

Research Article / Artículo de Investigación

New records of Reduviidae (Hemiptera: Heteroptera) from Costa Rica, Ecuador, French Guiana, Paraguay, and Peru

Nuevos registros de Reduviidae (Hemiptera: Heteroptera) de Costa Rica, Ecuador, Guayana Francesa, Paraguay y Perú

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Abstract. New records of species of Reduviidae from five Neotropical countries are provided: *Notocyrthus gibbus* (Fabricius) (Harpactorinae: Harpactorini) from Costa Rica; *Kodormus bruneosus* Barber (Stenopodainae), *Ploeogaster gesana* Kirkaldy (Harpactorinae: Harpactorini), *Pseudopothea paulai* Gil-Santana (Ectrichodiinae) from Ecuador; *Leogorrus immaculatus* Champion (Reduviinae), *Myocoris nugax* Stål (Harpactorinae: Harpactorini) from French Guiana; *Zelurus tibialis tibialis* (Stål) (Reduviinae) from Paraguay; *Apiomerus elegans* Distant, *Apiomerus lituratus* Stål, *Apiomerus nitidicollis* Stål (Harpactorinae: Apiomerini), *Aristathlus regalis* Bergroth, *Cosmoclopius nigroannulatus* (Stål), *K. bruneosus*, *Montina lobata* Stål (Harpactorinae: Harpactorini), *Pothea jaguaris* (Carpintero) (Ectrichodiinae), and *Saica apicalis* Osborn & Drake (Saicinae) from Peru. This new data improves our knowledge on the distribution of this interesting relevant group of heteropterans.

Key words: Color variation; Ectrichodiini; Neotropical region; taxonomy.

Resumen. Se aportan por primera vez nuevos registros de especies de Reduviidae de cinco países neotropicales: *Notocyrthus gibbus* (Fabricius) (Harpactorinae: Harpactorini) de Costa Rica; *Kodormus bruneosus* Barber (Stenopodainae), *Ploeogaster gesana* Kirkaldy (Harpactorinae: Harpactorini), *Pseudopothea paulai* Gil-Santana (Ectrichodiinae) de Ecuador; *Leogorrus immaculatus* Champion (Reduviinae), *Myocoris nugax* Stål (Harpactorinae: Harpactorini) de Guayana Francesa; *Zelurus tibialis tibialis* (Stål) (Reduviinae) de Paraguay; *Apiomerus elegans* Distant, *Apiomerus lituratus* Stål, *Apiomerus nitidicollis* Stål (Harpactorinae: Apiomerini), *Aristathlus regalis* Bergroth, *Cosmoclopius nigroannulatus* (Stål), *K. bruneosus*, *Montina lobata* Stål (Harpactorinae: Harpactorini), *Pothea jaguaris* (Carpintero) (Ectrichodiinae) y *Saica apicalis* Osborn y Drake (Saicinae) de Perú. Estos nuevos datos mejoran nuestro conocimiento sobre la distribución de este interesante y relevante grupo de heterópteros.

Palabras clave: Ectrichodiini; región neotropical; taxonomía; variación de color.

Introduction

Reduviidae is the largest family of predaceous terrestrial true bugs (Heteroptera), with

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about 7,000 species in 24 subfamilies and is one of the three most speciose families within Hemiptera (Gil-Santana *et al.* 2015; Schuh and Weirauch 2020). Maldonado Capriles (1990), although not exhaustively, compiled country-level occurrences of species of Reduviidae, followed by several papers which sparsely provided new records or reviews of different taxa of this family, including information on their known occurrences (*e.g.*, Dougherty 1995; Gil-Santana *et al.* 2003; Melo and Coscarón 2004; Gil-Santana and Marques 2005; Forero 2006; Bérenger 2007; Gil-Santana 2007, 2008, 2014, 2019, 2020, 2022; Forero *et al.* 2008; Melo 2008; Swanson and Chordas III 2018; Mejía-Soto *et al.* 2022; Gil-Santana and Oliveira 2022, 2023).

Species level identification can be difficult across the group as significant intraspecific variation in color, occasionally at extreme range, and sometimes in structural characteristics were documented in many groups of Reduviidae, including members of the subfamilies Harpactorinae, Ectrichodiinae, Saicinae and Stenopodainae (*e.g.*, Stål 1872; Costa Lima *et al.* 1951; Gil-Santana and Marques 2005; Gil-Santana *et al.* 2003; Gil-Santana 2008, 2014, 2020, 2022; Gil-Santana and Oliveira 2023).

The present paper presents additional new records of 15 species of Reduviidae from Costa Rica, Ecuador, French Guiana, Paraguay, and Peru, with notes about some of these species extending our knowledge of the distribution of members of the family.

Material and Methods

Images of specimens deposited in the Entomological Collection of the “Museum der Natur Hamburg, LIB”, Hamburg, Germany (ZMH) (Figs. 1, 3-4, 17-19, 22) were taken by Thure Dalsgaard with a DUN-custom made stacking system (DUN Inc., CA, USA), using a Canon EOS 5DsR, and are copyright of the LIB. The original photographs were cropped, their lighting and contrast slightly adjusted but without modifying their characteristics, while the numbered scales were reduced or modified to similar simple scale bars in order to standardize them. The remaining figures were produced by the first author (HRG-S), using digital cameras (Nikon D5600 with a Nikon Macro Lens 105 mm, Sony DSC-W830 and Sony DSC-HX400V). Most of these additional specimens not deposited at ZMH examined here were or will be deposited in the “Museu Nacional da Universidade Federal do Rio de Janeiro”, Rio de Janeiro, Brazil (MNRJ). General morphological terminology mainly follows Schuh and Weirauch (2020). When describing label data, a slash (/) separates the lines and a double slash (//) different labels; acronyms of the depository collection and comments or translations to English of the label data are provided in square brackets ([]).

