0.09); II: 0.30 (0.33–0.29); III: 0.22 (0.22–0.21); IV: 0.23 (0.25–0.22). Pronotum: length: 0.48 (0.52–0.45); width at base: 0.71 (0.73–0.68). Cuneus length: 0.43 (0.45–0.42); width at base: 0.44 (0.47–0.36). Similar coloration to male.

Etymology. The specific epithet is given in honour of our friend Dimitri Forero (Heteropteran Systematics Lab, Department of Entomology, University of California Riverside, USA) who sent us many specimens of Anthocoridae from Colombia and this species from Ecuador.

Comments. The sole male (holotype) was not measured because of the montage method: we believe that the structures of slide-mounted specimens can be distorted.

Lasiocolpoides Champion, 1900

Lasiocolpoides Champion, 1900: 313. Type species: *Lasiocolpoides ciliatus* Champion, 1900.

Diagnostic characters. Head longer than broad; eyes large; rostrum extending barely beyond fore coxae. Pronotum smooth, trapezoidal, abruptly narrowing forward; lateral margins carinated and feebly sinuated; scutellum transversely sulcated beyond middle, with apical portion flattened. Hemelytra very distinctly and subseriatly punctured, pilose; exocorium narrow apically, nearly half the width of endocorium. Legs elongate, femora incrassate; tibiae with long, projecting hairs. Ostiolar peritreme short, parallel-sided and strongly curved at apex; basal 3/4, straight.

Studied material. *Lasiocolpoides ciliatus* Champion, 1900: **GUATEMALA:** ♀ (syntype): ‘Type, BCA Rhynch. II, *Lasiocolpoides ciliatus* Ch., sp. Figured, San Geronimo, Champ.’ (BMNH).

Remarks. Like *Lasiochiloides*, this genus has an uncertain position among the Scolopini. We left *Lasiocolpoides* in Calliodina because the body is not flattened. Future studies of male and female genitalia will clarify its position within the Scolopini.

List of species and their distribution

L. ciliatus Champion, 1900

CA: GT.

***Lepidonannella* Poppius, 1913**

(Figs. 4, 19–21)

Lepidonannella Poppius, 1913: 15. Type species: *Lepidophorella opaca* Poppius, 1909.

Diagnostic characters. Body oval, opaque, depressed dorsally; dorsal surface of head and pronotum covered by whitish scales (Fig. 19), homogeneously distributed. Head with eyes large, contiguous to apical margin of pronotum; rostrum reaching mid coxae. Pronotum flat, wide, basal and apical margins nearly straight, lateral margins carinated, convex, with anterior angles rounded; scutellum rugose, covered with short yellowish hairs, with a median transversal sulcus. Hemelytra with sparse and homogeneously distributed whitish short hairs. Hairs somewhat thickened. Female with ovipositor reduced. Ostiolar peritreme (Fig. 20) long; its basal portion wide, medial portion slender, angulated forward; apical portion very slender, acute, like a short carina; median sulcus reaching its apex. Evaporatorium as seen in Fig. 21.

Studied material. *Lepidonannella opaca* (Poppius, 1913): **BRAZIL:** Nova Teutonia, 21-IV-1941, 1 ♀, F. Plaumann lgt. (MACN); same locality, 3-V-1941, 1 ♂ (slide mounted) (MACN).

List of species and their distribution*L. opaca* (Poppius, 1909)

SA: BR.

***Nidicola* Harris & Drake, 1941**

(Figs. 5, 22)

Nidicola Harris & Drake, 1941: 343. Type species: *Nidicola marginata* Harris & Drake, 1941.

