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RESEARCH PAPER

Taxonomic revision of *Montina* (Hemiptera: Heteroptera: Reduviidae) from Colombia with description of three new species

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Abstract. The Neotropical assassin bug genus *Montina* Amyot & Serville, 1843 (Reduviidae: Harpactorinae) is revised for Colombia. *Montina* has not been adequately explored taxonomically, with its last described species published in 1867. It has ten valid species distributed in tropical areas of Central and South America, but none of them have been formally recorded from Colombia. We describe three new species, *M. calarca* Mejía-Soto & Forero sp. nov., *M. gladiator* Mejía-Soto & Forero sp. nov., *M. tikuna* Mejía-Soto & Forero sp. nov., and report seven species as new records for the country: *M. confusa* (Stål, 1859), *M. distincta* (Stål, 1859), *M. fumosa* (Stål, 1867), *M. lobata* Stål, 1859, *M. ruficornis* (Fabricius, 1803), *M. scutellaris* Stål, 1859, and *M. testacea* (Stål, 1859). *Montina calarca* sp. nov. is distinguished by the reddish coloration with black head and legs; densely setose pronotum; connexival margin rounded on segments 4, 5, and 6 without protuberances, connexivum black with a narrow red band on margin; and translucent yellow membrane with hyaline cells and darkened veins. *Montina gladiator* sp. nov. is distinguished by the red coloration, with black legs, scutellum, and abdomen; connexival margin 4–5 lobed, 6 straight, segments 2–4 with acute posterior process on each segment, connexivum dark brown to black with a narrow red band on its margin. *Montina tikuna* sp. nov. is distinguished by the reddish-brown coloration, with black scutellum and abdomen; connexival margin nearly straight, segments 2–4 with small posterior acute process, 5–6 with obtuse process, connexivum black; ventral laterotergites only with black scattered erect setae. New characters help delimit *Montina* and differentiate it from *Ploeogaster* Amyot & Serville, 1843, its most similar genus. For all species we provide a diagnosis, images, documentation of genitalia, and distribution maps. A key to all the species of *Montina* is provided.

Key words. Hemiptera, Heteroptera, Reduviidae, Harpactorini, genitalia, new record, species discovery, Colombia, Neotropical Region, South America

Resumen. Se revisa el género neotropical de chinches asesinas *Montina* Amyot & Serville, 1843 (Reduviidae: Harpactorinae) para Colombia. *Montina* no ha sido adecuadamente explorado taxonómicamente, con su última especie descrita en 1867. Tiene diez especies válidas distribuidas en áreas tropicales de Centro y Sudamérica, pero ninguna ha sido registrada formalmente para Colombia. Describimos tres especies nuevas, *M. calarca* Mejía-Soto & Forero sp. nov., *M. gladiator* Mejía-Soto & Forero sp. nov., *M. tikuna* Mejía-Soto & Forero sp. nov., y reportamos siete nuevos registros para el país: *M. confusa* (Stål, 1859), *M. distincta* (Stål, 1859), *M. fumosa* (Stål, 1867), *M. lobata* Stål, 1859, *M. ruficornis* (Fabricius, 1803), *M. scutellaris* Stål, 1859 y *M. testacea* (Stål, 1859). *Montina calarca* sp. nov. se distingue por la coloración rojiza con la cabeza y patas negras; pronoto densamente setoso; margen conexival redondeado en los segmentos 4, 5 y 6 sin protuberancias, conexivo negro con una banda roja angosta en el margen; y membrana amarilla translúcida con celdas hialinas y venas oscurecidas.

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Montina gladiator sp. nov. se distingue por la coloración roja, con patas, escutelo y abdomen negros; margen conexival 4–5 lobulado, 6 recto, segmentos 2–4 con proceso posterior agudo en cada segmento, conexivo marrón oscuro a negro con una banda roja angosta en su margen. *Montina tikuna* sp. nov. se distingue por la coloración marrón rojiza, con escutelo y abdomen negros; margen conexival casi recto, segmentos 2–4 con un pequeño proceso agudo posterior, 5–6 con un proceso obtuso, conexivo negro; laterotergitos ventrales solo con setas erectas dispersas negras. Nuevos caracteres morfológicos ayudan a delimitar *Montina*, y permiten diferenciarlo de *Ploeogaster* Amyot & Serville, 1843, el género más similar. Para todas las especies proporcionamos una diagnosis, imágenes, documentación de la genitalia, y mapas de distribución. Se propone una clave para todas las especies de *Montina*.

Zoobank: http://zoobank.org/urn:lsid:zoobank.org:pub:EEAA3944-FB3B-473E-8A56-F1686D7F71B0

Introduction

Reduviidae is the second largest family within Heteroptera and the most speciose predatory group, with about 7,000 described species in 25 subfamilies (Maldonado 1990, Weirauch et al. 2014). It has a cosmopolitan distribution with the greatest diversity found in the tropics (Maldonado 1990, Weirauch et al. 2014). In Colombia, 15 subfamilies represented by about 120 genera have been so far recorded (Forero 2004, 2006, 2011; Maldonado 1990; D. Forero, unpubl. data). The great morphological diversity found in Reduviidae reflects their adaptation to a great variety of terrestrial environments, like termite mounds, mammal and reptile nests, spiderwebs, foliage, leaf litter, tree bark, among others (Bérenger & Pluot-Sigwalt 1997; Hwang & Weirauch 2012; Miller 1953, 1956). Nearly all Reduviidae species are predators of other arthropods, except members of the Triatominae, which are hematophagous, with some species being efficient vectors of the euglenozoan *Trypanosoma cruzi* (Chagas, 1909), which causes Chagas disease in humans (Lent & Wygodzinsky 1979, Molina et al. 2000). In Colombia, Reduviidae species are found from sea level up to 3,200 meters above sea level, in habitats ranging from tropical wet forest to high Andean forest and Paramo (Castro-Huertas & Forero 2017, Forero 2004).

Harpactorinae, with nearly 3,000 described species and 320 genera, is the most speciose subfamily of Reduviidae (Maldonado 1990, Weirauch et al. 2014). Harpactorinae have been considered a monophyletic group in several studies (Hwang & Weirauch 2012, Weirauch 2008, Weirauch & Munro 2009), but the monophyly and the relationship of the seven tribes (Apiomerini, Diaspidiini, Ectinoderini, Harpactorini, Rhaphidosomini, Tegeini, and Dicrotelini), are still debated, Harpactorini being polyphyletic with respect to some of the other tribes (Zhang & Weirauch 2014, Zhang et al. 2016).

Harpactorini species are mostly diurnal predators of other arthropods (Miller 1956, Weirauch et al. 2014) frequently found on the vegetation (Louis 1974), even in agricultural crops (Sahayaraj 2014). This has led to an increased interest in using harpactorine species as potential agents of biological control of agricultural pests (Grundy 2007; Grundy & Maelzer 2000, 2003; Sahayaraj & Balasubramanian 2016). Research towards that goal in the Neotropical Region has been modest, despite some taxa exhibiting promising biological attributes (e.g., Azevedo & Nascimento 2009, Dias et al. 2012, Gámez-Virués & Eben 2005, Giraldo-Jaramillo et al. 2011, Jahnke et al. 2002). Advance in this area is in part hampered by a lack of adequate species delimitation or ease of species identification, an issue that can be resolved by comprehensive taxonomic treatments of the species involved.

In the Neotropics, of the 52 native genera present, less than a third have been thoroughly treated taxonomically (Forero 2012, Forero et al. 2008, Gil-Santana 2015, Gil-Santana & Forero 2009, McPherson & Ahmad 2011). One of the genera that has never been revised taxonomically is *Montina* Amyot & Serville, 1843; which has ten described species, and it has been recorded from Panama, Costa Rica, French Guiana, Guyana, Brazil, Ecuador, and Peru (Amyot & Serville 1843; Champion 1899; Gil-Santana 2019; Maldonado 1990; Stål 1859, 1867, 1872). For Colombia, no species has been formally recorded, although the genus has been mentioned from the country before (Fig. 1) (e.g., Ayala et al. 2013, Guevara & Jiménez 2018, León Martínez & Guevara Agudelo 2006, Quiroz & Carmona 2011).

Amyot & Serville (1843) described *Montina* to accommodate *Reduvius sinuosus* Lepeletier & Serville, 1825. They also described *Ploeogaster* as new genus, indicating that it was very similar to *Montina*, including two species (Amyot & Serville 1843), of which *Ploeogaster mammosus* Amyot & Serville, 1843 was subsequently designated as its type species (Wygodzinsky 1949). The taxonomic history of *Montina* and *Ploeogaster* is complex and entwined. After the description of *Montina*, Stål (1859) described three additional species in the genus, and three species in *Ploeogaster*. Stål (1865) erected the genus *Aristippus* indicating that the species described by him in *Ploeogaster* should be transferred to this new genus, and that what Amyot & Serville (1843) described as *Ploeogaster* should be considered as a different genus. Stål (1867) described two new species within *Aristippus*, listing later (Stål 1868) five species to be included in this genus, including *Zelus ruficornis* Fabricius, 1803. The type species of *Aristippus* was subsequently designated as *Aristippus fenestratus* Stål, 1867 (Putshkov et al. 1987). Stål (1872) later treated *Aristippus* as a subgenus of *Montina*,

whereas Walker (1873) considered it a synonym of his widely conceived *Ploeogaster*. In the more recent catalogs of Reduviidae, there are ten valid species included in *Montina* (Maldonado 1990, Putshkov & Putshkov 1988). Putshkov & Putshkov (1988) considered *Aristippus* as a subgenus of *Montina*, whereas Lethierry & Severin (1896) and Maldonado (1990) both considered *Aristippus* as a synonym of *Montina*. We follow the proposal of Lethierry & Severin (1896) and Maldonado (1990) of disregarding subgenera of *Montina*, and to recognize ten valid species: *M. confusa* (Stål, 1859), *M. distincta* (Stål, 1859), *M. fenestrata* (Stål, 1867), *M. fumosa* (Stål, 1867), *M. lobata* Stål, 1859, *M. nigripes* Stål, 1859, *M. ruficornis* (Fabricius, 1803), *M. scutellaris* Stål, 1859, *M. sinuosa* (Lepeletier & Serville, 1825), and *M. testacea* (Stål, 1859).

Traditionally, the characters used to delimit *Montina* and to identify the species were the general coloration, the size, the shape of the margin of the connexivum, the presence of tubercles of the anterior lobe of the pronotum with carinae on the posterior lobe, and the presence of projections on the posterolateral angles of the pronotum (Amyot & Serville 1843; Champion 1899; Stål 1859, 1867, 1872). Nonetheless, no clear assessment of these characters for taxa delimitation has been made so far. As indicated by Amyot & Serville (1843), *Ploeogaster* has great morphological similarity with *Montina*, because of the expanded connexivum and similar pronotal structure, thus, it is difficult to delimit both genera (Stål 1867; D. R. Swanson, pers. comm.). Recent phylogenetic analyses of Harpactorini have recovered *Montina* as monophyletic and sister to *Pirnonota* Stål, 1859 and apparently not closely related to *Ploeogaster* (Zhang & Weirauch 2014). Nonetheless, the sparse taxon sampling in *Montina* and low branch support for several nodes on the backbone of their tree, prevent to adequately test these hypotheses.

Our aim is to document the *Montina* species present in Colombia. After the study of specimens deposited in Colombian entomological collections, we here describe as new three species: *M. calarca* sp. nov., *M. gladiator* sp. nov., and *M. tikuna* sp. nov.; and formally record seven species as new records from Colombia, bringing the total known species of *Montina* in Colombia to ten. In addition, we provide new characters for the delimitation of the genus and species, and discuss previous characters used. Besides the description of the new species, for each of the treated species we provide a diagnosis, documentation of the female and male genitalia, and distribution maps. To help identify the species, a key is provided for all the known species of *Montina*.

Material and methods

Examined specimens. A total of 223 *Montina* specimens were studied, spanning collecting dates between 1938 and 2020. The studied specimens are deposited in the following entomological collections:

CEUA Colección Entomológica, Universidad de Antioquia, Medellín, Colombia;
CTNI Colección Taxonómica Nacional de Insectos Luis María Murillo, Agrosavia, Mosquera, Colombia;
ICN Instituto de Ciencias Naturales, Universidad Nacional de Colombia, Bogotá, Colombia;
MEFLG Museo Entomológico Francisco Luis Gallego, Universidad Nacional de Colombia, Medellín, Colombia;
MPUJ_ENT Colección Entomológica, Museo Javeriano de Historia Natural, Pontificia Universidad Javeriana, Bogotá, Colombia;
NHMW Naturhistorisches Museum, Wien, Austria;
NHRS Naturhistoriska Riksmuseet, Stockholm, Sweden;
UNAB Museo Entomológico, Facultad de Agronomía, Universidad Nacional de Colombia, Bogotá, Colombia;
ZMHB Museum für Naturkunde, Leibniz Institute for Evolution and Biodiversity Science, Berlin, Germany;
ZMUC Natural History Museum of Denmark, Copenhagen, Denmark;

Species identification and type material. Species of *Montina* were identified using original descriptions, additional taxonomic literature (Amyot & Serville 1843; Champion 1899; Stål 1859, 1867, 1868, 1872), and photographs of type material available (Figs 30–39) at the NHMW, NHRS, ZMHB, and from the digital type collection of ZMUC (http://daim.snm.ku.dk/The-digitized-type-collection). Images of the NHMW are copyrighted by the "Natural History Museum Vienna, Hemiptera Image Collection / C. Hecher" and are published here with their permission. In addition to the Colombian species of *Montina*, we provide information about the type specimens of the three species not found in Colombia, including them in a separate section for comparative purposes. We also provide a key to all known species of *Montina* as well as its translation to Spanish in the Appendix.

Most species of *Montina* were described by Carl Stål. He never designated holotypes, and only rarely provided the sex or measurements for some of the specimens examined (e.g., Castro-Huertas & Forero 2021). Even when only one sex or a single measurement was given, multiple additional syntype specimens might occur in collections. Therefore, most of Stål's type material might require lectotype designations. Here we carefully compared Stål's original publications with the available type material to check for number of specimens, sex, and location, and with this information we argue for the particular type status of each set of specimens. If lectotype designations are required, we do so in accordance with Article 74.7 of the International Code of Zoological Nomenclature (ICZN 1999), and their Declaration 44 (ICZN 2003).

Label data and distribution maps. Specimen label data were recorded to equivalent Darwin Core terms (Wieczorek et al. 2012). Localities were georeferenced with the aid of gazetteers and local maps (https://www.colombiaenmapas.gov.co). Geographic coordinates are cited using a decimal degree format and presented with four decimal places because the level of precision is about 11 meters at the equator. The obtained coordinates were then used to produce distributional maps using SimpleMappr (Shorthouse 2010) (Figs 40–42). Data from historical type specimens are cited verbatim, in which data between quotation marks ("") indicate handwriting, data within square brackets ([]) are inferred, and a slash (/) indicates different labels.