Additional acronyms of depository collections, not mentioned above, are the following:

BMNH: Natural History Museum, London, United Kingdom.

MZUSP: Zoological Museum of the University of São Paulo, São Paulo, Brazil.

RBINS: Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium.

Results and Discussion

Subfamily Ectrichodiinae

Tribe Ectrichodiini

Ectrichodiinae in the New World includes 24 genera and more than 100 described species (Gil-Santana *et al.* 2015, 2020; Gil-Santana 2014, 2015, 2019, 2020; Forthman and Gil-Santana 2021; Gil-Santana and Oliveira 2022). Forthman and Weirauch (2017) synonymized

Tribeloccephalinae with Ectrichodiinae, describing three new tribes, Ectrichodiini, Tribelocodiini and Abelocephalini, resulting in a new composition of Ectrichodiinae (*sensu novum*) in the New World. Ectrichodiini now includes all the genera formerly belonging to Ectrichodiinae, except *Ectrichodiella* Fracker & Bruner, 1924, which was transferred to Tribelocodiini. An updated key to the New World genera of Ectrichodiinae was presented by Forthman and Gil-Santana (2021).

Genus *Pothea* Amyot & Serville, 1843

Gil-Santana (2014, 2020) summarized the taxonomic history and discussed several characteristics of *Pothea*, which currently includes about 30 species.

***Pothea jaguaris* (Carpintero, 1980)** (Fig. 1)

Material examined. *Pothea jaguaris*. PERU. 1 male: [green printed labels]: Peru, Satipo / Prov. Jauja, Distrikt / Andamarea / 750 m. ü. M. // Okt. 1936 / K. Meskendahl leg. / Eing. Nr. 17, 1936 // [white framed printed label:] ZMH 849014; 1 female: [green printed labels]: Peru, Satipo / Prov. Jauja, Distrikt / Andamarea / 750 m. ü. M. // Okt. 1936 / K. Meskendahl leg. / Eing. Nr. 17, 1936 // [white framed printed label:] ZMH 849015 [ZMH].

Pothea jaguaris described from Bolivia (Carpintero 1980), has been recorded from Brazil (Gil-Santana 2007) and French Guiana (Gil-Santana 2014). The intra-specific variability, sexual dimorphism and the male genitalia of *Pothea jaguaris* were recorded and described by Gil-Santana (2014, 2020). The specimens deposited in the ZMH (Fig. 1) are in accordance with several specimens previously examined by Gil-Santana (2014, 2020), including the female holotype.

Distribution. Bolivia, Brazil, French Guiana, Peru (new record).

***Pseudopothea paulai* Gil-Santana, 2015** (Fig. 2)

Material examined. *Pseudopothea paulai*. ECUADOR. 1 female: [Printed labels:] ECUADOR, / Napo, Coca. / xi.xii. 1982 / G. Onore // Tropical rainforest / general collecting // Brit. Mus. / 1982–246 [BMNH].

Pseudopothea paulai was described based on a male (holotype) and a female paratype from Brazil (Gil-Santana 2015). Unfortunately, the male holotype was destroyed on the 2nd of September 2018, during the fire which destroyed most of the zoological collections, including the entire Heteroptera collection of the MNRJ (Escobar 2018). The female paratype, however, is deposited in the MZUSP (Carrenho *et al.* 2020). The female from Ecuador, deposited in BMNH collection (Fig. 2), is very similar to the paratype (Gil-Santana 2015: fig. 22).

Distribution. Brazil, Ecuador (new record).

Subfamily Harpactorinae

Harpactorinae has the largest number of genera and species of Reduviidae in the Neotropical Region and worldwide. Only two of the seven tribes included in the subfamily,

Apiomerini and Harpactorini, occur in the New World (Gil-Santana *et al.* 2015; Schuh and Weirauch 2020). These two tribes may be separated by the key provided by Gil-Santana *et al.* (2015).

Tribe Apiomerini

Currently, there are 12 extant genera in Apiomerini among which *Apiomerus* Hahn, 1831 is the largest, with more than 100 described species (Gil-Santana *et al.* 2015). Gil-Santana *et al.* (2003) provided a synopsis of the genera and biology of Apiomerini, summarized and updated by Gil-Santana *et al.* (2015), who also presented a key to their genera.



Figures 1-2. Ectrichodiinae species, dorsal view. 1. *Pothea jaguaris* (Carpintero, 1980) from Peru, male. Scale: 5.0 mm. 2. *Pseudopothea paulai* Gil-Santana, 2015 from Ecuador, female. Scale: 3.0 mm. / Especies de Ectrichodiinae, vista dorsal. 1. *Pothea jaguaris* (Carpintero, 1980) de Perú, macho. Escala: 5,0 mm. 2. *Pseudopothea paulai* Gil-Santana, 2015 de Ecuador, hembra. Escala: 3,0 mm.

Apiomerus elegans Distant, 1903 (Figs. 3-5)

Material examined. *Apiomerus elegans*. PERU. 1 female: [green handwritten labels:] Peru, Satipo / K. Meskendahl // leg. 30.3.[19]37 / Eing. 11/38 [white framed printed label:] ZMH 849017; 1 male: [green handwritten labels:] Peru, Satipo / K. Meskendahl leg. // 30.3.[19]37 / Eing- 11/38 [white framed printed label:] ZMH 849018 [ZMH]; 1 male, 1 female: PERU, Loreto, Picuroyacu, I-1988 [MNRJ].

Apiomerus elegans was described from the Amazonian region of Brazil ("Madeira" river) (Distant 1903), with further records from the same region of this country only 398

(Costa Lima *et al.* 1951; Gil-Santana *et al.* 2003). The pale yellowish to whitish hind lobe of the pronotum (Figs. 3-5) is remarkable in this large species. The reddish markings on femora and tibiae (Figs. 3, 5) are variably absent in some individuals (Fig. 4) as recorded by Costa Lima *et al.* (1951).