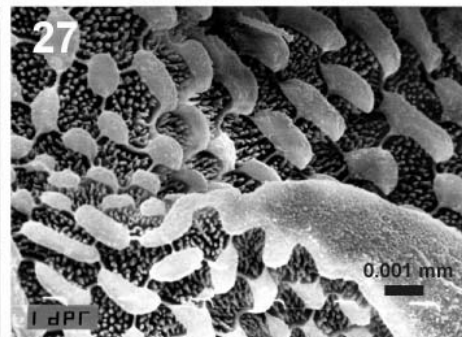
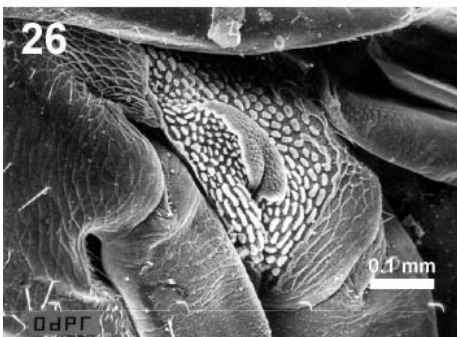
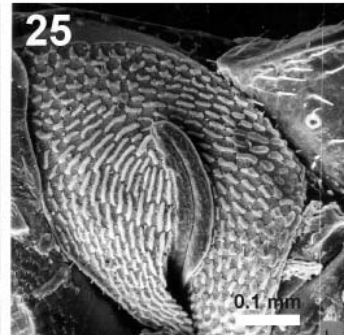
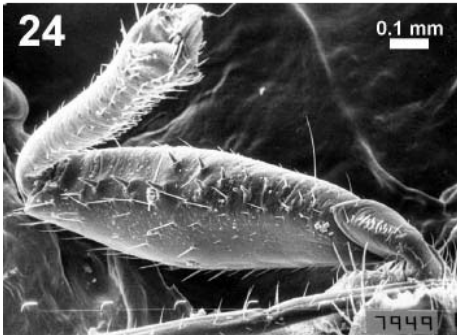
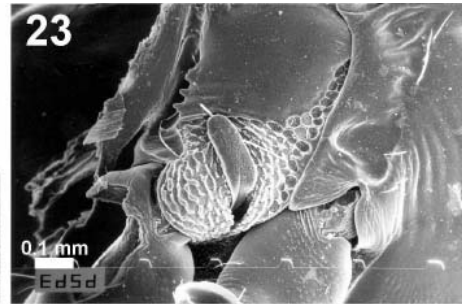
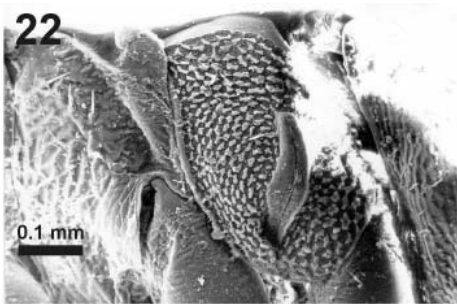
Diagnostic characters. Small size (1.6–2.1 mm), oblong to obovate. Upper surface depressed. Head wider than long; eyes small; rostrum long, surpassing mid coxae. Pronotum much wider than long; anterior margin nearly straight; lateral margins widely explanate, carinated and straight, with anterior angles rounded; basal margin concave. Polymorphic wings, from well developed to not reaching the tip of abdomen, dense and finely punctured, especially in clavus; exocorium narrow. Legs moderately long, with short and slender hairs; femora not enlarged; fore coxae with four or five long setae; male fore tibiae with row of teeth on inner surface; fossula spongiosa small. Female with ovipositor reduced. Left paramere slender, long and slightly spiraled. Ostiolar peritreme (Fig. 22) gently curved forward, basal half a little wider than apical one (a little different to peritreme drawn in DRAKE & HERRING (1964) that is parallel-sided), and apically rounded with small excentric acute tip; median sulcus arises from top of peritreme; dorsal margin of metapleura smooth.

Studied material. *Nidicola mitra* Drake & Herring, 1964: **NICARAGUA:** León, V. Telica, 4-IX-1991, 2 ♂♂ 1 ♀, Nolo – González lgt., en nido de *Nasutitermes* sp. (MACN).

Remarks. This genus includes a very peculiar group of species restricted to southwestern USA, Mexico and Central America. The long setae on fore coxae are probably related to a stridulatory function.

List of species and their distribution

<i>N. aglaia</i> Drake & Herring, 1964	CA: MX.
<i>N. engys</i> Drake & Herring, 1964	CA: MX NC.
<i>N. etes</i> Drake & Herring, 1964	CA: MX NC.
<i>N. jaegeri</i> Peet, 1979	NA: US.
<i>N. marginata</i> Harris & Drake, 1941	CA: MX; NA: US.
<i>N. mazda</i> Herring, 1966	PC: GA.
<i>N. mitra</i> Drake & Herring, 1964	CA: GT MX NC.



Figs. 22–27. 22 – *Nidicola mitra* Drake & Herring, 1964, ostiolar peritreme; 23 – *Opisthyselus punctaticollis* Reuter, 1909, ostiolar peritreme; 24, 25 – *Zopherocoris armatus* Reuter, 1871; 24 – fore femora; 25 – ostiolar peritreme; 26, 27 – *Scolopella brasiliensis* Carayon, 1954; 26 – ostiolar peritreme; 27 – detail of evaporatorium.

