

Revision of the Neotropical genus *Leogorrus* Stål (Hemiptera: Reduviidae)

MARÍA CECILIA MELO

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The present work provides a revised diagnosis of the genus *Leogorrus* Stål and its species, digital colour figures of habitus, and illustrations of the male and female genitalia, as well as a key to the species. Two synonymies are established: *L. incommodus* (Walker) as junior synonym of *L. ochropus* (Stål), and *L. insculptus* Hussey of *L. minusculus* (Walker). Lectotype specimens are designated for all valid species. The fifth instars of *L. litura* (Fabricius) is described and illustrated. Considerable new distributional information is recorded: *L. fasciatus* from Costa Rica; *L. immaculatus* from Colombia, Guiana, Honduras, and Panama; *L. interruptus* from Bolivia, Costa Rica, and El Salvador; *L. litura* from Belize, Ecuador, El Salvador, Paraguay, Peru, and Surinam; *L. longiceps* from Belize and Honduras; *L. minusculus* from French Guiana; and *L. pallipes* from Argentina, Guiana, and Paraguay. Maps showing geographic distribution are given.

María Cecilia Melo, División Entomología, Museo de Ciencias Naturales de La Plata, UNLP, Paseo del Bosque s/nº, 1900, La Plata, Buenos Aires, Argentina (ceciliameло@fcnym.unlp.edu.ar)

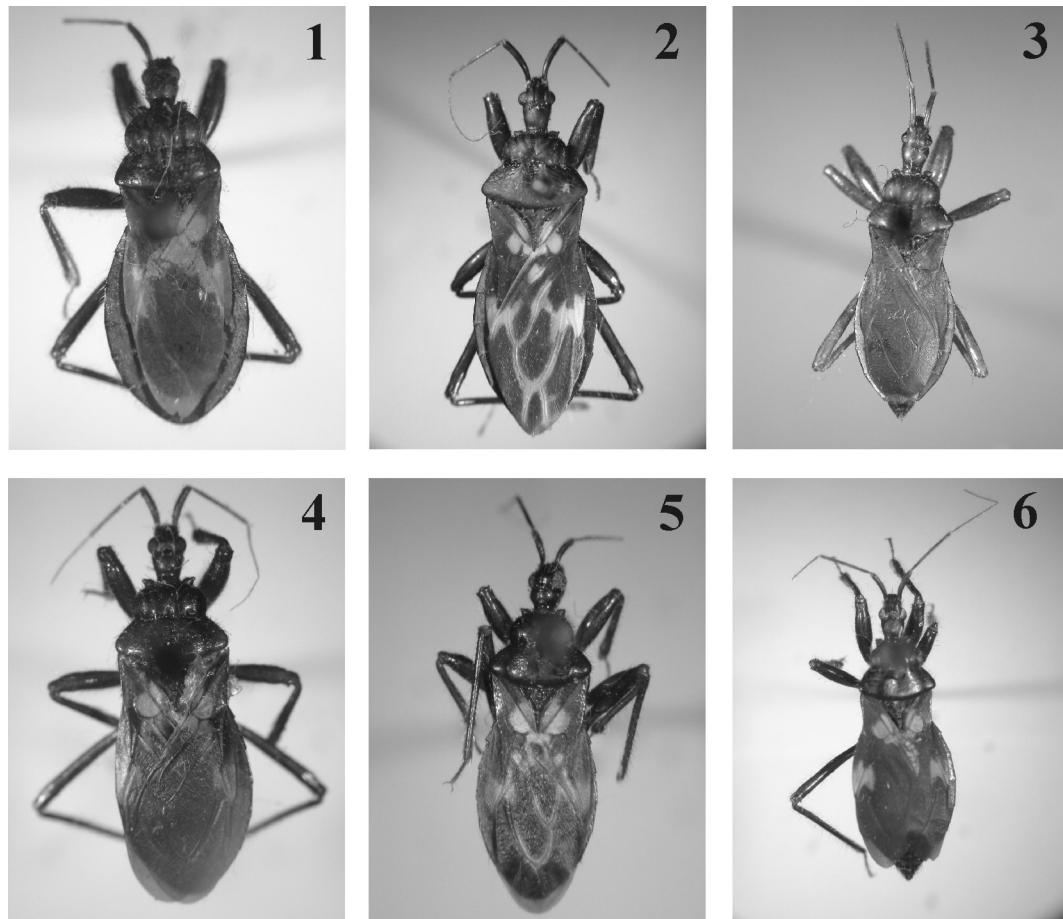
Introduction

The family Reduviidae, included within the infraorder Cimicomorpha, is one of the largest and morphologically most diverse of the suborder Heteroptera (Schuh & Slater 1995), comprising more than 6800 species in 931 genera. Most of the assassin bugs are predators, except the Triatominae that have a distinctive blood-sucking habit, and a few Harpactorinae species that prefer sugary substances like resins, nectar and secretions of coccids and membracids (Bérenger & Pluot-Sigwalt 1997).

Among the 31 subfamilies of assassin bugs (Maldonado Capriles 1990), the Reduviinae is one of the most heterogeneous; it includes 141 genera and more than 1070 species occurring in all biogeographic regions. It is characterized by a combination of characters such as the presence of ocelli, of fossulae spongiosa on legs I and II, and three-segmented tarsi, and the immature stages with three abdominal scent glands whose openings are

located on the anterior margins of terga IV, V, and VI (Schuh & Slater 1995). In America, the subfamily Reduviinae is represented by 17 genera and 181 species, of which 14 are included in the genus *Leogorrus* Stål and have not been studied comprehensively.

The genus *Leogorrus* ranges from Mexico to Argentina. The species included are: *L. fasciatus* Champion 1899, *L. formicarius* (Fabricius 1803), *L. incommodus* (Walker 1873), *L. immaculatus* Champion 1899, *L. insculptus* Hussey 1953, *L. interruptus* Champion 1899, *L. litura* (Fabricius 1787), *L. longiceps* Champion 1899, *L. minusculus* (Walker 1873), *L. ochropus* (Stål 1855), *L. pallipes* Stål 1872, *L. picturatus* Stål 1872, *L. venator* Stål 1862, and *L. xanthospilus* (Walker 1873). Stål (1859) briefly described the genus and characterized it by the presence of a pair of tubercles on the ventral apex of the femora. This character is present in all the species but it is not exclusive of *Leogorrus*, as it also occurs in another Neotropical



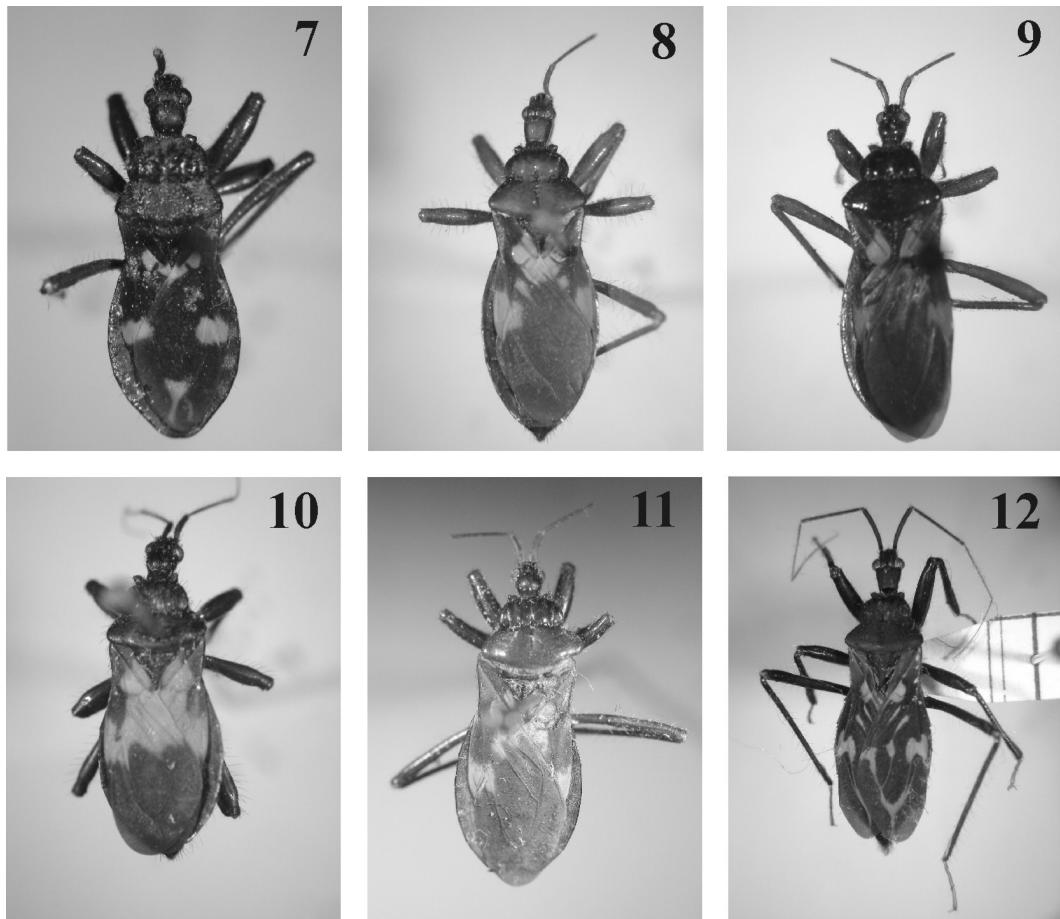
Figs 1-6. Habitus, dorsal: (1) *L. fasciatus* Champion. (2) *L. formicarius* (Fabricius). (3) *L. immaculatus* Champion. (4) *L. interruptus* Stål. (5) *L. litura* (Fabricius). (6) *L. longiceps* Stål.

genus, *Namapa* Wygodzinsky & Lent 1980. The purpose of this study is to redescribe the genus *Leogorras*, and revise its species.

Materials and methods

The specimens studied belong to the following institutions: Museo Argentino de Ciencias Naturales "Bernardino Rivadavia", Buenos Aires, Argentina (MACN); Museo de Ciencias Naturales de La Plata, La Plata, Argentina (MLP); California Academy of Sciences, San Francisco, California, U.S.A. (CAS); Cornell University Insect Collection, Comstock Hall, Ithaca, New York, U.S.A.

(CUIC); Institut royal des Sciences naturelles de Belgique, Brussels, Belgium (IRSNB); Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil (MZSP); Zoological Museum, University of Copenhagen (ZMUC); National Museum of Natural History-Naturalis, Leiden, Holanda (RMNH); Natural History Museum of Los Angeles County, Los Angeles, California, U.S.A. (LACM); Smithsonian Institution, National Museum of Natural History, Washington D.C., U.S.A. (USNM); Snow Entomological Collections, Natural History Museum, University of Kansas, Lawrence, Kansas, U.S.A. (SEMC); Swedish Museum of Natural History, Stockholm,



Figs 7-12. Habitus, dorsal: (7) *L. minusculus* (Walker). (8) *L. ochropus* Stål. (9) *L. pallipes* Stål. (10) *L. picturatus* Stål. (11) *L. venator* Stål. (12) *L. xanthospilus* (Walker).

Sweden (NHRS); The Natural History Museum, London, England (BMNH); The Ohio State University, Museum of Biological Diversity, Columbus, Ohio, U.S.A. (OSU); Universidad Nacional Agraria, Departamento de Entomología, Museo Entomológico, La Molina, Peru (UNA); Universidad Nacional Autónoma de Mexico, Mexico (UNAM); University of Michigan, Museum of Zoology, Ann Arbor, Michigan, U.S.A. (UMMZ); and the collections of Dr Diego J. Carpintero, Argentina (CC), and Dr Rodolfo U. Carcavallo, Argentina (RC).

The scanning electron micrographs were made from specimens of *L. litura* mounted on a stub,

sputter-coated with gold-palladium alloy, and studied under a JEOL T-100 SEM and a Jeol 6360 LV. Illustrations were made with a drawing tube on a Wild M-5 stereomicroscope. Measurements are given in millimetres.

The maps were done using the program DIVA-GIS (Hijmans 2004) including specimens and literature data; some localities were georeferenced using this program, and is indicated between brackets in the lists of specimens examined.

Key to the species of *Leogorru* Stål

1. Large species, generally more than 15 mm long 2

- Small species, generally less than 13 mm long 3
- 2. Lateral process of collar short (Fig. 36) *L. formicarius* (Fig. 2)
- Lateral process of collar elevated (Fig. 141) *L. xanthospilus* (Fig. 12)
- 3. Hemelytra with pale markings 4
- Hemelytra uniformly coloured *L. immaculatus* (Fig. 3)
- 4. Veins of the membrane pale *L. litura* (Fig. 5)
- Veins of the membrane dark, not paler than the rest of hemelytra 5
- 5. Hemelytra with only one large pale mark, situated at the base of the membrane, adjacent regions of corium and clavus, and internal margin and apex of corium (Fig. 10) 6
- Hemelytra with several pale markings, situated on the base of the membrane and adjacent regions of corium and clavus, apex of corium, and adjacent region of membrane, internal margin of membrane (Fig. 4) 7
- 6. General coloration brown, body very setose, with setae long and erect, abdominal sterna not swollen *L. fasciatus* (Fig. 1)
- General coloration dark brown, body with scarce setae, with setae short, abdominal sterna swollen *L. picturatus* (Fig. 10)
- 7. Pronotum dull (Fig. 8) 8
- Pronotum polished (Fig. 9) 9
- 8. Legs and connexive paler than rest of the body *L. ochropus* (Fig. 8)
- Legs and connexive of the same colour than rest of the body *L. longiceps* (Fig. 6)
- 9. External cell of the membrane two times wider than the internal cell (Fig. 59), external margin of lateral process of collar acute (Fig. 58) *L. interruptus* (Fig. 4)
- Cells of the membrane of sub-equal width or internal cell slightly narrower than the external cell, external margin of lateral process of collar rounded 10
- 10. Anterior lobe of pronotum a little longer than posterior lobe, posterior lobe slightly wider than the anterior lobe *L. minusculus* (Fig. 7)
- Anterior lobe of pronotum shorter than posterior lobe, posterior lobe considerably wider than anterior lobe 11
- 11. Total length less than 11 mm, anterior lobe of pronotum flattened, cells of the membrane of sub-equal width (Fig. 112) *L. pallipes* (Fig. 9)
- Total length more than 11.50 mm, anterior lobe of pronotum convex, posterior lobe wider than anterior, internal cell of the membrane narrower than the external cell (Fig. 132) *L. venator* (Fig. 11)

***Leogorrus* Stål 1859**

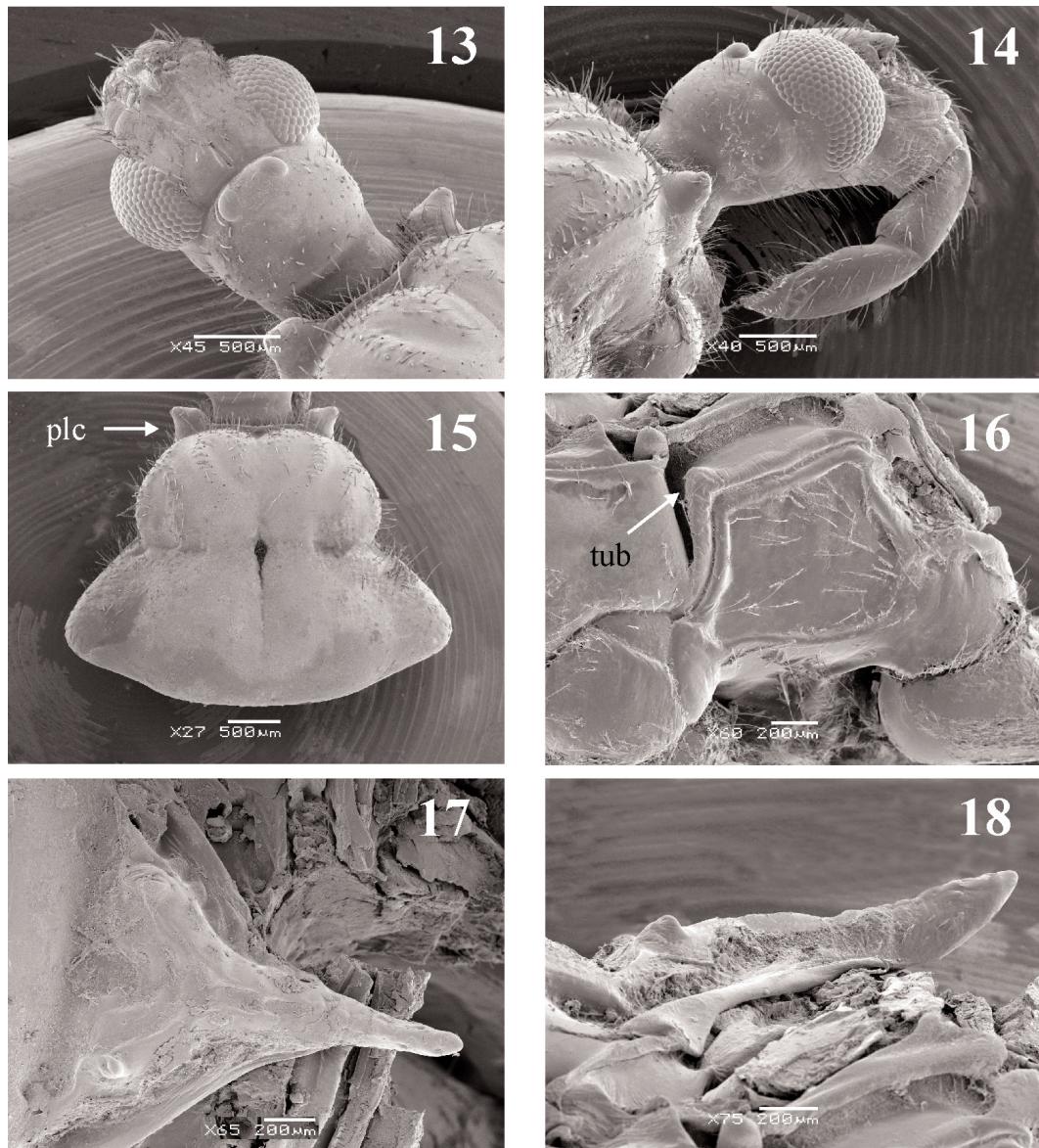
Leogorrus Stål 1859: 404 [n. gen.]. Type species: *Reduvius formicarius* Fabricius 1803: 208; Stål 1868: 125 [note, key]; Stål 1872: 109, 118; Lethierry & Severin 1896: 101 [cat.]; Champion 1899: 197; Fracker 1912: 229; Wygodzinsky 1949: 55 [list]; Putshkov & Putshkov 1985: 85 [cat.]; Maldonado Capriles 1990: 411 [cat.]; Froeschner 1999: 219 [cat.].

Diagnosis. – Small to middle-sized reduviids, up to 20.5 mm length. General coloration brown. Head sub-cylindrical (Fig. 13), eyes not surpassing dorsal and ventral margins of head in lateral view (Fig. 14), ocelli placed on the surface of the head, not upon a tubercle. Femora with two ventral tubercles at apex (Fig. 20). Metapleura delimited by ridges and with a tubercle on antero-dorsal angle (Fig. 16). Hemelytra brown, with pale markings. Femora I and II with small spines on ventral surface on both sides of a sulcus (Fig. 21), tibiae with a row of spiniform setae along ventral surface. Inter-segmental sutures of abdominal sterna with small punctures (Fig. 23). Posterior process of pygophore spiniform and elongate with long erect setae on the sides.

Redescription. – General colour brown to dark brown, with pale spots on hemelytra.

Head sub-cylindrical (Fig. 13), longitudinal interocular sulcus present on posterior half, wider anteriorly; transversal interocular sulcus present between posterior border of eyes. Jugae slightly prominent and compressed with a sulcus along the middle; genae rounded apically; clypeus slightly compressed. Antennal tubercles short with lateral stiff setae. Eyes reniform, not surpassing dorsal or ventral margins of head (Fig. 14); ocelli dorsal, situated behind transversal interocular sulcus. Interocellar distance shorter than distance between eye and ocellus. Antennae filiform, basiflagellomere and distiflagellomere thinner than scapus and pedicellus, scapus twice thicker than pedicellus, pedicellus three times thicker than basiflagellomere. Scapus surpassing apex of head, with sparse short thick decumbent setae and an apical crown of stiff setae; pedicellus with similar setae but more abundant toward apex; basiflagellomere and distiflagellomere with abundant short thin decumbent setae, and sparse long thicker setae. Rostrum curved, short and thick (Fig. 14), article I surpassing anterior margin of eyes. Article I subequal or shorter than article II, third article shortest. Postocular region abruptly constricted forming a short neck.

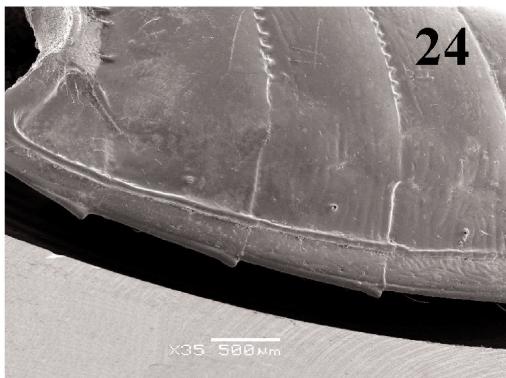
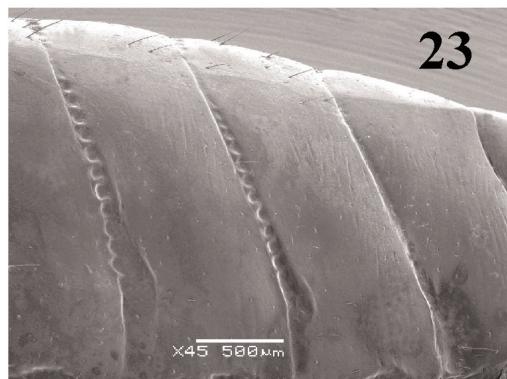
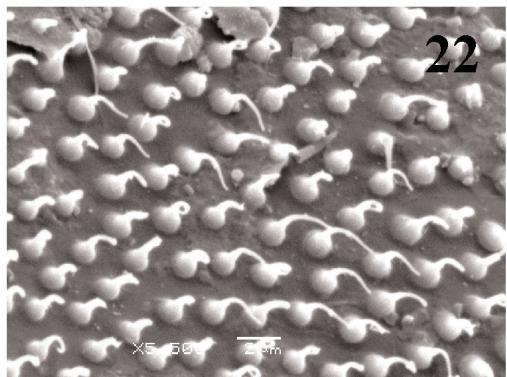
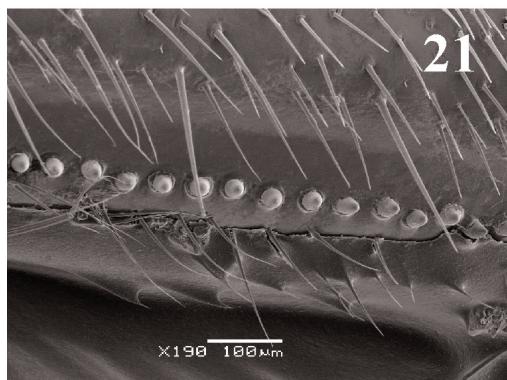
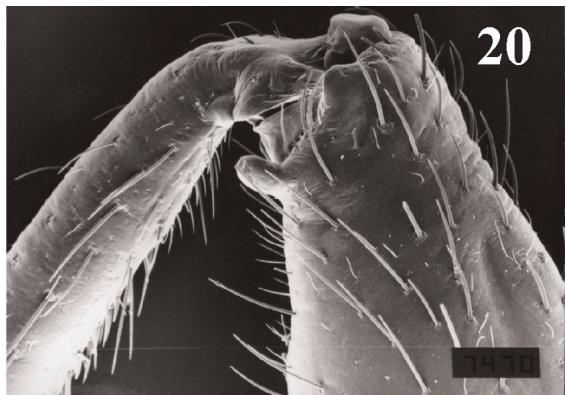
Thorax. Lateral angles of collar protruding into trapezoidal processes. Pronotum trapezoidal (Fig. 15), anterior lobe shorter than posterior or sub-equal in length. Surface usually smooth or with irregular rugosities, anterior lobe with four longitudinal sulci converging into a longitudinal median sulcus. Median sulcus deeper on central region



Figs 13-18. *Leogorru litura* (Fabricius). (13) Head, dorsal view. (14) Head, lateral view. (15) Pronotum, dorsal view (plc: lateral process of collar). (16) Metapleura (tub: tubercle). (17) Scutellum, dorsal view. (18) Scutellum, lateral view.

of pronotal disc, with small punctures separated by transversal keels at posterior lobe. Lateral margins of anterior lobe rounded, with a distinct rim in several species. Lateral and posterior margins of posterior lobe straight or slightly rounded, humeral angles rounded. *Scutellum* triangular (Fig. 17),

disc depressed and surface irregular, lateral margins prominent continued with the posterior process forming a Y, with a pair of tubercles at base, these tubercles may be more or less developed; posterior process short and spiniform, in some cases semi-erect (Fig. 18). *Pleura* smooth or



Figs 19-24. *Leogorrus litura* (Fabricius). (19) Anterior leg. (20) Apical region of anterior femur, apical tubercles. (21) Anterior femur, ventral view. (22) Dorsal surface of hemelytra. (23) Abdomen, ventral view. (24) Connexiva, ventral view.

with rugosities, metapleura surrounded by keels, antero-dorsal angle with a tubercle (Fig. 16). *Sterna*: meso- and metasterna keeled. *Legs*: Femora I and II short, third pair of legs longest.