Distribution. Brazil, Peru (**new record**).

Apiomerus lituratus Stål, 1872
(Figs. 6-7)

Material examined. *Apiomerus lituratus*. 1 male: PERU, Iquitos, IX.1997, Sanchez, P. leg. [MNRJ].

Apiomerus lituratus has been recorded only from Amazonian region of Brazil (Stål 1872; Walker 1873; Costa Lima *et al.* 1951; Gil-Santana *et al.* 2003). Although a certain range of variation of the reddish or pale markings has been recorded for the species (Stål 1872; Walker 1873; Costa Lima *et al.* 1951), the pale sublateral margins of the hind lobe of the pronotum and the small linear markings at the apex of the corium are commonly present (Figs. 6-7).

Distribution. Brazil, Peru (**new record**).

Apiomerus nitidicollis Stål, 1872
(Fig. 8)

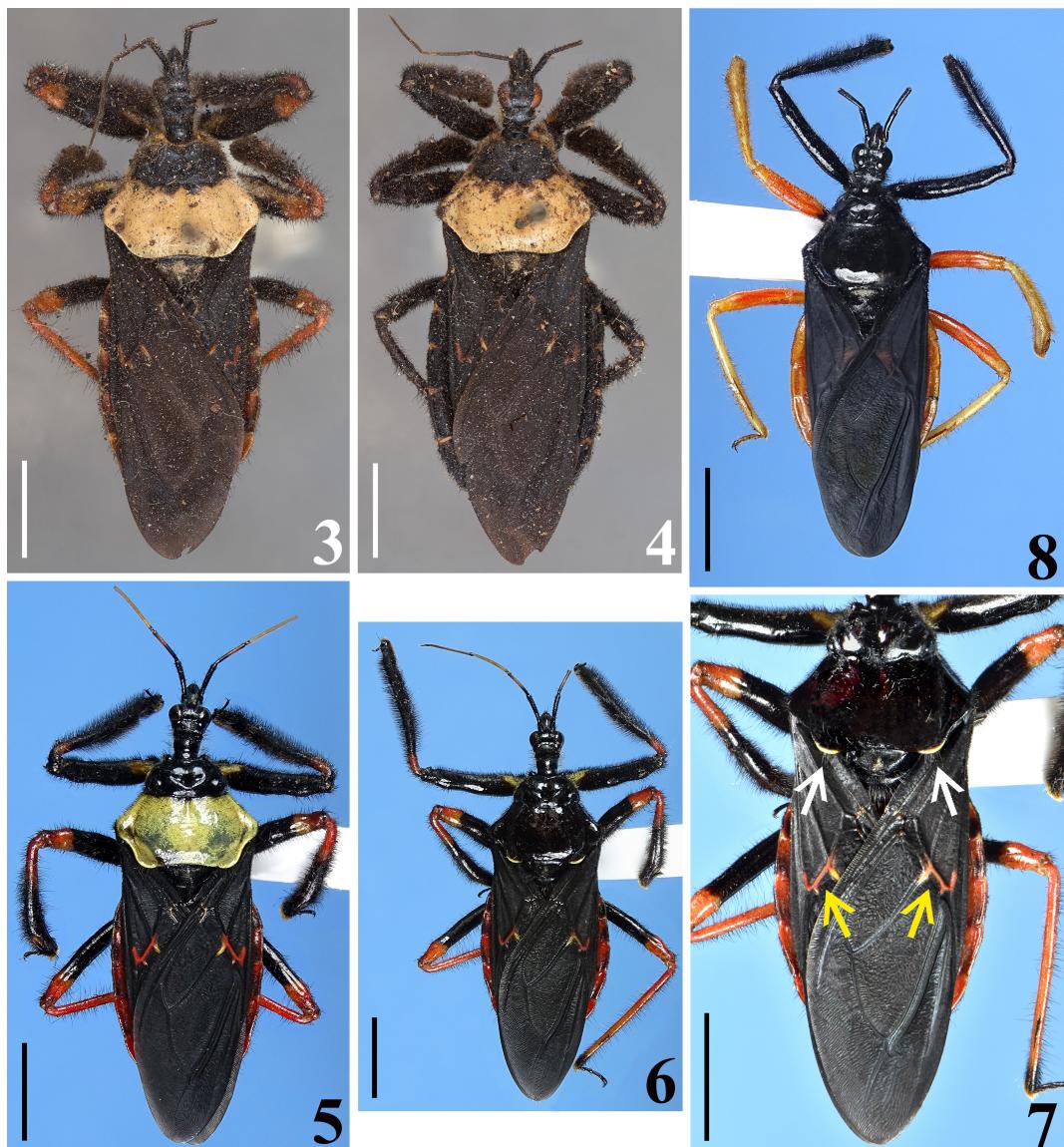
Material examined. *Apiomerus nitidicollis*. 1 female: PERU, Loreto, Picuroyacu, I-1988 [MNRJ].

Apiomerus nitidicollis was described based on specimens from northern Brazil (Stål 1872). This species was further recorded from Suriname (Costa Lima *et al.* 1951), Colombia (Gil-Santana *et al.* 2003) and French Guiana (Gil-Santana 2022). Based on the color of the coria of hemelytra of *A. nitidicollis*, Stål (1872) named two varieties of it: "var. *nigripennis*", with the hemelytra completely black and "var. *discopterus*", with the central portion of the coria golden yellowish. The middle and hind legs and the abdomen were described as mostly yellowish and reddish respectively by Stål (1872) and Walker (1873), denoting color or tone variations of the species. The female examined here agrees well with the descriptions and diagnosis of *A. nitidicollis*, belonging to the variety with the hemelytra blackish. The femora and connexivum are mostly reddish, while the tibiae are yellowish.