Genitalic dissections. Female abdomen and male pygophore were removed using a pair of forceps and cleared by placing them in a 10% KOH solution, either heating it

from five to ten minutes or leaving them 24 hours at room temperature, then rinsed in distilled water, dehydrated in 75% ethanol, and placed in glycerin for dissection. Dissections were carried out as detailed in Forero & Weirauch (2012). Genitalic characters were not examined in type specimens because only photographs were available. Males and females of all species, including the new ones, were dissected except in *M. tikuna* sp. nov., for which the male is unknown.

Observation and imaging. External and genitalic characters were imaged using an Olympus SZ2-ILST stereomicroscope with a Moticam 3.0 digital camera. Images of genitalic characters were obtained taking several images with different areas in focus and compiled with Helicon Focus 6.8.0 software to produce a final focused image. Dorsal habitus and lateral view images of specimens were taken with a Canon EOS 6D adapted with a macro lens Canon EF 100mm f/2.8. Final editing was carried out in Adobe Photoshop CS6 2012C and line drawing illustrations with Adobe Illustrator CC 2018.

Measurements were taken with an Olympus SZ2-ILST stereomicroscope fixed with a micrometer eyepiece. Measurement values correspond in most cases to the mean of several individuals of the same sex, indicating the number of specimens that were measured. The following measurements were taken, total length (from the apex of clypeus to the apex of the abdomen), length of the head (from apex of clypeus to the anterior margin of the pronotum), length of the anterior and posterior lobe of the pronotum, width of the abdomen (in the widest area), length-width ratio (L/W) of the head. For most species, the total length is the only value presented in the diagnosis. All measurements are in millimeters.

Terminology. External structures follow Schuh & Weirauch (2020) and Weirauch (2008) (Fig. 2), and for the genitalia Carrera & Osuna (1995), Davis (1966), and Forero & Weirauch (2012) (Fig. 3). We propose descriptive terms for pronotal characters that help delimit the genus, which are explained in the diagnosis of *Montina*. The following abbreviations for structures are used:

AED aedeagus;
AM anterior margin of gonocoxa 8;
AO anterior opening of the pygophore;
APT articulatory apparatus;
BDL basal dorsolateral lobes of the endosoma;
BR transverse bridge of the pygophore;
DDL distal dorsal lobe of the endosoma;
DLL distal lateral lobes of the endosoma;
DP distal portion of syntergite 9/10;
DPS dorsal phallothecal sclerite;
DVL distal ventral lobe of the endosoma;
END endosoma;
GPL gonoplac;
LBS lateral lobes of bursa;
LL lateral lobes of the endosoma;
LPP lateral sclerotization of the phallosoma;
MM medial margin of gonocoxa 8;
MOV median oviduct;
MPP medial process of pygophore;
PA paramere;
PHA phallosoma;
PO posterior opening of the pygophore;
POM posterior margin of gonocoxa 8;
PSE pseudospermathecae;
STR struts;
SUG subrectal glands;
SYN syntergite 9/10;
USP U-shaped sclerotization;
VSP ventral sclerotization of the phallosoma.

Taxonomy

Montina Amyot & Serville, 1843

Montina Amyot & Serville, 1843: 363 (description). Type species: *Reduvius sinuosus* Lepeletier & Serville, 1825, by monotypy.

Montina: Stål (1859): 197 (new species); Stål (1865): 48 (key); Stål (1872): 73 (list of species); Walker (1873): 91 (list of species); Lethierry & Severin (1896): 195 (catalog); Champion (1899): 286 (list, diagnosis); Putshkov & Putshkov (1988): 115 (catalog); Maldonado (1990): 234 (catalog); Zhang & Weirauch (2014): 341 (phylogenetic placement); Zhang et al. (2016): 540 (phylogenetic placement); Gil-Santana (2019): 516 (new records).

Ploeogaster (nec Amyot & Serville, 1843): Stål (1859): 197 (new species); Stål (1872): 73 (synonym).

Aristippus Stål, 1865: 48 (description in key). Type species: *Aristippus fenestratus* Stål, 1867, by subsequent designation.

Aristippus: Stål (1867): 48 (description, no species assigned); Stål (1867): 299 (new species); Stål (1868): 99 (key); Stål (1872): 74 (list, synonym of *Montina* as subgenus); Walker (1873): 93 (list of species, as synonym of *Ploeogaster*); Lethierry & Severin (1896): 195 (catalog, as subgenus); Putshkov et al. (1987): 103 (as valid subgenus); Putshkov & Putshkov (1988): 115 (catalog, as valid subgenus); Maldonado (1990): 234 (catalog).

Diagnosis. Distinguished among all Neotropical Harpactorini genera by the following combination of characters: head elongate, length/width ratio 2.3; disc of the anterior lobe of the pronotum with a pair of discal tubercles (Figs 2A–B; 5E–F; 7E; 9E–F;11F), each posteriorly connected to the submedial longitudinal carinae on the posterior pronotal lobe; submedial carina on posterior lobe rises prominently on the discal area forming a laterally compressed elevation (Figs 2B; 15E), which have its dorsal area truncated or rounded; the posterior margin of the pronotum have a pair of paramedial lobes (Figs 2A; 13D; 19B), each with its lateral margin entire and curved, and the margin between the lobes (in front of the scutellum) from slightly to strongly curved; the humeral angle of the pronotum is rounded, and anterior to it there is a laterally directed process, the posterolateral process (Fig. 2A); the mesopleura has a tubercle (the "plica" of authors); the connexivum is strongly protruding laterally on the abdomen (Figs 7B, D; 15B, D), the connexival margins range from being almost straight (Figs 7C; 9C) to strongly rounded lobes (Figs 15A, C). Males have the medial process of the pygophore (*mpp*) almost cylindrical in cross section, short, directed posteriorly at about 45 degrees, slightly to greatly widened basally, and with a small subapical hook-like posteriad projection (Figs 3A–B); the parameres (*pa*) are long, reaching the medial process, narrow, slightly enlarged apically and curved basally (Figs 6A, C; 8A, C; 10A, C); the phallosoma has the dorsal phallothecal sclerite (*dps*) ovoid with its margin

Fig. 1. Live specimens of *Montina*. A–B – *M. confusa* (Stål, 1859), female, Madre de Dios, Peru (A – lateral view, B – dorsal view) (photo by Sandra Lamberts). C – *M. lobata* Stål, 1859, Orellana, Ecuador (photo by Felipe Campos). D – *M. scutellaris* Stål, 1859, female, Chocó, Colombia (photo by Kritzzia Copete Murillo). E – *M. gladiator* sp. nov., pair in copula, Yolombo, Colombia (photo by Julian Vallejo-Sosa). F – *M. calarca* sp. nov., pair in copula, Risaralda, Colombia (photo by Fernando Lopez).

broadly rounded (Figs 10F; 14F); the endosoma has a pair of elongated basal dorsolateral lobes (*bdl*), a small distal dorsal lobe (*ddl*) beset with microtrichia, a pair of small distal lateral lobes (*dll*), a bilobed distal ventral lobe (*dvl*), and a pair of lateral lobes (*ll*) (Figs 3C–E). Females have the gonocoxa 8 with an emargination on the posterior margin (Fig. 24A, red arrow); the bursa copulatrix has long and wide projecting lateral lobes (*lbs*) which are as long as the length of the bursa (Figs 26; 27), anterior dorsal region with a dorsal semi-sclerotized fold and a ventral pair of folds, usually with a U-shaped sclerotization (*usp*) (Fig. 28A).

Biology. Individuals of *Montina* are generally found on shrubs or low vegetation (Fig. 1) and are common in agricultural areas. All examined specimens were collected manually or with an entomological net, which suggests that other types of collecting methods may not be very effective. The biology and natural history of the species are poorly known, only being documented aspects of the predatory capacity, life cycle, and description of immatures of *M. confusa* (Bueno & Berti Filho 1984a, b, 1987; Dellapé et al. 2002; Freitas 1994, 1995).

Montina has also been reported as a natural predator of agricultural pests. *Montina confusa* is a common predator of Lepidoptera larvae in *Eucalyptus* plantations (Zanuncio et al. 1993, 1994) and of other pests in different crops in Brazil (e.g., Trevisan & Meneguetti 2012). Similarly, in Colombia unidentified species of *Montina* has been documented as predators of insect pests of soybean, corn, and other crops (e.g., Ayala et al. 2013, Guevara & Jiménez 2018, León Martínez & Guevara Agudelo 2006). Thus, it is very important to adequately document the species to help plan future pest management programs that are willing to include *Montina* species in their strategies.

Differential diagnosis. The original description of *Montina* is short and not very detailed (Amyot & Serville 1843); however, it mentions two important characters, the laterally protruding abdomen, and a pair of tubercles on the anterior lobe of the pronotum connected with a submedial longitudinal carina. These characters are shared with *Ploeogaster*. Given the extreme similarity between these two taxa we have based our hypothesis of the generic limits of *Montina* on the study of photographs of the lectotype and paralectotype of *Reduvius sinuosus* Lepeletier & Serville, 1825 (Fig. 38) (NHMW) (see below), and numerous Colombian specimens of both *Ploeogaster* and *Montina*. We thus propose novel characters to help delimit the two genera (Table 1).

The presence of a pair of prominent tubercles on the anterior pronotal lobe that are continued posteriorly by a longitudinal submedial carina is a common feature in both genera. The tubercles of the anterior lobe of the pronotum have no marked differences in both genera, as they can be small acute tubercles or subcylindrical tubercles with a rounded apex. The structure of the posterior pronotal lobe between the two genera, on the other hand, shows a marked difference that has not been documented before. In *Montina*, the longitudinal submedial carina is slightly compressed laterally, and has an elevated portion on the discal area of the posterior lobe, this elevation is dorsally truncated or slightly rounded (Figs 21E; 23C); whereas in *Ploeogaster* the longitudinal submedial carina is less compressed, and the elevated portion on the discal area has a tubercle with a rounded apex (Fig. 4B).

The posterior margin of the pronotum presents in *Montina* a pair of paramedial lobes, which have an entire lateral margin (Figs 2A; 7B; 13D), whereas in *Ploeogaster* these lobes have the lateral margin deeply emarginated giving the impression of being almost bilobed (Fig. 4A). In both genera the shape of the posterior margin connecting the paramedial lobes range from being almost straight to strongly curved, so we consider this a variable character between the genera which might be species specific. In *Montina*, the posterolateral process of the pronotum, which is located anterior to the humeral angles, is small and no longer than its base width (Stål 1867), sometimes being a blunt tubercle (Figs 5D; 13D). In *Ploeogaster*, the posterolateral process is a conspicuous acute projection directed laterally and always longer than its base, giving the appearance of a sharp process (Fig. 4A).

Another unexplored character is the structure of the fore legs. In *Montina*, the fore femur is cylindrical on its entire length with its ventral margin nearly straight, and the

Table 1. Main differential morphological characters between *Montina* Amyot & Serville, 1843 and *Ploeogaster* Amyot & Serville, 1843.

	Montina	*Ploeogaster*
Longitudinal submedial carina of posterior pronotal lobe	Compressed laterally; medial elevated portion truncated or slightly rounded (Figs 21E; 23C).	Less compressed laterally; medial elevated portion produced as a rounded tubercle-like process (Fig. 4B).
Lateral margin of paramedial lobes of posterior margin of pronotum	Entire (Figs 2A; 7B; 13D).	Deeply emarginated (Fig. 4A).
Posterolateral process of the pronotum	Small, not longer than its base width, sometimes a blunt tubercle (Figs 5D; 13D).	A sharp process, projected laterally, always longer than its base (Fig. 4A).
Profemur	Cylindrical, ventral margin straight (Figs 5A, C).	Wider in the middle, ventral margin slightly curved (Fig. 4C).
Protibia	Straight.	Slightly curved.
Medial process of the pygophore	Nearly cylindrical, directed posteriorly at about 45 degrees, short and narrow, widened at the base, and with a small hook-like projection directed posteriad (Figs 3A–B; 8A–C).	Flattened antero-posteriorly, nearly laminar, directed almost vertically, longer, of subparallel margins (Figs 4D, E).
Parameres	Narrow, slightly enlarged apically, gently curved basally (Figs 8A; 10A; 16A).	Wide, enlarged medially, strongly L-shaped (Fig. 4D).

fore tibia is also straight (Figs 5A, C). *Ploeogaster*, on the other hand, has the fore femur wider near the middle with its ventral margin slightly curved ventrally, being thus the fore tibia similarly curved (Fig. 4C). It also seems that the profemur in *Ploeogaster* is much wider than the mesofemur (Fig. 4A) when compared to the width ratio between the pro- and mesofemur of *Montina* (Figs 5B, D), but this must be tested with accurate measurements in several species.

The male genitalia are also useful to delimit these genera. In *Montina* the medial process of the pygophore (*mpp*) is almost cylindrical, reclined, directed posteriorly at about 45 degrees, short and narrow, sometimes widened at the base, and with a small hook-like projection directed posteriad (Figs 3A–B; 8A–C). In *Ploeogaster*, on the other hand, the mpp is flattened antero-posteriorly, having thus a laminar form, being much longer than in *Montina*, of subparallel margins, and directed almost vertically (Figs 4D, E). Furthermore, the parameres in *Montina* are narrow, slightly enlarged apically, and curved basally (Figs 8A; 10A; 16A), whereas in *Ploeogaster* they are usually wide