Femora with ventral tubercles at apex (Fig. 20). Femora I (Fig. 19) and II incrassate, with small spines on ventral face intermixed with short and long erect setae. Tibiae I and II with spiniform

setae along ventral face, widened apically with abundant setae surrounding the fossula spongiosa, this structure is present on anterior and mid-tibiae; tibiae III elongate with more abundant setae on apex. Tarsi three-segmented, with short and long setae, segment's length increasing from base to apex. *Hemelytra* shorter or slightly surpassing apex of abdomen; in general, hemelytra longer than abdomen in males, and hemelytra shorter than abdomen in females.

Abdomen often keeled ventrally; inter-segmental sutures with small punctures (Fig. 23) on all segments or only on anterior ones (suture between segments II and III). Connexiva visible dorsally from the second abdominal segment, posterior margin protruding mainly on anterior abdominal segments (Fig. 24); connexiva can be paler than the rest of abdomen. Abdominal scent gland scars on anterior margin of segments IV, V, and VI.

Male genitalia: pygophore globose, ovoid laterally, posterior region acute, posterior process spiniform with long erect lateral setae, and sparse setae post-ventrally and on dorso-lateral regions near area of insertion of parameres. Parameres slightly curved at apex, with a dentiform process dorsally, and long erect setae dorsally and ventrally; dorsal setae usually thicker than ventral ones.

Female genitalia: gonocoxite VIII trapezoidal, gonapophysis VIII triangular, both with setae on posterior borders. Gonocoxite IX as rod-like pieces almost hidden by a triangular gonapophysis IX; styloids triangular with setae on posterior apex.

Discussion. – The genus *Leogorru*s can be easily distinguished by the presence of two apical tubercles on all femora, the overall brown coloration, and the pale markings on the hemelytra. The relationships with the other Reduviinae are not clear. The genus *Leogorru*s share with the Panamanian genus *Namapa* Wygodzinsky & Lent 1980 characters such as the tubercles on the apical region of femora, although the shape of head and pronotum, and hemelytra venation are quite different.

The genus *Leogorru*s is widely distributed in the Neotropical region (Figs 151-153). The most diverse area with respect to *Leogorru*s species is Central America, the Caribbean sub-region of Morrone (2001), *L. fasciatus*, *L. interruptus*, *L. longiceps*, and *L. venator* occur exclusively in this area; whereas the geographical ranges of *L. formicarius*, *L. immaculatus*, *L. litura*, and *L. minusculus* extend to northern and central South America

(*L. formicarius* to Bolivia). *L. ochropus*, *L. pallipes*, *L. picturatus*, and *L. xanthospilus* are only known from South America, with distributions restricted to a small number of localities, except *L. pallipes* that occurs from Guiana to central Argentina (Buenos Aires province).

***Leogorru*s *fasciatus* Champion 1899**

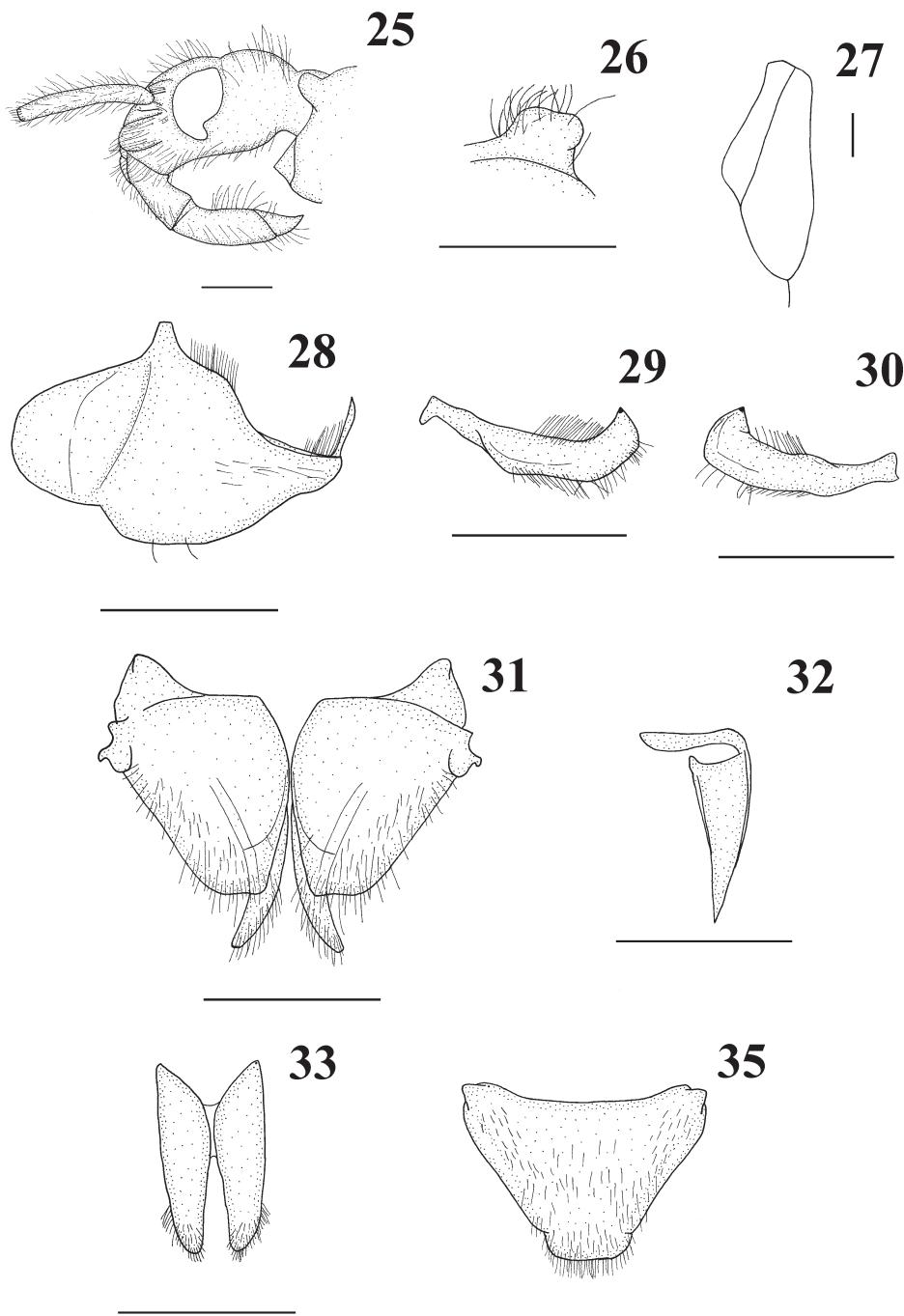
(Figs 1, 25-34, 151)

*Leogorru*s *fasciatus* Champion 1899: 198 [n. sp.]; Wygodzinsky 1949: 55 [list]; Maldonado Capriles 1990: 411 [cat.].

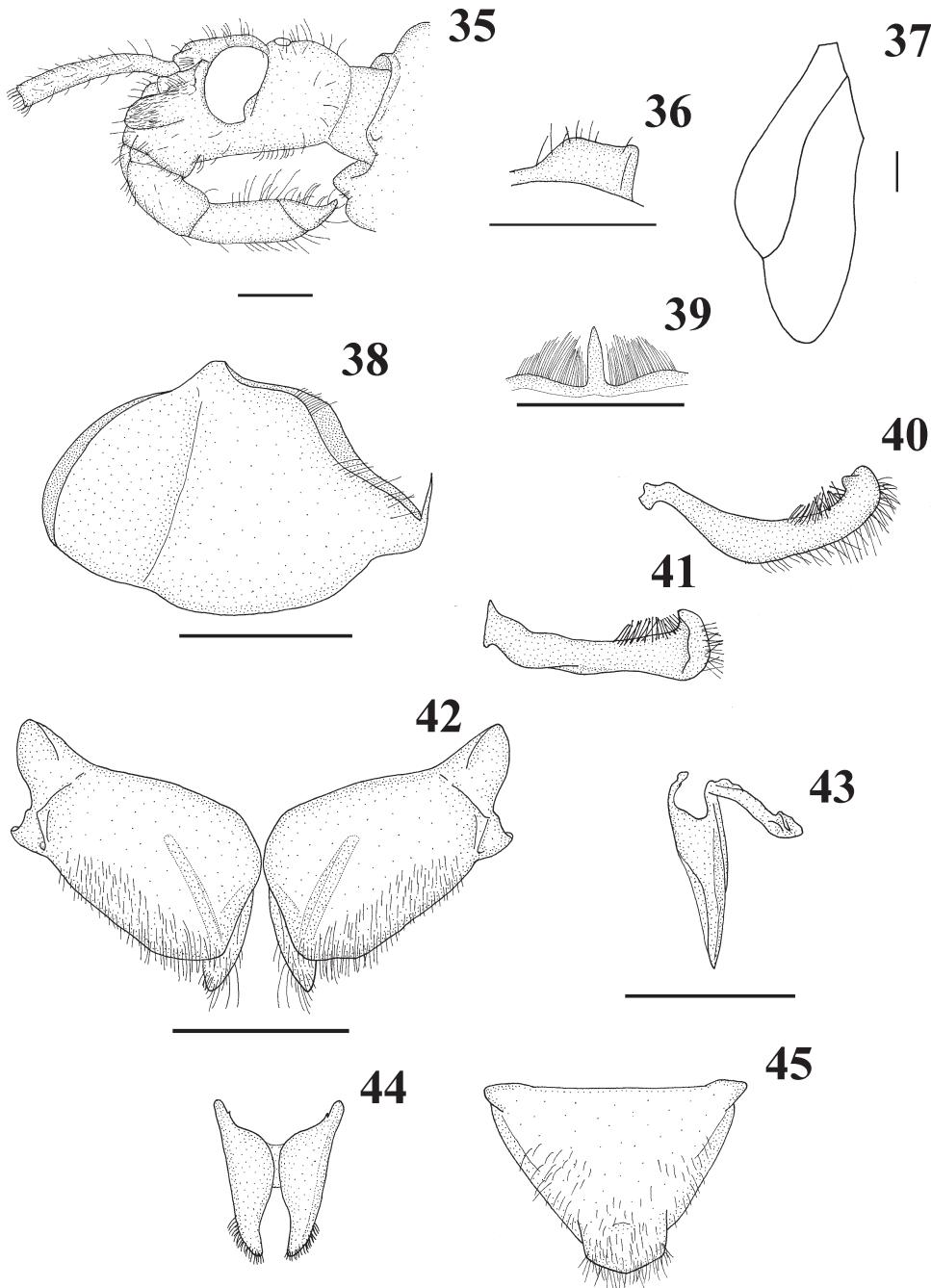
Redescription. – (n=2) Colour dark brown (Fig. 1). Total length: male 14.73, female 16.80.

Head elongate with abundant long erect setae (Fig. 25), surface opaque; width of head: male 1.54-female 1.60, antocular region length: male 0.74-female 0.67, postocular region length in both sexes 1.06. Interocular transversal sulcus concave posteriorly. Jugae with erect setae; genae with abundant long decumbent setae; clypeus with long erect setae; ventral area of genae with abundant setae anteriorly directed. Eyes and ocelli small. Eye width: male 0.37-female 0.40, interocular space: male 0.83-female 0.90. Antennae length: male >5.00, scapus 1.80, pedicellus 3.20 [basiflagellomere and distiflagellomere absent in lectotype specimen]- female >7.73, scapus 2.06, pedicellus 2.86, basiflagellomere 2.80 [distiflagellomere absent]. Scapus with scarce short thick decumbent setae; pedicellus with same type of setae as scapus, but more abundant toward apex; basiflagellomere with scarce long erect setae, and abundant short decumbent setae. Rostrum with long setae, more abundant ventrally on article I, and dorsally on articles II-III; length: male 2.78 (article I: 1.12, article II: 1.34, article III: 0.32)- female 3.10 (article I: 1.28, article II: 1.44, article III: 0.38).

Thorax. Pronotum dark brown, with long erect setae; anterior lobe length: male 1.60- female 1.93, posterior lobe length: male 1.63- female 1.80, width of collar: male 1.92- female 2.10, anterior lobe width: male 2.98- female 3.13, posterior lobe width: male 4.23- female 4.53. Collar with long erect setae, lateral processes rounded with long erect setae (Fig. 26). Lateral margins of anterior pronotal lobe with a distinct rim, mid-longitudinal sulcus more pronounced on posterior region, with three longitudinal sulci on both sides. Posterior lobe with transversal rugosities, mid-longitudinal



Figs 25-34. *Leogorras fasciatus* Champion. (25) Head, lateral view. (26) Lateral process of collar. (27) Cells of membrane. (Figs 28-31) Male genitalia. (28) Pygophore, lateral view. (29) Left paramere, outer view. (30) Left paramere, inner view. (Figs 31-34) Female genitalia. (31) Gonocoxite and gonapophysis VIII. (32) Gonocoxite and gonapophysis IX. (33) Styloids. (34) Tergites IX + X. Scale: 1 mm.



Figs 35-45. *Leogorru* formicarius (Fabricius). (35) Head, lateral view. (36) Lateral process of collar. (37) Cells of membrane. (Figs 38-41) Male genitalia. (38) Pygophore, lateral view. (39) Posterior process of pygophore, posterior view. (40) Left paramere, outer view. (41) Left paramere, inner view. (Figs 42-45) Female genitalia. (42) Gonocoxite and gonapophysis VIII. (43) Gonocoxite and gonapophysis IX. (44) Styloids. (45) Tergites IX + X. Scale: 1 mm.

sulcus distinct with transversal keels. *Scutellum*: basal tubercles rounded; posterior process short and horizontal, with transversal rugosities and short setae; apex rounded and laterally compressed. *Pleura*: propleura smooth with abundant long setae; mesopleura rugose with long setae; metapleura trapezoidal, with dorso-ventral rugosities and scarce long setae. *Sterna*: prosternal processes slightly prominent, with abundant setae. *Legs* dark brown, with abundant long erect setae. Coxae setose antero-ventrally, these setae short and decumbent, anterior region with a row of long thick setae; trochanters with similar setae. Femora I with abundant short and long interspersed setae, spines absent. Femora II slightly keeled ventrally, with similar setae as femora I; femora III with sparse long erect setae. Fossula spongiosa extending on apical $\frac{1}{4}$ of article. Tibiae III longest with abundant setae at apex. Tarsi with long and short setae. *Hemelytra* not surpassing apex of abdomen; length: male 9.33- female 9.73. Colour dark brown, except apex of clavus and adjacent region of corium, apex of corium and adjacent region of membrane, and base of membrane (Fig. 1); corium and clavus glabrous; lateral margins of corial base with long erect setae. External cell of membrane twice the width of internal cell (Fig. 27).

Abdomen. Sterna slightly keeled, with abundant semi-decumbent long setae, surface polished; inter-segmental suture II/III punctate, others smooth. Length: male 8.00- female 9.33, width: male 5.73- female 4.90. Connexiva of similar colour as rest of body, posterior margin of segment II protruding, with short and decumbent setae more abundant on inter-segmental sutures, long erect setae on margins.

Male genitalia: pygophore ovoid, narrowed anteriorly, acute posteriorly, with scarce setae (Fig. 28); apical half of parameres incrassate, setae thick and long on dorsal and ventral surfaces (Figs 29-30).

Female genitalia: gonocoxite and gonapophysis VIII elongate with short and long setae distally (Fig. 31); gonocoxite and gonapophysis IX as figure 32, styloids elongate with short setae apically (Fig. 33); tergites IX+X triangular, tergite X not completely fused, long abundant setae and scarce short setae intermixed (Fig. 34).

Geographic distribution. – Guatemala, and first record from Costa Rica (Fig. 151).

Type specimens examined. – Lectotype (NEW DESIGNATION): male, “*Leogorrus fasciatus* Champion, syntype, type, GUATEMALA, S. Geronimo [15°30' N 90°12' O], B.C.A. II, sp. figured” (BMNH).

Additional specimens examined. – COSTA RICA.- Alajuela: 1 female, Cariblanco, Sarapiqué, Goom, F. Biolley col., ex Distant coll., 1911-383. *Rasalus*, 156, *fasciatus* Ch. (BMNH).

Observations. – The Costa Rican specimen only differs from the lectotype by the protruding posterior apex of connexival segments II-VI.

Discussion. – This species is only known from a few localities from Guatemala and Costa Rica. It is easy to recognize by the large pale spot on the hemelytra and by the long setae of the body.

Leogorrus formicarius Fabricius 1803

(Figs 2, 35-45, 151)

Reduvius formicarius Fabricius 1803: 280 [n. sp.]; Stål 1860: 71.

Platymeris formicaria Burmeister 1835: 233; Herrich-Schaeffer 1848: 33.

Leogorrus formicarius: Stål 1862: 456; Stål 1868: 125; Stål 1872: 118; Lethierry & Severin 1896: 101 [cat.]; Champion 1899: 198 [= *R. lugubris*, *R. plagipennis* y *R. areolatus*]; Distant 1902a: 193 [= *R. lugubris*, *R. plagipennis* y *R. areolatus*]; Fracker 1912: 229; Wygodzinsky 1948: 563; Wygodzinsky 1949: 55 [list]; Wygodzinsky 1959: 309; Maldonado Capriles 1972: 55; Maldonado Capriles 1990: 411 [cat.]; Froeschner 1999: 219 [cat.]; Coscarón 2002: 465.

Acanthaspis formicaria Walker 1873: 167.

Reduvius lugubris Walker 1873: 183 [n. sp.]; Lethierry & Severin 1896: 119 [cat., species incertae sedis].

Reduvius plagipennis Walker 1873: 186 [n. sp.]; Lethierry & Severin 1896: 119. [cat., species incertae sedis].

Reduvius areolatus Walker 1873: 186 [n. sp.]; Lethierry & Severin 1896: 118 [cat., species incertae sedis].

Redescription. – (n=10) Colour dark brown (Fig. 2); total length: males 17.34-20.00 (mean=19.24)- females 17.34-20.51 (mean=19.53).

Head elongate with sparse short erect setae (Fig. 35), surface opaque. Width of head: males 1.90-2.03 (mean=1.98)- females 1.84-2.15 (mean=2.04), antocular region length: males 1.02-1.12 (mean=1.07)- females 0.96-1.12 (mean=1.03), postocular region length: males 1.28- females 1.18-1.31 (mean=1.25). Interocular transversal sulcus concave anteriorly. Jugae with thick erect setae dorsally; genae with abundant short decumbent setae; clypeus with erect setae; ventral area of the genae with a row of setae on anterior margin. Eyes median slightly prominent, ocelli small. Eye

width: males 0.45-0.54 (mean=0.49)- females 0.48-0.50 (mean=0.48), interocular space: males 1.01-1.14 (mean=1.06)- females 0.89-1.20 (mean =1.10). *Antennae* length: males 12.03-12.15 (mean =10.09), scapus 2.28-2.41 (mean=2.36), pedicellus 2.66-3.42 (mean=3.17), basiflagellomere 3.42, distiflagellomere 2.91]- females 8.90-11.27 (mean =9.58), scapus 1.90-2.53 (mean= 2.38), pedicellus 2.66-2.79 (mean=2.72), basiflagellomere 2.53-3.54 (mean=3.08), distiflagellomere 2.53-3.48 (mean=3.13)]. Scapus with scarce short thick decumbent setae; pedicellus with same setae as scapus, but more abundant towards apex; basiflagellomere and distiflagellomere with abundant short thin setae and scarce long thick setae. *Rostrum* with long setae (as its width), setae of article I more abundant ventrally, setae of articles II-III more abundant dorsally, and interspersed short and decumbent setae. Length: males 2.91-3.29 (mean =3.17), article I: 1.14-1.39 (mean= 1.22), article II: 1.27-1.52 (mean=1.35), article III: 0.51-0.63 (mean=0.59)- females 3.04-3.35 (mean=3.23), article I: 1.27-1.46 (mean=1.31), article II: 1.27-1.71 (mean=1.56), article III: 0.19-0.63 (mean=0.59).

Thorax. *Pronotum* dark brown, with short setae; anterior lobe length: males 2.00-2.26 (mean= 2.09)- females 1.80-2.06 (mean=1.99), posterior lobe length: males 2.33-2.46 (mean=2.42)- females 2.00-2.53 (mean=2.32), width of collar: males 1.92-1.98 (mean=1.94)- females 2.04-2.16 (mean=2.10), anterior lobe width: males 2.82-3.00 (mean=2.92)- females 3.00-3.30 (mean=3.15), posterior lobe width: males 5.19-5.95 (mean= 5.61)- females 4.81-5.95 (mean=5.39). Collar with short erect setae, lateral processes with internal margin rounded and external acute (Fig. 36). Lateral margins of anterior pronotal lobe without a distinct rim, mid-longitudinal sulcus more pronounced posteriorly, with three smooth longitudinal sulci on the sides, rest of disc irregular and setose. Posterior lobe with transversal rugosities, mid-longitudinal sulcus distinct with transversal keels. *Scutellum*: basal tubercles rounded, posterior process short and semi-erect, with transversal rugosities and short setae; apex laterally compressed, rounded. *Pleura*: propleura with dorso-ventral rugosities and scarce long setae; mesopleura with whitish short decumbent setae on antero-basal region and sparse long erect setae, surface opaque; metapleura trapezoidal, with dorso-ventral rugosities. *Sterna*: prosternal processes slightly prominent, with thick setae, suture between

meso- and metasterna with a tubercle. Legs dark brown, with scarce short erect setae. Coxae setose antero-ventrally, setae short and decumbent, anterior region with a row of thick long setae; trochanters with similar setae as coxae, and sparsely long erect pale brown setae. Femora I with a flat ventral surface, with transversal rugosities surrounded by two fringes of short spines, and abundant short and long setae. Femora II: ventral surface slightly keeled, with similar spines as femora I but irregularly arranged; femora III without spines. Tibiae I and II with spiniform setae along a ventral keel, widened at apex with abundant setae surrounding the fossula spongiosa. Tibiae III longest with more abundant setae at apex. Tarsi with long and short setae. *Hemelytra* reaching apex of abdomen or slightly surpassing it in the males, shorter than the abdomen in the females. Length: males 10.63-12.28 (mean= 11.65)- females 10.89-12.79 (mean=11.90). Colour dark brown, except two pale spots and veins (Fig. 2), short setae on corium and clavus; lateral margin of corial base with scarce short erect setae. External cell of the membrane $\frac{1}{3}$ wider than the internal cell (Fig. 37).

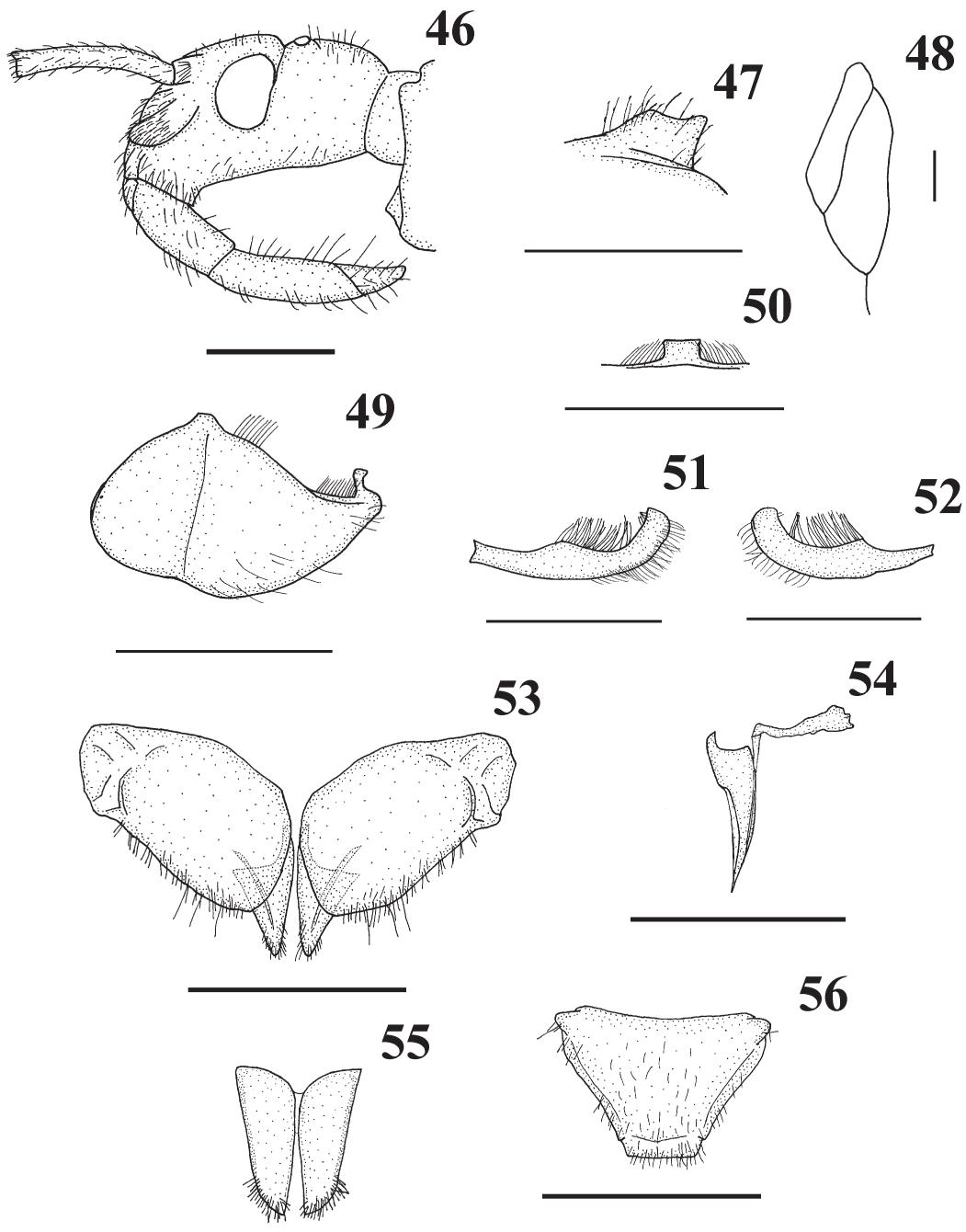
Abdomen keeled ventrally, with sparse semi-decumbent setae, surface polished; inter-segmental sutures smooth. Length: males 9.37-10.13 (mean=9.71)- females 9.12-10.38 (mean=10.24), width: males 6.39-6.71 (mean=6.69)- females 5.44-7.09 (mean=6.24). Connexiva of same colour as the body, glabrous, posterior margin of segments II-IV protruding.