Distribution. Brazil, Colombia, French Guiana, Peru (**new record**), Suriname.

Tribe Harpactorini

Harpactorini is the most speciose group within Reduviidae, with about 53 genera in the Neotropics (Gil-Santana *et al.* 2015; Gil-Santana 2022; Gil-Santana and Oliveira 2023). Several taxa of this tribe are recognized as being involved in mimicry systems with Hymenoptera, resembling bees or wasps in general body and wing coloration, as well as characteristics of physical proportions (e.g., Hogue 1993; Gil-Santana 2008; Gil-Santana *et al.* 2017; Gil-Santana and Oliveira 2023).



Figures 3-8. *Apiomerus* species from Peru, dorsal view. Scales: 5.0 mm. 3-5. *Apiomerus elegans* Distant, 1903. 3, 5. Males. 4. Female. 6-7. *Apiomerus lituratus* Stål, 1872, male. 7. Pronotum and hemelytra, the white arrows point to the pale sublateral margins of the hind lobe, and the yellow arrows to the small linear markings at the apex of the corium. 8. *Apiomerus nitidicollis* Stål, 1872, female. / Especies de *Apiomerus* de Perú, vista dorsal. Escalas: 5,0 mm. 3-5. *Apiomerus elegans* Distant, 1903. 3, 5. Machos. 4. Hembra. 6-7. *Apiomerus lituratus* Stål, 1872, macho. 7. Pronoto y hemelítritos, las flechas blancas apuntan a los márgenes sublaterales pálidos del lóbulo posterior y las flechas amarillas a las pequeñas marcas lineales en el vértice del corium 8. *Apiomerus nitidicollis* Stål, 1872, hembra.

Aristathlus regalis Bergroth, 1913
(Figs. 9-10)

Material examined. *Aristathlus regalis*. 2 males: PERU, Amazonas, Rodríguez de Mendoza, I.1997, P. Sanchez, leg. [MNRJ].

Aristathlus Bergroth, 1913 and its two species, *A. imperatorius* Bergroth, 1913 and *A. regalis* Bergroth, 1913 were revised by Forero *et al.* (2008). Subsequently, *A. imperatorius* was recognized as a junior synonym of *Zelus iopterus* (Perty, 1834), resulting in the new combination *A. iopterus* (Perty, 1834) (Gil-Santana and Forero 2015). *Aristathlus regalis* was described from French Guiana (Bergroth 1913), and further recorded from Brazil (Gil-Santana 2007), Colombia and Suriname (Forero *et al.* 2008). The species is generally blackish with yellowish markings, with some interindividual variation, such as the extent of the yellowish markings on the fore lobe of pronotum; the scutellum is completely yellowish or darkened on its median portion (Figs. 9-10).

Distribution. Brazil, Colombia, French Guiana, Peru (**new record**), Suriname.

Cosmoclopius nigroannulatus (Stål, 1860)
(Figs. 11-12)

Material examined. *Cosmoclopius nigroannulatus*. 2 males, 2 females: PERU, Amazonas, Rodríguez de Mendoza, IV.1997, P. Sanchez, leg. [MNRJ].

Cosmoclopius nigroannulatus has been observed preying upon numerous immature or adult insects with economic or even medical importance and commonly found associated with tobacco plants (*Nicotiana tabacum* L.) (Marques *et al.* 2006). It has been recorded from Argentina, Bolivia, Brazil, Paraguay, and Uruguay (Fracker and Bruner 1924; Maldonado Capriles 1990; Melo and Coscarón 2004; Melo *et al.* 2023). The identification of the specimens examined here (Figs. 11-12) follows Cobben and Wygodzinsky (1975) and Melo and Coscarón (2004).

Distribution. Argentina, Bolivia, Brazil, Paraguay, Peru (**new record**), Uruguay.

Montina lobata Stål, 1859
(Fig. 13)