***Opisthopselus* Reuter, 1909, restored placement**

(Figs. 6, 23)

Opisthopselus Reuter, 1909: 5. Type species: *Opisthopsellus punctaticollis* Reuter, 1909.

Diagnostic characters. Elongate, ant-mimetic species. Shiny dorsally, with sparse long hairs. Head long; portion before eyes curved downward; eyes rounded, projecting, well separated from anterior margin of pronotum; antennae slender and long; segment II slightly widened toward its apex. Pronotum subtriangular, smooth; pronotal collar wide; anterior margin narrower than base of head; lateral and basal margins straight; posterior lobe with some strong punctures; both lobes separated by a row of punctures; scutellum slightly elevated. Hemelytra with lateral sides sinuated and with strong punctures as in pronotum; cuneal fracture long, reaching corial-claval suture. Legs slender and very long; unarmed; pseudo-pads at apex on fore and mid tibiae consisting of short membranous prominence bearing long hairs. Abdomen very constricted basally. Uradenia typical. Dorsal half of metapleura smooth; ostiolar peritreme (Fig. 23), placed basally in metapleura, short, wide, straight, inclined backward and rounded apically; median sulcus reaching only the basal quarter of peritreme.

Studied material. *Opisthopselus punctaticollis* Reuter, 1908: **BRAZIL:** Rio de Janeiro, Tijuca, 10/VI/1963, 1 ♂ (slide mounted), San Martín lgt. (MACN). **NICARAGUA:** Zelaya: C Saslaya, IV-1996, 4 ♀♀, Maës – Hernandez lgt. (MACN).

Remarks. This is the most modified genus of Scolopini. The ostiolar peritreme is probably the most characteristic of all Anthocoridae. CARPINTERO (2002) transferred this genus to Lasiochilinae based on the shape of ostiolar peritreme, straight with dorsal half of metapleura smooth. However, here we restore its position according to CARAYON (1972). The male genitalia have never been described; unfortunately, the single male we studied had lost the pygophore, and we could not study genital structures but we could see the typical uradenia of the Scolopini.

List of species and their distribution*O. punctaticollis* Reuter, 1909

CA: NC. SA: VN BR.

***Zopherocoris* Reuter, 1871**

(Figs. 7, 24, 25)

Zopherocoris Reuter, 1871: 565. Type species: *Anthocoris armatus* Stål, 1860.

Diagnostic characters. Body dorsally flat, subparallel-sided. Head wide, eyes basal, contiguous to apical margin of pronotum; ocelli near basal angles of eyes; rostrum thick, reaching anterior coxae. Pronotal collar thick; lateral margins of pronotum narrowed from base to apex, carinated and nearly straight with small sinuosity between anterior and posterior lobes, from which arises a long seta; basal margin slightly concave; lobes delimited by feeble median and transversal sulcus. Legs spinose (Fig. 24). Hemelytra smooth. Metasternum convex. Fore and hind femora enlarged; fore femora with spines at their inner margin; fore tibiae curved basally, with row of spines on inner margin. Ostiolar peritreme (Fig. 25) long, apically rounded and gently curved forward; median sulcus reaching tip of peritreme.

Studied material. *Zopherocoris armatus* (Stål, 1860): **PANAMÁ:** La Campana, 4278, 1938, J. 1 ♂ (slide mounted), Zetek lgt. (MACN). **COLOMBIA:** Barbosa, Cotton, XI-1935, 1 ♂, L. M. Murillo lgt. (MACN).

List of species and their distribution

Z. armatus (Stål, 1860)

CA: PN. SA: BR CO.

Scolopina Carayon, 1972

Scolopina Carayon, 1972: 341. Type genus: *Scolopa* Carayon, 1954.

Diagnostic characters. Body flattened dorso-ventrally, subparallel-sided. Ocelli placed behind imaginary line that passes through posterior margin of eyes. Legs robust; femora enlarged, usually with irregular row of spines on inner margin. Corium generally without punctures. Metasternum not carinated medially. Ectospermalege shaped as copulatory tubes.

Discussion. See under Calliodina.

Neotropical genera of Scolopina

Ameroscolopa gen. nov.

Type species. *Scoloposcelis flavicornis* Reuter, 1871, here designated.