Male genitalia: pygophore globose (Fig. 38), posterior process acute (Fig. 39); apex of parameres widened, dorsal setae short and thick, outer surface setae long and thin (Figs 40-41).

Female genitalia: gonocoxite and gonapophysis VIII wide with short and long setae on distal region (Fig. 42); gonocoxite and gonapophysis IX as figure 43; styloids elongate with apical short setae (Fig. 44); tergites IX+X not completely fused, with abundant interspersed short setae and long setae on posterior half (Fig. 45).

Geographic distribution. – Belize, Bolivia, Brazil, Colombia, Guiana, French Guiana, Honduras, Mexico, Panama, Surinam, Venezuela, and first records from Guatemala and Peru (Fig. 151).

Type specimens examined. – Lectotype (NEW DESIGNATION): (photograph) 1 female, *R. formicarius*, ex. A. mer. Schmidt (ZMUC).



Figs 46-56. *Leogorruus immaculatus* Champion. (46) Head, lateral view. (47) Lateral process of collar. (48) Cells of membrane. (Figs 49-52) Male genitalia. (49) Pygophore, lateral view. (50) Posterior process of pygophore, posterior view. (51) Left paramere, outer view. (52) Left paramere, inner view. (Figs 53-56) Female genitalia. (53) Gonocoxite and gonapophysis VIII. (54) Gonocoxite and gonapophysis IX. (55) Styloids. (56) Tergites IX + X. Scale: 1 mm.

Additional specimens examined. – BOLIVIA.- Santa Cruz: 1 female, Ichilo, Buena Vista [17°17' S-63°39'59" O], XI-XII-1948, L. Peña col. (CAS); 2 females, same locality [17°17' S-63°39'59" O], II-1950, Martínez leg., det. Carcavallo (RC); 1 female, Pcia. Ichilo, Buena Vista, Tacú [17°17' S-63°39'59" O], III-1951, Martínez col. (RC); 1 female, Río Seco, III-1962, Apóstol (MACN); 1 male, same locality, III-1962, Apóstol, det. Carpintero (CC); 1 female, same locality 1-II-1962, Apóstol (MACN); 2 females, Nueva Moka [17°18'59" S-63°33' O], 1-II-1964, Apóstol (MACN); 1 male, same locality, 1-II-1962, Apóstol (MACN). BRAZIL.- Mato Grosso: 1 female, Utirari [13°1'59,8" S-58°16'59" O], Viana col. 1966, det. Carpintero. (MACN); PARÁ: 1 female, Saunders col. # 6513 (BMNH). COLOMBIA.- 1 female, Purnio, Nurd, Sudamerika und Westindien, Prof. O. Bürger leg. Vend, 1-I-1898. (SEMC); 1 female, Corozal, C.Z., 20-III-1937. R. Bilss col., J.C. Lutz Coll. 1961 (USNM). GUATEMALA.- Izabal: 1 male, Quirigua [15°18'59" N-89°4'59,8" O], 14-VIII-1965, P.J. Spangler col. (USNM); Petén: 1 female, Tikal [17°12'59" N-89°37'59" O], 7-IV-1956. Hubbell-Cantrall col., det. J.C. Lutz, 107 (UMMZ). GUIANA.- 1 male, So. Am., B.G., Kartabo, 15-VII-1925, Searl col. (CAS). PANAMA.- Panama: 1 female, Canal Zone, Barro Colorado Is. [9°9'16,92" N-79°50'52" O], 9-I-1967, # 19, I.J. Cantrall, det. J. Maldonado Capriles 1981 (UMMZ); 1 female, same locality, 24-VII-1963, Cavagnaro & Irwin col. (CAS); Colón: 1 female, Gatun Lake, Tres Ríos Plantation, 1931, T.O. Zschokke col. (CAS); 1 male, same locality, 16-VIII-1931, Zschokke col., det. by R.L. Usinger (CAS). PERU.- Huánuco: 1 male, Monzon Valley, Tingo María [9°18' S-75°58'59" O], 27-X-1954, Schlinger & Ross col. (CAS); 1 male, Tingo María [9°18' S-75°58'59" O], 19-I-1962, Douroujeanni col., 85 TM UA 669-83 (UNAM); 1 female, 23-XII-40, Paprzycky col., sp. tipo (SEMC). VENEZUELA.- Carabobo: 1 female, San Esteban [10°25'57" N-68°0'27,7" O], P.J. Anduze col. (CAS).

Discussion. – This species is known from a few localities from southern Mexico and Bolivia (Fig. 151). It is easy to distinguish by its large size, the shape of the postocular region of head, the transversal rugosities on the posterior lobe of pronotum, and the pale veins of the membrane. Due to the similar size, it could be confused with *L. xanthospilus*, but they can be distinguished by the shape of the postocular head and the coloration pattern of hemelytra.

*Leogorru*s *immaculatus* Champion 1899

(Figs 3, 46-56, 152)

*Leogorru*s *immaculatus* Champion 1899: 200 [n. sp.]; Wygodzinsky 1949: 55 [list]; Maldonado Capriles 1990: 411 [cat.].

Redescription. – (n =8) Colour dark brown (Fig. 3); total length: male 1.53- females 1.10-11.66 (mean=10.51).

Head elongate, with sparse short thick erect setae (Fig. 46), surface opaque. Width of head: male 1.18- females 1.10-1.17 (mean=1.13), antocular region length: male 0.54- females 0.61-0.80 (mean=0.70), postocular region length: male 0.77- females 0.80-0.86 (mean=0.84). Interocular transversal sulcus concave posteriorly. Jugae with thin decumbent setae; genae with abundant short thin decumbent setae; clypeus with scarce erect setae; ventral area of the genae with decumbent setae anteriorly directed. Eyes and ocelli small. Eye width: male 0.22- females 0.20-0.26 (mean=0.22), interocular space: male 0.74- females 0.64-0.72 (mean=0.67). Antennae length: males >4.00, scapus 1.33, pedicellus 2.66 [basiflagellomere and distiflagellomere absent in lectotype]- females 6.70, scapus 1.15-1.27 (mean=1.23), pedicellus 2.05-2.40 (mean=2.27), basiflagellomere 1.75-1.90 (mean=1.83), distiflagellomere 1.25. Scapus with short semi-decumbent setae; pedicellus with short semi-decumbent setae and sparse long semi-erect setae; basiflagellomere and distiflagellomere with short semi-decumbent and long erect setae. Rostrum: article III darker, segment I with short setae more abundant ventrally, article II with longer setae distally; article III with interspersed short and long setae. Length: male >0.74, article I: 0.74, articles II and III not visible- females 2.24-2.45 (mean=2.32), article I: 0.75-0.96 (mean=0.84), article II: 0.99-1.15 (mean=1.12), article III: 0.29-0.40 (mean=0.36).

Thorax. Pronotum dark brown; anterior lobe length: male 1.31- females 1.13-1.28 (mean=1.23), posterior lobe length: male 1.25- females 1.13-1.27 (mean=1.21), width of collar: male 1.47- females 1.35-1.57 (mean=1.40), anterior lobe width: male 2.24- females 2.00-2.34 (mean=2.08), posterior lobe width: male 3.36- females 2.95-3.43 (mean=3.06). Collar with short setae, internal margin rounded and external conical (Fig. 47). Anterior pronotal lobe strongly convex with short erect thick setae, lateral margins with a distinct rim; mid-longitudinal sulcus more pronounced on posterior region. Posterior pronotal lobe smooth with sparse setae, longitudinal sulcus ending before the posterior margin, with six excavations. Transversal interlobular sulcus punctate, except in the middle. Scutellum: basal tubercles rounded, posterior process short, apex rounded and erected. Pleura: propleura smooth divided by a punctated interlobular sulcus; mesopleura with dorso-ventral rugosities, surface polished antero-

ventrally, posteriorly smooth and opaque; metapleura sub-quadrangular, surface smooth and polished. *Sterna*: prosternal processes slightly prominent, with abundant short erect setae, and longer thicker setae intermixed on the sides. *Legs* paler than the body. Coxae with abundant thin setae, setae less abundant on coxae II and III; coxae I with a row of thicker setae anteriorly. Trochanters I with abundant setae, trochanters II and III with sparse short setae. Femora I: ventral surface flat with abundant thin long erect setae, more abundant at base. Femora II: ventral surface with small tubercles and abundant thin erect setae on basal ?, and a row of longer setae along the article. Femora III with sparse short setae. Tibiae I and II incrasate distally, fossula spongiosa on apical ?; ventrally with two rows of semi-decumbent short thick setae; and sparsed long setae. Tibiae II with abundant thick setae apically; tibiae III with abundant semi-decumbent setae apically, and sparsed setae. Tarsi pale brown, with abundant short setae and sparse long setae. *Hemelytra* not reaching apex of abdomen. Length: male 6.66- females 6.00-7.46 (mean=6.43). Colour dark brown. Lateral margin of corial base with thick short erect setae. External cell of membrane twice the width of internal cell (Fig. 48).

Abdomen. Ventral keel including segment II, with sparse short semi-decumbent setae, surface polished; ventral inter-segmental sutures II-III slightly punctate. Length: males 5.59- females 5.00-6.00 (mean=5.53), width: male 3.86- females 3.50-4.23 (mean=3.70). Connexiva pale brown, with thin short decumbent setae on dorsal region; posterior margin of segment II protruding.

Male genitalia: pygophore ovoid with scarce long setae (Fig. 49), posterior process quadrangular (Fig. 50); inner region of parameres with a knob in the middle, setae long and thick on inner surface, long and thin on outer surface (Figs 51-52).

Female genitalia: gonocoxite and gonapophysis VIII wide with short and long setae intermixed on distal region (Fig. 53); gonocoxite and gonapophysis IX as figure 54; styloids elongate with short setae apically (Fig. 55); tergites IX+X with abundant short and long setae, more abundant on lateral and posterior margins (Fig. 56).

Geographic distribution. – Guatemala, Trinidad, and first records from Colombia, Guiana, Honduras, and Panama (Fig. 152).

Type specimens examined. – Lectotype (NEW DESIGNATION): male, “*Leogorrus immaculatus* Champion, B.C.A. Rhyn. II, [GUATEMALA], El Reposo [14°31'59" N-91°48'59" O], 800 ft, Champion, type, syntype” (BMNH).

Additional specimens examined. – GUIANA.- *Upper Demerara/Berbice*: 1 female, Essequibo R., Moraballi Creek [7°1'59.88" N-58°27' O], 2-IX-1929, Oxf. Univ. Expdn. B.M. 1929-485, *L. immaculatus* Champion, det. Wygodzinsky 1949 (BMNH). HONDURAS.- *Choluteca*: 1 female, 3776' Sa de Colón E of S. Francisco [13°27'59" N-83°49'59" O], 31-VII-1948, Hubbel col., det. Hussey 1952, # 169 (UMMZ). PANAMA.- *Chiriquí*: 1 female, Progreso [8°27' N-82°49'59" O], 20-IV-1923, F.M. Gaige col., # 431 (UMMZ); *Panama*: 2 females, Canal Zone, Tres Ríos Plantation, Gatun, III-1930, T.O. Zchokke col. (CAS); 1 female, same locality, VII-1931, T.O. Zchokke col., det. R.L. Usinger (CAS).

Discussion. – This is the only species with unicoloured hemelytra. It could be confused with *L. longiceps* and *L. venator*, but it can be distinguish by the less elongate body and smaller eyes.

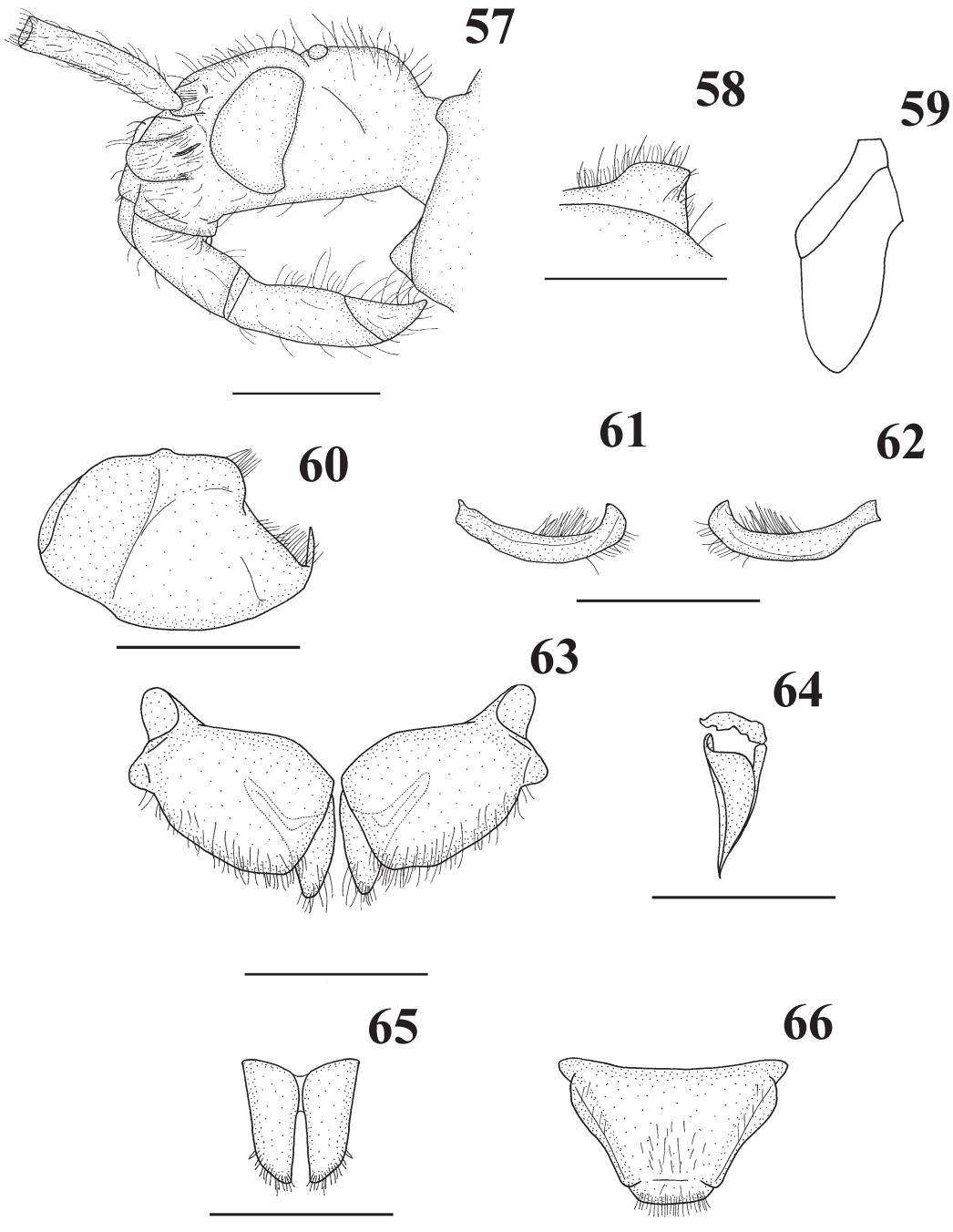
Leogorrus interruptus Champion 1899

(Figs 4, 57-66, 151)

Leogorrus interruptus Champion 1899: 201 [n. sp.]; Wygodzinsky 1949: 56 [list]; Maldonado Capriles 1990: 412 [cat.]; Froeschner 1999: 220 [cat.].

Redescription. – (n=7) Colour dark brown (Fig. 4). Total length: males 12.80-14.53 (mean=13.78)- females 12.53-13.73 (mean=13.33).

Head elongate, with sparse short thick erect setae (Fig. 57), surface opaque. Width of head: males 1.32-1.60 (mean=1.45)- females 1.41-1.60 (mean=1.49), antocular region length: males 0.61-0.64 (mean=0.62)- females 0.60-0.67 (mean=0.63), postocular region length: males 0.83; females 0.87. Interocular transversal sulcus concave posteriorly. Jugae with thick erect setae dorsally; genae with short thin decumbent setae, more abundant dorsally; clypeus with erect setae; ventral area of genae with a row of thick decumbent setae anteriorly. Eyes median, slightly prominent; ocelli small. Eye width: males 0.32-0.42 (mean=0.37)- females 0.35-0.42 (mean=0.38), interocular space: males 0.64-0.74 (mean=0.69)- females 0.70-0.74 (mean=0.73). **Antennae** length: males 6.90, scapus 1.02-1.33 (mean=1.19), pedicellus 2.21-2.73 (mean=2.39), basiflagellomere 1.86-2.33 (mean=2.10), distiflagellomere 1.62 [basiflagellomere and distiflagellomere absent in lectotype]- females 8.06, scapus 1.33-1.40 (mean= 1.35), pedicellus 2.20-2.33 (mean=2.24), basiflagellomere 1.93-



Figs 57-66. *Leogorrus interruptus* Champion. (57) Head, lateral view. (58) Lateral process of collar. (59) Cells of membrane. (Figs 60-63) Male genitalia. (60) Pygophore, lateral view. (61) Left paramere, outer view. (62) Left paramere, inner view. (Figs 63-66) Female genitalia. (63) Gonocoxite and gonapophysis VIII. (64) Gonocoxite and gonapophysis IX. (65) Styloids. (66) Tergites IX + X. Scale: 1 mm.

2.13 (mean=2.03), distiflagellomere 2.26. Scapus with scarce short thick decumbent setae; pedicellus with similar setae as scapus, but more abundant towards apex; basifagellomere and distiflagellomere with abundant short thin decumbent setae and sparse long thicker setae. *Rostrum* with long setae, in articles II-III more abundant dorsally. Length: males 1.98-2.43 (mean=2.28), article I: 0.70-0.93 (mean=0.87), article II: 0.93-1.08 (mean=1.04), article III: 0.32-0.40 (mean=0.37)- females 1.15-2.53 (mean=1.83), article I: 0.45-1.00 (mean=0.70), article II: 0.51-1.07 (mean=0.81), article III: 0.19-0.47 (mean=0.31).

Thorax. *Pronotum* dark brown, with short erect setae; anterior lobe length: males 1.33- females 1.20-1.33 (mean=1.22), posterior lobe length: males 1.67-1.73 (mean=1.53)- females 1.47-1.60 (mean=1.53), width of collar: males 1.60-1.80 (mean=1.68)- females 1.47-1.73 (mean=1.62), anterior lobe width: males 2.48-2.80 (mean=2.58)- females 2.33-2.66 (mean=2.53), posterior lobe width: males 3.80-4.40 (mean=4.03)- females 3.53-4.00 (mean=3.80). Collar with short erect setae and sparse long thicker setae, lateral processes with internal margin rounded and external acute (Fig. 58). Lateral margins of anterior pronotal lobe without a distinct rim, mid-longitudinal sulcus more pronounced posteriorly, and three longitudinal smooth sulci on the sides, with marks of setal insertions. Posterior pronotal lobe smooth, mid-longitudinal sulcus not visible on anterior region, with two excavations on posterior region, and setae on lateral and posterior margins. *Scutellum*: basal tubercles rounded, posterior process spiniform, short, laterally compressed, and horizontal, with transversal rugosities and scarce setae, apex rounded. *Pleura*: propleura with abundant long thin setae; mesopleura with long thin decumbent setae on antero-basal region and scarce erect setae, rest glabrous, surface opaque; metapleura quadrangular, with shallow dorso-ventral rugosities, and sparse long thin setae. *Sterna*: prosternal processes slightly prominent, with thick setae, meso/metasternal suture with a tubercle, with abundant thin semi-decumbent setae. *Legs* brown with sparse short erect setae. Coxae with abundant short and decumbent setae antero-ventrally, with a row of long thicker setae anteriorly; trochanters with similar distribution and sparse long erect pale brown setae. Femora I: ventral surface shallowly sulcate, smooth with short abundant and sparse long erect setae on the sides. Femora II: ventral

surface slightly keeled, with similar setae than femora I but more sparses; femora III with sparse long semi-erect setae. Tibiae I and II with spiniform setae placed along a ventral keel, widened apically with abundant setae surrounding the fossula spongiosa. Tibiae III elongated with more setae towards the apex. Tarsi with short and long setae. *Hemelytra* reaching apex of abdomen in the males, in females genital segments exposed. Length: males 8.50-9.60 (mean=8.82)- females 7.99-8.80 (mean=8.66). Colour dark brown, except three yellowish marks as figure 4, apex of corium dark brown with short setae, lateral margins of corial base with abundant short decumbent setae. External cell of membrane three times wider than internal cell (Fig. 59).

Abdomen ventrally keeled, with sparses semi-decumbent setae, surface polished; inter-segmental sutures punctate: II-III in males, and II-IV in females. Length: males 6.39-7.73 (mean=6.92)- females 6.00-7.86 (mean=7.06), width: males 4.38-4.80 (mean=4.54)- females 4.73-4.80 (mean=4.54). Connexiva visible, brown, posterior margin of segments III-V protruding, with short decumbent setae.

Male genitalia: pygophore globose (Fig. 60); parameres with long setae, thick dorsally and thin ventrally (Figs 61-62).

Female genitalia: gonocoxite and gonapophysis VIII wide with long setae distally (Fig. 63); gonocoxite and gonapophysis IX as figure 64; styloids elongate with long setae apically (Fig. 65); tergites IX+X triangular, tergite X not completely fused, with short and long setae interspersed, more abundant towards apex (Fig. 66).

Geographic distribution. – Panama, and first records from Bolivia, Costa Rica, and El Salvador (Fig. 151).

Type specimens examined. – Lectotype (NEW DESIGNATION): male, “syntype, *L. interruptus* Ch., B.C.A. Rhynge, II, PANAMA, Boucard, sp. figured” (BMNH). Paratypes: 1 male, syntype, *L. interruptus* Champion, PANAMA, David [8°25'59.8" N-82°25'59" O], B.C.A. Rhynge, II. (BMNH); 1 female, syntype, *L. interruptus* Ch., B.C.A. Rhynge, II, Panama, Boucard (BMNH).

Additional specimens examined. – BOLIVIA.- La Paz: 1 male, La Paz [16°30' S-68°9' O], 1-VIII-1954, J. Bechyné col., det. Maldonado Capriles 1985 (IRSNB). COSTA RICA.- 1 female, Billey col., Distant coll. 1911-383 (BMNH); Alajuela: 1 female, Alajuela [10°0'59.7" N-84°12'59" O], 900 m, 109, P. Biolley, Distant coll. 1911-383 (BMNH); 1 male, Surubres près San Mateo

(Pac.) [9°55'59,8" N-84°34'59" O], 25-I-1903, P. Biolley, 206, Distant coll. 1911-383 (BMNH); *Cartago*: 1 female, Turrialba [9°54' N-83°40'59" O], 18-VIII-1964, F. Fisk col., *L. venator* Stål, det. J. Maldonado 1972 (OSU); *San José*: 1 female, San José [9°55'59,8" N-84°4'59,8" O], VIII-1964, F. Fisk col. *L. venator* Stål, det. J. Maldonado 1972 (OSU). EL SALVADOR.- 1 male, Mt. El Salvador [13°44'43" N-89°15'21" O], alt. 400'-640', 8-VII-1963, D.Q. Cavagnaro & M.E. Irwin cols. *L. longiceps* Champion, det. Wygodzinsky (CAS); *La Libertad*: 1 male 2 females, Santa Tecla [13°40'59" N-89°16'59" O], 29-IX-1959, J. Bechyné col., det. Maldonado Capriles 1985 (IRSNB); 2 males, Hacienda Argentina [13°31'59" N-89°31'59" O] 17-VI-1960, J. Bechyné col., det. Maldonado Capriles 1985 (IRSNB); 1 female, Yam, 15-VI-1960, J. Bechyné col., det. Maldonado Capriles 1985 (IRSNB); *Usulutan*: 1 male 1 female, Jucuaran [13°15'13" N-88°14'51" O], 10/11-XI-1959, J. Bechyné col., det. Maldonado Capriles 1985 (IRSNB); *La Paz*: 1 male 1 female, Volcán San Vicente, Finca La Paz [13°36' N-88°21' O], I-VIII-1959, J. Bechyné col., det. Maldonado Capriles 1985 (IRSNB); *Cuscatlan*: 1 male, Hacienda Colima [14°3' N-89°7'59,8" O], 22-VII-1959 J. Bechyné col., det. Maldonado Capriles 1985 (IRSNB).