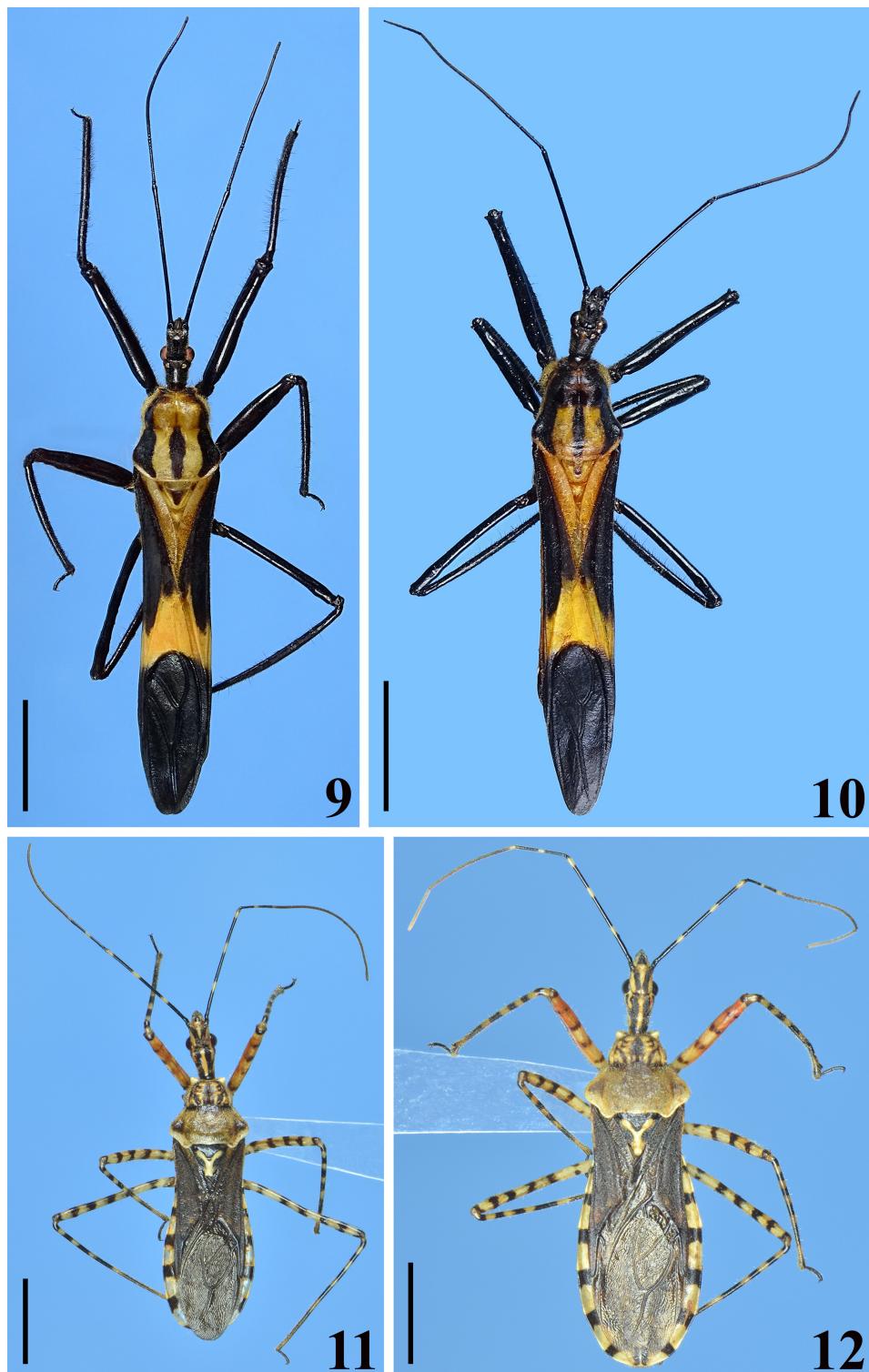
Material examined. *Montina lobata*. 2 males. PERU, Satipo, X-1996, P. Sanchez, leg. [MNRJ].

Montina lobata was previously recorded from Brazil, Ecuador and Colombia (Stål 1872; Maldonado Capriles 1990; Gil-Santana 2019; Mejía-Soto *et al.* 2022). The pronotum is pale yellow, sometimes densely setose; the connexival margins are darkened, enlarged as rounded lobes, and commonly marked by a pale band at each posterior margin (Fig. 13), allowing to identify this species. Additional characteristics were provided by Mejía-Soto *et al.* (2022) and agree well with the specimens examined here.

Distribution. Brazil, Colombia, Ecuador, Peru (**new record**).

Myocoris nugax Stål, 1872
(Figs. 14-16)

Material examined. *Myocoris nugax*. 1 male, 1 female: FRENCH GUIANA, Bélizion, XII-1997, H. Gaspard, leg. [MNRJ].



Figures 9-12. Harpactorini species from Peru, dorsal view. **9-10.** *Aristathlus regalis* Bergroth, 1913, males. Scales: 5.0 mm. **11-12.** *Cosmoclopius nigroannulatus* (Stål, 1860). Scales: 3.0 mm. **11.** Male. **12.** Female. / Especies de Harpactorini de Perú, vista dorsal. **9-10.** *Aristathlus regalis* Bergroth, 1913, macho. Escalas: 5,0 mm. **11-12.** *Cosmoclopius nigroannulatus* (Stål, 1860). Escalas: 3,0 mm. **11.** Macho. **12.** Hembra.

All three species of *Myocoris* Burmeister, 1835 are generally similar, have been considered as mimetic of ichneumonoids wasps (Maldonado Capriles and Lozada 1992; Gil-Santana and Oliveira 2023), and were described from Rio de Janeiro, Brazil (Stål 1872). Haviland (1931) recorded “*Xystonyx nugax* (Burm.)” [a wrong combination and authorship] from Guyana, stating that “these Ichneumonid-like Harpactorinae are difficult to determine”, leading to the uncertainty of the alleged occurrence of *M. nugax* in Guyana. Fracker and Bruner (1924) recorded this species from localities of the Amazonian region in Brazil (“Teffe”) and in Peru (“Iquitos”), without providing any details on the specimens upon which such records were based on. The male (Fig. 14) and female (Figs. 15-16) examined here showed to be very similar.