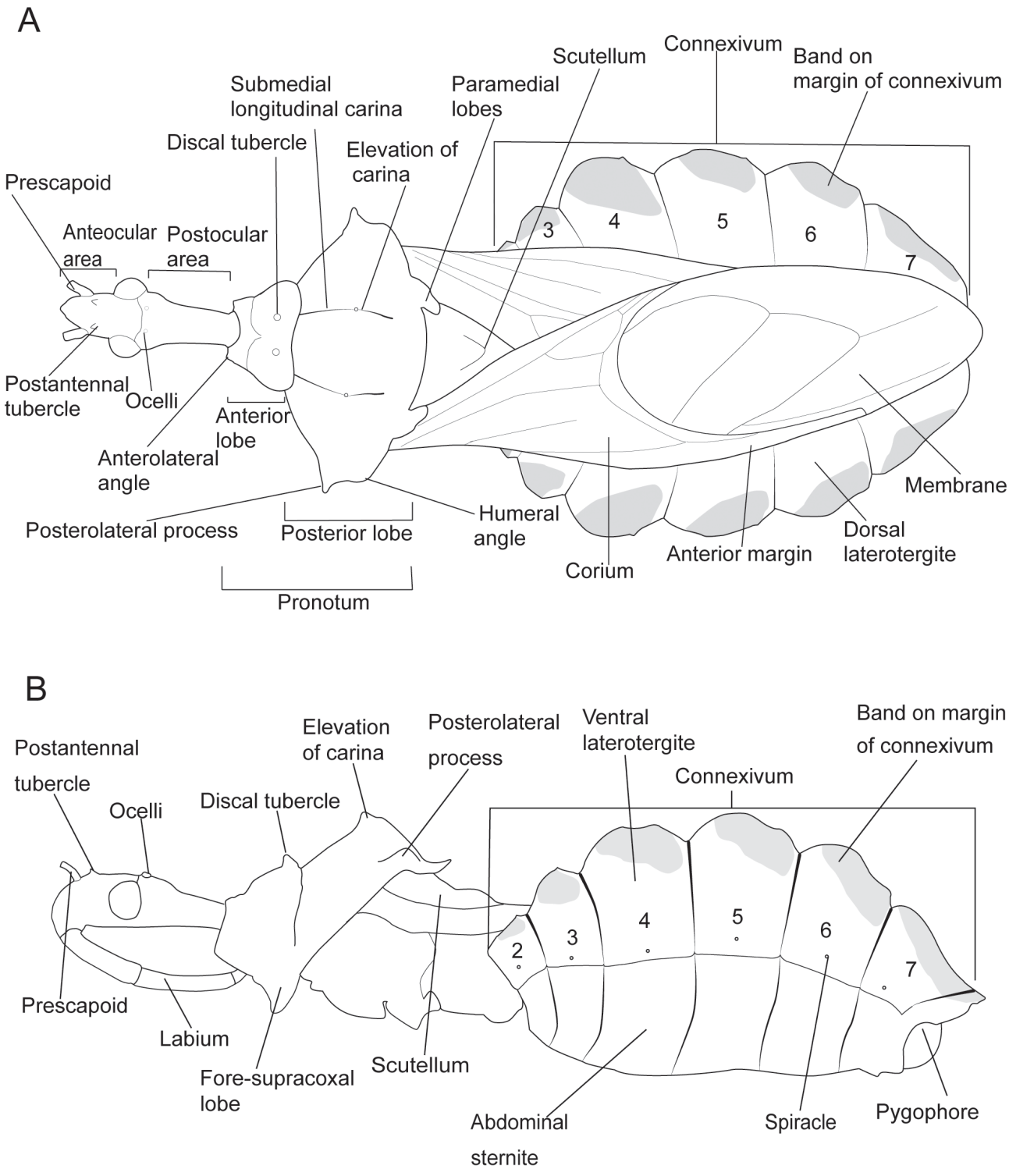

Fig. 2. General external morphology of *Montina* Amyot & Serville, 1843. A – dorsal view. B – lateral view.

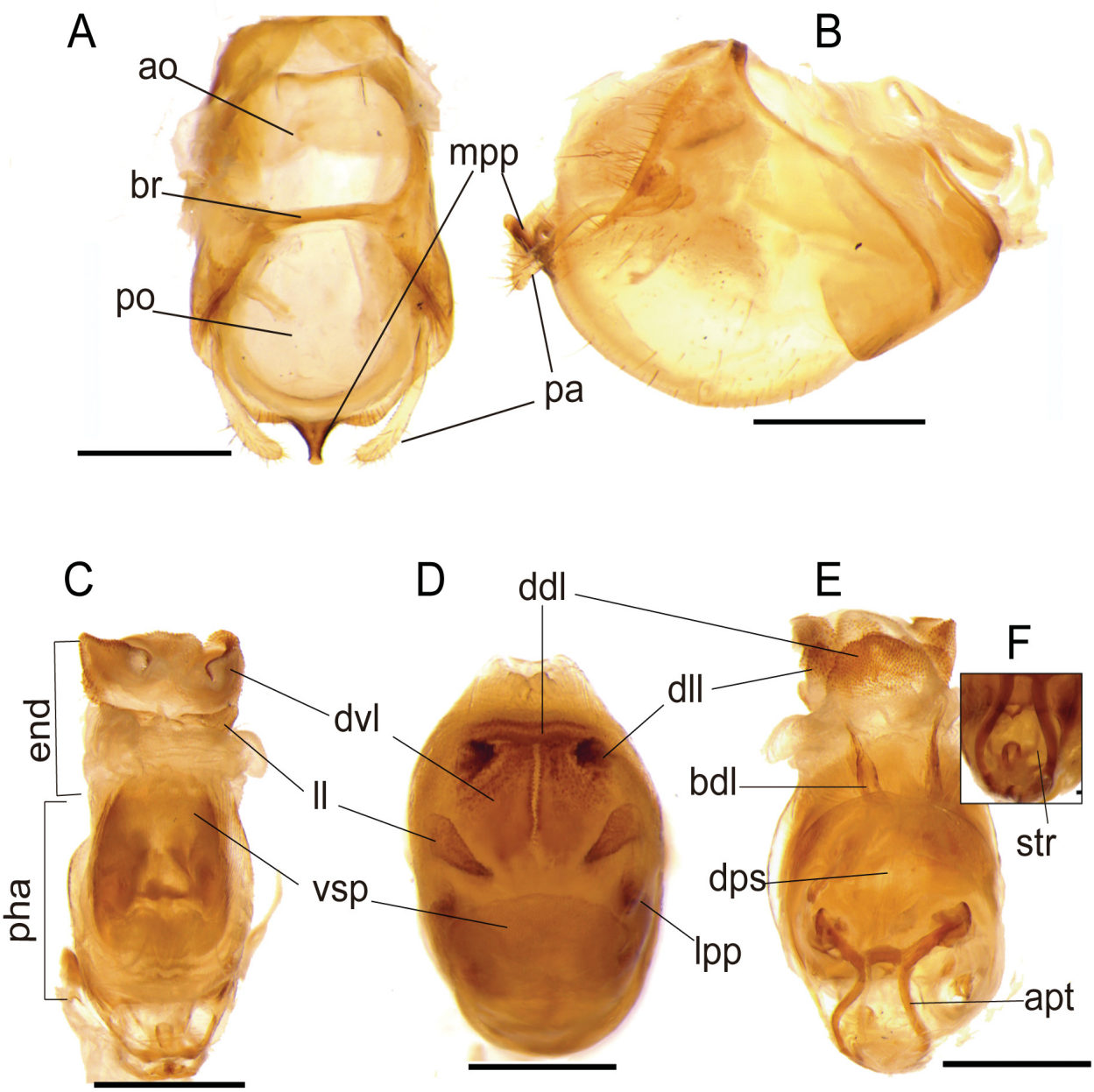

Fig. 3. Pygophore and phallus morphology of *Montina* Amyot & Serville, 1843. A – pygophore, dorsal view; B – pygophore, lateral view; C – phallus with extended endosoma, ventral view; D – non-extended phallus, ventral view; E – phallus with extended endosoma, dorsal view; F – phallus, dorsal view, detail. Abbreviations: aed – aedeagus, ao – anterior opening of the pygophore, apt – articulatory apparatus, bdl – basal dorsolateral lobes of the endosoma, br – transversal bridge of the pyphohore, ddl – distal dorsal lobe of the endosoma, dll – distal lateral lobes of the endosoma, dps – dorsal phallothecal sclerite, dvl – distal ventral lobe of the endosoma, end – endosoma, ll – lateral lobes of the endosoma, lpp – lateral sclerotization of the phallosoma, mpp – medial process of pygophore, pa – paramere, pha – phallosoma, po – posterior opening of the pygophore, str – struts, vsp – ventral sclerotization of the phallosoma. Scale bars: 1 mm.

and enlarged medially (Fig. 4D).

The structure of the male genitalia is usually useful for species delimitation in Harpactorini (e.g., Forero et al. 2008; Zhang et al. 2016). In *Montina*, male genitalia are rather uniform, only with small differences between species. Particularly, the male aedeagus has only slight differences among species. Nonetheless, the structure of the medial process of the pygophore (*mpp*) is clearly different among species (e.g., Figs 6A–C; 10A–C; 14A–C). Other characters such as the shape of the margin of the connexivum, color patterns, and the vestiture of the ventral laterotergites and sternites of the abdomen are more conspicuous and are used here as the primary characters to delimit the species.

A character that has been used to separate *Montina* and *Ploeogaster* is the structure of the connexivum (Amyot & Serville 1843, Stål 1867). Traditionally has been indicated that each of the connexival segments are forming distinct rounded lobes in *Montina* in opposition to straight margins in *Ploeogaster*. However, this is not always the case, because in some *Montina* species the margin of the connexivum is almost straight (Figs 7A, C; 9A, C; 11C; 19C; 21A, C; 23A) and it could be nearly lobate in some *Ploeogaster* species. Therefore, the shape of the margin of

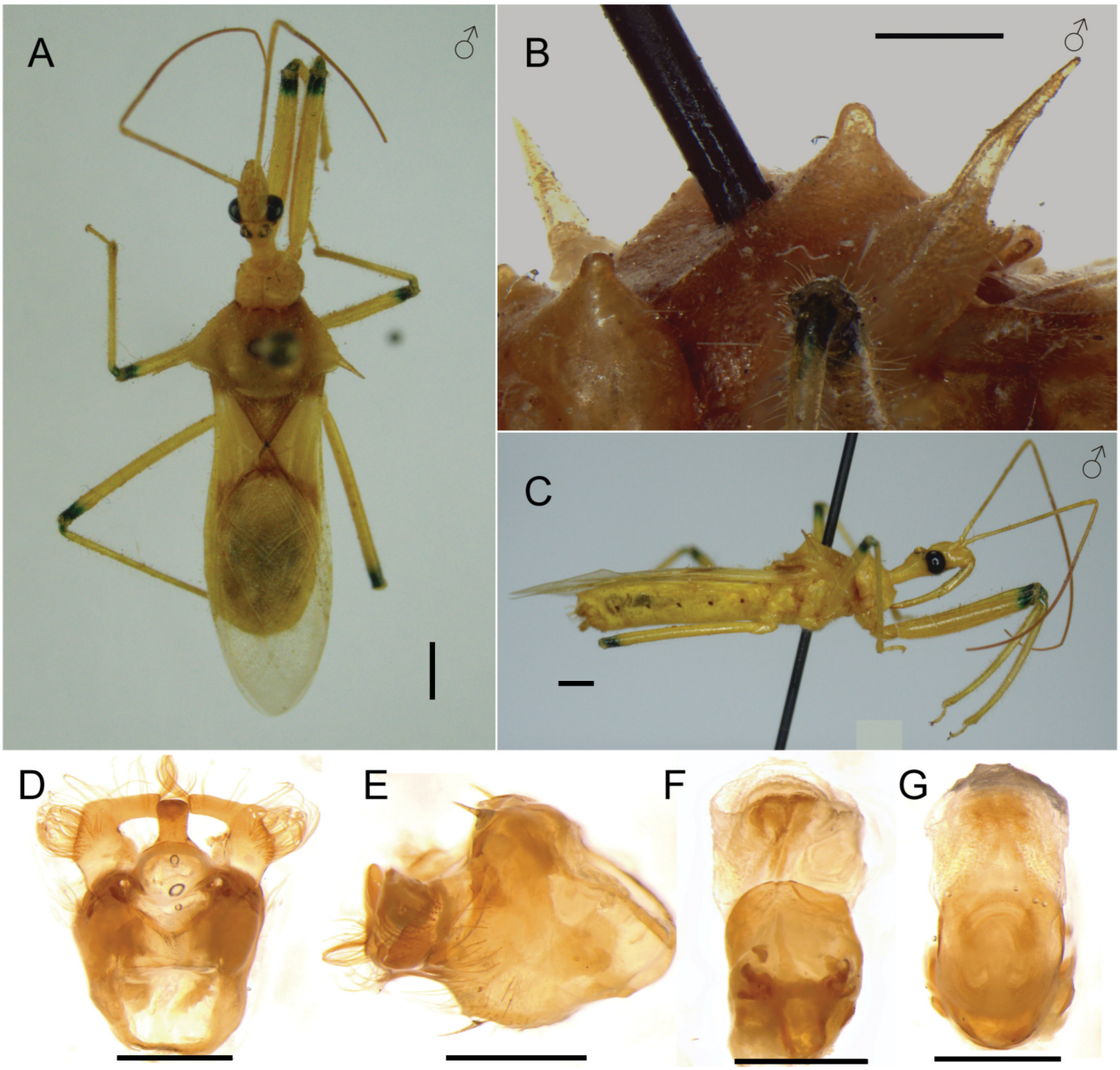

Fig. 4. Morphological characters of *Ploeogaster* Amyot & Serville, 1843. *Ploeogaster* sp., male from Florencia, Caquetá, Colombia. A – dorsal view; B – detail of pronotum; C – lateral view; D – pygophore, dorsal view; E – pygophore, lateral view; F – phallus, ventral view; G – phallus, dorsal view. Scale bar: 1 mm.

the connexivum seems an unreliable character to separate these two genera. Despite this, having a lobate margin of the connexivum could help to recognize certain *Montina* species.

The value of the aforementioned characters to delimit the two genera is congruent with the results of the phylogenetic analysis of Zhang & Weirauch (2014). Among the Neotropical clades recovered in their analysis, there is one monophyletic group containing species that we positively ascribe to *Montina*, and another one which contains species that we identify as *Ploeogaster*. This assessment was based on the examination of images of their voucher specimens (http://research.amnh.org/pbi/heteropteraspeciespage/, searched for each taxon and the RCW numbers used in Zhang & Weirauch 2014) and verified against the proposed characters mentioned above to distinguish *Montina* from *Ploeogaster*. Although these two groups are not sister lineages in their final topology, as would be the expectation based on the very similar morphology of the pronotum and abdomen, the low support values indicate that the relationships presented must be viewed as unresolved at best, therefore allowing the possibility that these two clades might be sister groups. Furthermore, the specimen UCR_ENT 00001516 (RCW_636 in their analysis) that is nested within *Ploeogaster* species correspond to what has been described as *Cidoria* Amyot & Serville, 1843, a monotypic genus known from French Guiana (Maldonado 1990). In *Cidoria*, the pronotum exhibit the same pronotal structure as species of *Ploeogaster*, particularly the presence of a pair of discal tubercles on the posterior lobe of the pronotum and the strongly emarginate paramedial lobes on its posterior margin. The only remarkable feature of *Cidoria* is the strongly curved medial posterior margin of the pronotum between the paramedial lobes,

thus covering almost completely the scutellum in dorsal view, but as indicated above, the shape of the posterior pronotal margin is a variable feature in both *Ploeogaster* and *Montina*. Future studies might conclude that *Cidoria* is congeneric with *Ploeogaster*.

Distribution. Costa Rica, Panama, French Guiana, Guyana, Brazil, Ecuador, and Peru (Champion 189; Gil-Santana 2019; Maldonado 1990; Stål 1859, 1865, 1867, 1872). Newly recorded from Colombia.