Discussion. – This species has an ample distribution in Central America, and in this paper we record it from an isolated locality in Bolivia. It is easy to distinguish by virtue of the dark brown apex of the corium. It could be confused with *L. longiceps*, but it may be distinguished by the shorter and thicker body setae, and the shorter postocular head.

Leogorru *litura* (Fabricius 1787)

(Figs 5, 67-78, 153)

Reduvius litura Fabricius 1787: 310 [n. sp.]; Fabricius 1794: 199; Fabricius 1803: 272.

Cimex cayennensis Gmelin 1790: 2198 [n. sp.]

Platymerus myrmecodes Herrich-Schaeffer 1848: 32 [n. sp.].

Reduvius (*Platymerus*) *myrmecodes*: Guérin-Meneville 1857: 410.

Leogorru *litura*: Stål 1868: 126 [= *P. myrmecodes*]; Stål 1872: 118. [= *Cimex cayennensis*]; Uhler 1886: 25; Lethierry & Severin 1896: 101 [cat.]; Champion 1899: 199 [= *R. signifer* y *R. partitus*]; Distant 1902a: 193 [= *R. signifer* y *R. partitus*]; Fracker 1912: 229; Wygodzinsky 1945: 150; Wygodzinsky 1949: 55 [list]; Wygodzinsky 1959: 309; Maldonado Capriles 1972: 55; Maldonado Capriles 1990: 412 [cat.]; Coscarón 1998: 162 [list]; Froeschner 1999: 220 [cat.]; Coscarón 2002: 465; Arnold 2004: 73.

Acanthaspis *litura*: Walker 1873: 167.

Reduvius signifer Walker 1873: 182 [n. sp.]; Lethierry & Severin 1896: 119 [cat.].

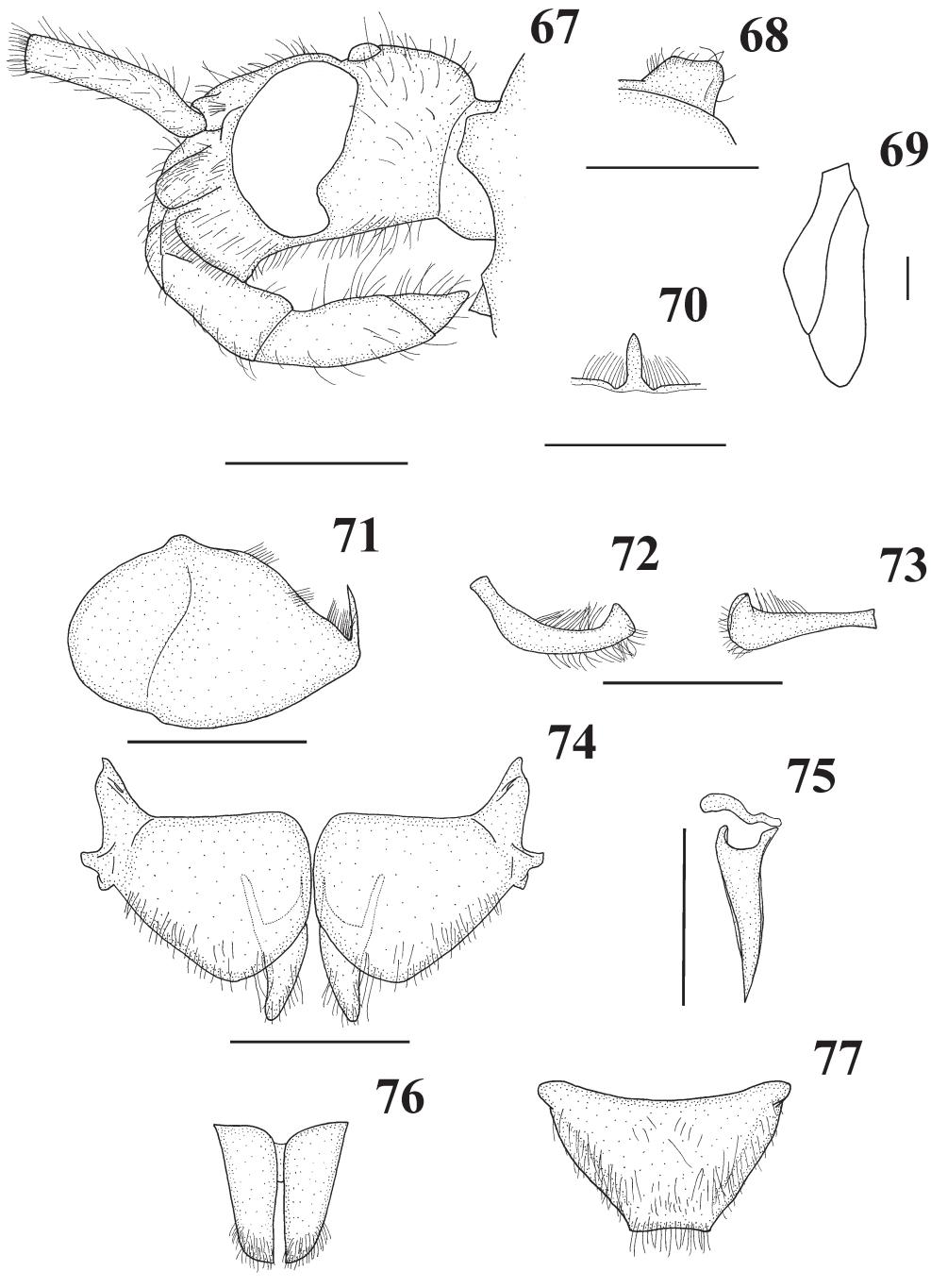
Reduvius partitus Walker 1873: 183 [n. sp.]; Lethierry & Severin 1896: 119 [cat.].

Redescription. – (n=10) Colour brown (Fig. 5).

Total length: males 12.66-14.18 (mean=13.59)-females 12.03-13.42 (mean=12.72).

Head with abundant short thick setae (Fig. 67), surface smooth. Width of head: males 1.39-1.52 (mean=1.48)- females 1.39-1.52 (mean=1.46), antocular region length: males 0.42-0.51 (mean=0.46)- females 0.35-0.48 (mean=0.43), postocular region length: males 0.67-0.74 (mean=0.71)-females 0.67-0.77 (mean=0.70). Postocular region globose. Interocular transversal sulcus concave posteriorly. Jugae with erect setae; genae with thin decumbent and semi-erect setae; clypeus with scarce erect setae; ventral area of the genae with decumbent setae anteriorly directed. Eyes large (Fig. 14), protruding, almost reaching dorsal and ventral margins of head in lateral view; ocelli small. Eye width: males 0.35-0.38 (mean=0.36)-females 0.32-0.45 (mean=0.41), interocular space: males 0.63-0.76 (mean=0.68)- females 0.63-0.76 (mean=0.65). Antennae pale brown, length: males 7.57-7.98 (mean=7.77), scapus 1.14-1.27 (mean=1.22), pedicellus 1.52-2.53 (mean=2.07), basiflagellomere 2.03-2.28 (mean=2.19), distiflagellomere 1.90-2.03 (mean=1.96)- females 7.34-7.47 (mean=7.41), scapus 1.01-1.27 (mean=1.16), pedicellus 2.15-2.28 (mean=2.23), basiflagellomere 1.90-2.15 (mean=2.03), distiflagellomere 1.90. Scapus with scarce short thick and semi-decumbent setae; pedicellus with short semi-decumbent setae; basiflagellomere and distiflagellomere with short semi-decumbent setae, and sparse long erect setae. Rostrum brown, article I with long setae more abundant ventrally, article II with long setae dorsally; article III with setae of diverse length, more abundant dorsally. Length: males 1.52-1.65 (mean=1.77), article I: 0.63-0.76 (mean=0.68), article II: 0.51-0.76 (mean=0.59), article III: 0.25-0.38 (mean=0.34)- females 1.65-1.90 (mean=1.77), article I: 0.51-0.76 (mean=0.65), article II: 0.51-0.76 (mean=0.72), article III: 0.38-0.51 (mean=0.40).

Thorax. Pronotum brown, with short setae (Fig. 15); anterior lobe length: males 1.33-1.40 (mean=1.35)- females 1.27-1.33 (mean=1.30), posterior lobe length: males 1.73-1.86 (mean=1.80)- females 1.47-1.80 (mean=1.68), width of collar: males 1.54-1.63 (mean=1.60)- females 1.57-1.76 (mean=1.66), anterior lobe width: males 2.46-2.56 (mean=2.52)- females 2.40-2.69 (mean=2.53), posterior lobe width: males 3.66-4.16 (mean=4.00)- females 3.73-4.26 (mean=4.05). Collar with abundant short setae on anterior



Figs 67-77. *Leogorruus litura* (Fabricius). (67) Head, lateral view. (68) Lateral process of collar. (69) Cells of membrane. (Figs 70-73) Male genitalia. (70) Pygophore, lateral view. (71) Posterior process of pygophore, posterior view. (72) Left paramere, outer view. (73) Left paramere, inner view. (Figs 74-77) Female genitalia. (74) Gonocoxite and gonapophysis VIII. (75) Gonocoxite and gonapophysis IX. (76) Styloids. (77) Tergites IX + X. Scale: 1 mm.

margin, lateral processes with internal margin rounded and external acute (Fig. 68). Lateral margins of anterior pronotal lobe rounded with a distinct rim; with short erect thick setae; mid-longitudinal sulcus distinct on anterior and posterior regions, surface with three longitudinal smooth sulci on the sides, rest of disc with setae. Posterior pronotal lobe smooth, longitudinal median sulcus not reaching posterior margin, with transversal keels. Interlobular sulcus punctate. *Scutellum*: basal tubercles acute and setose, posterior process short and narrow, apex rounded and horizontal or slightly elevated (Figs 17, 18). *Pleura*: propleura smooth with abundant setae; mesopleura smooth and opaque with less abundant setae; metapleura quadrangular, surface polished with scarce setae and dorso-ventral deep rugosities. *Sterna*: prosternal processes slightly prominent, with abundant short erect setae. *Legs* brown, setose. Coxae with abundant short and long thin setae on antero-ventral surface, scarce on coxae II and III, coxae I with a row of thick long setae anteriorly; trochanters I with abundant setae, sparse on trochanters II and III. Femora I: ventral surface flat with rugosities, with a row of small spines posteriorly and another row anteriorly on basal half, with abundant short erect setae ventrally and sparse longer setae (Fig. 21). Femora II: ventral surface slightly keeled, with an irregular row of spines, and abundant short, erect setae ventrally; femora III with abundant sparse setae shorter than article diameter. Tibiae I and II with short erect spiniform setae placed along a ventral keel and long thin setae, apex widened with abundant setae surrounding the fossula spongiosa. Tibiae III longest, with abundant semi-decumbent thick setae on apex, and sparse thin setae. Tarsi pale brown, with semi-decumbent thin setae, longer setae ventrally. *Hemelytra* slightly surpassing apex of abdomen in males, shorter than abdomen in females; with small setae only visible with SEM (Fig. 22). Length: males 8.86-9.87 (mean=9.50)- females 8.10-9.24 (mean=8.74). Colour brown, except posterior half of clavus, internal angle and apex of corium, and basal region and veins of membrane (Fig. 5); corium and clavus with sparse short thick setae, lateral margin of corial base with abundant short decumbent setae. Membrane cells sub-equal (Fig. 69).

Abdomen ventrally keeled as much as segment II, with sparse short semi-decumbent setae, surface polished; inter-segmental sutures punctate, in

males as much as third suture (IV/V), in females as much as fourth (V/VI). Length: males 6.33-6.71 (mean=6.46)- females 6.20-6.96 (mean=6.54), width 4.30-5.06 (mean=4.63). Connexiva of same colour as body, posterior margin of segments II-IV protruding, surface rugose with short decumbent setae.

Male genitalia: pygophore ovoid, posterior region acute (Fig. 70), posterior process indented at base (Fig. 71); parameres with short thick setae dorsally, and long thin setae on outer surface (Figs 72-73).

Female genitalia: gonocoxite and gonapophysis VIII wide with long and short setae on distal region (Fig. 74); gonocoxite and gonapophysis IX as figure 75; styloids elongate with abundant short setae apically (Fig. 76); tergites IX+X triangular, setae long and short intermixed on lateral and posterior margins (Fig. 77).

Geographic distribution. – Argentina, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Guatemala, French Guiana, Honduras, Mexico, Panama, Dominican Republic, Venezuela, and first records from Belize, Ecuador, El Salvador, Paraguay, Peru, Surinam, and Trinidad.

Type specimens examined. – Lectotype (NEW DESIGNATION): (photograph) 1 female, *litura* (label with Fabricius' handwriting on separate pin between the specimens) (ZMUC). Paralectotype: 1 specimen with the abdomen destroyed, same data (ZMUC).

Additional specimens examined. – ARGENTINA.- *Chaco*: 1 female, Resistencia [27°27' S-58°58'59" O], 10-VI-1939, ex Denier's coll. (MLP); 1 female, Resistencia, La Liguria, 11-VI-1939, ex Denier's coll. (MLP); 1 female, 30-XI-1897, S. Venturi col., n° 47206, det. Carpintero (MACN); *Formosa*: 1 female, Formosa [26°10'59" S-58°10'59" O], X-1962, det. Carpintero (CC); *Jujuy*: 1 female, (MLP); *Misiones*: 1 male 1 female, Loreto [27°18'59" S-55°31'59" O], X-1951, ex Bosq's coll. (MLP); without abdomen, A.A. Ogloblin col., det. Wygodzinsky (MLP); 1 female, Iguazú [25°42'59" S-54°24'59" O] (MLP); 1 male 1 female, P.N. Iguazú [25°42'59" S-54°24'59" O], XII-1979, det. Carpintero, ex Carpintero's coll. (MACN); 1 male 3 females, same locality, X-1980 (CC); 1 female, same locality, XI-1989 (CC); 1 male, Dept. Concepción, Santa María [27°54'59" S-55°22'59" O], X-1947, M.J. Viana col., det. Carpintero (MACN); 1 male, Piñalito [26°54'59" S-54°7'59,8" O], Viana col. 1962, det. Carpintero (MACN); 1 male, Dept. Alba Posse [27°33' S-54°42' O], Viana col., 15-XI-1946, det. Wygodzinsky, det. Carpintero (MACN); 1 male, San Ignacio, 27°15'59" S-55°31'59" O, L. Bade col., det. Carpintero (MACN); 3 males 3 females, Pepirí-miní [27°3'59,7" S-53°55'59" O], X-1982, det. Carpintero (CC); 1 male 2 females, Ape-pú, X-1980 (CC); 1 male, 2 de Mayo [27°1'59,8" S-54°39' O], I-1978, det. Carpintero (CC);

Salta: 1 female, Orán [23°7'59,8" S-64°19'59" O], 5-XI-1955, Denier leg., ex Bosq's coll. (MLP); 1 male, same locality, Daguerre leg., n° 33503, det. Costa Lima (MLP); 1 female, Orán, Aguas Blancas [23°7'59,8" S-64°19'59" O], 15-XI-1959, Vollenweider leg. (MACN); 1 male, same locality, XI-1960, Vollenweider leg. (MACN); 1 male, Maroma, Río San Andrés [25°9' S-65°27' O], 18-VI-1933, ex. Denier's coll. (MLP); 1 female, Río de las Cañas, 20-VI-1933, ex Denier's coll. (MLP); 1 male 1 female, P.D., La Maroma [25°9' S-65°27' O], 10-VI-1933, ex Denier's coll. (MLP); 1 female, Pocitos, IX-1949, Muñiz col., det. Wygodzinsky (RC); **Santiago del Estero:** without abdomen, Río Salado, Lengas del Chaco, Wagner col., ex Denier's coll. (MLP). **BELIZE.**- 1 male, Cornell Univ. Lot. 546 sub. 1464, det. Wygodzinsky (CUIC); 1 male, Cornell Univ. Lot. 546 sub. 1464, det. Wygodzinsky (CUIC); 1 male 3 females, (CAS). **BOLIVIA.**- *Cochabamba*: 1 male, Chapare, Zischka col., 10-IX-1945 (CC); 1 male, same locality, Zischka col., 28-X-1945, det. Carpintero (CC); 1 male 2 females, Pcia. Chapare, Gral. Roman [17°9' S-64°27'59" O], 400 m, XI-1945, Zischka leg., coll. MEPRA (RC); 1 male, same locality, 400 m, XII-1945, Zischka leg., ex Martínez's coll. (RC); *Santa Cruz*: 1 male 1 female, Nueva Moka [17°18'59" S-63°33' O], II-1964, Apóstol, det. Carpintero (CC); 2 males 1 female, Pcia. Ichilo, Buenavista [17°17' S-63°39'59" O], X-1949, Martínez col. (RC); 2 females, Buena Vista, [17°17' S-63°39'59" O], det. Wygodzinsky (RC); no locality: 1 male, Steinberg leg., n° 11862 (MLP); 1 male, n° 11862 (MLP); 1 male, n° 6654, det. Carpintero (MACN); 1 male, Espigis, Saracho, 12-bm 17-47, 12258 (USNM). **BRAZIL.**- *Mato Grosso*: 1 female, Río Paraná, Riacho de Herval, XI-1952, B. Pohl col. (MZSP); 1 male, Barra do Tapirapé [10°27' S-51°24'59" O], 23-XII-1962, B. Malkin col., det. Wygodzinsky (CAS); *Minas Gerais*: 1 male, 1897, H. Fruhstorfer, vend. 6-III-1898, ex. Fruhstorfer coll. (SEMC); *Paraná*: 1 female, Rolândia [23°18' S-51°51'59" O], Dirlings col. (MZSP); 1 male, Foz do Iguaçu [25°33' S-54°34'59" O], 26-IV-1964, C.E. & E.S. Ross, det. Wygodzinsky (CAS); *San Pablo*: 1 male, S. Paulo [123°31'59" S-46°36'59" O], 923, Staudinger & Bang-Haas cols., # 794 (UMMZ); *Santa Catarina*: 1 female, Nova Teutonia [27°3' S-52°24' O], 14-IV-1948, F. Plaumann col., J.C. Lutz Coll. 1961 (USNM); 2 females, same locality, 1932, det. Carpintero (MACN); 1 female, Nova Teutonia, 27°19' B-52°23' L, 29-V-1944, Fritz Plauman col. (RC); no locality: 3 males 2 females, Victoria, 7-VI-1900, Van Duzee col. (CAS). **COLOMBIA.**- *Magdalena*: 1 female, Santa Marta Mts., Arroyo Arenas [11°15' N-74°12' O], 25-VI-1920, F.M. Gaige col., det. Hussey (UMMZ); 1 female, same locality, alt. 400 ft., under log in forest, 25-VII-1920, F.M. Gaige col., det. Hussey 1922 (UMMZ); 1 male, same locality, alt. 450 ft., 29-VII-1920, F.M. Gaige col., det. Hussey 1922 (UMMZ); 1 male, same locality, alt. 400 ft., 25-VII-1920, F.M. Gaige col., det. Hussey 1922 (UMMZ). **COSTA RICA.**- *Puntarenas*: 1 male, Esparta [9°58'59,8" N-84°39'59" O], 18-II-1943, T. Aiken col. (CAS); uncertain locality: 1 female, Underwood, VII-1962, E.P. VanDuzee col. (CAS); without abdomen, same locality, VI-1902, E.P. Van Duzee Coll. (CAS). **ECUADOR.**- *Isla Puna*: 1 male, Puna Is., 2°49'59,8" S-80°7'59,8" O, 9-XI-1950, Ross & Michelbacher cols. (CAS); *Manabi*: 5 females, Duret col. 1968 (CC); NAPO: 1 male, Coca, alt. 250 m, III-V-1982, G. Onore, tropical rainforest general collecting, 1982-246 (BMNH); 1 male 2 female, same locality, alt. 250 m, III-V-1982, G. Onore col., Amazonian rainforest, 1982-246 (BMNH); *Sucumbios*: 1 female, Limoncocha [0°24' S-76°36'59" O], 12-VI-1977, W. Steiner col., Ecuador Peace Corps, Smithsonian Inst. Aquatic Insect Survey (USNM). **EL SALVADOR.**- *Cuscatlan*: 1 female, Hacienda Colima [14°3' N-89°7'59,8" O], 22-VII-1959, J. Bechyné col., *L. venator*, det. Maldonado Capriles 1985 (IRSNB); *La Libertad*: 1 female, Hacienda San Diego [14° N-89°9'59,7" O], 28-IV-1960, J. Bechyné col., *L. venator*, det. Maldonado Capriles 1985 (IRSNB); 1 male, Comasagua [13°37'59" N-89°22'59" O], 1-VII-1959, J. Bechyné col., *L. venator*, det. Maldonado Capriles 1985 (IRSNB); *La Paz*: 2 male 1 female, Volcán San Vicente, Finca La Paz [13°36' N-88°51' O], 5/6-VIII-1959, J. Bechyné col., *L. venator*, det. Maldonado Capriles 1985 (IRSNB); 5 males 4 females, same locality, I-VIII-1959, J. Bechyné col., *L. venator*, det. Maldonado Capriles 1985 (IRSNB); 1 male 1 female, same locality, I-VIII-1959, J. Bechyné col., *L. interruptus* det. JMC 1985 (IRSNB); 1 female, Hacienda La Herradura [13°21' N-88°57' O], 17/18-XI-1959, J. Bechyné col., *L. venator*, det. Maldonado Capriles 1985 (IRSNB); *La Unión*: 1 male, Vol. Conchagua [13°15'59" N-87°49'59" O], 27-29-V-1958, O.L. Cartwright col. (USNM). **GUATEMALA.**- *Escuintla*: 3 males 2 females 1 without abdomen, Nueva Concepción [14°12' N-91°18' O], 50', 17-VIII-1963, Cavagnar & Irwin cols., det. Wygodzinsky (CAS); *Petén*: 1 male, Tikal [17°12'59" N-89°37'59" O], 18-V-1956, at light at camp, Hubbell col., # 100 (UMMZ). **GUIANA.**- *Demerara-Mahaica*: 1 female, Demerara, 6°48' N-58°9'59,7" O, 24-V-1901, R.J. Crew (SEMC); 2 females, same locality [6°48' N-58°9'59,7" O], R.J. Crew, 25-V-1901, ex Van Duzee's coll. (CAS); 1 male, same locality [6°48' N-58°9'59,7" O], R.J. Crew, 4-V-1901 (CAS); 1 female, Mahaica, Demerara [6°48' N-58°9'59,7" O], 20-VI-1927, Cornell Univ. lot. 760, C.U. lot 801 sub. 152, det. H.G. Barber (CUIC); *Mazaruni-Potaro*: 1 male, Takutu Mountains [6°15' N-59°5' O], 7-XII-1983, A.B. Lau col. (USNM). **HAITI.**- *Artibonite*: 1 male, St. Marc [19°6'59,7" N-72°40'59" O], C. Gazgo leg., 1905, ded. 6-V-1905 (SEMC). **HONDURAS.**- *YORO*: 1 female, Progreso [14°24' N-87°48' O], 25-III-1923, T.H. Hubbell col., # 1139, det. Hussey 1924 (UMMZ); 2 females, same locality, 1923, # 113a, T.H. Hubbell col., det. Hussey 1924 (UMMZ); 2 males 5 females 1 without abdomen, same locality, 25-III-1923, T.H. Hubbell col., # 113a, det. Hussey 1924 (UMMZ); 2 females, same locality, 25-III-1923, T.H. Hubbell col., # 105a, det. Hussey 1924 (UMMZ); 1 male, same locality, 24-III-1923, T.H. Hubbell col., # 105a, det. Hussey 1924 (UMMZ). **MEXICO.**- *Chiapas*: 2 males 1 female, Municipio La Trinitaria, 18 km S of La Trinitaria, small road NW Hwy [15°57'6,1" N-92°3' O], alt. 190-194 m, 5-XII-1976, D.E. & J.A. Breedlove cols. (CAS); 2 females, 26 km of Ocozoantla [16°45'59" N-93°21'59" O], alt. 853 m, 14-I-1972, D.E. Breedlove col. (CAS); 1 male, Oaxaca border, 21 km W Rizo de Oro along ridge SE of Cerro Baul [15°57'59" N-92°39'19" O], in cloud forest, alt. 1615 m, 6-8-IX-1972, C. Millunex & D.E. Breedlove cols. (CAS); 1 male, Malpaso [14°58'59" N-80°5' O], 1972, D.E. Breedlove col. (CAS).