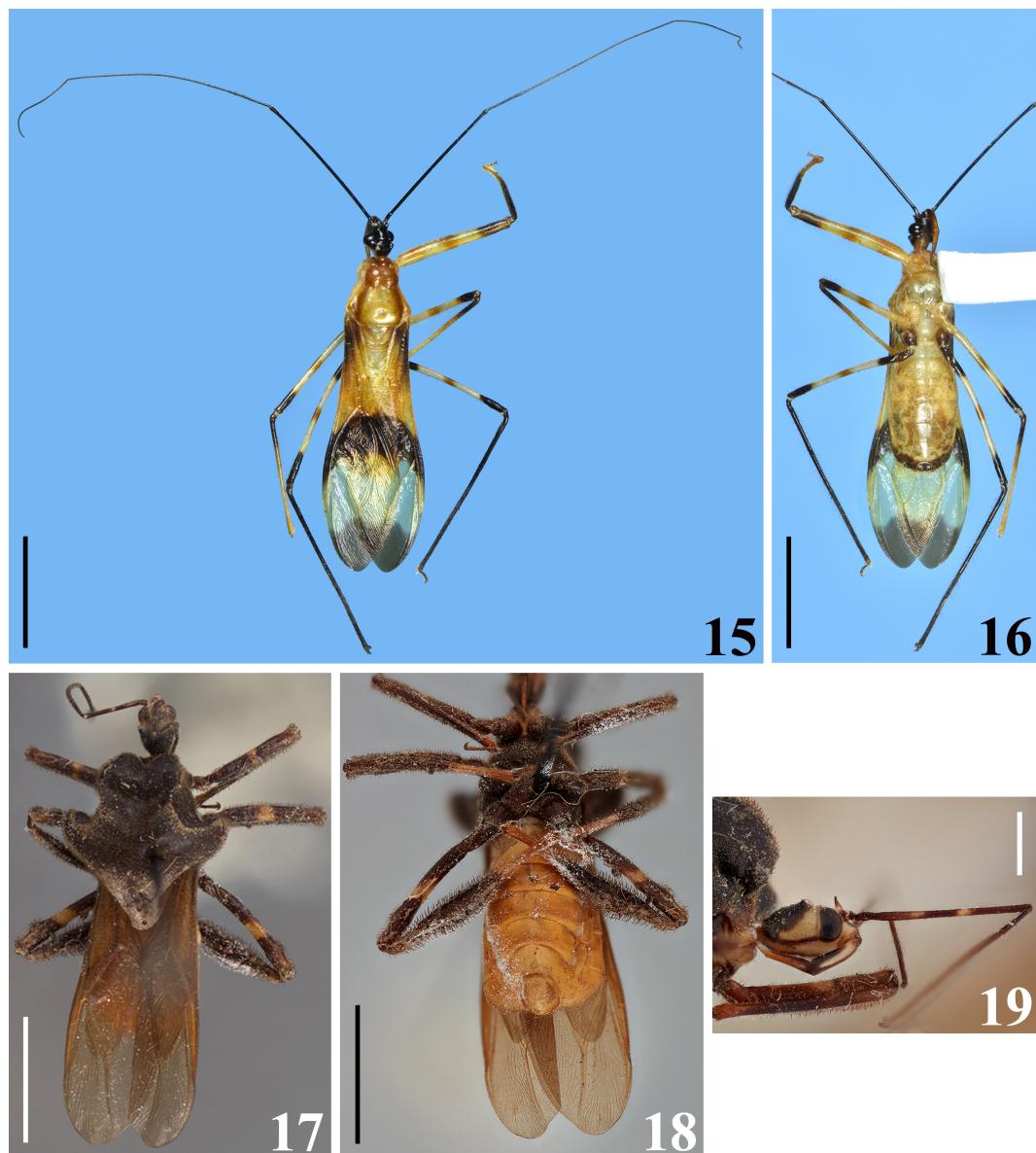
Distribution. Brazil, French Guiana (**new record**), Guyana (?), Peru.



Figures 13-14. Dorsal view. **13.** *Montina lobata* Stål, 1859 from Peru, male. Scale: 5.0 mm. **14.** *Myocoris nugax* Stål, 1872 from French Guiana, male. Scale: 3.0 mm. / Vista dorsal. **13.** *Montina lobata* Stål, 1859 de Perú, macho. Escala: 5,0 mm. **14.** *Myocoris nugax* Stål, 1872 de Guayana Francesa, macho. Escala: 3,0 mm.

***Notocyrtus gibbus* (Fabricius, 1803)**
(Figs. 17-19)

Material examined. *Notocyrtus gibbus*. COSTA RICA. 1 male: [handwritten torn label:] Costa Rica / Farm Hamburg a. Reventazon / bei S. Jose ...1924 [?] / F. Nevermann leg. [white framed printed label:] ZMH 849006; 1 female: [printed pale brownish label:] Farm Hamburg am / Reventazón. / 12-30 km v. Atlantik / [handwritten]: 14.10. [printed:] 1926 // [printed pale green label:] F. Nevermann leg. / Eng. Nr. 99.1926 [white framed printed label:] ZMH 849007 [ZMH].



Figures 15-19. **15-16.** *Myocoris nugax* Stål, 1872 from French Guiana, female. Scales: 5.0 mm. **15.** Dorsal view. **16.** Ventral view. **17-19.** *Notocyrtus gibbus* (Fabricius, 1803) from Costa Rica. **17-18.** Male. Scales: 3.0 mm. **17.** Dorsal view. **18.** Thorax and abdomen, ventral view. **19.** Female, head, lateral view. Scale: 1.0 mm. / *Myocoris nugax* Stål, 1872 de Guayana Francesa, hembra. Escalas: 5,0 mm. **15.** Vista dorsal. **16.** Vista ventral. **17-19.** *Notocyrtus gibbus* (Fabricius, 1803) de Costa Rica. **17-18.** Macho. Escalas: 3,0 mm. **17.** Vista dorsal. **18.** Tórax y abdomen, vista ventral. **19.** Hembra, cabeza, vista lateral. Escala: 1,0 mm.

Notocyrtus Burmeister, 1835 currently includes 24 valid species, all of which considered as mimetic of meliponine bees (Haviland 1931; Jackson 1973; Gil-Santana 2008). Subsequent papers with descriptions of species or other information posterior to the revisions of Carvalho and Costa (1992, 1993) of the genus, were listed by Gil-Santana (2022). *Notocyrtus gibbus* (Fabricius, 1803) had already been recorded from Bolivia, Brazil, French Guiana, Guyana and Paraguay (Stål 1872; Lethierry and Severin 1896; Haviland 1931; Carvalho and

Costa 1993; Gil-Santana 2008). The male (Figs. 17-18) and the female (Fig. 19) from Costa Rica agree well with the redescription provided by Carvalho and Costa (1993), except by the sternites. While in the examined specimens the sternites are completely pale (Fig. 18), Carvalho and Costa (1993) described the abdomen as black with the posterior portion of segments II to IV pale. We consider this as a color variation of the species, as commonly recorded in other species of Harpactorinae (e.g., Gil-Santana 2022), including *Notocyrtus* spp., in which the variation in color was hypothesized as being a result of mimicking different meliponine bees in different localities (Jackson 1973).