Key to the known species of *Montina*

(for Spanish translation see the Appendix)

1 Connexival margin, at least segments 4 and 5, noticeably lobed (Figs 13A, C; 15C; 19A); if slightly lobed (Figs 19C; 17A) then general coloration orange with head and legs black or brown (Figs 19A–D), or general coloration pale brown with ventral laterotergites dark with a pale-yellow oblique band on the posterior margin of segments 2–6 (Figs 17A, C). 2
– Connexival margin straight or at most slightly lobed (Figs 7A; 9A; 11D; 21A, C; 23A); if segments 4 and 5 are slightly lobed (Fig. 11A) then general coloration is brown, with ventral laterotergites dark without pale contrasting areas (Figs 11A, B). 8
2 Ventral laterotergites dark without any pale contrasting areas (Figs 38A–B). .... ***M. sinuosa*** (Lepeletier & Serville, 1825)
– Ventral laterotergites dark with red or yellow contrasting areas. 3
3 Ventral laterotergites dark with contrasting pale-yellow areas, either an oblique band on the posterior margin of segments 2–6 (Figs 15A, C; 17A, C), or on the dorsal margin of segments 2–7 (Fig. 35A). 4
– Ventral laterotergites with a red band on the dorsal margin of each segment, sometimes not very conspicuous (Figs 5A, C; 13A, C; 19A, C), but contrasting areas never yellow. 6
4 Connexival margin not deeply lobed, with a short, acute process on the posterior half of segments 2–6, more acute in males (Fig. 17A); general coloration pale brown (Figs 17B, D). ..... ***M. ruficornis*** (Fabricius, 1803)
– Connexival margin deeply lobed on segments 4–5 (Figs 15A, C; 38B); general coloration dark to black. 5
5 Pronotum pale-yellow, densely setose (Fig. 15E); pale-yellow bands present on the posterior margin of each connexival segment (Figs 15A–D). .... ***M. lobata*** Stål, 1859
– Pronotum dark red, with sparse setae (Fig. 35B); dorsal margin of connexivum with a pale-yellow, narrow band (Figs 15A–D). ..... ***M. nigripes*** Stål, 1859
6 Connexival margin with segments 4–6 deeply lobed (both males and females), without a conspicuous acute process on each segment (Figs 5A, C); discal tubercles of the anterior lobe of the pronotum not well developed (Figs 5E–F). .... ***M. calarca*** Mejía-Soto & Forero **sp. nov.**
– Connexival margin only with segments 4 and 5 lobed, posterior margin of each segment oblique, with a short, acute process on the posterior half (Figs 13A, C; 19A, C); discal tubercles of the anterior lobe of the pronotum subconical and well developed (Figs 13E, F; 19E, F). 7
7 Head red (Figs 13B, D, G); posterior margin of pronotum red; proximal portion of the corium red (Figs 13B, D). ..... ***M. gladiator*** Mejía-Soto & Forero **sp. nov.**
– Head black (Figs 19B, D); posterior margin of the pronotum usually with a transverse dark band connecting the bases of the paramedial lobes; proximal portion of the corium dark (Figs 19B, D). .... ***M. scutellaris*** Stål, 1859
8 Forewing membrane with a conspicuous hyaline medial area (Fig. 32B). ..... ***M. fenestrata*** (Stål, 1867)
– Forewing membrane with uniform coloration (Figs 21B; 23B). 9
9 Ventral laterotergites uniformly black, with scattered black, erect setae (Figs 23E–F); abdominal sternites entirely black, with decumbent, silver setae (Fig. 23F). ..... ***M. tikuna*** Mejía-Soto & Forero **sp. nov.**
– Ventral laterotergites with contrasting coloration (Figs 7A, C; 9A, C), if apparently with homogenous coloration (Figs 11A, C; 21A) with numerous decumbent setae and no erect setae; abdominal sternites not entirely black, with silver or black erect setae. 10
10 Overall dorsal coloration and legs red (Figs 7B, D; 21B, D). 11
– Overall dorsal coloration and legs brown to pale brown (Figs 9B, D; 11B, D). 12
11 Dorsal laterotergites with segments 2–4 mostly black, 5–7 black with a broad and conspicuous yellow or orange dorsal band increasing in size toward the posterior segments (Figs 7B, D), tubercle of the anterior pronotal lobe straight, constricted near the middle and markedly globose apically (Fig. 7E). .... ***M. confusa*** (Stål, 1859)
– Dorsal laterotergites with segments 3–7 black with a narrow and uniform orange band on their lateral margin (Figs 21B, D), tubercle of anterior pronotal lobe slightly curved anteriad, not constricted near the middle (Fig. 21E). ..... ***M. testacea*** (Stål, 1859)
12 Ventral laterotergites mostly dark brown (Figs 11A, C). ..... ***M. fumosa*** (Stål, 1867)
– Ventral laterotergites with a dorsal, broad, pale-yellow band contrasting with the black ventral area (males on segments 4–5 with black reaching dorsal margin) (Figs 9A, C). ..... ***M. distincta*** (Stål, 1859)

Montina calarca Mejía-Soto & Forero, sp. nov.

(Figs 5; 6; 24B; 26B; 28B; 40)

Type locality. Colombia, Risaralda, Santuario de Flora y Fauna Otún Quimbaya, estación La Suiza.

Type material. Holotype: **COLOMBIA: Risaralda:** ♂, [Santuario de Flora y Fauna Otún Quimbaya, estación] La Suiza; [04.7269°N, 75.5772°W]; 1900 m; Ago 1992; MPUJ_ENT0058608 / (red label) HOLOTYPE *Montina calarca* A. Mejía-Soto & D. Forero, sp. nov. (MPUJ). Paratypes: **COLOMBIA: Quindío:** 1 ♂, Salento; 1895 m; 14 Jul 1939; L. Richter leg.; CTNI No. 2543 (CTNI); 1 ♂, Filandia, Estación Bremen C.R.Q. [Reserva Natural Forestal y de Investigación Bremen-La Popa]; 1800–1900 m; 20 Abr 1992; V. Cruz et al. leg.; MPUJ_ENT0058606 (MPUJ); 1 ♀, same data; 14–20 Abr 1998; J. Infante et al. leg.; MPUJ_ENT0058605 (MPUJ). **Risaralda:** 1 ♂, [Santuario

de Flora y Fauna Otún Quimbaya, estación] La Suiza; [04.7269°N, 75.5772°W]; 1900 m; 18 Ago 1992; MPUJ_ENT0058611 (MPUJ); 1 ♀, same data; 20 Sep 1992; Gómez leg.; MPUJ_ENT0058617 (MPUJ), 1 ♀, same data; 18 Sep 1992; MPUJ_ENT0058616 (MPUJ), 1 ♀, same data; Ago 1992, MPUJ_ENT0058615 (MPUJ); 1 ♀, same data; 21 Ago 1992; MPUJ_ENT0058614 (MPUJ); 1 ♀, same data; 1995 m; Ago 1992; MPUJ_ENT0058613 (MPUJ); 1 ♀, same data; 1900 m; 20 Ago 1992; MPUJ_ENT0058610 (MPUJ); 1 ♀, same data; 1995 m; 18 Ago 1992; MPUJ_ENT0058609 (MPUJ); 1 ♀, same data; 1900 m; 22 Ago 1992; MPUJ_ENT0058604 (MPUJ); 1 ♀, same data; 1992 m; Ago 1992; GUI GER leg.; MPUJ_ENT0058603 (MPUJ); 1 ♀, Pereira, Parque Regional Natural Ucumarí; 19 Ago 1992; Matuk & Ochoa leg.; MPUJ_ENT0058607 (MPUJ).

Diagnosis. Total length, females 23.8–24.9 mm (n = 2), males 17.9–18.3 (n = 4). General coloration reddish, with head, scutellum, and legs from dark brown to black (Figs 5B, D), membrane translucent yellow with basal area of M, Cu, and An1 veins darkened, cells hyaline; tubercle of anterior pronotal lobe reduced, conical and apically acute (Figs 5E, F); pronotum densely setose; elevation of the carina of the posterior pronotal lobe slightly prominent, triangular shaped, posterior margin slightly rounded (Figs 5E, F); connexivum black with a red narrow band on its margin, not so visible or absent on segments 2–3 (Figs 5A–C), segments 4–6 markedly lobed and rounded, without an acute process on each segment (Figs 5A, C); male genitalia with endosomal lateral lobes (*ll*) reduced (Fig. 6D); arms of articulatory apparatus (*apt*) thin and lumen very narrow apically (Fig. 6F).

Description. ***Male.*** Total length 17.9–18.3 mm, head length 3.3–3.5 mm, anterior pronotal lobe length 1.1–1.2 mm, posterior pronotal lobe length 2.8–2.9 mm, abdomen width 5.6–6.3 mm (n = 4). COLORATION. *Head* dark brown to black; area around ocelli reddish black, between ocelli a yellow spot; scape and pedicel black, flagellomeres light red; labium black, last segment light brown. *Thorax:* Anterior pronotal lobe reddish orange; posterior pronotal lobe on disc, elevation of carina, and posterolateral process bright red, surrounding discal area and posterior margin yellow; scutellum dark brown; pro-, meso- and metasternum dark brown. *Legs*: Coxa dark brown, femur from dark brown to black, tibia reddish brown, tarsi dark brown. *Hemelytron*: Corium red, basally dark, central area dark red; clavus dark red, basally darker; membrane translucent yellow with basal area of M, Cu, and An1 veins darkened, cells hyaline. *Abdomen*: Sternites brown with broad dark brown band on posterior margin of segments 2–6; connexival segments black with margin light red; pygophore yellow or orange. VESTITURE. Body densely setose. *Head:* Numerous golden and decumbent medium size setae, and sparse, long, erect, dark setae. *Thorax:* Pronotum densely set with medium and long sized golden setae, with some glabrous areas on submedial carinas of posterior lobe; scutellum apically with a few black, erect setae; profemur and tibia ventrally with dense medium sized setae. *Abdomen:* Sternites and ventral laterotergites with numerous decumbent golden setae and few erect ones, dark spots on lateral area of sternites with black erect setae near posterior margin, sometimes not visible. STRUCTURE. *Head:* Eyes globular, prominent in dorsal view, about half the width of postocular area, ovoid in lateral view with posterior margin nearly straight; first visible labial segment shorter than second. *Thorax:* Tubercles of anterolateral angles obtuse, triangular-shaped; discal tubercles of anterior pronotal lobe reduced, conical, apically acute; elevation of the carina of the posterior pronotal lobe slightly prominent, triangular shaped, posterior margin slightly rounded; pronotal posterolateral angles obtuse; scutellum with narrow apex, projected and slightly rounded. *Hemelytron*: Membrane surpassing apex of abdomen. *Abdomen:* Margin of connexival segments 2–3 straight, 3 with sharp posterior projection, segments 4–6 deeply lobed with rounded margin, segment 7 straight. *Genitalia:* Pygophore ovoid in lateral view, subquadrangular in dorsal view (Figs 5A–C); medial process (*mpp*) slightly widened at base, narrowing apically, apical third of constant width, in lateral view straight, directed at about 45 degrees (Figs 6B, C); paramere slightly curved, body of constant diameter, distal portion enlarged and rounded, preapically dorsally with small low tubercle, beset with long dense setae apically (Figs 6B, C); articulatory apparatus (*apt*) with basal plate arms narrower than basal plate bridge, very narrow lumen at union of these (Fig. 6F); dorsal phallothecal sclerite (*dps*) strongly emarginate preapically, lateral margin on basal half reaching about middle of phallosoma height (Fig. 6F); endosoma with distal ventral lobe (*dvl*) deltoid-shaped, elongated; distal dorsal lobe (*ddl*) as a narrow, sclerotized area; distal lateral lobes (*dll*) not differentiated (Figs 6D, E); lateral lobes (*ll*) reduced (Fig. 6D).

Female. Similar to male but larger, except in the following: larger, total length 24.7–24.9 mm, head length 4.2–4.3 mm, anterior pronotal lobe length 1.7–1.8 mm, posterior pronotal lobe length 3.4–3.5 mm, abdomen width 7.2–7.6 mm (n = 2). COLORATION. Usually darker, particularly the pronotal posterolateral process. STRUCTURE. *Head:* First two visible labial segments of equal length. *Thorax:* Discal tubercles of anterior pronotal lobe slightly larger; elevation of carina of posterior pronotal lobe slightly more prominent; posterolateral process blunt. *Genitalia:* Gonocoxa 8 subquadrangular, anterior margin (*am*) slightly concave; gonoplac (*gpl*) apically slightly projected beyond joining area, obtuse, with medium-sized setae (Fig. 17B); bursa copulatrix subquadrangular, lateral protruding lobes (*lbs*) very wide in all its length (Fig. 26B); U-shaped structure of dorsal area of bursa slightly sclerotized (Fig. 28B).

Variation. *Montina calarca* sp. nov. does not exhibit much intraspecific variation and the only noticeably variation is in the body setation, in which specimens from Filandia (Quindío) are slightly more setose than specimens from La Suiza (Risaralda).

Differential diagnosis. *Montina calarca* sp. nov. resembles *M. gladiator* sp. nov., *M. nigripes*, and *M. scutellaris* due to the markedly lobed margin of the connexival segments and its overall reddish coloration. It can easily be distinguish from these species by having smaller and apically acute discal tubercles of the anterior lobe of the pronotum (Figs 5E–F), and by the completely round connexival margin on segments 4, 5, and 6 without any protuberance on each segment (Figs 5A, C); whereas in the other species the