92°13'59" O], 2-IV-1966, F. De Lachica col., at light, det. E. Martín F. (RC); *Colima*: 1 male, 7 mi NE of Colima, 3-XII-1948, E.S. Ross col. (CAS); *Islas Tres Marías*: 11 males, 3 females, María Madre Is. [21°34'59" N-106°33' O], Village, 23-V-1925, Kelfer col. (CAS); 2 female, María Madre Is., Arroyo Hondo [21°3'59.7" N-104°43' O], 17-V-1925, H.H. Kelfer col. (CAS); *Jalisco*: 1 male, Vol. Colima [19°30'59" N-103°37' O], L. Conrad col., det. McAtee & Malloch, ex W.L. McAtee's coll., 1942 (USNM); 1 male, Chamela [19°31'59" N-105°4'59" O], 21-X-1977, E. Barrera col., det. H. Brailovsky (LACM); *Michoacan*: 1 female, Ficus Creek, 1 mi Pomaro [18°19'59" N-103°18' O], 11-VIII-1950, J. Peters col. (UMMZ); *Nayarit*: 1 male, 17 mi S of Acaponeta [22°29'47" N-105°21' O], 26-XI-1948, E.S. Ross col. (CAS); 1 male, San Blas [22°51'59" N-105°6' O], 17-21-IX-1953, B. Malkin col. (CAS); *Oaxaca*: 2 males, Bethania [17°55'27" N-95°46'59" O], tronco, E, Barrera col., 30-III-1976 (CC); *San Luis Potosí*: 1 male, Tamazunchale [21°15'59" N-98°46'59" O], 20-VIII-1954, at light, F.N. Young col., det. J. Maldonado Capriles 1983 (UMMZ); *Veracruz*: 1 female, Catemaco lake, Coyame [18°25'59" N-95° O], 1/15-VII-1963, under bark, D.R. Whitehead col. (USNM); 1 male, San Andrés, Tuxtla, 22-VII-1972, H. Brailovsky col. (LACM); 1 female, Playa Vicente [17°49'59" N-95°48'59" O], 30-I-1976, det. H. Brailovsky (LACM); 1 female, same locality, 29-I-1976, en tronco, H. Brailovsky col. (LACM); 1 male 1 female, 13 km WNW of Potrero, 16-XII-1948, E.S. Ross col. (CAS). PANAMA.- *Chiriquí*: 1 female, Progreso [8°27' N-82°49'59" O], 25-IV-1923, F.M. Gaige col., det. Hussey 1952, # 486 (UMMZ); *COLÓN*: 1 female, Almirante [9°33' N-79°36' O], 9-VI-1936 (CAS); *Panama*: 4 males, Canal Zone, Barro Colorado Is. [9°0'16.92" N-79°50'52" O], 24-VII-1963, D.Q. Cavagnaro & M.E. Irwin cols., det. Wygodzinsky (CAS); 1 male, same locality, 10/17-V-1964, W.D. & S.S. Duckworth cols. (USNM); 4 males, Canal Zone, Gatun, Tres Ríos Plantation, III-1930, T.O. Zschokke col. (CAS); 58 males 47 females, same locality, 27-VIII-1931, Zschokke col. (CAS); 1 female, Canal Zone, Gamboa [9°6'59.76" N-79°42' O], V-1944, Pres. by K.E. Frick col. (CAS). PARAGUAY.- *Amambay*: 2 females, P.N. Cerro Corá, 24-XI-1981, H. Ferreira C. Col. (USNM); *Caaguazú*: 1 female, Caaguazú [25°27' S-56°3'42.1" O], XI-1958 (MLP); *Concepción*: 2 males 2 females, Horqueta [23°24' S-56°52'59" O], 3-VII-1933, A1 Schulze col., ex Van Duzee's coll. (CAS); 1 male 1 female, Concepción [23°24'59" S-57°16'59" O], Viana col. 1966, det. Carpintero (MACN); *Cordillera*: 1 male, San Bernardino [25°15'59" S-57°18'59" O], 14-I-1939, ex Denier's coll., det. Denier, det. Wygodzinsky (MLP); *GUAIRA*: 2 females, Colonia Independencia [25°42'59" S-56°15' O], I-1987, Foerster col., det. Wygodzinsky (RC); 1 male, same locality, XI-1951 (RC); 1 female, same locality, XI, 1951, det. Caravallo (RC); *Itapúa*: 2 males 1 female, Hohenau [27°4'59.8" S-55°45' O], XI-1982, det. Carpintero (CC); *San Pedro*: 1 female, Cororó [23°27'59" S-56°30'59" O], Viana col. 1979, det. Carpintero (MACN); no locality: 1 male, nº 6654 (MLP); 1 male 1 female, Paso Yobay, Schade col., 9-I-1947 (CC); 3 without abdomen, San Pedro, Koslovsky col. (MLP). PERU.- *Huánuco*: 1 male, Monson Valley, Tingo María [9°18' S-75°58'59" O], 27-X-1954, Schlinger & Ross cols. (CAS); 1 female, same

locality, 10-X-1954, Schlinger & Ross cols. (CAS); 3 males 1 female, same locality, 16-V-1964, C.E. & E.S. Ross cols. (CAS); 1 male, Yurac, 87 mi E of Tingo María, 4-X-1964, Schlinger & Ross cols., det. Wygodzinsky (CAS); *Junín*: 1 male, Colonia Perene, Río Perene, 18 mi NE la Merced [10°52'59" S-75°12'59" O], 3-I-1955, Schlinger & Ross cols. (CAS). SURINAM.- *Para*: 1 without abdomen, Tibiti [5°33' N-55°57' O], R. Reynolds camp, under bark, fallens logs, 22-I-1972 (USNM); *Marowijne*: 1 female, Boven Cottica R., Moengo [5°36'59.7" N-54°24' O], 23-V-1927, Cornell Univ. Lot. 801 sub. 152, det. H.G. Barber (CUIC). TRINIDAD.- 1 female, West Indies, Chipman col., det. E.P. Van Duzee, # 1256 (SEMC); 1 male, same locality, 21-XI-1902, Chipman col., (CAS); 1 male, same locality, 21-XII-1902, Chipman col., ex E. P. VanDuzee's coll. (CAS). VENEZUELA.- 1 male, Carapita, VII-1937, P.J. Anduze col. (CAS); *Distrito Federal*: 1 male, Caracas [10°30' N-66°54'59" O], IV-1937 (CAS); *Guárico*: 1 male, Hato Masaguaral, 44 km S Calabozo [9°22'59.8" N-67°42' O], 3-10-V-1985, Menke & Carpenter cols. (USNM); 1 male, Calabozo [8°56'3.84" N-67°25'35" O], Duret col., 16-XI-1959 (CC).

No geographic distribution: 1 female, Bosq (MLP); 1 male 3 females, PA, I-1978, von Atzingen col. (UNA); 5 males 2 females (RC).

Discussion. – This species, besides being the most abundant in the collections, is the one with the most extensive geographic distribution, ranging from Mexico to northern Argentina including some Caribbean islands. It can be distinguished by the colouration pattern of hemelytra, the short head, and the large eyes. The general colour of the body may vary from light brown to dark brown, probably related to the age of the specimens. *L. pallipes* seems to be the most closely related species, especially by the shape of head and large eyes.

Description of V instars of *Leogorru*s *litura* (Fabricius)

(Fig. 78)

Description. – (n=10) Body pyriform, colour pale brown. Total length 7.60-11.33 (mean=9.21).

Head rhomboidal, as wide as long, with abundant short erect setae. Length of head 1.40-1.86 (mean=1.75), width 1.27-1.53 (mean=1.43). Clypeus with erect setae. Eyes slightly prominent, reniform, eye width 0.20-0.27 (mean=0.24), interocular space 0.87-0.93 (mean=0.91). Ocelli absent. Antennal tubercles large. *Antennae* filiform, scapus and pedicellus thicker than basiflagellomere and distiflagellomere. Length of antenna 6.66-6.69 (mean=6.67), scapus 0.80-1.25 (mean=1.11), pedicellus 1.38-1.92 (mean=1.77), basiflagellom-

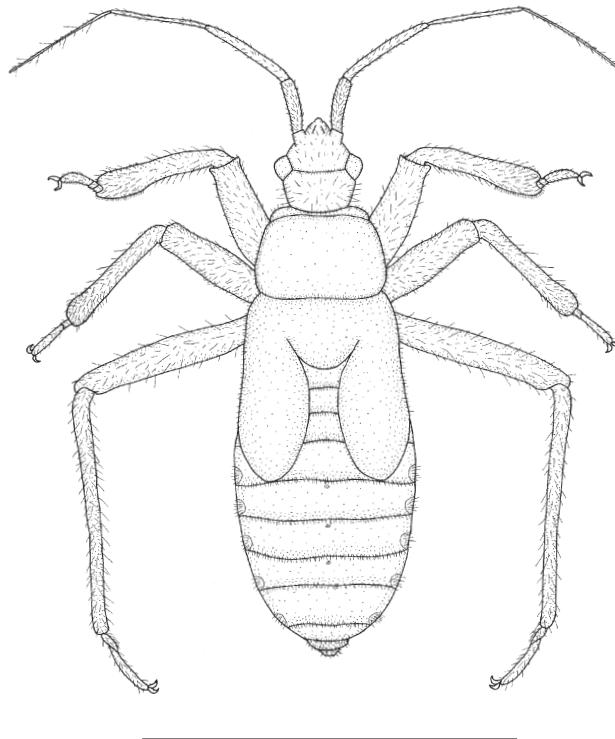


Fig. 78. *Leogorras litura* (Fabricius): fifth instar. Scale: 1 mm.

ere 1.41-2.05 (mean=1.84), distiflagellomere 1.60-1.73 (mean=1.67). *Rostrum* pale brown, with long erect setae, length 1.70-1.86 (mean=1.79), article I 0.48-0.74 (mean=0.68), article II 0.74-0.86 (mean=0.82), article III 0.22-0.29 (mean=0.26). Neck differentiated.

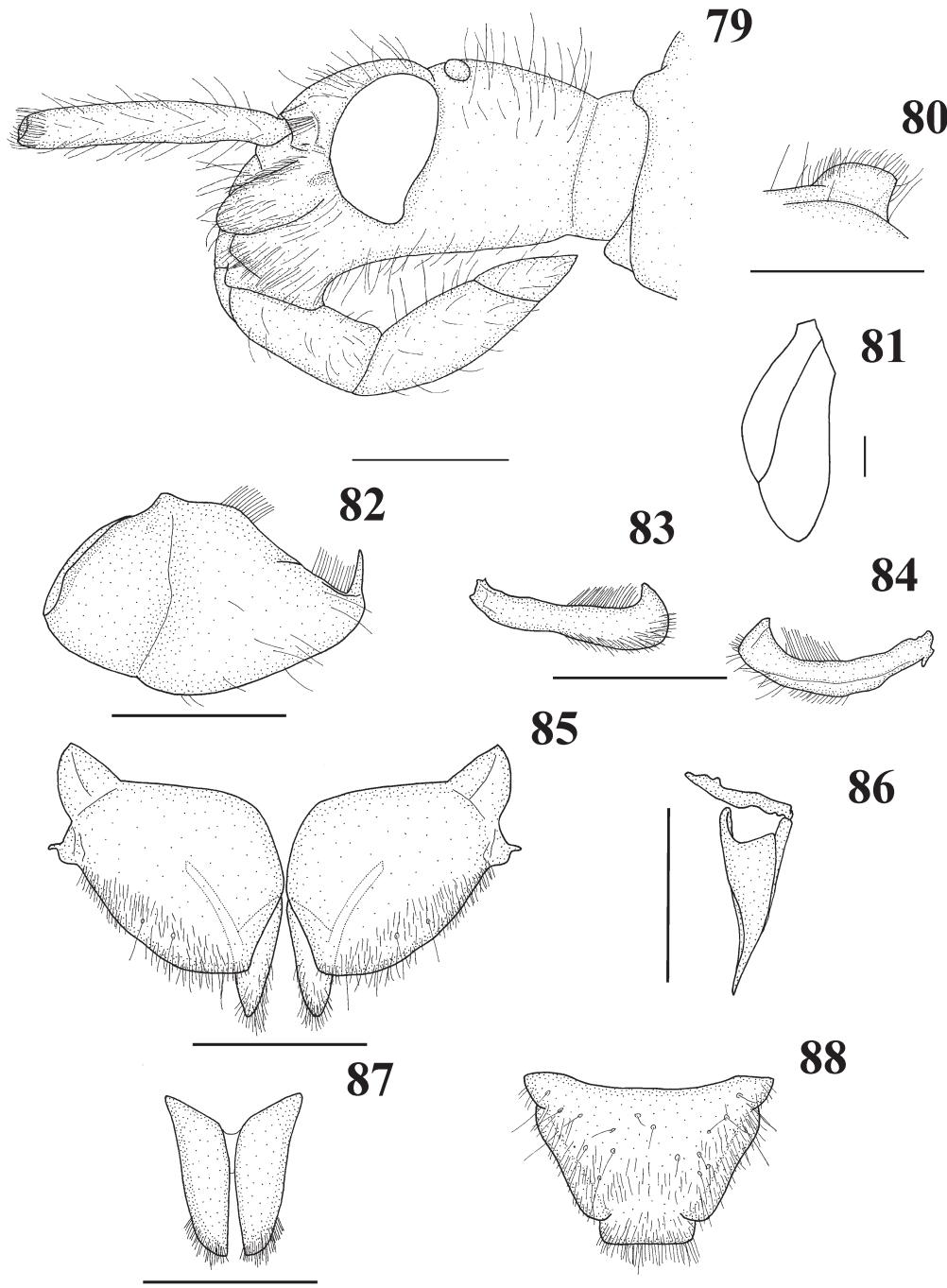
Thorax. *Pronotum* with collar differentiated, lateral processes of collar rounded with setae. *Pronotum* brown, not divided into lobes, with short erect setae, mid-sulcus present. Length of pronotum 1.23-1.47 (mean=1.41), maximum width 1.76-2.23 (mean=2.10). *Mesonotum* triangular, convex, brown with erect setae; *metanotum* partially hidden under the wing pads. Stridulatory sulcus present, meso- and metasterna not keeled. *Pleura* convex, darker than body, with sparse erect setae. *Legs* pale brown, except basal ¼ of femora darker, with abundant short erect setae. *Tibiae* I and II with incipient fossula spongiosa. *Tarsi* brown. *Wing pads* reaching anterior margin of abdominal

segment IV, length 2.73-3.26 (mean= 3.12).

Abdomen ovoid, pale brown with short setae except semicircular dark spots on central area of margin of each segment, this region with abundant long setae. Length 4.20-6.99 (mean=5.09) [abdomen collapsed]. Dorsal abdominal scent glands openings on segments IV, V and VI. Spiracles ventro-lateral.

Specimens examined. – MEXICO.- Chiapas: 6 specimens, Municipio La Trinitaria, 18 km S of La Trinitaria [15°57'6,1" N-92°3' O], small road NW Mexico Hwy, 190-914 m, 5-XII-1976, D.E. & J.A. Breedlove (CAS); Nayarit: 1 specimen, Tres Marias Is., María Madre Is. Village [21°34'59" N-106°33' O], 23-V-1925, H.H. Keifer col. (CAS). PANAMA.- Panama: 3 specimens, Tres Ríos Plantation, Gatun Lake, T.O. Zschokke col. (CAS).

Discussion. – The fifth instars does not possess



Figs 79-88. *Leogorrus longiceps* Champion. (79) Head, lateral view. (80) Lateral process of collar. (81) Cells of membrane. (Figs 82-84) Male genitalia. (82) Pygophore, lateral view. (83) Left paramere, outer view. (84) Left paramere, inner view. (Figs 85-88) Female genitalia. (85) Gonocoxite and gonapophysis VIII. (86) Gonocoxite and gonapophysis IX. (87) Styloids. (88) Tergites IX + X. Scale: 1 mm.

characteristics that are diagnostic for *Leogorrus* adults, as was previously observed by Lent & Wygodzinsky (1947) for instars IV and V of *Opiosthacidius* Berg and *Neivacoris* Lent & Wygodzinsky. As well as the adults, the immatures of these two genera have only two scent glands openings on abdominal terga IV and V; in *L. litura*'s fifth instars three scent glands openings on segments IV, V and VI are present.

Leogorrus longiceps Champion 1899

(Figs 6, 79-88, 152)

1899 *Leogorrus longiceps* Champion: 200 [n. sp]; Fracker 1912: 229; Wygodzinsky 1949: 56 [list]; Maldonado Capriles 1990: 412 [cat.]; Coscarón 2002: 465.

Redescription. – (n=9) Colour dark brown (Fig. 6); total length: males 12.50-14.93 (mean=13.70)- females 13.30-14.80 (mean=14.30).

Head elongate, with sparse long erect setae (Fig. 79), surface opaque. Width of head: males 1.30-1.60 (mean=1.46)- females 1.35-1.57 (mean=1.44), antocular region length: males 0.75-1.00 (mean=0.84)- females 0.75-0.80 (mean=0.78), postocular region length: males 0.85-1.00 (mean=0.95)- females 0.85-0.95 (mean=0.90). Interocular transversal sulcus concave posteriorly. Jugae with long erect setae on posterior margin; genae with abundant long decumbent setae; clypeus with erect setae; ventral area of genae with abundant decumbent setae anteriorly directed. Eyes median, slightly prominent; ocelli small. Eye width: males 0.30-0.42 (mean=0.37)- females 0.38-0.45 (mean=0.40), interocular space: males 0.64-0.80 (mean=0.71)- females 0.68-0.74 (mean=0.70). *Antennae* length: males 7.41, scapus 0.80-1.67 (mean=1.31), pedicellus 2.55-3.00 (mean=2.73), basiflagellomere 1.80-2.10 (mean=1.95), distiflagellomere 1.74 [basiflagellomere and distiflagellomere absent on lectotype]- females 8.66, scapus 1.40-1.67 (mean=1.52), pedicellus 2.40-2.73 (mean=2.54), basiflagellomere 2.20-2.46 (mean=2.33), distiflagellomere 2.26. Scapus with short thick semi-decumbent setae; pedicellus with shorter and thinner setae, more abundant towards apex, and sparse long erect setae; basiflagellomere and distiflagellomere with sparse long erect setae and abundant short decumbent setae. *Rostrum* with short setae, on article I more abundant on dorso-lateral region, articles II-III with an homogeneous distribution. Length: males 2.46-2.84 (mean=2.56), article I: 0.80-1.04

(mean=0.95), article II: 1.13-1.36 (mean=1.25), article III: 0.22-0.44 (mean=0.36)- females 2.45-2.66 (mean= 2.59), article I: 0.95-1.07 (mean=1.01), article II: 1.15-1.30 (mean=1.22), article III: 0.35-0.40 (mean=0.37).

Thorax. *Pronotum* dark brown with abundant long erect setae, surface smooth and opaque; anterior lobe length: males 1.30-1.60 (mean=1.40)- females 1.25-1.47 (mean=1.64), posterior lobe length: males 1.55-1.75 (mean=1.65)- females 1.50-1.60 (mean=1.53), width of collar: males 1.60-1.86 (mean=1.74)- females 1.55-1.86 (mean =1.69), anterior lobe width: males 2.55-2.86 (mean=2.74)- females 2.45-2.86 (mean=2.60), posterior lobe width: males 3.70-4.33 (mean=4.01)- females 3.55-4.26 (mean=3.82). Collar with long erect, and short thin setae, more abundant laterally, lateral processes with internal margin rounded and external more acute (Fig. 80). Lateral margins of anterior pronotal lobe rounded with a distinct rim, mid-longitudinal sulcus more pronounced on posterior region. Mid-longitudinal sulcus of posterior pronotal lobe distinct on anterior $\frac{3}{4}$ with transversal keels. *Scutellum:* basal tubercles rounded, posterior process short and slightly erected, with transversal marks; apex compressed, rounded; with sparse long erect setae. *Pleura:* propleura smooth, with abundant long setae; mesopleura with long semi-decumbent setae, more abundant on antero-basal region, and scarce erect setae; metapleura quadrangular with dorso-ventral rugosities, and sparse long erect setae. *Sterna:* prosternal processes slightly prominent, with thick short and long setae. *Legs* dark brown, with long erect setae. Femora I and III incrassate, posterior legs more slender. Coxae setose antero-ventrally, setae short and decumbent, with a row of long thick setae anteriorly; trochanters with similar distribution but the setae are erect and longer. Femora I: ventral surface flat with small spines on basal half, with abundant short setae and sparse long setae. Femora II: ventral surface slightly keeled, with abundant erect setae; femora III with long erect setae. Tibiae I with spiniform setae along a ventral keel, incrassate at apex with long erect setae. Tibiae II: with abundant short thick semidecumbent setae ventrally, longer and more abundant towards apex. Tibiae III elongate, with long erect setae, and more abundant shorter semi-decumbent setae on apex. Tarsi with long and short setae. *Hemelytra* surpassing apex of abdomen in males, females with the genital segments exposed.

Length: males 8.00-9.73 (mean=8.81)- females 7.70-9.33 (mean=8.52). Colour dark brown, except apical $\frac{1}{2}$ of clavus, internal angle of corium, base of membrane, apex of corium and adjacent region of membrane (Fig. 6); sparse short setae on corium, lateral margin of corial base with long erect setae. External cell of membrane twice the width of internal cell (Fig. 81).

Abdomen: ventral keel reaching segment III, more conspicuous in males, surface polished with sparse semi-decumbent setae; inter-segmental suture II punctate. Length: males 5.70-7.73 (mean =7.03)- females 6.80-8.66 (mean=7.45), width: males 4.50-5.26 (mean=4.86)- females 4.38-5.19 (mean=4.74). Connexiva with abundant short decumbent setae, posterior margin of segments II-IV protruding.

Male genitalia: pygophore ovoid (Fig. 82); parameres with short and thick setae dorsally, long and thin apically (Figs 83-84).

Female genitalia: gonocoxite and gonapophysis VIII wide, with abundant short and long setae distally (Fig. 85); gonocoxite and gonapophysis IX as figure 86; styloids elongate with short setae apically (Fig. 87); tergites IX+X not completely fused, with interspersed short and long setae (Fig. 88).

Geographic distribution. – Guatemala, Mexico, and first records from Belize and Honduras.

Type specimens examined. – Lectotype (NEW DESIGNATION): female, “*L. longiceps* Champion, B.C.A. Rhynge, II, El Reposo [GUATEMALA, 14°31'59" N-91°48'59" O], 800 ft. Champion, sp. figured” (BMNH). Paralectotypes: 1 male, *L. longiceps* Stål, El Reposo [GUATEMALA, 14°31'59" N-91°48'59" O], alt. 800 ft., B.C. A. Rhynge, II. (BMNH); 1 male, *L. longiceps* Champion, B.C.A. Rhynge, II, Volcán de Atitlán [GUATEMALA, 14°34'59" N-91°10'59" O], 25-3500 ft, Champion, syntype (BMNH).

Additional specimens examined. – BELIZE.- 1 female, Cayo, Chiquibul forest, Las Cuevas, XI-1994, J.H. Martin col. (BMNH); 1 female (CAS). GUATEMALA.- Petén: 1 male, Tikal [17°13'30" N-89°36'47" O], 17-II-1956, I.J. Cantrall col., # 55, *L. venator* Stål, det. J.C. Lutz (UMMZ); 1 male, same locality, 8-II-1956, I.J. Cantrall col., # 37 (UMMZ). HONDURAS.- Atlántida: 1 male, Lancetilla Creek, Tela [15°46'59" N-87°27' O], 16-III-1923, Hubbell col., det. Hussey 1952 (UMMZ). MEXICO.- Chiapas: 1 male, Palenque, 30-IX-1975, J. Decelle col., *L. interruptus*, det. JMC 1985 (IRSNB); 1 male 3 females, Chiapas-Oaxaca border, 21 km W Rizo de Oro [15°57'59" N-92°39'19" O], along ridge SE of Cerro Baul, alt. 1615m, 6/IX-1972, C. Mullinex & D.E. Breedlove cols., in cloud forest (CAS); 1 male, 2 mi E of Francisco Madero N and E of Cintalpa [16°43'59" N-93°43'59" O], alt. 1219 m, 4-X-1974, D.E. & J.A. Breedlove cols. (CAS); 1 male 1 female,

Municipio Motozintla, ridge between Cerro Boquerón and Niquivil [15°21'59" N-92°13'59" O], 2438-2743 m, 15-XII-1976, D.E. & J.A. Breedlove cols. (CAS); Veracruz: 1 male 1 female, Río Metlac near El Fortín [18°54' N-97° O], 17-XII-1948, H.B. Leech col. (CAS).

Discussion. – This species has a restricted distribution in Central America; it is similar to *L. ochropus*, but it can be distinguished by its larger size, and by the darker coloration.

*Leogorru*s *minusculus* (Walker 1873)

(Figs 7, 89-98, 152)

Pirates minusculus Walker 1873: 108 [n. sp].