Description. Male. Elongate, macropterous, glabrous. *Head:* short, shiny, with long setae; rostrum nearly reaching mid coxae. *Thorax:* Pronotum finely rugose; lateral margins carinated; calli not elevated, rounded, shiny, finely wrinkled; pronotal collar narrow; scutellum shiny, finely sculptured. Mesosternum with longitudinal median groove; metasternum apically acute. Fore femora armed with several teeth on inner margin. Fore and hind femora enlarged. Hemelytra shiny, very finely punctured. Ostiolar peritreme apically rounded, short and gently curved forward; without apparent median sulcus. *Abdomen:* Sternum IV in male with pair of uradenia opening ('orifice' *sensu* CARAYON 1954), a complex reticulated blister, indicated by clump of setae. Terminal abdominal segments with long setae. Left paramere with short bifid apex.

Female. Similar to male. Ovipositor developed.

Differential diagnosis. The New World species of *Scoloposcelis* Fieber, 1864 are here arranged in a new genus because of the following characters:

1. Femora: Old World species of *Scoloposcelis* have the mid and hind femora spinose as well (except for *S. koreanus* Jung, Yamada & Lee 2011 – see JUNG et al. (2011)). They are smooth in the species of *Ameroscolopa* gen. nov.
2. Left paramere: In the Old World species, it is nearly straight and 'weakly projected at apex' (YAMADA & HIROWATARI 2005). New World species have a short bifid apex.
3. Ostiolar peritreme: In the Old World species curved and apically acute with a median sulcus extending in basal 3/4 of its length. New World species have the ostiolar peritreme apically rounded and 'short and gently curved forward' (KELTON 1978), and without an apparent median sulcus.

Etymology. The prefix (*Amero-*) refers to the continent (Americas) where the species occurs, and the suffix (*-scolopa*) refers to the tribe Scolopini. The gender is feminine.

Studied material. *Ameroscolopa flavicornis* (Reuter, 1871): **USA: MAINE:** Paris, 8-IX-1947, 1 ♀, G. A. Frost. coll. (MACN).

List of species and their distribution

- A. flavicornis* (Reuter, 1871) **comb. nov.** CA: GT MX.
A. basilicus (Drake & Harris, 1926) **comb. nov.** NA: US.

***Lasiochiloides* Champion, 1900**

Lasiochiloides Champion, 1900: 311. Type species: *Lasiochiloides denticulatus* Champion, 1900.

Diagnostic characters. Body flattened dorso-ventrally. Head short, broader than long. Eyes small. Rostrum reaching middle of metasternum; antennal segments III and IV very slender. Hemelytra pilose, punctured: clavus with row of punctures on inner margin; corium and cuneus with sparse punctures. Fore and hind femora very enlarged. Fore femora with spines on inner margin. Fore tibiae with row of teeth on inner margin, with a small fossula spongiosa at apex. Ostiolar peritreme long and strongly curved forwards, apically rounded.

Studied material. *Lasiochiloides denticulatus* Champion, 1900: HOLOTYPE: ♂, GUATEMALA: 'Type, BCA Rhynch. II, *Lasiochiloides denticulatus* Ch. Cerro Zunil, 4-5000 ft Champ. sp. figured' (BMNH).

Remarks. This genus has an uncertain position within the Scolopina because of its densely pilose and punctured dorsum. The generic affinities with the Old World species must be revised.

List of the South American species and their distribution

- L. denticulatus* Champion, 1900 CA: GT.
L. socialis Drake & Harris, 1926 CA: MX.

***Scolopa* Carayon, 1954**

Scolopa Carayon, 1954: 596. Type species: *Scolopa wygodzinskyi* Carayon, 1954.

Diagnostic characters. Body strongly flattened dorso-ventrally. Head subtriangular beyond eyes, short and narrowed behind. Rostrum short, slightly surpassing base of head. Pronotum and scutellum smooth, lateral margins convex, with slender median longitudinal carina. Metasternum cordiform. Femora enlarged, but hind femora larger. Femora without spines on inner margin. Fore tibiae with small fossula spongiosa. 'On sternite (III) behind the two orifices, a shore covered of microtrichia and a lock of long, erected hairs' (CARAYON 1954). Ostiolar peritreme 'long and strongly curved, slightly projected on external edge' (CARAYON 1954). Left paramere curved, having a median sulcus, its apex obtuse.

Studied material. We have not seen specimens of this genus. We use characters mentioned in the original description.

Remarks. Differs from *Scolopella* Carayon 1954, by having slender rostrum, sinuated sides of body and left paramere with an obtuse apex. This is the only genus among the Scolopina with a very short rostrum, not reaching the fore coxae, and unarmed fore femora.

List of species and their distribution

- S. wygodzinskyi* Carayon, 1954 SA: BR.