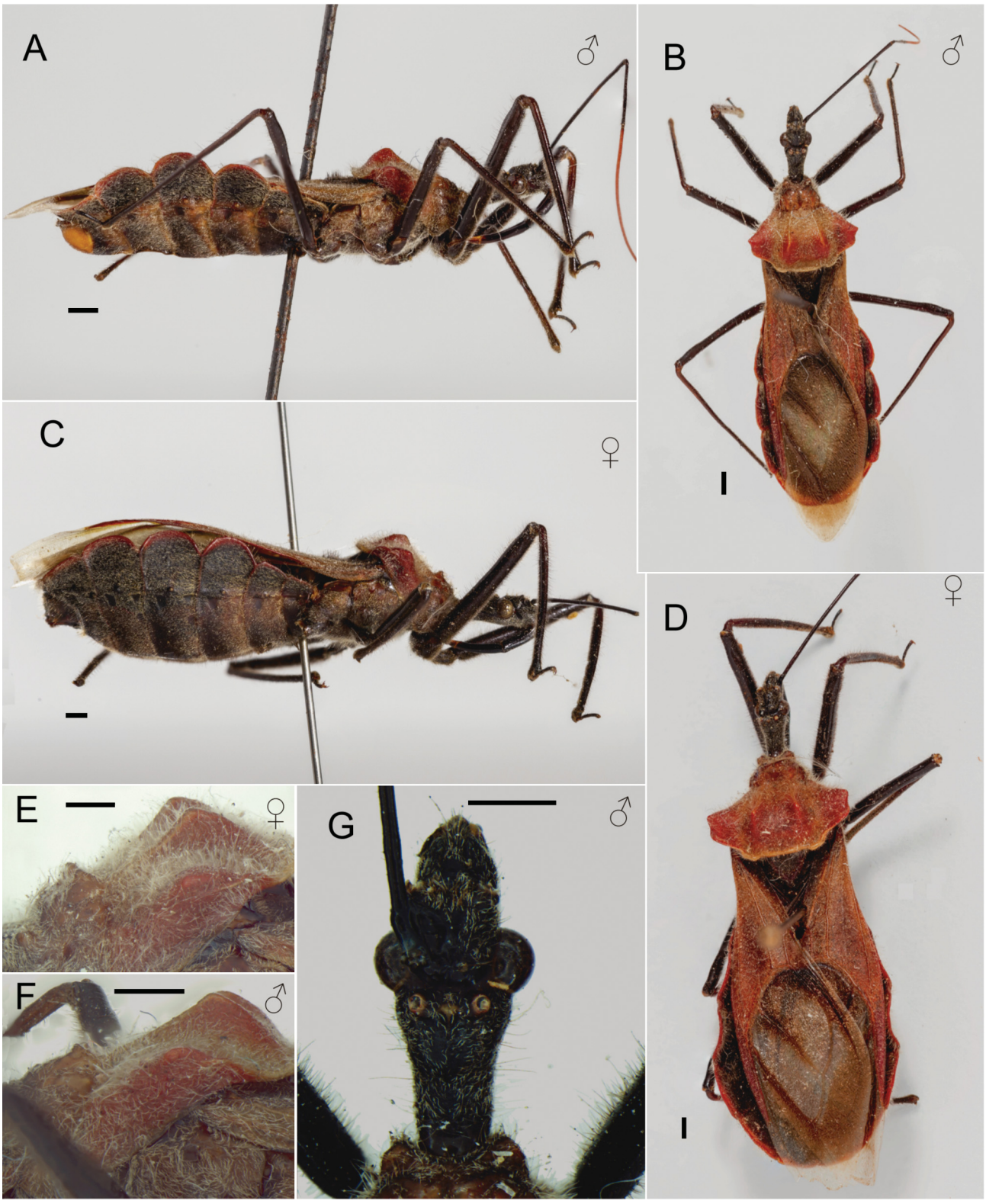

Fig. 5. *Montina calarca* Mejía-Soto & Forero sp. nov. A – male holotype, lateral view; B – male holotype, dorsal view; C – female paratype, lateral view; D – female paratype, dorsal view; E – pronotum, female paratype, lateral left view; F – pronotum, male paratype, lateral left view; G – head, male paratype, dorsal view. Scale bar: 1 mm.

tubercles of the anterior pronotal lobe are larger and more obtuse apically (Figs 13E, F; 19E–F), and the connexival margin has a subangular protuberance towards the posterior half on some segments (Figs 13C; 19A, C). Of those species, *M. nigripes* has not been found in Colombia, as it was described from "Bahia" in Brazil (Stål 1859). In addition, the coloration of *M. nigripes* is darker, not bright red as *M. calarca* sp. nov. and the connexival margin seems to be pale yellow (Fig. 35), not red as in *M. calarca* sp. nov. (Fig. 5). Furthermore, the connexival segments are deeply lobed in *M. calarca* sp. nov., whereas in *M. nigripes* they are not as lobed (Fig. 35A). *Montina calarca* sp. nov. can

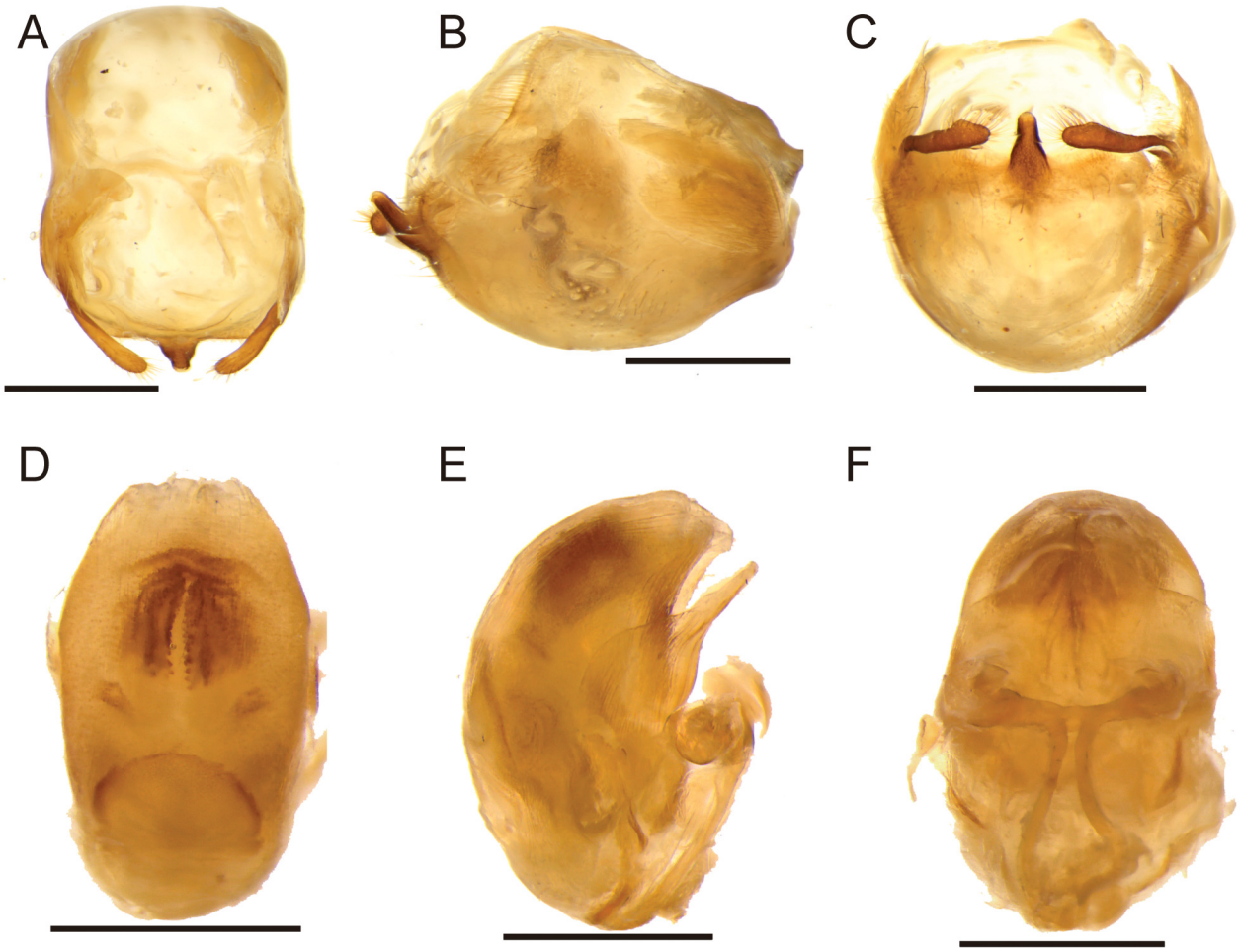

Fig. 6. *Montina calarca* Mejía-Soto & Forero sp. nov., paratype, male genitalia. A – pygophore, dorsal view; B – pygophore, lateral right view; C – pygophore, caudal view; D – phallus, ventral view; E – phallus, lateral right view; F – phallus, dorsal view. Scale bar: 1 mm.

also be differentiated from *M. gladiator* sp. nov., because in the latter the head, thorax, and hemelytron are red (Figs 13B, D, G), in contrast to the black head in *M. calarca* sp. nov. (Fig. 5G). Furthermore, *M. calarca* sp. nov. have male genitalic characters that allow the identification of the species, such as the reduction of the lateral lobes of the endosome (*ll*) (Fig. 6D), and the narrow arms of the basal plate of the articulatory apparatus (*apt*) which are narrower than the basal plate bridge (Fig. 6F).

Etymology. The name of the new species is after the Cacique Calarcá or Karlaca, who lived between the 16th and 17th centuries. He was part of the Pijao people, whose territories covered part of the central mountain range in Colombia, including the department of Quindío, where he died and where much of the examined material come from. The name is treated as a noun in apposition.

Distribution. Only known from Quindío and Risaralda in Colombia, in altitudes ranging between 1800–1900 m (Fig. 40). The known distribution of this species is restricted to a few localities, very close to each other, in an area of less than 200 km^2 in the Colombian central Cordillera.

Montina calarca sp. nov. exhibit a restricted distribution in Colombia, similar to *M. tikuna* sp. nov., which is known from a single locality (see below). Having restricted distributions is very unusual in Reduviidae and only a few species are known from restricted geographic ranges (e.g., Castro-Huertas & Forero 2017). It is also unusual for species in *Montina* to have an altitudinal distribution restricted to middle elevations (1800–1900 m), as in the case of *M. calarca* sp. nov., because species in this genus are found either at low elevations (*M. fumosa*, *M. ruficornis*, *M. tikuna* sp. nov., *M. testacea*, *M. gladiator* sp. nov.) or have a wide altitudinal range (*M. confusa*, *M. lobata*, *M. distincta*, *M. scutellaris*).

Montina confusa (Stål, 1859)

(Figs 7; 8; 24C; 26C; 28C; 30, 40)

Ploeogaster confusus Stål, 1859: 198 (new species).
Ploeogaster confusus: Walker (1873): 93 (checklist).
Aristippus confusus: Stål (1868): 99 (key, new generic placement).
Montina (*Aristippus*) *confusa*: Stål (1872): 74 (checklist, new generic placement, *Aristippus* as subgenus).
Montina confusa: Lethierry & Severin (1896): 195 (catalog); Maldonado (1990): 234 (catalog).

Type locality. Brazil, Pará (?).

Type material. Lectotype (here designated): [**BRAZIL – Para?**]: 1 ♀, (green label) Para / 25"6"5 / (red label) Typus / "*confusus* Stål" / (QR code) http://coll.mfn-berlin.de/u/e0b7c0 / Lectotype *Ploeogaster confusus* Stål, 1859 Desig. by A. Mejía-Soto & D. Forero (ZMHB). Paralectotype: [**BRAZIL – Unknown state**]: 1 ♀, "Amazon" / Stevens / "confusus Stål [illegible]" / (red label) 379 "82" / NHRS-GULI 000000605 (NHRS).

Other specimens examined. COLOMBIA: Amazonas: 1 ♂, Leticia; Km 7 vía Tarapacá; 1 May 2002; Sistemática Animal UNAL exped.; ICN

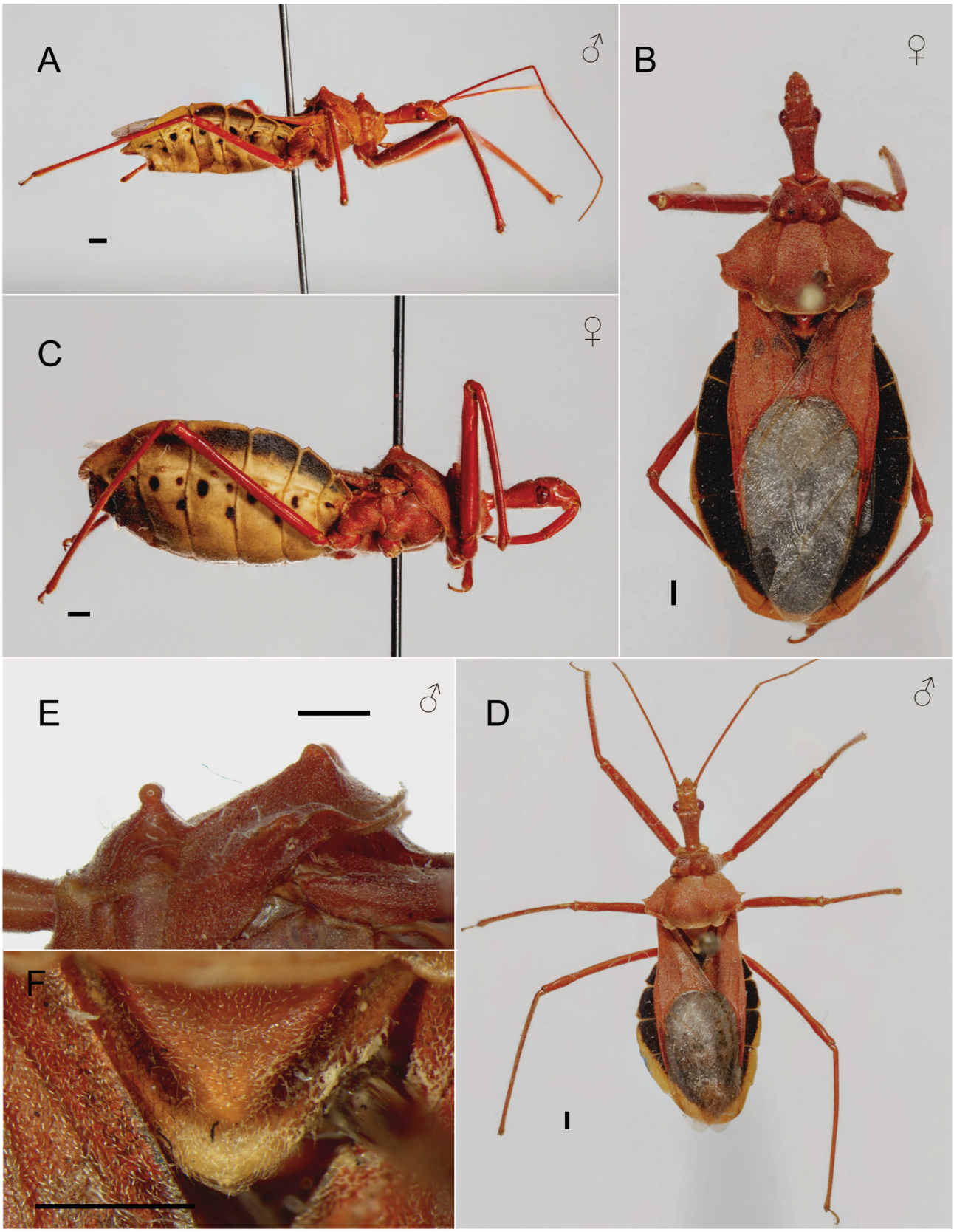

Fig. 7. *Montina confusa* (Stål, 1859)**.** A – male, lateral view; B – female, dorsal view; C – female, lateral view; D – male, dorsal view; E – pronotum, male, lateral left view; F – scutellum. Scale bar: 1 mm.