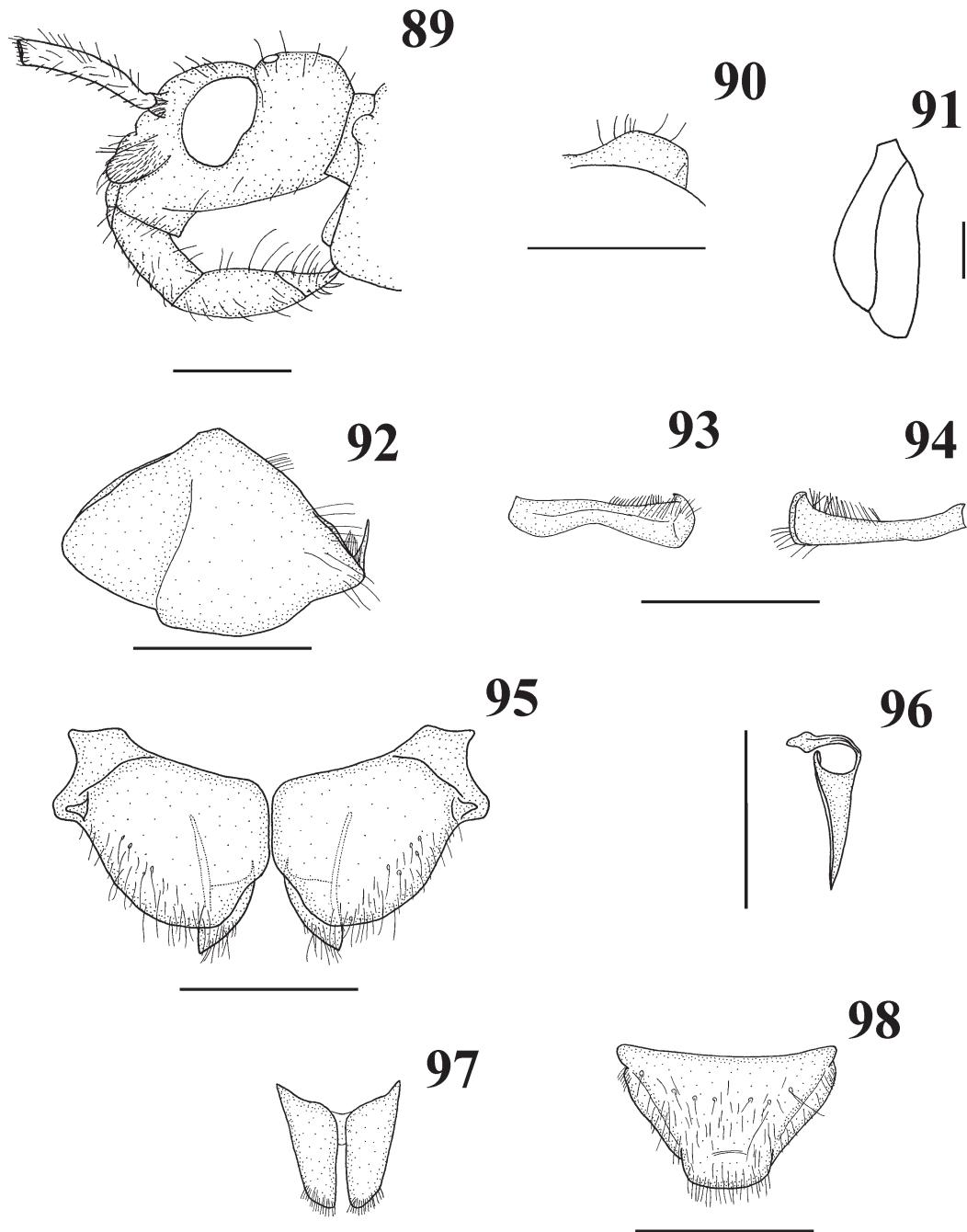
Rasahus minusculus: Lethierry & Severin 1896: 128 [cat.]

*Leogorru*s *minusculus*: Distant 1902b: 287 [n. comb.]; Wygodzinsky 1949: 56 [list]; Maldonado Capriles 1990: 412 [cat.]

*Leogorru*s *insculptus* Hussey 1953: 196 [n. sp.]; Maldonado Capriles 1990: 412 [cat.]; Froeschner 1999: 219 [cat.]. **NEW SYNONYMY**

Redescription. – (n=4) Colour dark brown (Fig. 7). Total length: males 10.00-10.66 (mean=10.33), females 10.40-10.50 (mean=10.45).

Head elongate, with sparse short thick erect setae (Fig. 89), surface opaque. Width of head: males 1.32-1.33 (mean=1.32)- females 1.24-1.28 (mean =1.26), antocular region length: males 0.54- females 0.60, postocular region length: males 0.75- females 0.78. Postocular region globose. Interocular transversal sulcus concave posteriorly. Jugae with scarce short erect setae; genae with abundant decumbent setae; clypeus protruding with sparse long erect setae; ventral area of the genae with scarce long decumbent setae anteriorly directed. Eyes and ocelli small; ocelli slightly protruding. Eye width: males 0.32-0.35 (mean=0.34)- females 0.32-0.34 (mean=0.33), interocular space: males 0.61-0.68 (mean=0.64)- females 0.56-0.60 (mean=0.58). Antennae length: males >3.26, scapus 1.05-1.20 (mean=1.12), pedicellus 2.06 [basiflagellomere and distiflagellomere absent in holotype]- females 7.30, scapus 1.05-1.10 (mean= 1.08), pedicellus 1.86-2.05 (mean=2.00), basiflagellomere 2.15, distiflagellomere 2.15. Scapus with sparse short semi-erect setae; pedicellus with short thin decumbent setae, and sparse semi-erect setae; basiflagellomere and distiflagellomere with short semi-decumbent setae, and sparse long erect setae. Rostrum dark brown except article III paler. Article I with sparse short erect setae; article II with long setae more abundant on the apex; article III with interspersed short and long setae, more



Figs 89-98. *Leogorruus minusculus* (Walker). (89) Head, lateral view. (90) Lateral process of collar. (91) Cells of membrane. (Figs 92-94) Male genitalia. (92) Pygophore, lateral view. (93) Left paramere, outer view. (94) Left paramere, inner view. (Figs 95-98) Female genitalia. (95) Gonocoxite and gonapophysis VIII. (96) Gonocoxite and gonapophysis IX. (97) Styloids. (98) Tergites IX + X. Scale: 1 mm.

abundant dorsally. Length: male 2.16-2.20 (mean=2.18), article I: 0.80-0.87 (mean=0.83), article II: 1.00-1.04 (mean=1.02), article III: 0.32-0.33 (mean=0.32)- females 2.16, article I: 0.76-0.80 (mean=0.78), article II: 1.04-1.08 (mean=1.08), article III: 0.28-0.32 (mean=0.30).

Thorax. Pronotum dark brown; anterior lobe length: males 1.20-1.26 (mean=1.23)- females 1.14-1.26 (mean=1.20), posterior lobe length: males 1.14-1.20 (mean=1.17), width of collar: males 1.55-1.60 (mean=1.57)- females 1.50-1.65 (mean=1.58), anterior lobe width: males 2.23-2.25 (mean=2.24)- females 2.20-2.25 (mean=2.23), posterior lobe width: males 2.93-2.95 (mean=2.94)- females 2.90-3.05 (mean=2.98). Collar with scarce long erect setae, lateral processes rectangular, apex rounded (Fig. 90). Anterior pronotal lobe sub-quadrangular and remarkably convex, lateral margins without a distinct rim, mid-longitudinal sulcus more pronounced on anterior and posterior region, with three sulci on the sides, surface irregular with scarce short erect setae. Posterior lobe of pronotum with irregular rugosities and sparse long erect setae, mid-longitudinal sulcus more pronounced on anterior half with transversal keels and punctures. Interlobular transversal sulcus irregular. Scutellum: basal tubercles rounded and setose; posterior process short and thick, apex semi-erect and rounded. Pleura: propleura smooth, divided by the interlobular sulcus, setae scarce, surface polished; mesopleura with dorso-ventral rugosities, dorso-posterior region paler; metapleura quadrangular with dorso-ventral rugosities and scarce long erect setae. Sterna: prosternal processes slightly prominent with setae. Legs brown with short setae. Coxae with abundant short and long setae on anterior and internal surfaces, scarce setae on coxae II and III. Coxae I with a row of long thick erect setae anteriorly. Trochanter I with abundant long setae ventrally. Femora I: ventral surface flat, with a row of small spines on anterior region, and abundant short setae, and two rows of longer setae. Femora II: ventral surface with small spines on apical half, and sparse short and long setae on the sides. Femora III with sparsely long erect setae. Tibiae I and II with spiniform setae along a ventral keel, incrassate at apex, with abundant thick setae surrounding the fossulae spongiosa. Tibiae III longest, with abundant thick setae apically, and sparse long setae. Tarsi pale brown, with short setae dorsally and abundant long setae ventrally. Hemelytra, on both sexes, not over-pass-

ing apex of abdomen; length: males 6.00-6.53 (mean=6.27)- females 5.90-6.00 (mean=5.95). Colour dark brown, except apex of clavus, internal angle of corium, apex of corium and adjacent region of membrane (Fig. 7); corium and clavus with sparse setae, lateral margin of corial base with scarce short erect setae. Cells of membrane sub-equal (Fig. 91).

Abdomen keeled ventrally, with sparse long setae; inter-segmental ventral sutures smooth. Length: males 5.00- females 4.99-5.02 (mean=5.01), width: males 3.64-3.66 (mean=3.65)- females 3.64-3.68 (mean=3.66). Connexiva visible, with thin short whitish setae, adpressed to surface, posterior margin of segments II-IV protruding.

Male genitalia: pygophore ellipsoidal, narrowed anteriorly and posteriorly (Fig. 92); parameres with long and thin setae (Figs 93-94).

Female genitalia: gonocoxite and gonapophysis VIII wide with short and long setae distally (Fig. 95); gonocoxite and gonapophysis IX as figure 96; styloids elongate with short setae apically (Fig. 97); tergites IX+X triangular, tergite X not completely fused, with abundant long and short setae intermixed (Fig. 98).

Geographic distribution. – Colombia, Panama, and first record from French Guiana.

Type specimens examined. – Lectotype (NEW DESIGNATION): male, “type, *Pirates minusculus* Walker, Columbia” (BMNH).

Leogorrus insculptus: (photographs) holotype, female, “PANAMA, Guánico, Los Santos [7°18' N-80°25'59" O], 15-IX-1925, F.W. Walker col.” (UMMZ).

Additional specimens examined. – COLOMBIA.- 1 female, La Garita, Gerbirge col., 1912 (SEMC); 1 male, in wild orchids, intercept Inspect LT D.C., 29-VIII-1985 (USNM); 1 female, S.A., VII-1914, Pres. by B. Martín col. (CAS). FRENCH GUIANA.- 1 female, Cayenna [4°55'59.8" N-52°19'59" O] (IRSNB).

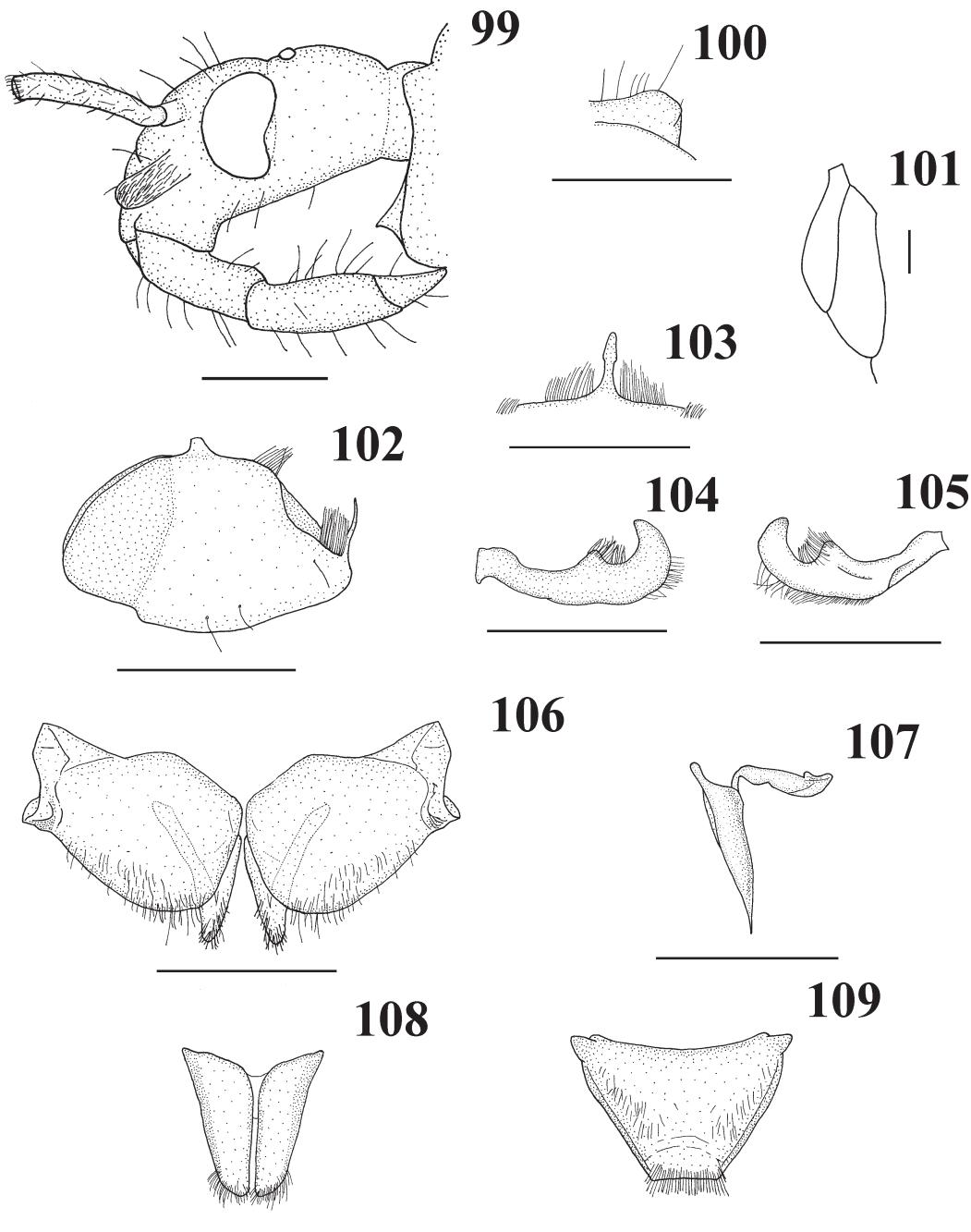
Discussion. – The evaluation of the measurements and external morphology of type specimens of *L. insculptus* and *L. minusculus* resulted in the synonymization of these two species. This species is easy to distinguish by the small size and the characteristic coloration pattern of hemelytra.

Leogorrus ochropus (Stål 1855)

(Figs 8, 99-109, 152)

Acanthaspis ochropus Stål 1855: 188 [n. sp]; Walker 1873: 167.

Reduvius ochropus: Stål 1860: 71.



Figs 99-109. *Leogorrus ochropus* (Stål). (99) Head, lateral view. (100) Lateral process of collar. (101) Cells of membrane. (Figs 102-105) Male genitalia. (102) Pygophore, lateral view. (103) Posterior process of pygophore, posterior view. (104) Left paramere, outer view. (105) Left paramere, inner view. (Figs 106-109) Female genitalia. (106) Gonocoxite and gonapophysis VIII. (107) Gonocoxite and gonapophysis IX. (108) Styloids. (109) Tergites IX + X. Scale: 1 mm.

Leogorrus ochropus: Stål 1872: 119; Lethierry & Severin 1896: 101 [cat.]; Wygodzinsky 1949: 56 [list]; Maldonado Capriles 1990: 412 [cat.]

Reduvius incommodus Walker 1873: 204 [n. sp., *incertae sedis, patria ignota*]; Lethierry & Severin 1896: 119 [cat., *incertus generis*] NEW SYNONYMY

Leogorrus incommodus: Champion 1899: 198 [n. comb. in footnote]; Wygodzinsky 1949: 55 [list]; Maldonado Capriles 1990: 412 [cat.]

Redescription. – (n=7) Colour dark brown, with abundant long setae. (Fig. 8); total length: male 12.00- females 11.60-14.80 (mean=12.87).

Head elongate, with sparse long erect setae (Fig. 99), surface opaque. Width of head: male 1.32-females 1.28-1.57 (mean=1.36), antocular region length: male 0.77- females 0.64-0.80 (mean=0.72), postocular region length: male 0.96- females 0.86-0.96 (mean=0.92). Interocular sulcus straight. Jugae with short decumbent setae; genae with abundant short and long decumbent setae; clypeus glabrous; ventral area of genae pale with sparse short and long setae anteriorly directed. Eyes and ocelli small, ocelli placed on the sides of a low protuberance. Eye width: male 0.32- females 0.32-0.45 (mean=0.34), interocular space: male 0.66- females 0.60-0.74 (mean=0.68). *Antennae* length: male 7.92, scapus 1.40, pedicellus 2.56, basiflagellomere 1.88, distiflagellomere 2.08-females 9.12, scapus 1.32-1.67 (mean=1.45), pedicellus 2.44-2.73 (mean=2.58), basiflagellomere 1.52-2.46 (mean=1.95), distiflagellomere 2.26 [basiflagellomere and distiflagellomere absent on lectotype and paralectotype]. Scapus with short thick decumbent setae, pedicellus with abundant semi-decumbent setae, basiflagellomere with sparse long erect setae and abundant short decumbent setae. *Rostrum* with sparse long erect setae. Length: male 2.16, article I: 0.88, article II: 0.96, article III: 0.32- females 2.24-2.86 (mean=2.48), article I: 0.88-1.13 (mean=0.99), article II: 1.00-1.33 (mean=1.13), article III: 0.32-0.40 (mean=0.37).

Thorax. *Pronotum* brown, with long erect setae on margins, disc glabrous; anterior lobe length: male 1.33- females 1.20-1.47 (mean=1.33), posterior lobe length: male 1.67- females 1.53-1.70 (mean=1.62), width of collar: male 1.65- females 1.50-1.86 (mean=1.59), anterior lobe width: male 2.43- females 2.-2.86 (mean=2.43), posterior lobe width: male 3.68- females 3.48-4.26 (mean=3.74). Collar with short erect setae, lateral processes internal margin rounded and external acute (Fig. 100). Lateral margins of anterior pronotal lobe

rounded with a distinct rim; smooth, longitudinal sulcus distinct. Posterior lobe smooth. *Pleura*: propleura with shallow longitudinal rugosities, and sparse long setae; mesopleura smooth with short decumbent setae on antero-basal region and sparse long setae; metapleura sub-pentagonal and glabrous, with dorso-ventral rugosities. *Sterna*: prosternal processes slightly prominent, with thick setae. *Scutellum*: basal tubercles prominent and rounded, posterior process short and semierect, glabrous, apex rounded. *Legs* pale brown, with longitudinal rows of sparse long erect setae. Coxae with abundant setae ventrally of diverse length; less abundant setae on trochanters. Femora I and II with abundant short erect setae ventrally, more abundant at base; femora III with sparse long setae. Tibiae I and II widened at apex with abundant setae surrounding the fossulae spongiosa. Tarsi with long setae. *Hemelytra* not surpassing apex of abdomen; length: male 7.60- females 7.20-9.33 (mean=7.87). Colour dark brown, except yellowish spots on posterior half of clavus and adjacent regions of corium and membrane, apex of corium and adjacent region of membrane, and a small spot at base of membrane (Fig. 8); lateral margin of corial base with long erect setae. External cell $\frac{1}{2}$ wider than internal cell (Fig. 101).

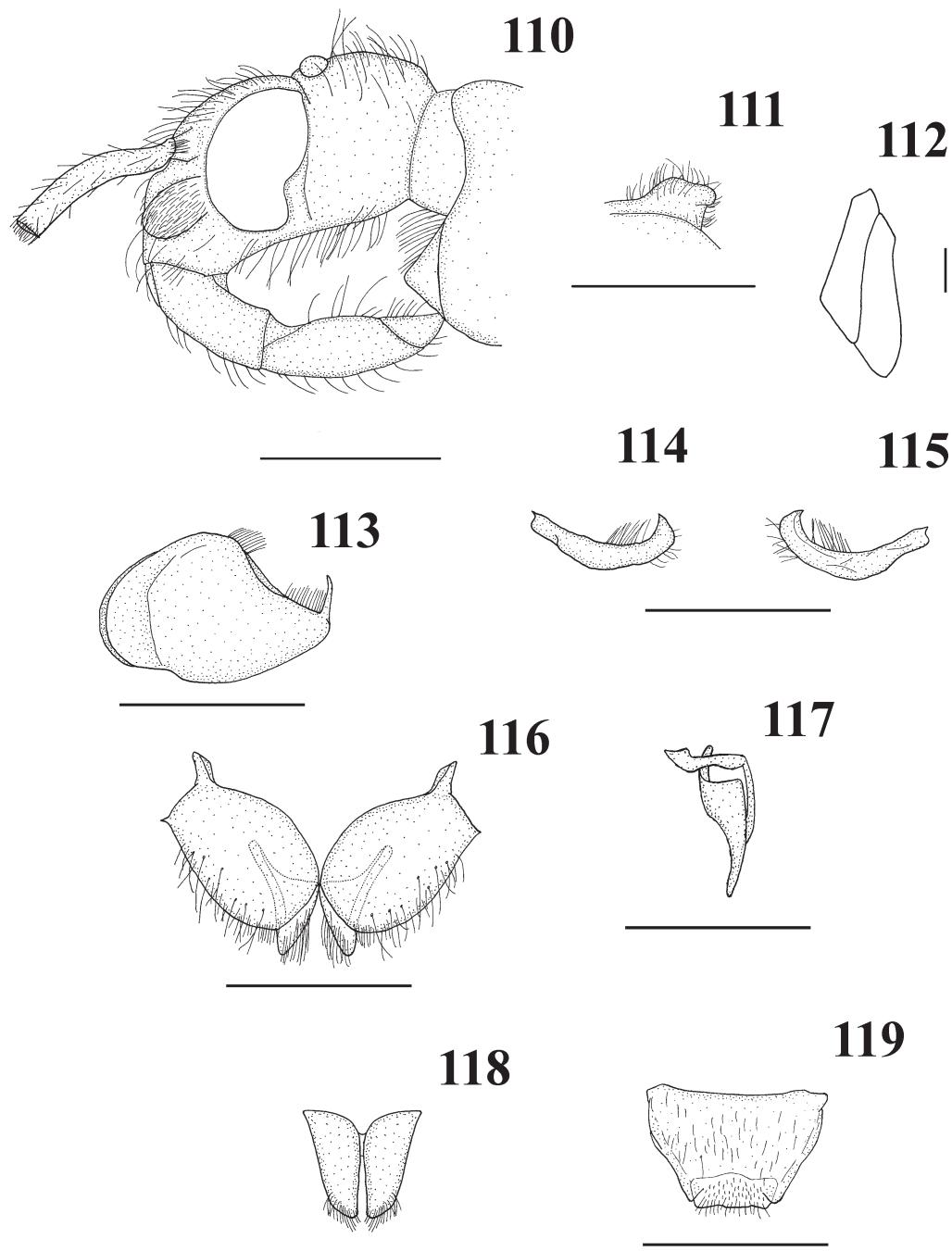
Abdomen ventrally keeled as much as segment II, with sparse long erect setae; inter-segmental suture II punctate. Length: male 6.00- females 6.16-8.66 (mean=6.77), width: male 4.45- females 4.15-5.19 (mean=4.45). *Connexiva* pale brown, glabrous; posterior margin of segments II-V protruding.

Male genitalia: pygophore ellipsoidal slightly narrowed anteriorly (Fig. 102), apex of posterior process slightly incrassate (Fig. 103); parameres with a knob medially, apex curved, with long and thick setae over the knob, and long thin setae apically (Figs 104-105).

Female genitalia: gonocoxite and gonapophysis VIII wide, with short and long setae intermixed on distal region (Fig. 106); gonocoxite and gonapophysis IX as figure 107; styloids elongate with short and long setae apically (Fig. 108); tergites IX+X with abundant short setae, and longer setae on posterior margin (Fig. 109).

Geographic distribution. – Brazil.

Type specimens examined. – Lectotype (NEW DESIGNATION): female, “typus, BRAZIL, Minas Gerais, *L. ochropus* Stål” (NHRS). Paralectotype: paratype,



Figs 110-119. *Leogorras pallipes* Stål. (110) Head, lateral view. (111) Lateral process of collar. (112) Cells of membrane. (Figs 113-115) Male genitalia. (113) Pygophore, lateral view. (114) Left paramere, outer view. (115) Left paramere, inner view. (Figs 116-119) Female genitalia. (116) Gonocoxite and gonapophysis VIII. (117) Gonocoxite and gonapophysis IX. (118) Styloids. (119) Tergites IX + X. Scale: 1 mm

female, BRAZIL, Rio de Janeiro [22°54' S-43°13'59" O], *L. ochropus* Stål (NHRS).

Reduvius incommodus: lectotype (NEW DESIGNATION), female, 1156, 89, type (BMNH).

Additional specimens examined. — BRAZIL: Santa Catarina: 1 female, Río Vermelho [27°27' S-48°21'59" O], Dirings col. (MZSP); 1 female, Nova Teutonia [27°3' S-52°24' O], 19-IV-1964, 300 m, C.E. & E.S. Ross cols. (CAS); no locality: 1 male, Santos, 15-22-XII-1904 ded. 24-I-1905, C. Gagzo leg. (SEMC).

Discussion. — The evaluation of the external morphology, measurements and female genitalia of the type specimens of *L. incommodus* and *L. ochropus* resulted in the synonymization of these two species. This species is only known from a few localities in Brazil; it is similar to *L. longiceps*, but it can be distinguished by the paler general coloration and the very much paler legs.

Leogorrus pallipes Stål 1872

(Figs 9, 110-119, 153)

Leogorrus pallipes Stål 1872: 119 [n. sp.]; Lethierry & Severin 1896: 101 [cat.]; Distant 1902a: 183, 193. [= *R. crassipes*]; Wygodzinsky 1949: 56 [list]; Maldonado Capriles 1972: 55; Maldonado Capriles 1990: 412 [cat.].