***Scolopella* Carayon, 1954**

(Figs. 8, 26, 27)

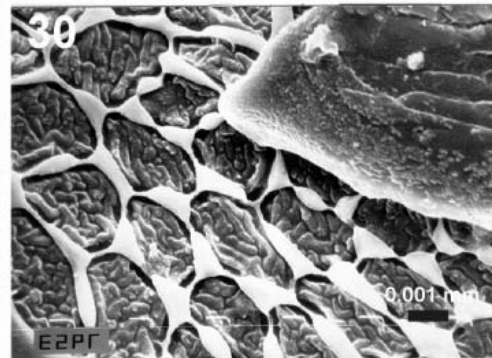
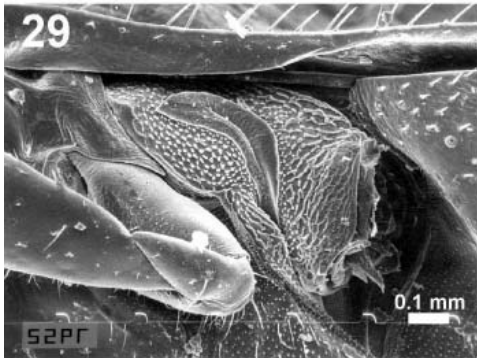
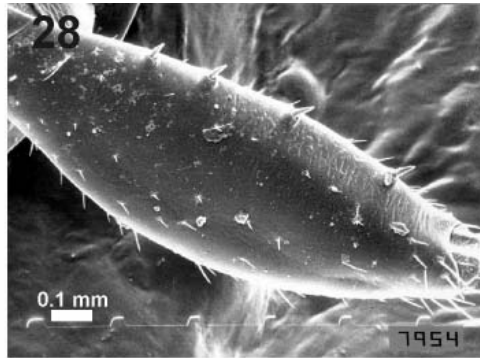
Scolopella Carayon, 1954: 599. Type species: *Scolopella brasiliensis* Carayon, 1954.

Diagnostic characters. Body long, subcylindrical, narrow and slightly flat. Head widened behind eyes. Eyes small. Space between ocelli wider than interocular space. Rostrum short, thick, not reaching fore coxae, longer than in *Scolopa*. Lateral margins of pronotum nearly straight. Fore and hind femora enlarged, without spines. Fossula spongiosa on fore tibiae small. Hemelytra slender, with membrane longer than corium. A single external orifice of uradenia on sternum III, with long, erect hairs. Left paramere gently curved, with many acute teeth at apex. Metapleura small, ostiolar peritreme (Figs. 26, 27) curved forward, apically acute. Median sulcus only present on basal half.

Studied material. *Scolopella brasiliensis* Carayon, 1954: ARGENTINA: MISIONES: Loreto, 2 ♂♂, Ogloblin lgt. (MACN).

List of species and their distribution*S. brasiliensis* Carayon, 1954

SA: AR (mis) BR.



Figs. 28–30. *Scolopocoris gracilicornis* (Poppius, 1909). 28 – fore femora; 29 – ostiolar peritreme; 30 – detail of evaporatorium.

***Scolopocoris* Carayon, 1972**

(Figs. 9, 28–30)

Scolopocoris Carayon, 1972: 341. Type species: *Scoloposcelis gracilicornis* Poppius, 1909.

Diagnostic characters. Rostrum short, slightly surpassing fore coxae. All femora armed with spines on inner margin (Fig. 28). Male with orifices of uradenia well separated, and with row of long setae over sternum IV among the orifices. Left paramere perpendicular to left margin of pygophore, ending as a long flagellum. Female with ovipositor well developed. Ostiolar peritreme (Figs. 29, 30) wide, folded forward (as in genus *Xylocoris*), apically rounded with small excentric acute tip; median sulcus disappearing in apical quarter.

Studied material. ARGENTINA: CÓRDOBA: Calamuchita, I-1945, 1 ♀, Viana lgt. (MACN). BUENOS AIRES: Tigre, VII-1947, 2 ♀♀, Viana lgt. (MACN); same locality, IV-1937, 1 ♂ (MACN).

Remarks. This genus differs from the other Scolopina by having all femora armed with spines over the inner margin, and by ostiolar peritreme very long, folded (as in *Xylocoris*). This is also the most meridional genus of the subtribe, distributed in temperate central Argentina, southern Brazil and Uruguay.

List of species and their distribution

S. gracilicornis (Poppius, 1909) SA: AR (bue) BR UR.

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