Distribution. Bolivia, Brazil, Costa Rica (**new record**), French Guiana, Guyana, Paraguay.

Ploeogaster gesana Kirkaldy, 1909
(Fig. 20)

Material examined. *Ploeogaster gesana*. 2 males: ECUADOR, Narupa, Napo Province, 1,200 m, 12.ii.1996, Juán Salvador leg. [MNRJ].

Ploeogaster gesana was originally described from an unspecified place ("Amérique méridionale" [=South America] (Lepeletier and Serville 1825). This generalist record of occurrence was repeated by subsequent authors (e.g., Amyot and Serville 1843; Stål 1872; Lethierry and Severin 1896; Wygodzinsky 1949; Maldonado Capriles 1990), until Gil-Santana (2022) that recorded the species from French Guiana. It is noteworthy that *P. gesana* was described as *Reduvius geniculatus* Lepeletier & Serville, 1825. Because this name was preoccupied by *Reduvius geniculatus* Latreille, 1811 (currently, *Panstrongylus geniculatus*; Triatominae), Kirkaldy (1909) created the new specific name to replace it.

Distribution. Ecuador (**new record**), French Guiana.

Subfamily Reduviinae

Reduviinae currently includes 14 Neotropical genera, which can be separated by the key provided by Gil-Santana *et al.* (2015).

Leogorras Stål, 1859

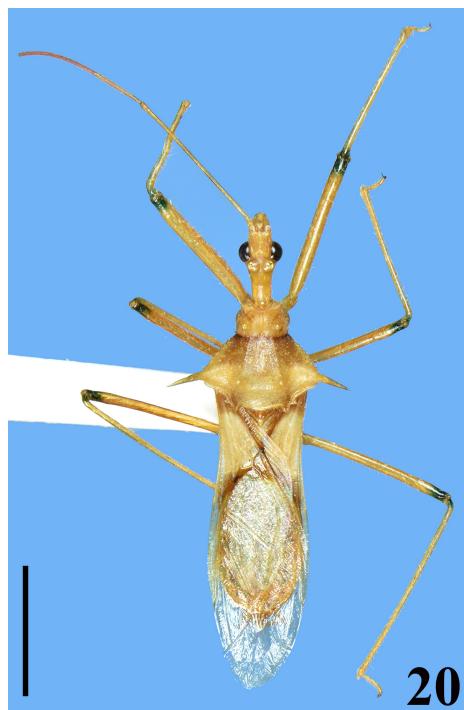
A revision of *Leogorras* and a key to the current 14 species of the genus were provided by Melo (2007). The previously known geographical distribution of the species follows Melo (2007).

Leogorras immaculatus Champion, 1899
(Fig. 21)

Material examined. *Leogorras immaculatus*. 2 females. FRENCH GUIANA, Bélizou, XII-1997, H. Gaspard, leg. [MNRJ].

Leogorras immaculatus is easily recognized because it is the only species of *Leogorras* with unicolored hemelytra (Melo 2007) (Fig. 21).

Distribution. Colombia, French Guiana (**new record**), Guatemala, Guyana, Honduras, Panama, and Trinidad.



20



21



22

Figures 20-22. Dorsal view. **20.** *Ploeogaster gesana* Kirkaldy, 1909 from Ecuador, male. Scale: 5.0 mm. **21.** *Leogorras immaculatus* Champion, 1899 from French Guiana, female. Scale: 3.0 mm. **22.** *Zelurus tibialis tibialis* (Stål, 1860) from Paraguay, male. Scale: 5.0 mm. / Vista dorsal. **20.** *Ploeogaster gesana* Kirkaldy, 1909 de Ecuador, macho. Escala: 5,0 mm. **21.** *Leogorras immaculatus* Champion, 1899 de Guayana Francesa, hembra. Escalas: 3,0 mm. **22.** *Zelurus tibialis tibialis* (Stål, 1860) de Paraguay, macho. Escala: 5,0 mm.

***Zelurus tibialis tibialis* (Stål, 1860)**
 (Fig. 22)

Material examined. *Zelurus tibialis tibialis*. PARAGUAY. 1 male: [green printed label:] Paraguay, Hohenau / Prov. Alto Parana / H. Jacob leg. / Eing. Nr. 5, 1932 [white framed printed label:] ZMH 849016 [ZMH].

Zelurus tibialis was described based on females from state of Rio de Janeiro, Brazil (Stål 1860). Lent and Wygodzinsky (1945) described a subspecies, *Z. tibialis freitasi*, and provided a short redescription of the nominotypical subspecies, based on males from Rio de Janeiro and the neighbouring state of São Paulo.

Distribution. Brazil, Paraguay (**new record**).

Subfamily Saicinae

***Saica apicalis* Osborn & Drake, 1915**
 (Figs. 23-25)

Material examined. *Saica apicalis*. 1 female. PERU, Amazonas, Rodríguez de Mendoza, IV.1997, P. Sanchez, leg. [MNRJ].

Saica apicalis was described from Guatemala (Osborn and Drake 1915), and has been recorded from several Neotropical countries: Argentina, Bolivia, Brazil, French Guiana and Panama (McAtee and Malloch 1923; Maldonado Capriles 1990; Melo and Coscarón 1994; Gil-Santana and Marques 2005; Gil-Santana 2008). Elkins (1951) recorded this species from Texas, USA, based on a single specimen collected at light. However, Blinn (1994) considered the presence of *S. apicalis* in Texas could be a result of an accidental introduction of an exotic species, or a labeling error. Therefore, its natural occurrence in the USA remains to be confirmed. The variability of posterior pronotal spines, from long to imperceptible, in *S. apicalis*, was recorded by Gil-Santana and Marques (2005). The female examined here (Figs. 23-25) showed to have short posterior pronotal spines (Fig. 24). The presence of three completely closed cells, including the basal cell, in the forewing (Fig. 25), as recorded in the specimen from Peru, was considered as a diagnostic characteristic to the species by McAtee and Malloch (1923).