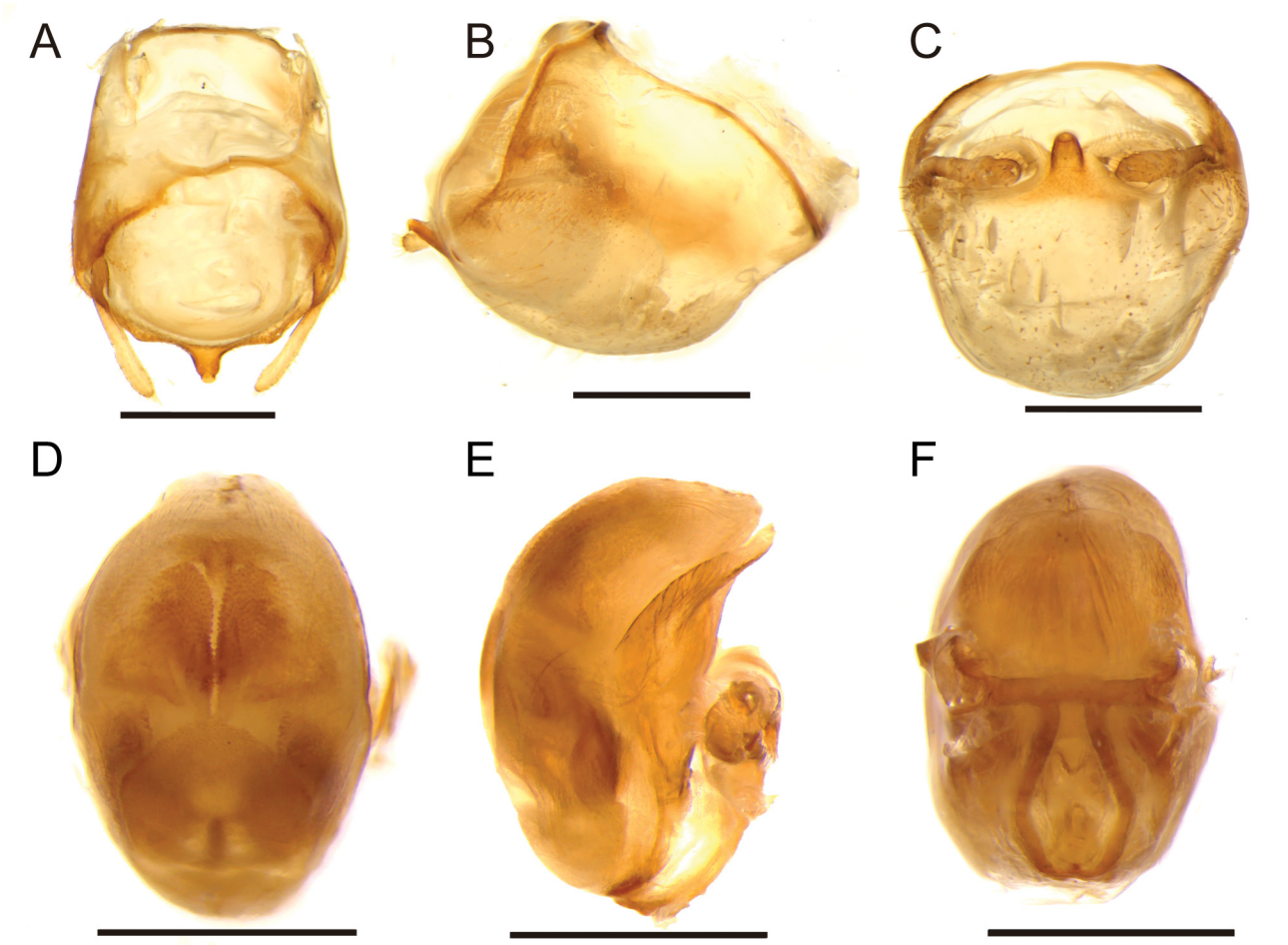

Fig. 8. *Montina confusa* (Stål, 1859), male genitalia. A – pygophore, dorsal view; B – pygophore, lateral right view; C – pygophore, caudal view; D – phallus, ventral view; E – phallus, lateral right view; F – phallus, dorsal view. Scale bar: 1 mm.

037796 (ICN); 1 ♂, Leticia, comunidad indígena Monifue Amena, Km 11 [vía Leticia-Tarapacá]; [04.1416°S 69.9232°W]; 80 m; 2 Oct 2003; [colecta] manual; MPUJ_ENT0058484 (MPUJ); 1 ♀, Leticia, comunidad indígena Monifue Amena, Km 9,8 vía Leticia-Tarapacá; [04.1416°S 69.9232°W]; 80 m; 29 Sep 2003; [colecta] manual; MPUJ_ENT0058485 (MPUJ); 1 ♀, same data; 70 m; 30 Mar 2005; Plata, Rengifo, Barrayan leg.; parcela, [bosque] varzea; MPUJ_ENT0058459 (MPUJ); 1 ♀, same data; 13 Oct 2003; Cortez & Suarez leg.; chagra, [colecta] manual; MPUJ_ENT0058486 (MPUJ); 1 ♀, same data; 28 Mar 2005; Erazo & Zarada leg.; chagra; MPUJ_ENT0058462 (MPUJ); 1 ♀, same data; 50 m; 11 Oct 2002; D. Calle, A. Pérez, C. Rodre leg.; chagra, [colecta] manual; MPUJ_ENT0058458 (MPUJ); 1 ♀, same data; 80 m; 25 Sep 2003; M. Montenegro, leg.; chagra, [colecta] manual, nocturno; MPUJ_ENT0058463 (MPUJ); 1 ♀, same data; 10 Oct 2002; A. Vélez; día lluvioso; MPUJ_ENT0058473 (MPUJ); 1 ♀, same data; 60 m; 10 Oct 2002; Ospina, Pedroza, Ordoñez leg.; [colecta] manual, chagra, día soleado; MPUJ_ENT0058577 (MPUJ); 1 ♀, same data; 60 m; 7 May 2007; Suescón et al.; [colecta] manual, chagra; MPUJ_ENT0058562 (MPUJ). **Caldas:** 1 ♀, Manizales; 5°04′12″N, 75°31′14″W; 2216 m; 6 May 1994; V. Bernal, K. Turiago leg.; UNAB No. 4857 (UNAB). **Caquetá:** 1 ♀, Florencia, vereda Balcanes, CIMAZ Balcanes; 1°25′35.7″N, 75°30′58.6″W; 266 m; 21 Sep 2016; A. Quiroga leg.; jama [insect net], cerca de cultivos de cacao; UNAB No. 4857 (UNAB). **Casanare:** 1 ♂, Tauramena, Kiosco Verde, 2.5 Km SW de Tauramena; 5.00385°N 72.77376°W; 526 m; 8–12 Sep 2014; L. Pabón leg.; [colecta] manual, bosque, en la mañana; MPUJ_ENT0024462 (MPUJ); 1 ♀, same data; 25–29 Ago 2014; A. Botache leg.; [colecta] manual, bosque de galería, nocturno; MPUJ_ENT0024786 (MPUJ); 1 ♀, same data; 25–29 Ago 2014; N. Wilches et al. leg.; [colecta] manual, borde de bosque de galería; MPUJ_ENT0026372 (MPUJ); 1 ♀, same data; 25–29-ago-2014, D. Cáceres, et al., jama [insect net], pantano; MPUJ_ENT0025453 (MPUJ); 1 ♀, same data; jama [insect net], pastizal; 25–29 Ago 2014; D. Cáceres et al. leg.; MPUJ_ENT0019168 (MPUJ); 1 ♀, same data; 515 m; 25–29 Ago 2014; León et al. leg.; campo abierto, diurno; MPUJ_ENT0025124 (MPUJ); 1 ♂ 1 ♀, same data; 8–12 Sep 2014; D. Forero leg.; [colecta] manual; MPUJ_ENT0058483, MPUJ_ENT0058502 (MPUJ); 1 ♀, same data; 25–29 Ago 2014; W. Moya leg.; MPUJ_ENT0025194 (MPUJ); 1 ♀, same data; 25–29 Ago 2014; D. Forero leg., [colecta] manual; MPUJ_ENT0058501 (MPUJ); 1 ♀, Yopal; 5°21′N, 72°24′W; 350 m; L. Arenas, R. Lesmes leg.; jama [insect net]; UNAB No. 4857 (UNAB). **Cundinamarca**: 1 ♀, La Mesa; 1289 m; 13 Mar 2003; J. Cárdenas leg.; [colecta] manual; UNAB No. 4857 (UNAB). **Meta**: 1 ♀, La Macarena, bocas del Ariari; Dic 1970; ICN 029960 (ICN); 1 ♀, same data, El Refugio; Jul 1970; ICN 029958 (ICN); 1 ♀, Mapiripán, vereda Morropelado, Poronga, Finca Macondo; 3°01′23″N, 72°12′28.6″W; 230 m; 28 Ene 2016; E. Betancourt leg.; [colecta] manual, cerca de ecosistema agrícola; UNAB No. 4857 (UNAB); 1 ♀, Puerto López; 4°05′00″N, 72°58′00″W; 181 m; 9 Sep 2003; R. Pinzón leg.; jama [insect net]; UNAB No. 4857 (UNAB); 1 ♀, Puerto López, Cafam, Mata Mata; 165 m; 23 Oct 2011; Kecan et al. leg.; [colecta] manual, nocturno; MPUJ_ENT0058539 (MPUJ); 1 ♀, Puerto López, Cafam, Piedra Candela; 165 m; 23-oct-2011; B. Navas et al. leg.; [colecta] manual, bosque; MPUJ_ENT0058537 (MPUJ); 1 ♀, Puerto López, [Remolinos, Centro] Cafam [Llanos, ~55km W Puerto Gaitán]; [04.2751°N 72.5408°W]; 165 m; 27 Abr 2001; M. Ordoñez leg.; [colecta] manual, noche; MPUJ_ENT0058535 (MPUJ); 1 ♀, Puerto López; Sep 1991; Fernandez, Tellez leg.; MPUJ_ENT0058548 (MPUJ); 1 ♀, Puerto López, Remolinos, Centro Cafam Llanos, ~55km W Puerto Gaitán; 04.2751°N 72.5408°W; 165 m, 18 Oct 2012; A. Cortez leg.; [colecta] manual, nocturno; MPUJ_ENT0058549 (MPUJ); 1 ♀, same data; 15–19 Oct 2012; T. Rodríguez leg.; [colecta] manual; MPUJ_ENT0058554 (MPUJ); 1 ♀, same data; 30 Abr 2011; L. Díaz leg.; [colecta] manual, sabana; MPUJ_ENT0058555 (MPUJ); 1 ♀, same data, [caño] Mata, Mata; 11 Sep 1991; Castaño, Castillo leg.; [colecta] manual, MPUJ_ENT0058551 (MPUJ); 1 ♀, same data; 23

Mar 1996; NOS leg.; [colecta] manual; MPUJ_ENT0058553 (MPUJ); 1 ♂, same data; 25 Oct 2011; Herrero et al. leg.; [colecta] manual; MPUJ_ENT0058552 (MPUJ); 1 ♀, same data; 11–15 Mar 2013; A. Méndez leg.; [colecta] manual; MPUJ_ENT0058579 (MPUJ); 1 ♂ 3 ♀♀, same data; 15–19 Oct 2012; D. Forero leg.; [colecta] manual; MPUJ_ENT0058564, MPUJ_ENT0058567, MPUJ_ENT0001799, MPUJ_ENT0001802 (MPUJ); 1 ♀, same data; 11–15 Mar 2013; D. García leg.; [colecta] manual; MPUJ_ENT0058565 (MPUJ); 1 ♀, same data; 15–19 Oct 2012; M. León leg.; [colecta] manual; MPUJ_ENT0058561 (MPUJ); 1 ♂, same data; 11–15 Mar 2013; A. Guillen leg.; [colecta] manual; MPUJ_ENT0058566 (MPUJ); 1 ♀, same data; 220 m; [colecta] manual; MPUJ_ENT0058568 (MPUJ); 1 ♂ 1 ♀, same data; 11–15 Mar 2013; J. Gutiérrez leg.; [colecta] manual; MPUJ_ENT0058576, MPUJ_ENT0058575 (MPUJ); 1 ♂, same data; 11–15 Mar 2013; L. Nova leg.; [colecta] manual, MPUJ_ENT0058574 (MPUJ); 1 ♂, same data; 11–15 Mar 2013; Escobar leg.; [colecta] manual, pastizal; MPUJ_ENT0058500 (MPUJ); 2 ♂♂, same data; 11–15 Mar 2013; S. Nuñez leg.; [colecta] manual; MPUJ_ENT0058526, MPUJ_ENT0058540 (MPUJ); 1 ♂, San Martín, vereda Turpial, Palmeras del Meta; 3°42′N, 73°42′W; 419 m; 12 Abr 2001; C. Galeano, J. Herrera leg.; plantas aledañas al cultivo, palma africana; UNAB No. 4857 (UNAB); 1 ♀, San Martín, Finca [el] Caudeco, cerca al Rio Camoa; 3°39′53″N, 73°39′28″W; 400 m; 8 Dic 2006; D. Campos leg.; [colecta] manual, bosque de galería; ICN 2661 (ICN); 1 ♀, San Martín, vereda Puerta Castro, Finca Hato Palmera; 21 Nov 2014; J. Ramírez leg.; [colecta] manual, sobre palmera, MPUJ_ENT0058496 (MPUJ); 1 ♀, same data; 22 Nov 2014; J. Ramírez leg.; [colecta] manual, borde de rio; MPUJ_ENT0058497 (MPUJ); 1 ♀, Puerto Gaitán, Río Yucao; 200 m; Ene 1975; R. Restrepo leg.; ICN 029952 (ICN); 1 ♂, Puerto Gaitán, Hacienda Yamato; 150 m; 22 Abr 1996; D. Forero leg.; sabana arbolada, sobre *Curatella americana*; ICN 027640 (ICN); 1 ♀, Puerto Gaitán, Centro Cafam; Sep 1989; Restrepo; ICN 029949 (ICN); 1 ♂, Puerto Gaitán, Altamira, Club de los Llaneros; [04.3722°N 72.1565°W]; 140 m; 22 Oct 2006; A. Borbon, A. Peña, D. Mejía leg.; sabana, noche; MPUJ_ENT0061415 (MPUJ); 1 ♂, same data; M. Salazar, M. Palacio, M. Salamanca leg.; maizal, soleado; MPUJ_ENT0058488 (MPUJ); 1 ♀, same data; R. Sandoval, L. Linares, I. Vela leg.; sabana, soleado; MPUJ_ENT0061402 (MPUJ); 1 ♀, same data; 20 Oct 2016; Tuncero, Villamil leg.; [colecta] manual; MPUJ_ENT0058522 (MPUJ); 1 ♀, same data; 21 Oct 2006; I. Gaviria, et al. leg.; [colecta] manual, sabana; MPUJ_ENT0058487 (MPUJ); 1 ♀, same data; 23 Oct 2011; B. Navas et al. leg.; [colecta] manual, mata mata; MPUJ_ENT0058542 (MPUJ); 1 ♂, same data; 6 Oct 2006; J. Díaz leg.; [colecta] manual, sabana; MPUJ_ENT0058541 (MPUJ); 1 ♀, same data; 21 Oct 2006; E. Hernández et al. leg.; [colecta] manual, bosque, MPUJ_ENT0058550 (MPUJ); 1 ♀, Villavicencio; 4°09′N, 73°39′W; 467 m; 24 Nov 1993; D.U. Riveros leg.; UNAB No. (UNAB); 2 ♂♂ 6 ♀♀, Villavicencio, Centro de investigación La Libertad; 4°3′20.18″N, 73°28′10.32″W; J. Guevara leg.; [colecta] manual, en cría; CTNI No. 2545 (CTNI); 1 ♂, Vista Hermosa, Caño Cabra; 12 May 1968; Fowler leg.; MPUJ_ENT0058563 (MPUJ). **Vichada:** 1 ♂, Puerto Carreño, Finca La Morena; 6°12′N, 67°23′W; 90 m; 24 Sep 1998; J. Herrera, M. Martínez leg.; UNAB No. 4857 (UNAB); 1 ♀, Cumaribo, Gaviotas; 167 m; 2 May 1977; R. Cortez leg.; ICN 029959 (ICN); 1 ♀, same data; 15 Oct 1972, R. Cortez leg.; ICN 029916 (ICN).