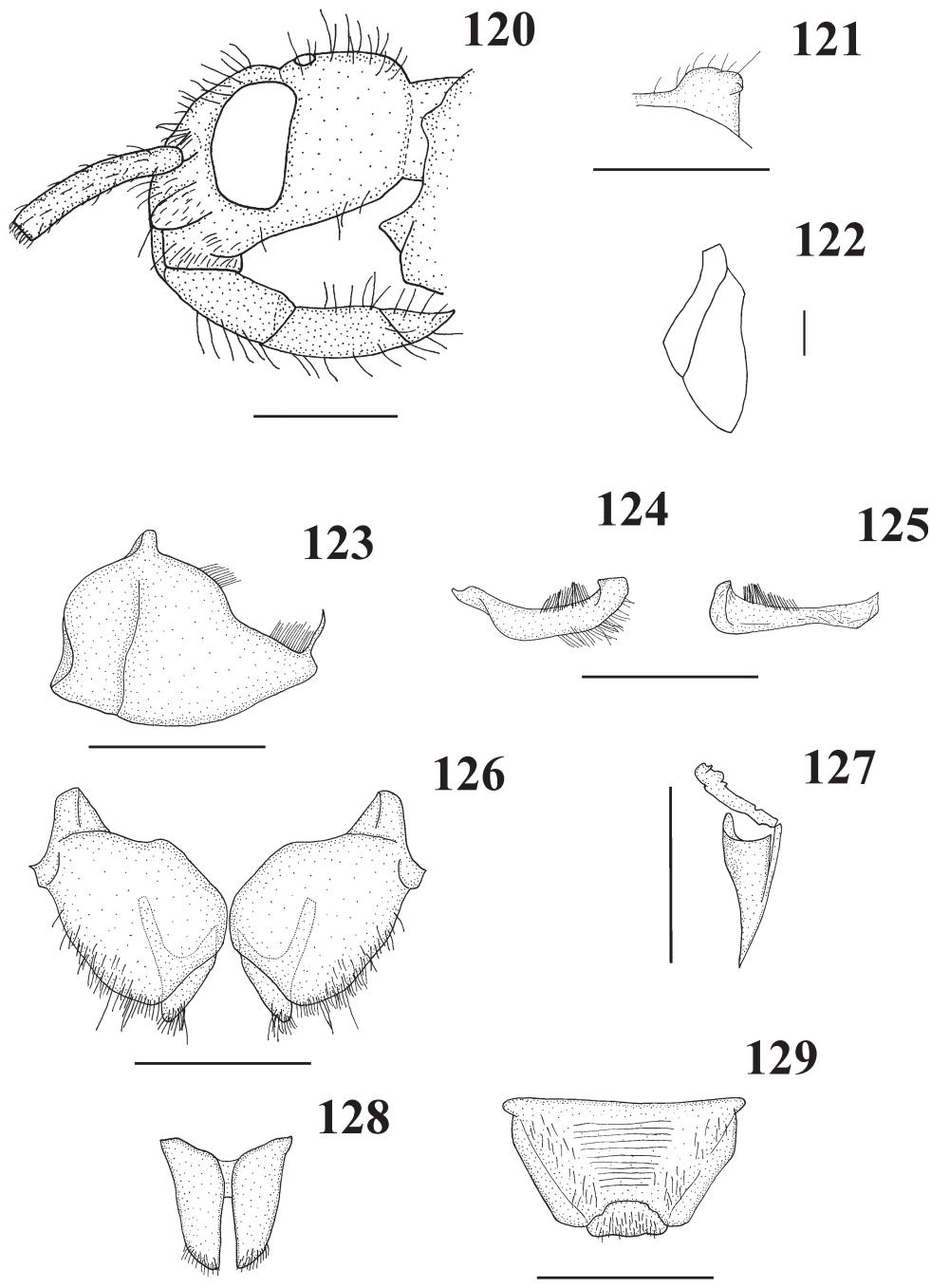
Reduvius crassipes Walker 1873: 186; Lethierry & Severin 1896: 118 [cat.].

Redescription. — (n=10) Colour brown, body surface polished (Fig. 9); total length: 8.00-11.00 (mean=9.87).

Head short with short curved semi-erect setae (Fig. 110). Width of head: males 1.05-1.16 (mean=1.10)- females 1.12-1.18 (mean=1.16), antocular region length: males 0.48-0.52 (mean=0.50)- females 0.48-0.52 (mean=0.49), postocular region length: males 0.76-0.88 (mean=0.80)- females 0.80-0.92 (mean=0.85). Interocular transversal sulcus concave posteriorly. Jugae with erect setae on dorsal margin; genae with long decumbent setae; clypeus with short decumbent setae, and long semi-erect setae; ventral area of genae with long setae on anterior margin. Eyes large, slightly protruding; ocelli median. Eye width: males 0.23-0.32 (mean=0.28)- females 0.26-0.32 (mean=0.28), interocular space: males 0.50-0.55 (mean=0.52)- females 0.48-0.54 (mean=0.52). Antennae length: males 4.70, scapus 0.55-0.92 (mean=0.76), pedicellus 1.25-1.72 (mean=1.53), basiflagellomere 1.25, distiflagellomere 1.45- females >4.13, scapus 0.76-0.95 (mean=0.86), pedicellus 1.60-1.75 (mean=1.65), basiflagellomere 1.55-1.70 (mean=1.63), distiflagellomere absent [antenna

absent on lectotype]. Scapus and pedicellus with short thick decumbent setae; basiflagellomere and distiflagellomere absent. Rostrum with long setae, semi-decumbent on article I, and erect on articles II and III. Length: males 1.46-1.68 (mean=1.54), article I: 0.59-0.64 (mean=0.61), article II: 0.66-0.80 (mean=0.73), article III: 0.18-0.24 (mean=0.20)- females 1.48-2.10 (mean=1.70), article I: 0.60-0.80 (mean=0.66), article II: 0.72-1.00 (mean=0.82), article III: 0.20-0.30 (mean=0.26).

Thorax. Pronotum brown, with scarce short decumbent setae, more abundant and erect on margins; anterior lobe length: males 1.17-1.50 (mean=1.30)- females 1.08-1.50 (mean=1.35), posterior lobe length: males 1.42-1.75 (mean=1.53)- females 1.67-1.83 (mean=1.72), width of collar: males 1.18-1.30 (mean=1.24)- females 1.28-1.95 (mean=1.42), anterior lobe width: males 1.70-2.10 (mean=1.88)- females 1.65-2.05 (mean=1.71), posterior lobe width: males 2.55-3.25 (mean=2.89)- females 2.05-3.25 (mean=2.83). Collar with thin short erect setae, lateral processes with internal margin rounded and external with a tubercle (Fig. 111). Anterior pronotal lobe slightly darker than posterior, lateral margins rounded with a distinct rim, surface smooth and polished; longitudinal sulcus present. Posterior pronotal lobe with shallow rugosities. Scutellum: basal tubercles acute, posterior process short, apex acute. Pleura: propleura smooth with abundant long setae; mesopleura with long setae, inter-segmental sutures with small punctures and long setae; metapleura trapezoidal with dorso-ventral rugosities and sparse long setae. Sterna: prosternal processes slightly prominent, with abundant erect setae. Legs pale brown, with long semi-decumbent setae, more abundant ventrally towards apex. Coxae and trochanters with abundant long setae mainly ventrally; coxae I with a row of thick setae anteriorly. Femora I with small spines ventrally, and abundant short setae intermixed with sparse long setae; femora II with abundant erect setae ventrally, and decumbent setae on all article; femora III with sparse decumbent setae. Tibiae I and II widened at apex, with abundant setae surrounding the fossulae spongiosa; ventral region with a row of spiniform setae, tibiae III with long decumbent setae. Tarsi with long setae, more abundant ventrally. Hemelytra surpassing apex of abdomen; length: males 5.10-7.00 (mean=6.10)- females 5.90-7.00 (mean=6.80) [left hemelytron



Figs 120-129. *Leogorrus picturatus* Stål. (120) Head, lateral view. (121) Lateral process of collar. (122) Cells of membrane. (Figs 123-125) Male genitalia. (123) Pygophore, lateral view. (124) Left paramere, outer view. (125) Left paramere, inner view. (Figs 126-129) Female genitalia. (126) Gonocoxite and gonapophysis VIII. (127) Gonocoxite and gonapophysis IX. (128) Styloids. (129) Tergites IX + X. Scale: 1 mm.

absent on lectotype]. Colour brown, except two yellowish spots (Fig. 9); corium and clavus with short decumbent setae, lateral margin of corial base with long decumbent setae. Cells of membrane subequal (Fig. 112).

Abdomen brown, with sparse short decumbent setae; without ventral keel; inter-segmental sutures punctate; genital region more setose. Length: males 4.20-5.80 (mean=4.80)- females 4.70-6.20 (mean=5.47), width: males 3.00-3.64 (mean=3.35)- females 3.55-3.85 (mean=3.68). Connexiva of same colour as body; glabrous, posterior margin of segment II protruding.

Male genitalia: pygophore ovoid, narrowed anteriorly (Fig. 113); parameres with long setae: thick anteriorly and thin distally, apex curved (Figs 114-115).

Female genitalia: gonocoxite and gonapophysis VIII wide, with short setae and sparse long setae (Fig. 116); gonocoxite and gonapophysis IX as figure 117; styloids short and wide with short setae apically (Fig. 118); tergites IX+X not completely fused, with interspersed short and long setae, more abundant on posterior half (Fig. 119).

Geographic distribution. – Brazil, and first records from Argentina, Guiana, and Paraguay.

Type specimens examined. – Lectotype (NEW DESIGNATION): female, “*L. pallipes* Stål, typus. BRAZIL, Minas Gerais, Drew” (NHRS). Paralectotype: female, paratype, BRAZIL, F. Surth (NHRS).

Additional specimens examined. – ARGENTINA.- Capital Federal: 1 female, ciudad [34°36'45" S-58°28'15" O], 10-II-1913, # 153, ex coll. Bosq (MLP); Chaco: 1 male, Charata [27°12'59" S-61°12' O], X-1924, ex Bosq's coll. (MLP); 1 male, Resistencia, La Liguria, 11-VI-1939, ex Denier's coll. (MLP); 1 male, Roque Saenz Peña [26°46'59" S-60°27' O], 1932, K.J. Hayward col., B.M. 1933-58 (BMNH); Corrientes: 1 male, Santo Tomé [28°33' S-56°3' O], XI-1925 (CC); Formosa: 1 female, Formosa, B.D. Casas, X-1962 (CC); 1 male, Ea. La Marcela, 35 km E El Colorado, 22-III-2003, en la luz, J. Williams col., 26°17'29" S-55°8'10" W (MLP); 1 male, Tucumancito [22°48'59" S-62°6'59,7" O], 21-XI-1936, # 39, ex Denier's coll. (MLP); Misiones: 1 male, Cerro Cora [27°30'59" S-55°36'59" O], VIII-1948, ex Bosq's coll. (MLP); Salta: 1 female, Orán [23°7'59,8" S-64°19'59" O], nº 33506 (MACN); 1 female, Dept. Anta, 50km Las Lajitas [24°40'59" S-64°15' O], 23-31-I-1980, Golbach col., det. Carpintero (CC); Santiago Del Estero: 4 males, Afiatuya [28°27' S-62°54'59" O], IX-1998 (CC); 1 male 1 female, Lengas del Chaco, Río Salado, Wagner col., *Leogorrus* según Pennington, ex Denier's coll. (MLP); 1 male 1 female, Campo del Cielo [27°34'59" S-62° O], I-1934, ex Bosq's coll. (MLP). BRAZIL.- Amazonas: 1 female, Manaus [3°6'47,88" S-60°1'30,7" O], Roman,

mars. (NHRS); Rio Grande do Sul: 1 female, Novo Hamburgo [29°40'59" S-51°7'59,8" O], Muller col., *L. ochropus* Stål, det. J. Maldonado Capriles 1985 (IRSNB); Santa Catarina: 4 males 1 female, Rio Grande do Sul, Nova Teutonia [27°3' S-52°24' O] (RMNH); 2 female, same locality, 32-3 (RMNH); 1 female, Río Vermelho [27°27' S-48°21'59" O], Dirings col., 1960 (MZSP); Estado do Río de Janeiro: 1 female, Río de Janeiro [22°54' S-43°13'59" O], Camille van Voixem col., *L. ochropus* Stål, det. J. Maldonado Capriles 1985 (IRSNB); 1 without abdomen, Río [22°54' S-43°13'59" O], 7-X-1901, P.G.B. (MACN); no locality: 1 male, Victoria, ex E.P. VanDuzee's coll. (CAS); 1 female, Hanss col., ex Schouteden's coll., *L. ochropus* Stål, det. J. Maldonado Capriles 1985 (IRSNB). GUIANA.- Upper Demerara-Berbice: 1 male, Moraballi Creek, Essequibo R. [7°1'59,88" N-58°27' O], VIII-1929, Oxf. Univ. Expedn, B.M. 1929-485 (BMNH). PARAGUAY: 1 male, ex Berg's coll. (MLP).

No geographic distribution: 1 female, *Euagoras*??, 46 20 (BMNH)

Discussion. – This species has the more ample distribution in southern Brazil and northeastern Argentina. It is very similar to *L. litura*, but it can be distinguished by its smaller size and the different colouration pattern of hemelytra.

Leogorrus picturatus Stål 1872

(Figs 10, 120-129, 153)

Leogorrus picturatus Stål 1872: 119 [n. sp.]; Lethierry & Severin 1896: 101 [cat.]; Distant 1902a: 183, 193 [= *R. signatus*]; Distant 1902b: 287 [= *P. megaspilus*]; Wygodzinsky 1949: 5 [list]; Maldonado Capriles 1986: 44 [lectotype designation]; Maldonado Capriles 1990: 412 [cat.]

Pirates megaspilus Walker 1873: 106 [n. sp.]

Reduvius signatus Walker 1873: 184 [n. sp.]; Lethierry & Severin 1896: 119 [cat.]

Redescription. – (n=10) Colour dark brown (Fig. 10); total length: males 10.70-12.66 (mean=11.59)- females 10.90-12.10 (mean=11.53).

Head elongate, with sparse thick erect setae, longer on postocular region; and two longer setae dorsally between eyes (Fig. 120), surface opaque. Width of head: males 1.23-1.44 (mean=1.35)- females 1.23-1.43 (mean=1.34), antocular region length: males 0.35-0.58 (mean=0.49)- females 0.35-0.58 (mean=0.44), postocular region length: males 0.86- females 0.80-0.96 (mean=0.88). Interocular sulcus concave posteriorly. Jugae with sparse long erect setae; genae with sparse short semi-decumbent setae; clypeus with sparse long erect setae; ventral area of genae with short semi-decumbent setae anteriorly. Eyes median, slightly prominent; ocelli small, placed by sides of a low tubercle. Eye width: males 0.25-0.35 (mean=

0.31)- females 0.30-0.35 (mean=0.32), interocular space: males 0.65-0.77 (mean=0.71)- females 0.64-0.75 (mean=0.68). *Antennae* length: males 5.50-7.06 (mean=8.57), scapus 1.05-1.13 (mean=1.09), pedicellus 1.75-2.00 (mean=1.90), basiflagellomere 1.55-1.93 (mean=1.80), distiflagellomere 1.15-2.00 (mean= 1.57)- females 5.12-6.20 (mean=5.66), scapus 1.00-1.16 (mean=1.09), pedicellus 1.75-2.05 (mean=1.89), basiflagellomere 1.64-2.12 (mean=1.83), distiflagellomere 1.64. Scapus with sparse setae; pedicellus with thin setae; basiflagellomere and distiflagellomere with longer and thinner setae; all setae erect. *Rostrum* with short setae more abundant ventrally; apical region of articles II and III paler. Length: males 1.95-2.26 (mean=2.12), article I: 0.70-0.93 (mean =0.81), article II: 0.85-1.00 (mean=0.96), article III: 0.30-0.40 (mean=0.34)- females 2.00-2.20 (mean=2.10), article I: 0.75-0.84 (mean=0.81), article II: 0.90-1.00 (mean=0.95), article III: 0.30-0.36 (mean=0.34).

Thorax. *Pronotum* dark brown, opaque, with short thick erect setae; anterior lobe length: males 1.20-1.27 (mean=1.23)- females 1.27-1.33 (mean =1.28), posterior lobe length: males 1.33-1.53 (mean=1.43)- females 1.33-1.47 (mean= 1.40), width of collar: males 1.50-1.60 (mean=1.53)-females 1.45-1.55 (mean=1.51), anterior lobe width: males 2.15-2.46 (mean=2.28)- females 2.15-2.30 (mean=2.24), posterior lobe width: males 3.45-3.73 (mean=3.56)- females 3.20-3.60 (mean=3.42). Collar with short thick setae, lateral processes subtrapezoidal, internal margin rounded and external with a tubercle bearing a long and erect setae (Fig. 121). Lateral margins of anterior pronotal lobe rounded without a distinct rim; posterior pronotal lobe with shallow glabrous sulci converging in the middle of pronotum; longitudinal sulcus absent. Posterior lobe smooth, with thick erect setae; mid-longitudinal sulcus distinct. *Scutellum:* basal tubercles prominent and acute, with sparse long setae; posterior process short and horizontal, with transversal rugosities and long setae, apex acute. *Pleura:* propleura smooth with sparse thin setae; mesopleura smooth, with thin decumbent setae on antero-basal region; metapleura quadrangular, with dorso-ventral rugosities. *Sterna:* prosternal processes slightly protruding, with thick setae. *Legs* dark brown, with sparse long erect setae. Coxae with short thin decumbent setae ventrally, and sparse thick erect setae anteriorly; trochanters with similar setae of coxae as

well as sparse long erect setae. Femora I and II with an external row of small spines ventrally, and abundant short setae intermixed with sparse long setae. Tibiae I and II widened apically, with abundant setae surrounding the fossulae spongiosa. Tarsi with long setae ventrally. *Hemelytra* not surpassing apex of abdomen. Hemelytra length: males 7.20-8.40 (mean=7.57)- females 7.10-8.00 (mean=7.50). Colour dark brown, except a yellowish spot on basal half (Fig. 10); corium with setae placed mainly on veins and on its base, lateral margin of corial base with short decumbent setae. External cell of membrane twice and a half the width of the internal cell (Fig. 122).

Abdomen ventrally keeled, with sparse thin setae; inter-segmental sutures II-V punctate. Abdominal length: males 5.60-6.13 (mean=5.96)-females 5.10-6.70 (mean=5.84), width: males 4.40-4.93 (mean=4.60)- females 4.20-4.85 (mean =4.51). Connexiva dark brown, glabrous, posterior margin of segments II-VI protruding.

Male genitalia: pygophore ovoid (Fig. 123); parameres with long setae: thick anteriorly and thin distally (Figs 124-125).

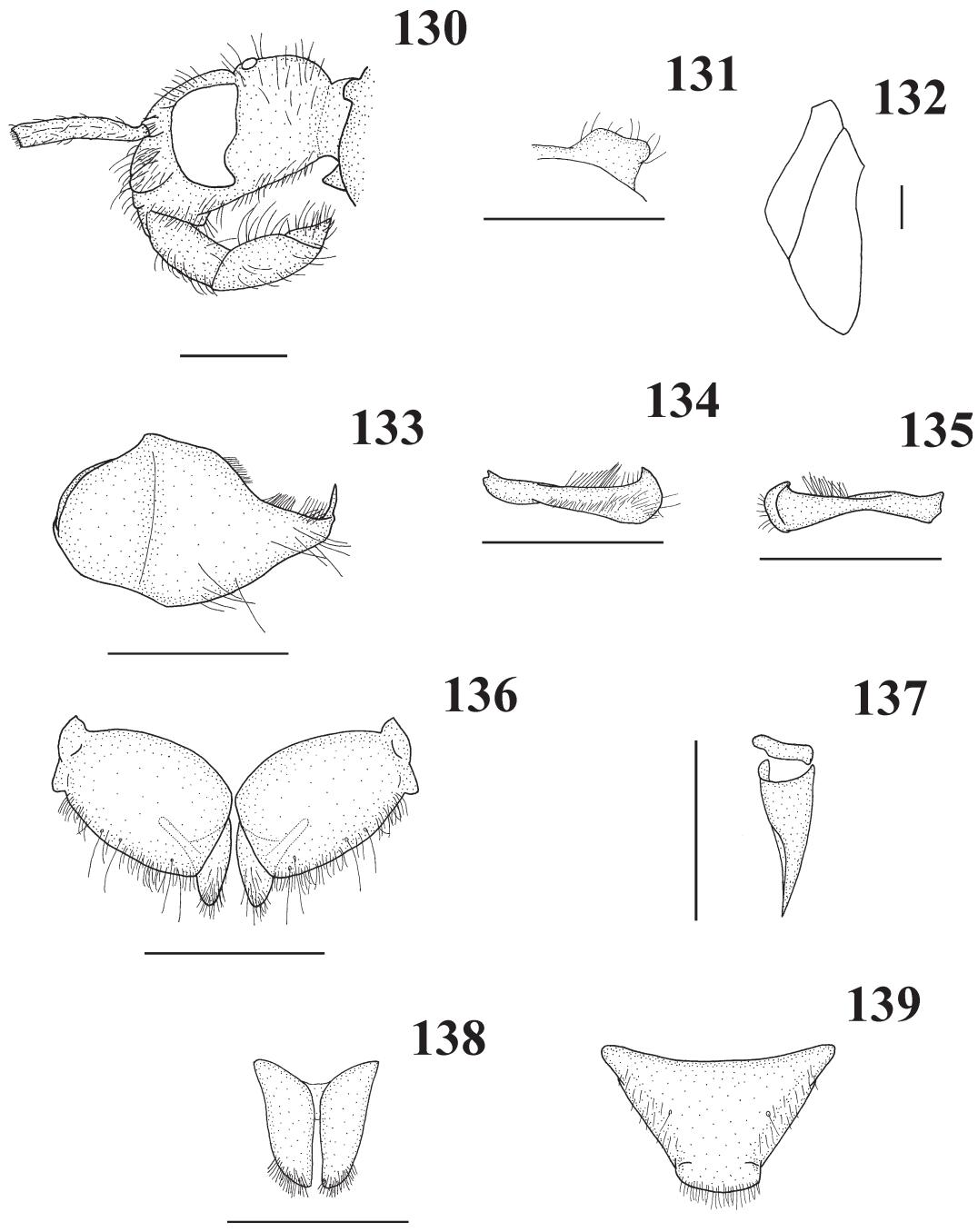
Female genitalia: gonocoxite and gonapophysis VIII wide, with short and long setae distally (Fig. 126); gonocoxite and gonapophysis IX as figure 127; styloids elongate with short setae apically (Fig. 128); tergites IX+X not completely fused, with short setae more abundant on lateral margins and posteriorly (Fig. 129).

Geographic distribution. – Colombia, Nueva Granada [These name refers to the actual territories of Colombia, Ecuador, Panama and Venezuela; the reference to this place probably only correspond to Colombia]

Type specimens examined. – Lectotype (NEW DESIGNATION): female, “*L. picturatus* Stål, COLOMBIA, Bogotá [4°36' N-74°4'59,8" O], Lindig” (NHRS). Paralectotypes: 1 female, *L. picturatus* Stål, COLOMBIA, Bogotá [4°36' N-74°4'59,8" O], Lindig, alotype, (NHRS); 1 male, *L. picturatus* Stål, *signatus* W., *megalophilus* W., Bogotá [4°36' N-74°4'59,8" O], Lindig (NHRS); 1 male 3 females, *L. picturatus* Stål, COLOMBIA, Bogotá [4°36' N-74°4'59,8" O], Lindig (NHRS).

Additional specimens examined. – COLOMBIA.- 1 male, ex Camille van Voixem's coll., *L. picturatus*, syntype (IRSNB); 1 male, Bogotá [4°36' N-74°4'59,8" O] (M.H.), ex Camille van Voixem's coll., lectotype, *L. picturatus*, det. Maldonado Capriles 1985 (IRSNB); BOYACÁ: 1 female, S.A., Muzo [5°31'59,8" N-74°6' O], Pres. by Hno. Apolinario-Maria (CAS).

Observations. – According to art. 74 of



Figs 130-139. *Leogorru venator* Stål. (130) Head, lateral view. (131) Lateral process of collar. (132) Cells of membrane. (Figs 133-135) Male genitalia. (133) Pygophore, lateral view. (134) Left paramere, outer view. (135) Left paramere, inner view. (Figs 136-139) Female genitalia. (136) Gonocoxite and gonapophysis VIII. (137) Gonocoxite and gonapophysis IX. (138) Styloids. (139) Tergites IX + X. Scale: 1 mm.

International Code of Zoological Nomenclature (4^o edition), the lectotype designation made by Maldonado Capriles (1986) is not valid, as the specimens studied are not members of the type series. Stål's original description (1872) indicates that the specimens were deposited in the Stockholm Museum (Sweden) and the lectotype designated by Maldonado Capriles belongs to Institut Royal de Belgique (Belgium).

Discussion. – This species has a very restricted distribution limited to a few localities in Colombia. It can be distinguished by the large pale band across the hemelytra, it is similar to *L. palipes* and *L. venator*, but it has keeled abdominal sterna and each abdominal sternite is globose.