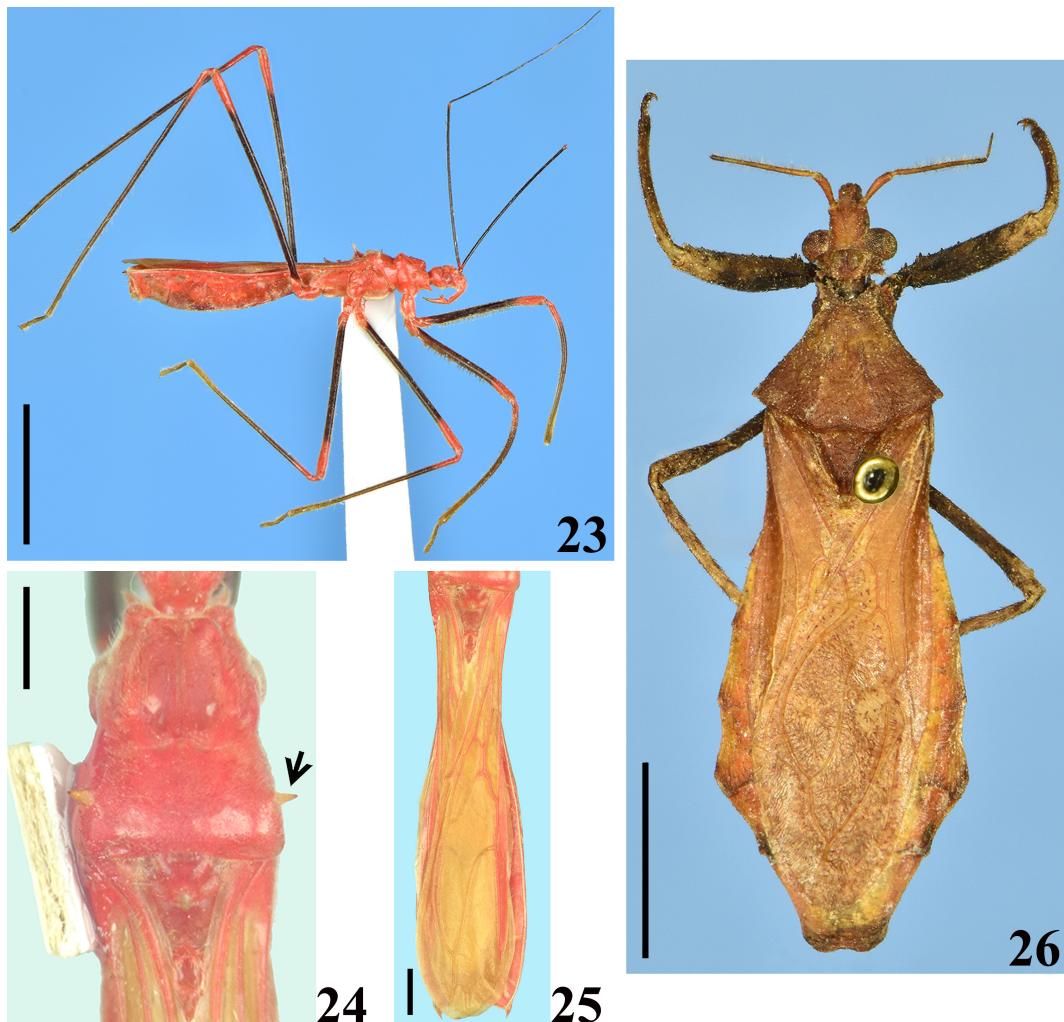
Distribution. Argentina, Bolivia, Brazil, French Guiana, Guatemala, Panama, Peru (**new record**), USA (?).

Subfamily Stenopodainae

***Kodormus bruneosus* Barber, 1930**
 (Fig. 26)

Material examined. *Kodormus bruneosus*. 1 male. ECUADOR, Narupa, Napo Province, 1,200 m, 12.ii.1996, Juán Salvador leg. [MNRJ]; PERU. 1 male: [red label with a smaller white label glued on bottom right; both printed labels:] [underlined on top]: *Coll. R. I. Sc. N. B.* / [on top left:] Pérou; [on the smaller label:] Peru 700 m / Chanchamayo / 20.X.1960 // [printed white label:] *Kodormus / brunneus* [sic] / Barber / JMaldonadoC.85 // [printed white label:] *Kodormus / [handwritten:] bruneosus* / Gil-Santana det., [handwritten:] [20] 19 [RBINS].

Distribution. Panama, Guyana (Barber 1930), French Guiana (Villiers 1971), Trinidad and Tobago, Venezuela (Giacchi 1985), Bolivia (Maldonado Capriles 1990), Colombia (Forero 2006), Ecuador and Peru (**new records**).



Figures 23-26. 23-25. *Saica apicalis* Osborn & Drake, 1915 from Peru, female. 23. Lateral view. Scale: 5.0 mm. 24-25. Dorsal view. Scales: 1.0 mm. 24. Pronotum and scutellum, the arrow points to the right posterior pronotal spine. 25. Scutellum and forewings. 26. *Kodormus bruneosus* Barber, 1930, male from Peru, dorsal view. Scale: 5.0 mm. / 23-25. *Saica apicalis* Osborn & Drake, 1915 de Perú, hembra. 23. Vista lateral. Escala: 5,0 mm. 24-25. Vista dorsal. Escalas: 1,0 mm. 24. Pronoto y escutelo, la flecha apunta a la espina pronotal posterior derecha. 25. Escutelo y alas anteriores. 26. *Kodormus bruneosus* Barber, 1930, macho de Perú, vista dorsal. Escala: 5,0 mm.

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