Diagnosis. Total length, female 22.9 mm (n = 6), male 20.1 mm (n = 5). General coloration red or dark red (Figs 7B, D); tubercle of the anterior pronotal lobe straight, constricted near the middle and markedly globose apically (Fig. 7E); elevation of the carina of the posterior pronotal lobe narrow (Fig. 7E); scutellum apically rounded (Fig. 7F); connexivum nearly straight, abdominal mediotergites and most of dorsal laterotergites on segments 2–4 black, segments 5–7 black with a bright yellow broad band increasing in size toward the posterior segments (Figs 7B, D), also visible on the ventral laterotergites, but less bright (Figs 7A, C); membrane usually translucent, sometimes translucent yellow (some Amazon specimens).

Variation. The specimens examined show some degree of variation in terms of coloration, such as in the membrane, which is hyaline in most of the examined specimens, including the lectotype (Figs 7B, D; 30), but golden in the specimens examined from Leticia (Amazonas). Specimens of localities above 1000 m have an overall darker coloration. Moreover, the pattern on the dorsal laterotergites of segments 5–7 is also slightly variable with regard of the extension of the dark area.

Differential diagnosis. Among those species with connexival segments not strongly lobed, *Montina confusa* is similar to *M. testacea* because of the overall reddish coloration (Fig. 7), although *M. testacea* has an almost uniform coloration on the ventral laterotergites (Figs 21A, C), unlike *M. confusa* which has a strongly contrasting black and yellow pattern on the ventral laterotergites (Figs 7A, C). It might also be confused with *M. distincta* because of the contrasting pale band against a dark area on the ventral laterotergites (Figs 9A, C), although *M. distincta* has an overall pale brown coloration (Figs 9B, D). Additionally, *M. confusa* has the anterior pronotal lobe tubercles apically globose and with a pre-apical constriction (Fig. 7E), the scutellum with a rounded apex (Fig. 7F), the elevation of the carina of the posterior pronotal lobe narrow and tubercle-like (Fig. 7E), and the margin of the connexivum with an acute tubercle on the posterior half of each of segments 2 and 3 in females and also on segments 4 and 5 in males (Figs 7A, C). Both *M. distincta* and *M. testacea* have subconical tubercles on the anterior pronotal lobe which are not preapically constricted, the elevation of the carina of the posterior pronotal lobe is truncated or rounded (Figs 9E, F; 21E), and the scutellum is apically acute.

Biology. In Colombia, *Montina* has been reported as a predator of insect pests of agricultural crops such as corn and others (Ayala et al. 2013, León Martínez & Guevara Agudelo 2006), although the species involved have never been identified. Nevertheless, specimen images in these reports seem to correspond to *M. confusa* (e.g., Guevara & Jiménez 2018). Even some of the Amazonian specimens were collected in "chagras", which are indigenous cultivation plots (Escobar et al. 2005). Therefore, given that *M. confusa* can be found in agricultural crops in Colombia this species should be studied as a potential predatory agent against pest species.

Distribution. Brazil, Peru (Maldonado 1990; Stål 1859, 1868), and Colombia (Amazonas, Caldas, Caquetá, Casanare, Cundinamarca, Meta, Vichada), with altitudinal records between 100 and 2,000 m (Fig. 40).

Remark on types. Stål (1859) described *M. confusa* based on females from "Brasilia?" deposited at ZMHB ("Mus. Berol."). We have located two females, one at ZMHB and another at NHRS that might be considered syntypes. We are designating the specimen from ZMHB as the lectotype (Fig. 30) because it is found in the same collection as when originally described, and the locality (Para) is congruent with "Brasilia".

Montina distincta (Stål, 1859)

(Figs 9; 10; 24D; 26D; 28D; 30; 40)

Ploeogaster distinctus Stål, 1859: 198 (new species).
Ploeogaster distinctus: Walker (1873): 93 (checklist).
Aristippus distinctus: Stål (1868): 99 (key, new generic placement).

Montina (*Aristippus*) *distincta*: Stål (1872): 74 (checklist, new generic placement, *Aristippus* as subgenus).
Montina distincta: Lethierry & Severin (1896): 195 (catalog); Maldonado (1990): 234 (catalog).

Type locality. Brazil, Pará.
Type material. Lectotype (here designated): [**BRAZIL** – **Para**]: 1 ♂, (green label) "Para" / "distinctus Stål" / 2566 / (red label) Typus / Lectotype *Ploeogaster distinctus* Stål, 1859 Desig. by A. Mejía-Soto & D. Forero (ZMHB). Paralectotypes: **BRAZIL:** 1 ♀, (green label) "Brazil. Coll. Germ." / "distinctus ♀ Stål" / 8227 / (red label) "Allo-" Typus (ZMHB). **Para**: 1 ♀, (green label) "Pará Sieber" / "2564" / "*Ploeogaster testaceus" (sic) ♀ Paratypus Stål" (red label) Paratypus (ZMHB). [**UNKNOWN**]: 1 ♂, "distinctus !! Stål" / M. Berl / (red label) Paratypus / (red label) 380 "82" / NHRS-GULI 000000606 (NHRS); 1 ♂, "*Ploeogaster distinctus Paratypus Stal" / (red label) Paratypus (ZMHB).
Other specimens examined. COLOMBIA: Amazonas: 1 ♂, Leticia, comunidad indígena Monifue Amena, Km 9,8 vía Leticia-Tarapacá; [04.1416°S 69.9232°W]; 70 m; 2 Oct 2009; M. Cubillos, M. Gamba leg.; MPUJ_ENT0058490 (MPUJ). **Caquetá:** 1 ♀, Florencia; 22 Ene 1969; I. Zenner leg.; CTNI No. 2541 (CTNI). **Cundinamarca:** 1 ♀, La Vega, vereda El Volcán; 1600 m; 28 Mar 2002; N. Ulba leg.; vegetación baja; UNAB No. 4861 (UNAB); 1 ♀, Cáqueza; 4°24′30″N, 73°56′50″W; 1740 m; 10 Sep 1994; W. Valero leg.; UNAB No. 4861 (UNAB). **Meta:** 1 ♂, La Macarena; 2°10′54.185″N, 73°47′11.22″W; 28 Mar 1997; C. Santana leg.; UNAB No. 4861 (UNAB); 1 ♀, Puerto López; 2 Nov; L.E. Aguirre leg.; ICN 029913 (ICN); 1 ♀, Puerto López; 85 m; Oct 194?; F. Gallego leg.; MEFLG 7277 (MEFLG); 1 ♂, Puerto López, Cafam; 9 Sep 1991; C. Jímenez leg.; MPUJ_ENT0058529 (MPUJ); 1 ♀, Puerto López, Remolinos; 300 m; 19 Mar 1993; [colecta] manual; MPUJ_ENT0058509 (MPUJ); 1 ♀, Puerto López, Remolinos, Centro Cafam Llanos, ~55km W Puerto Gaitán; 04.2751°N 72.5408°W; 165 m; A. Guillen leg.; MPUJ_ENT0058527 (MPUJ); 1 ♀, Remolinos; 300 m; 20 Mar 1993; J. Gary leg.; MPUJ_ENT0058515 (MPUJ); 1 ♀, Remolinos; 390 m; 19 Mar 1993; MPUJ_ENT0058509 (MPUJ); 1 adult, sex not determined; San Juan de Arama, PNN [Parque Nacional Naural] La Macarena, vereda Monserrate; Nov 1989; ICN 027664 (ICN); 1 ♀, San Juan de Arama; 3°22′, 73°52′W; 450 m; 24 Mar 1997; S. Henríquez leg.; UNAB No. 4861 (UNAB); 1 ♂ 1 ♀, San Martín, Finca [el] Caduceo, cerca al río Camoa; 400 m; 14 May 2006; C. Sánchez leg.; jama [insect net] (ICN); 1 ♀, San Martín, vereda Puerto Castro, Finca Hato; 11 Dic 2001; J. Ramírez leg.; MPUJ_ENT0058580 (MPUJ); 1 ♂, San Martín; 3°42′N, 73°42′W; 419 m; 17 Ene 1997; O. Fuentes leg.; UNAB No. 4861 (UNAB); 2 ♀♀, Villavicencio; 4°09′N, 73°39′W; 467 m; 12 Nov 1992; R. Marisol leg.; UNAB No. 4861 (UNAB); 1 ♀, same data; 13 Oct 1994;

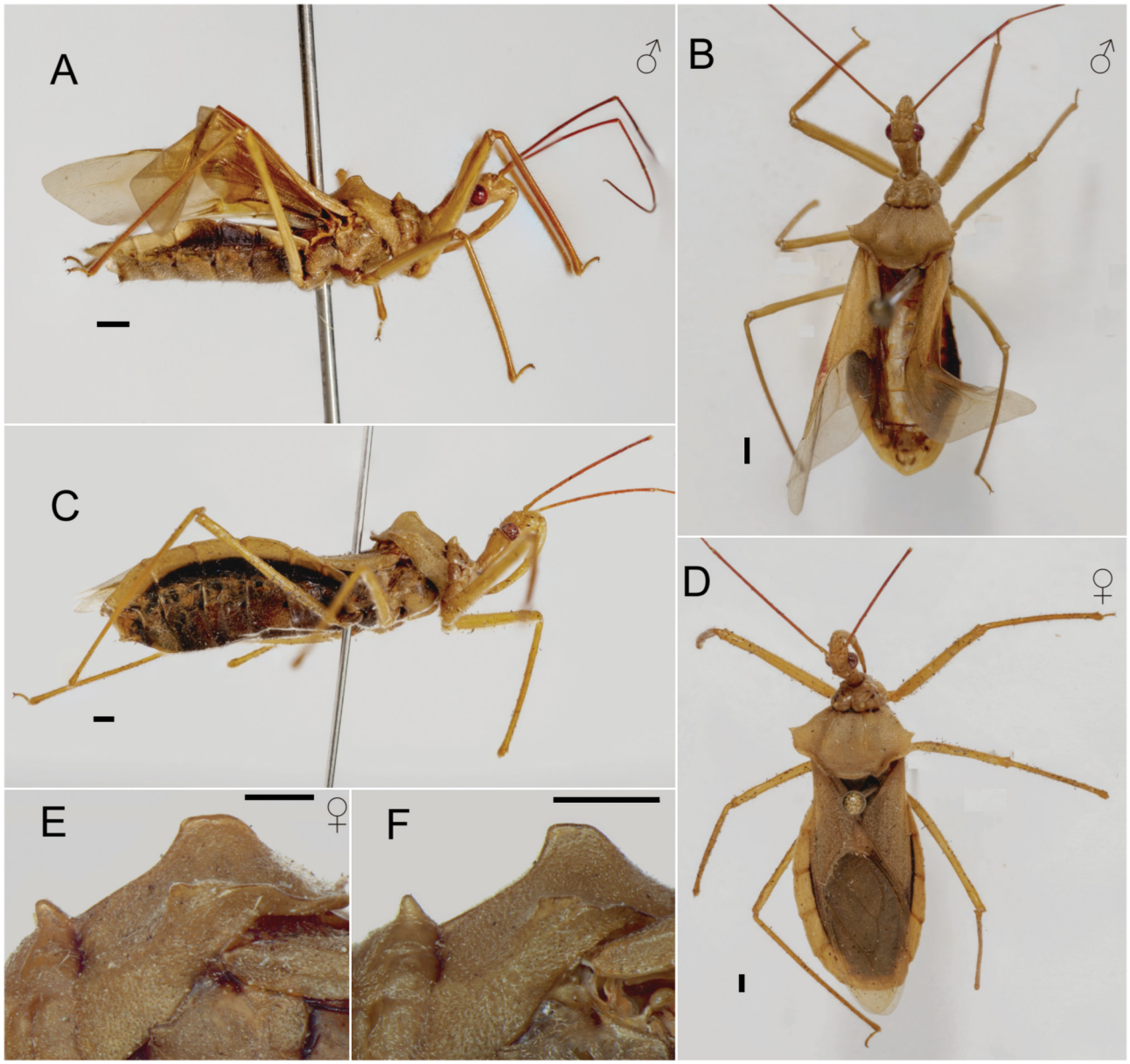

Fig. 9. *Montina distincta* (Stål, 1859). A – male, lateral view; B – male, dorsal view; C – female, lateral view; D – female, dorsal view; E – pronotum, female, lateral left view; F – pronotum, male, lateral left view. Scale bar: 1 mm.