***Leogorrus venator* Stål 1862**

(Figs 11, 130-139, 153)

Leogorrus venator Stål 1862: 456 [n. sp]; Stål 1872: 119; Uhler 1886: 25; Lethierry & Severin 1896: 101 [cat.]; Fracker 1912: 229; Wygodzinsky 1949: 56 [list]; Maldonado Capriles 1990: 412 [cat.]; Coscarón 2002: 465 [list].

Acanthaspis venator: Walker 1873: 168.

Redescription. – (n=5) Colour dark brown (Fig. 11); total length: male 11.70- females 11.70- 12.30 (mean=11.98).

Head with sparse long thick erect setae, more abundant ventrally (Fig. 130), surface opaque. Width of head: male 1.23- females 1.24-1.33 (mean=1.27), antocular region length: male 0.45- females 0.45-0.51 (mean=0.46), postocular region length: male 0.75- females 0.63-0.77 (mean=0.73). Interocular transversal sulcus concave posteriorly. Jugae with thick erect setae; genae with short decumbent setae; clypeus with long erect setae; ventral area of genae with abundant setae. Eyes median, slightly prominent; ocelli median. Eye width: male 0.25- females 0.32-0.35 (mean=0.34), interocular space: male 0.60- females 0.58-0.60 (mean=0.59). Antennae length: males >3.15, scapus 1.05, pedicellus 2.10, basiflagellomere and distiflagellomere absent- females 6.20-6.80 (mean=6.53), scapus 1.00-1.05 (mean=1.01), pedicellus 2.00, basiflagellomere 1.25-1.85 (mean=1.55), distiflagellomere 1.90-2.00 (mean=1.95). Scapus and pedicellus with short thick semi-decumbent setae; basiflagellomere and distiflagellomere with abundant short decumbent setae, and sparse thin erect setae. Rostrum with abundant long setae. Rostral length: male 1.85, article I:

0.70, article II: 0.95, article III: 0.20- females 1.90-2.20 (mean=2.03), article I: 0.70-0.80 (mean=0.75), article II: 0.95-1.10 (mean=0.99), article III: 0.25-0.35 (mean=0.29).

Thorax. Pronotum dark brown, with scarce long setae on lateral margins; anterior lobe length: male 1.20- females 1.20-1.27 (mean=1.25), posterior lobe length: male 1.50- females 1.35-1.80 (mean=1.59), width of collar: male 1.50- females 1.45-1.55 (mean=1.50), anterior lobe width: male 2.40- females 2.30-2.45 (mean=2.40), posterior lobe width: male 3.65- females 3.55-3.90 (mean=3.70). Collar with abundant short setae, lateral processes with internal margin rounded and external with a tubercle (Fig. 131). Lateral margins of anterior pronotal lobe rounded with a distinct rim, disc with smooth sulci between shallow punctate keels; longitudinal sulcus distinct, surface polished. Posterior pronotal lobe smooth, with marks of insertion of setae and long setae on lateral margins. Scutellum: basal tubercles short and rounded with a setae; posterior process short and horizontal, glabrous, apex rounded. Pleura: propleura with abundant long decumbent setae anteriorly directed; meso- and metapleura with less abundant setae; metapleura trapezoidal with dorso-ventral rugosities. Sterna: prosternal processes slightly protruding, with thin setae. Legs dark brown, with abundant long erect setae. Coxae with short thin decumbent setae ventrally; trochanters with similar setae but less abundant, and with sparse long erect setae. Femora I and II: ventral surface smooth, with small short spines and abundant long setae. Femora III with sparse setae. Tibiae I and II widened at apex, with abundant setae surrounding the fossulae spongiosa. Tarsi with short and long setae. Hemelytra not surpassing apex of abdomen in females. Hemelytra length: male 8.00- females 7.20-8.50 (mean=8.04). Colour dark brown, except three yellowish spots (Fig. 11); corium and clavus with long semi-erect setae, lateral margin of corial base with short decumbent setae. External cell of membrane twice the width of internal cell (Fig. 132).

Abdomen ventrally keeled almost to apex, with sparse long setae; intersegmental sutures II and III punctate. Length: male 6.50- females 6.00-6.90 (mean=6.58), width: male 4.25- females 4.30-4.75 (mean=4.53). Connexiva of same colour as body, with short decumbent setae; posterior margin of segments II-IV protruding, glabrous.

Male genitalia: pygophore ovoid, with long setae on posterior and ventral regions (Fig. 133);

parameres widened apically, with long and thick setae dorsally, long and thin setae on outer surface, and short and thin setae apically (Figs 134-135).

Female genitalia: gonocoxite and gonapophysis VIII wide, with abundant interspersed short and long setae distally (Fig. 136); gonocoxite and gonapophysis IX as figure 137; styloids wide with short setae apically (Fig. 138); tergites IX+X not completely fused, with abundant short setae and scarce long setae intermixed (Fig. 139).

Geographic distribution. – Costa Rica, Guatemala, and Mexico.

Type specimens examined. – Lectotype (NEW DESIGNATION): female, “*L. venator* Stål, MEXICO, typus” (NHRS). Parlectotype: female, *L. venator* Stål, MEXICO, paratypus (NHRS).

Additional specimens examined. – MEXICO. Chiapas: 1 male, rainforest 12 km SE of Palenque on road to Ocosingo [17°3'59.7" N-92°15' O], alt. 457m, 12-X-1972, D.E. Breedlove col. (CAS); 1 female, Chiapas-Oaxaca border, 21 km W Rizo de Oro along ridge SE of Cerro Baul [15°57'59" N-92°28'59" O], alt. 1615m, 6-8-IX-1972, C. Mullinex & D.E. Breedlove cols., in cloud forest (CAS); Oaxaca: 1 female, 7-VII-1963, A.B. Lau col. (USNM).

Observations. – According to the original description part of the type series belongs to Signoret's collection; these specimens were not seen.

Discussion. – This species is restricted to Central America, from southern Mexico to Costa Rica. It is similar to *L. litura*, but it can be distinguished by the less prominent eyes, the longer postocular region, and the longer setae on pronotum and legs. It is distinguished from *L. pallipes* by its larger size and the more elongate head.

*Leogorru*s *xanthospilus* (Walker 1873)

(Figs 12, 140-150, 153)

Reduvius xanthospilus Walker 1873: 184 [n. sp]; Lethierry & Severin 1896: 119 [cat.]

*Leogorru*s (*Reduvius*) *xanthospilus*: Champion 1899: 200.

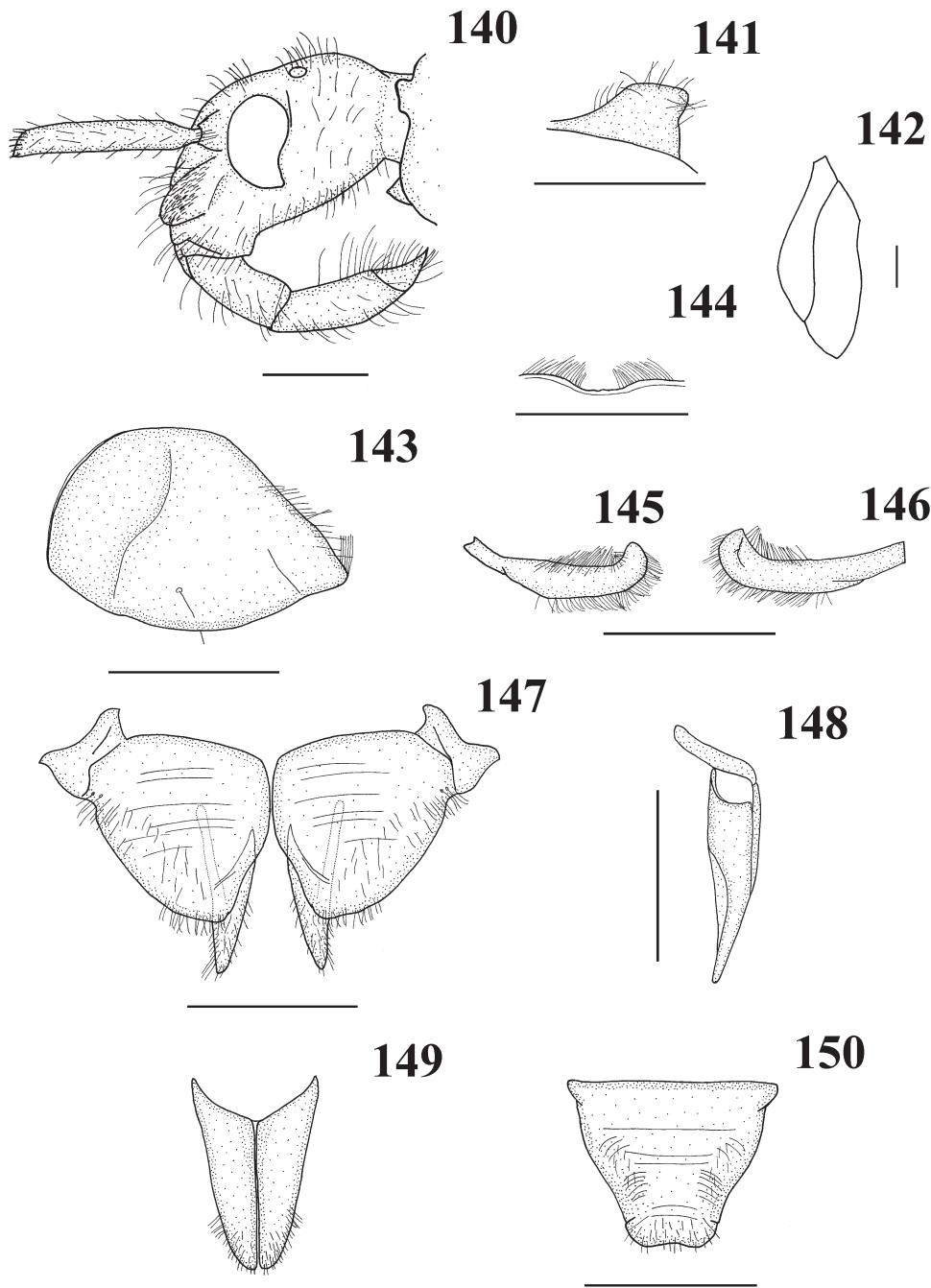
*Leogorru*s *xanthospilus*: Distant 1902a: 183, 192 [n. comb.]; Wygodzinsky 1949: 56 [list]; Maldonado Capriles 1990: 412 [cat.].

Redescription. – (n=7) Colour dark brown (Fig. 12); total length: male 14.10- females 14.90-16.00 (mean=15.38).

Head elongate, with short thick erect setae (Fig. 140), surface opaque. Head length: male 3.84- females 3.40-3.84 (mean=3.44), width: male 1.68-

females 1.66-1.76 (mean=1.71), antocular region length: male 0.96- females 0.73-0.96 (mean=0.85), postocular region length: male 1.12- females 1.07-1.33 (mean=1.18). Interocular transversal sulcus concave posteriorly. Jugae with sparse long erect setae; genae with abundant short decumbent setae, and sparse long setae; clypeus with erect setae; ventral area of genae with a row of setae on anterior margin. Eyes small, slightly prominent, ocelli small. Eyes width: male 0.40- females 0.42-0.48 (mean=0.46), interocular space: male 0.80- females 0.72-0.83 (mean=0.79). Antennae length: male 10.62, scapus 2.04, pedicellus 2.94, basiflagellomere 2.70, distiflagellomere 2.94- females 10.14-11.16 (mean=10.70), scapus 1.38-2.04 (mean=1.89), pedicellus 2.28-2.88 (mean=2.66), basiflagellomere 2.70-2.94 (mean=2.81), distiflagellomere 2.82-3.36 (mean=3.17) [basiflagellomere and distiflagellomere absent on lectotype]. Sapus with scarce short thick semi-erect setae; pedicellus with similar setae, but more abundant towards apex. Rostrum with long setae, more abundant ventrally on article I, and dorsally on articles II-III, and sparse short decumbent setae. Length: male 2.76, article I 0.96, article II 1.32, article III 0.48- females 2.28-3.00 (mean=2.83), article I 0.90-1.20 (mean=1.09), article II 1.08-1.38 (mean=1.32), article III 0.30-0.48 (mean=0.42).

Thorax. Pronotum dark brown, with short erect setae, more abundant on lateral margins. Anterior lobe length: male 1.38- females 1.14-1.47 (mean=1.36), posterior lobe length: male 1.74- females 1.56- 1.80 (mean=1.72), width of collar: male 1.72- females 1.73-1.84 (mean=1.78), anterior lobe width: male 2.64- females 2.56-2.88 (mean=2.70), posterior lobe width: male 4.24- females 4.04-4.48 (mean=4.32). Collar with short erect setae; lateral processes with internal margin rounded and external acute (Fig. 141). Anterior pronotal lobe convex, lateral margins rounded without a distinct rim, with setae, mid-longitudinal sulcus more pronounced on posterior region, and three longitudinal sulci on the sides. Posterior pronotal lobe with transversal rugosities, mid-longitudinal sulcus more pronounced on anterior region with transversal keels. Scutellum: basal tubercles prominent and acute; posterior process short and semi-erect, with transversal rugosities and long setae, apex acute. Pleura: propleura with sparse long setae; mesopleura with short decumbent setae on antero-basal region, and scarce long



Figs 140-150. *Leogorras xanthospilus* (Walker). (140) Head, lateral view. (141) Lateral process of collar. (142) Cells of membrane. (Figs 143-146) Male genitalia. (143) Pygophore, lateral view. (144) Posterior process of pygophore, posterior view. (145) Left paramere, outer view. (146) Left paramere, inner view. (Figs 147-150) Female genitalia. (147) Gonocoxite and gonapophysis VIII. (148) Gonocoxite and gonapophysis IX. (149) Styloids. (150) Tergites IX + X. Scale: 1 mm.

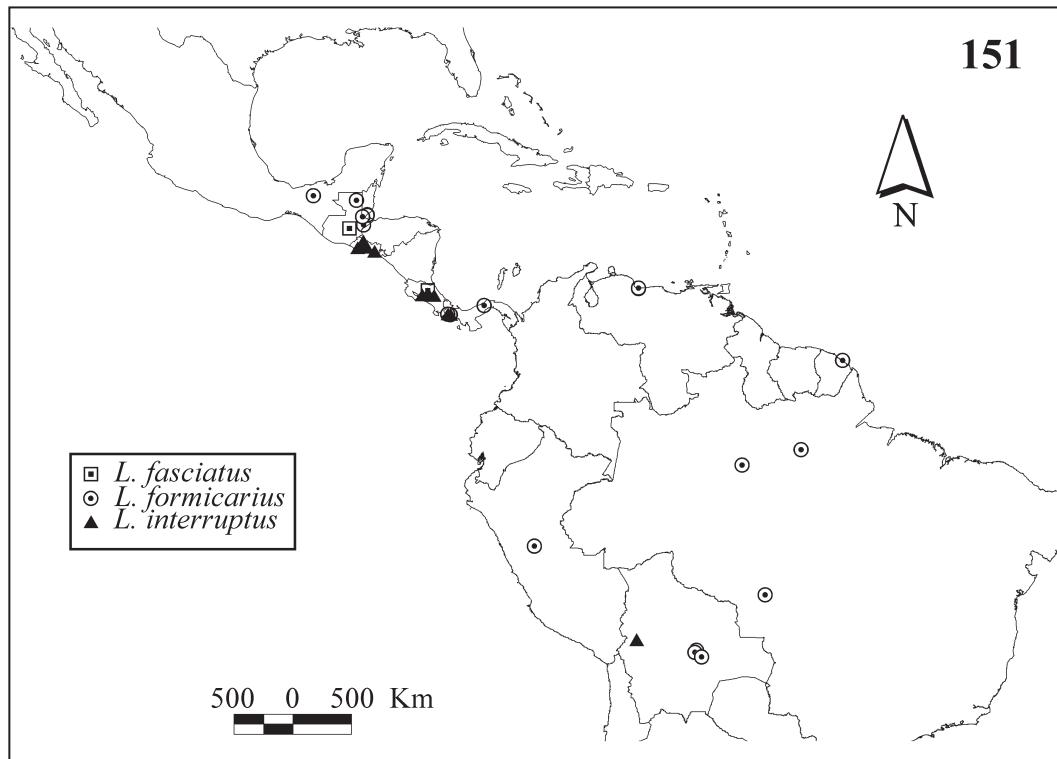


Fig. 151. Geographic distribution of *L. fasciatus*, *L. interruptus*, and *L. formicarius*.

setae, surface opaque; metapleura trapezoidal, surface with dorso-ventral rugosities. *Sterna*: prosternal processes prominent, with thick setae; meso- and metasterna keeled, suture between meso and metasterna with a setose tubercle projected backwards. Legs dark brown, with sparse long erect setae. Coxae with short decumbent setae on antero-ventral surface, with a row of long thick setae anteriorly; trochanters with similar setae besides sparse long erect paler setae. Femora I with two rows of short spines ventrally, with sparse short and long setae. Femora II: ventral surface slightly keeled, with similar spines as femora I but more irregular; femora III with scarce long erect setae. Tibiae I and II with spiniform setae along a ventral keel, widened at apex with abundant setae surrounding the fossulae spongiosa. Tibiae III elongate with abundant setae apically. Tarsi with short and long setae. *Hemelytra* not reaching apex of abdomen in females. *Hemelytra* length: male 9.00-females 8.66-9.30 (mean=9.03). Colour dark

brown, except yellowish spots on internal angle of corium, apex of corium and adjacent region of membrane, central area of membrane, and apex of external cell (Fig. 12); corium and clavus glabrous, lateral margin of corial base with scarce short erect setae. Internal cell of membrane more than half the width of external cell basally, and abruptly widened apically (Fig. 142).

Abdomen ventrally slightly keeled, with sparse semi-decumbent setae, surface polished; inter-segmental sutures smooth. Length: male 9.30-females 8.40-9.00 (mean=8.65), width: male 5.04-females 5.00-5.32 (mean=5.17). Connexiva of same colour as body, glabrous, posterior margin of segments II-IV protruding.

Male genitalia: pygophore ovoid (Fig. 143), posterior process absent (Fig. 144); parameres with short thick setae dorsally, and long thin setae posteriorly (Figs 145-146).

Female genitalia: gonocoxite and gonapophysis VIII wide, with sparse short setae, and transversal

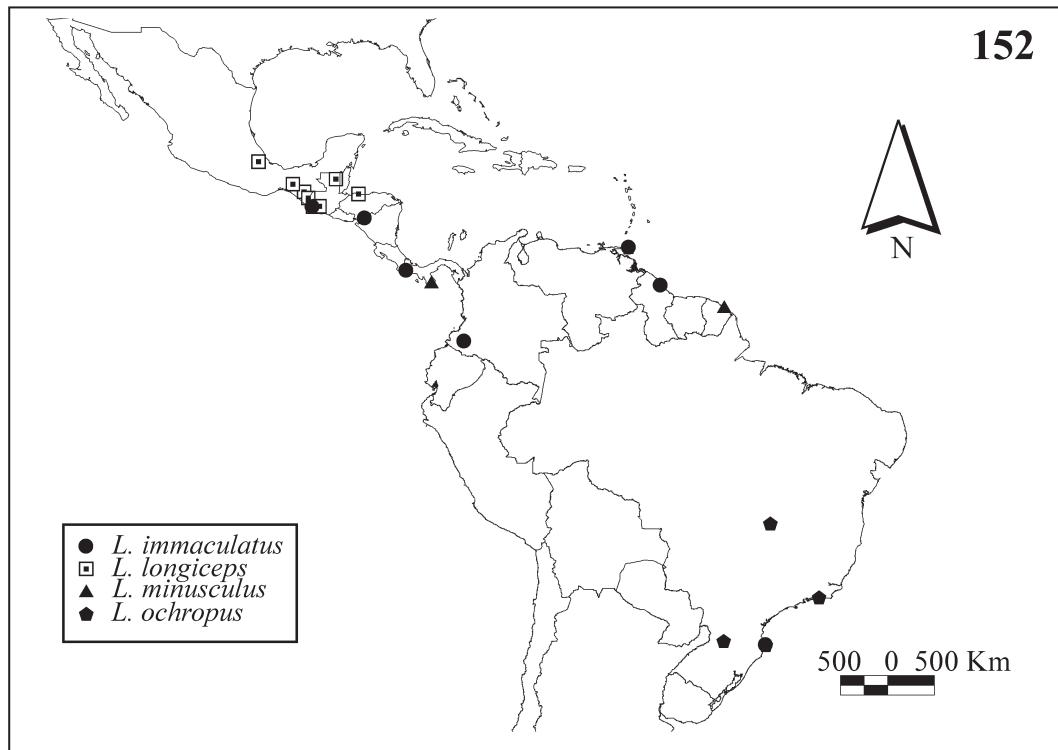


Fig. 152. Geographic distribution of *L. immaculatus*, *L. longiceps*, *L. minusculus*, and *L. ochropus*.

rugosities (Fig. 147); gonocoxite and gonapophysis IX as figure 148; styloids elongate with short setae apically (Fig. 149); tergites IX+X not completely fused, with scarce short setae, and transversal rugosities (Fig. 150).

Geographic distribution. – Brazil, and first records from Ecuador and Peru.

Type specimens examined. – Lectotype (NEW DESIGNATION): female, “type, *Reduvius xanthospilus*, 5720, BRAZIL, Ega” [3°21'59,7” S-64°42' O] (BMNH).

Additional specimens examined. – ECUADOR. Pastaza: 1 male 3 female, Río Lliquino, 1°28'15” S-77°26' O, alt. 420 msnm, P. Araujo y C. Ocampo cols., fumigación, bosque de tierra firme primario, 2-IX-1997 (MLP); 2 females, Santa Cecilia, 1°28'28” S-77°36'2” O, alt. 600 msnm, P. Araujo col., fumigación, bosque tierra firme (MLP). PERÚ.- 1 female, 21 mi W of Pucalipa, 3-X-1954, E.I. Schlinger & E.S. Ross cols. (CAS).

Observations. – The lectotype is paler and smaller than the other specimens studied (probably due to the age of the specimen).

Discussion. – This species is only known from the type locality in Brazil and from a few localities in Ecuador. *L. xanthospilus* can be confused with *L. formicarius*, due to its large size and the coloration pattern of hemelytra; but it can be distinguished by the shape of the postocular head, the shape of the lateral tubercle of the collar, and the female genitalia.

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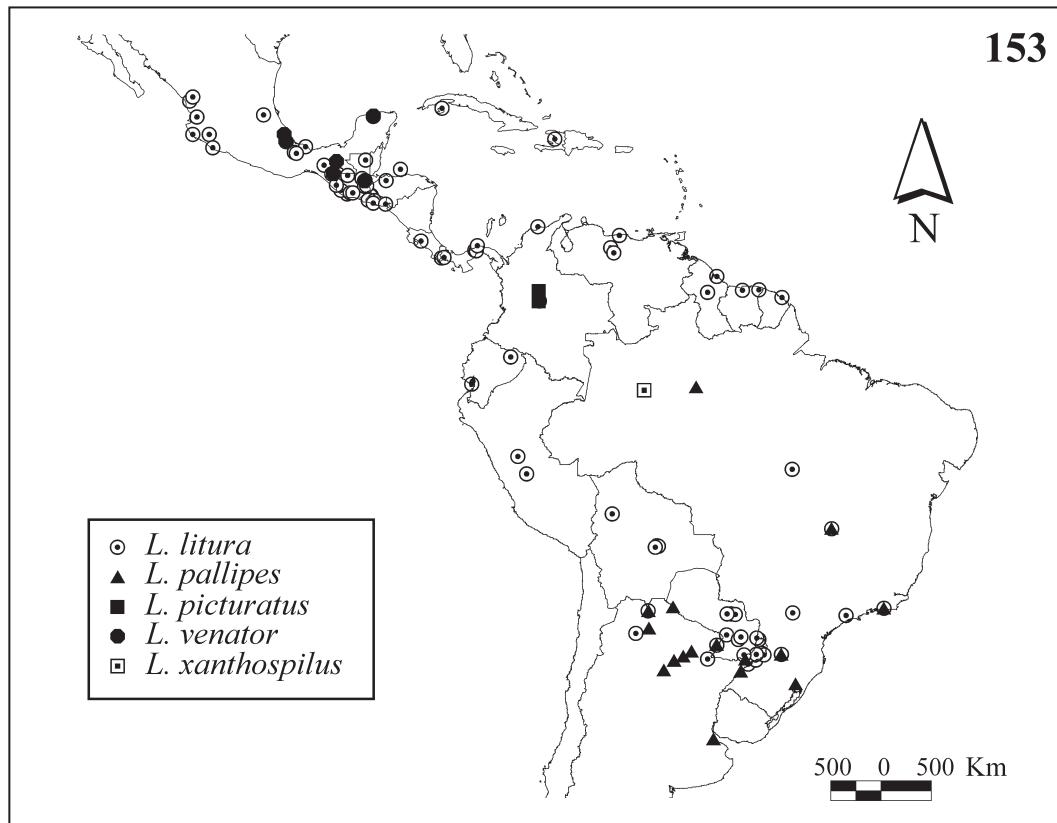


Fig. 153. Geographic distribution of *L. litura*, *L. pallipes*, *L. picturatus*, *L. venator*, and *L. xanthospilus*.

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