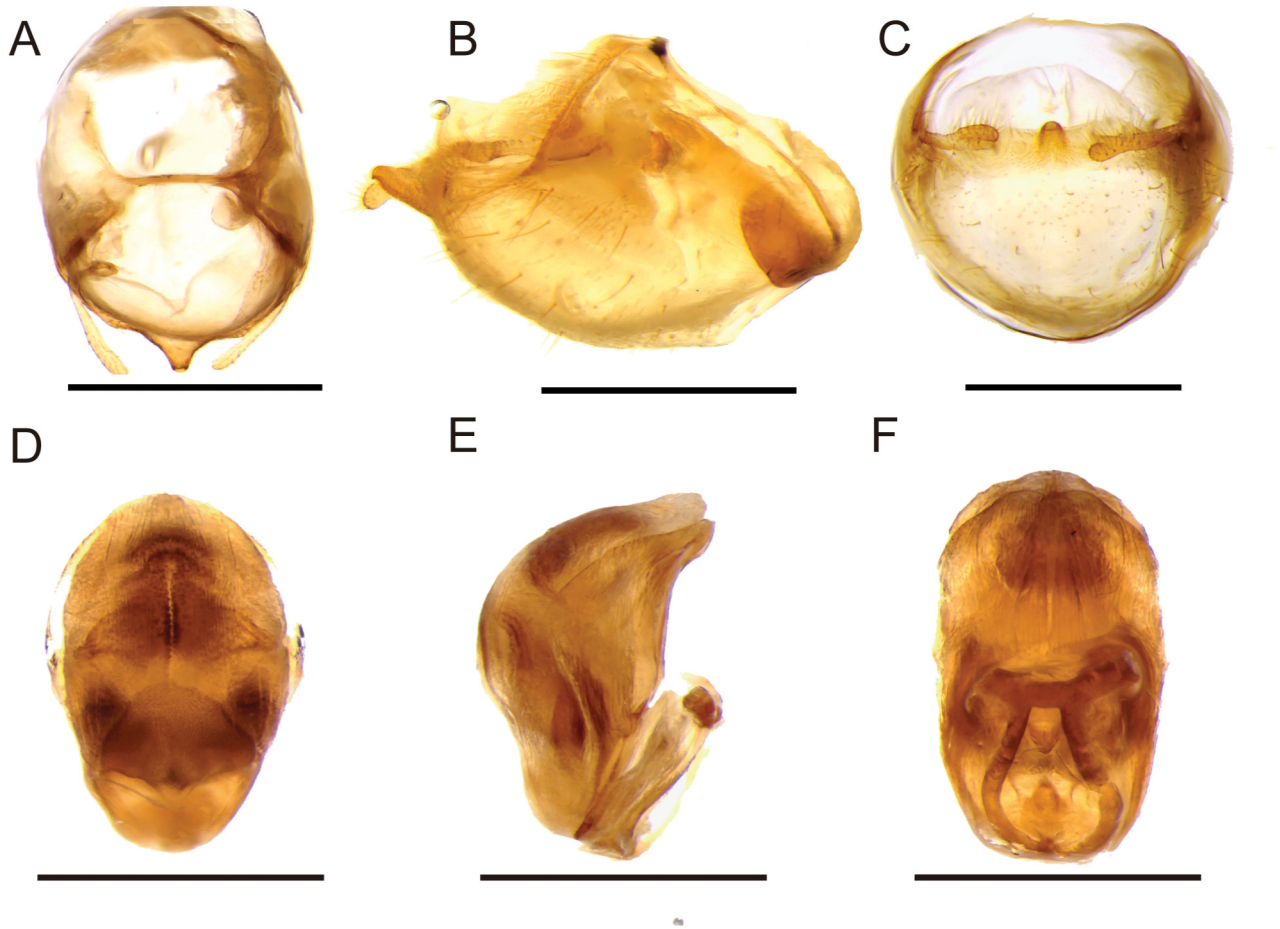

Fig. 10. *Montina distincta* (Stål, 1859), male genitalia. A – pygophore, dorsal view; B – pygophore, lateral right view; C – pygophore, caudal view; D – phallus, ventral view; E – phallus, lateral right view; F – phallus, dorsal view. Scale bar: 1 mm.

D. Aponte leg.; UNAB No. 4861 (UNAB); 1 ♀, Villavicencio, Km 20 Vía Puerto López, Hacienda San Antonio; 1 Dic 2003; M. Turgeman leg.; MPUJ_ENT0058601 (MPUJ); 1 ♂, same data; 15 Nov 2003; A. Robayo leg.; MPUJ_ENT0058528 (MPUJ). **Vichada:** 1 ♀, Puerto Carreño, Finca La Morena; 6°12′N, 67°23′W; 90 m; 26 Sep 1998; J. Herrera, M. Martínez leg.; UNAB No. 4861 (UNAB).

Diagnosis. Total length, female 20.5–21.8 mm (n = 4), male 14.3–14.6 mm (n = 4). General coloration light brown (Figs 9B, D), sometimes pronotum dark brown (Fig. 31B); membrane translucent yellow; reduced anterolateral pronotal angles (Figs 9B, D); discal tubercle of the anterior pronotal lobe conical and small in males (Fig. 9F), thick, subconical, directed anteriad in females (Fig. 9E); apex of corium usually red (Fig. 9B); margin of connexivum almost straight, never lobed (Figs 9A, C); females with ventral laterotergites with a dorsal, broad, pale yellow band contrasting with the black ventral area (Fig. 9C), males similar but usually with the black band reaching the dorsal margin on segments 4–5 (Fig. 9A).

Variation. Two characters are sexually dimorphic in *M. distincta,* the coloration and structure of the connexivum. The dark band on the ventral laterotergites in females usually covers the lower half of segments 2–6 and part of 7 (Fig. 9C), whereas in males this dark band resembles a semicircle that covers most of segments 4 and 5 but only a small part of segments 3 and 6 (Figs 9A). The posterior margin of each of the connexival segment has a blunt process, these are more conspicuous in segments 2–6 in males, whereas in females they are more conspicuous in segments 2–5.

Differential diagnosis. *Montina distincta* is similar in coloration to *M. fumosa* and *M. tikuna* sp. nov. but can be easily distinguished by having a shorter total length and by the contrasting black band on the ventral laterotergites (Figs 9A, C), whereas in *M. tikuna* sp. nov. the ventral laterotergites are uniformly black (Fig. 23A) and in *M. fumosa* the ventral laterotergites are uniformly dark brown, both without a conspicuous contrasting pattern (Figs 11A, C).

Distribution. Brazil, French Guiana (Maldonado 1990; Stål 1859, 1868), and Colombia (Amazonas, Caquetá, Cundinamarca, Meta, and Vichada), with records between 90–1500 m (Fig. 40).

Remark on types. When describing *M. distincta*, Stål (1859) indicated that he had examined a male from "Mus. Berol." (ZMHB). We found several specimens that we consider syntypes in both ZMHB and NHRS. We have designated a male in good condition from ZMHB as the lectotype which bears a "Para" label (Fig. 31). We have selected this male because it is from the ZMHB collection, agreeing with the original description (Stål 1859), and has a label that although not directly indicating Brazil, it fits Stål's note of "Brasilia?" because Pará is a large Brazilian state in Amazon region. The lectotype differs from most of the examined specimens on the dorsal extension of the dark

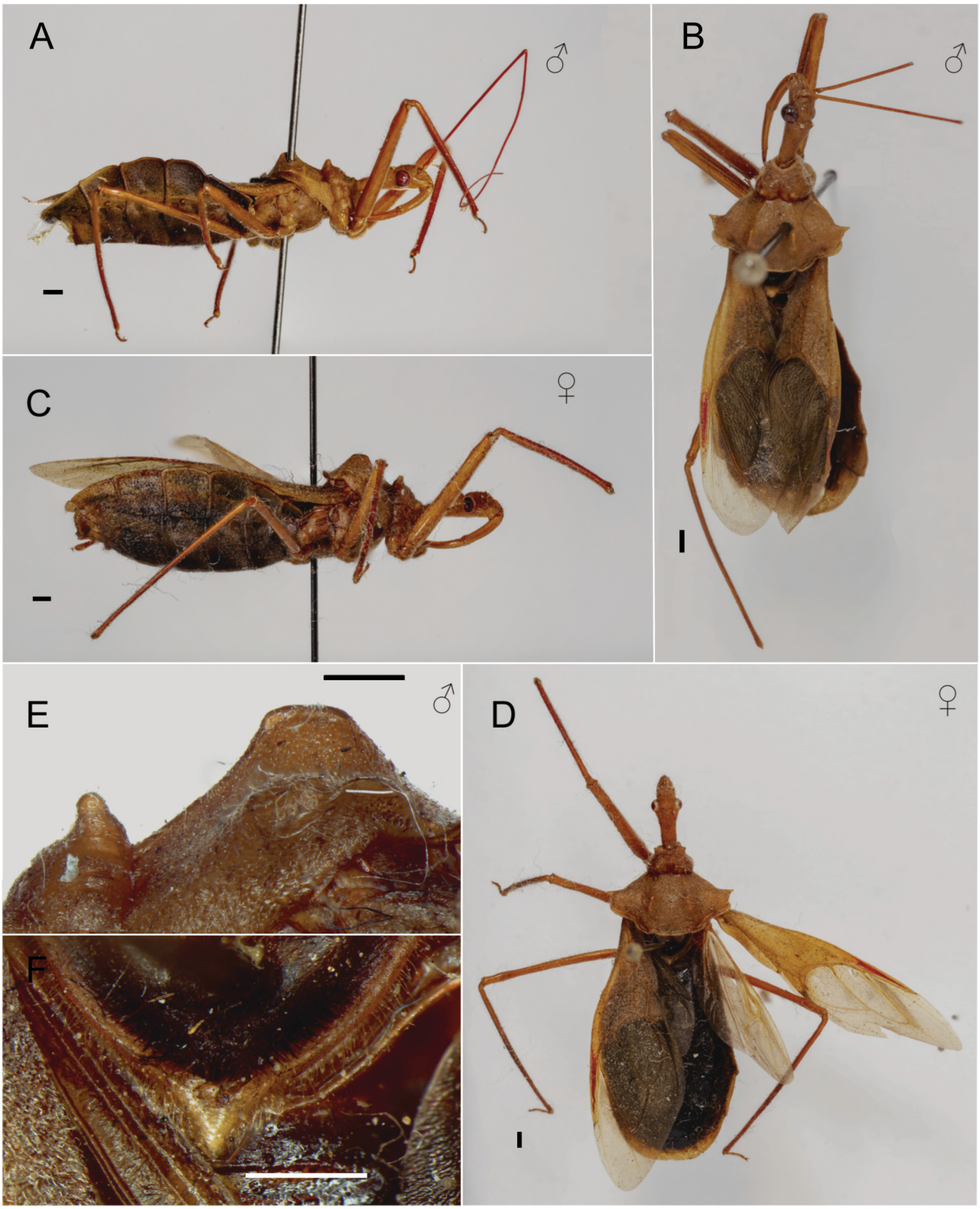

Fig. 11. *Montina fumosa* (Stål, 1867). A – male, lateral view; B – male, dorsal view; C – female, lateral view; D – female, dorsal view; E – pronotum, male, lateral left view; F – scutellum. Scale bar: 1 mm.

marking on the ventral laterotergites. In the lectotype the dark marking extends only slightly dorsally on segments 4 and 5, whereas in most examined males the dark marking reaches the dorsal margin of the ventral laterotergites. Similarly, one female paralectotype has the black marking completely covering the ventral laterotergites on segments 2, 3 and part of 4. This suggests that the dark marking is variable in its extension on the ventral laterotergites, but the presence of a dark marking strongly contrasting with a dorsal pale area is common to all examined specimens, and thus, of specific value. We are considering one of the paralectotype specimens to belong here although it bears an identification label of "*Ploeogaster testaceus*". As discussed below under *M. testacea*, that specimen was likely

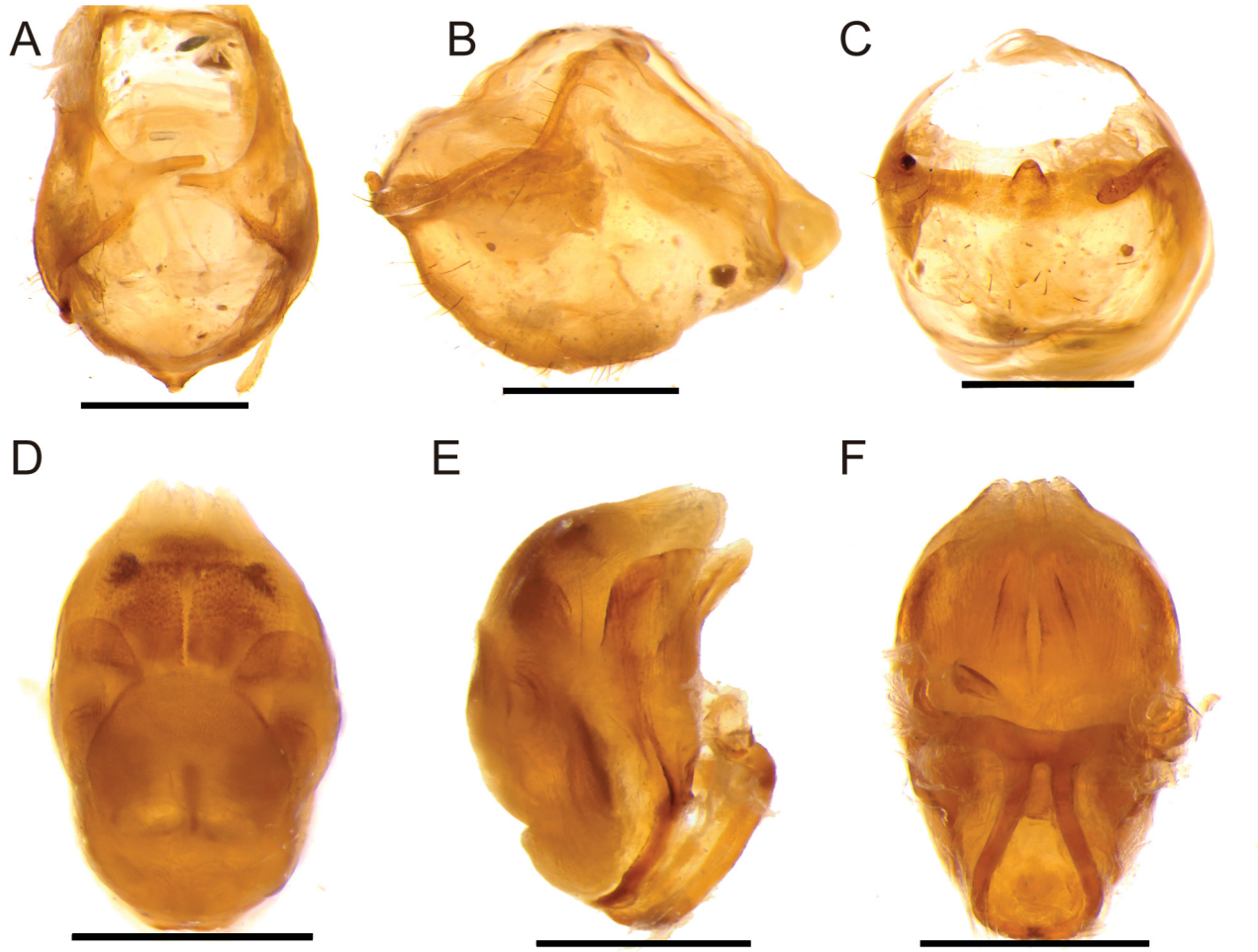

Fig. 12. *Montina fumosa* (Stål, 1867), male genitalia. A – pygophore, dorsal view; B – pygophore, lateral right view; C – pygophore, caudal view; D – phallus, ventral view; E – phallus, lateral right view; F – phallus, dorsal view. Scale bar: 1 mm.

mislabeled for curatorial purposes, and because it fits all the diagnostic characters of *M. distincta*, we are considering it as a paralectotype of this species.

Montina fumosa (Stål, 1867)

(Figs 11; 12; 24A; 26A; 28A; 33; 41)

Aristippus fumosus Stål, 1867: 300 (new species).
Montina (*Aristippus*) *fumosa*: Stål (1872): 74 (checklist, new generic placement, *Aristippus* as subgenus).
Ploeogaster fumosus: Walker (1873): 94 (catalog).
Montina fumosa: Lethierry & Severin (1896): 195 (catalog); Maldonado (1990): 234 (catalog).

Type locality. Brazil, Amazon (?).
Type material. Holotype: [BRAZIL – Unknown state]: 1 ♀, "Amazon" / (red label) 383 "82" / "*fumosus* Stål" / (red label) Typus / NHRS-GULI 000000608 (NHRS).

Other specimens examined. COLOMBIA: Amazonas: 1 ♂, S. Encanto; 4°12′N, 69°56′W; 14 Ago 1991; F. Ramoz leg.; UNAB No. 4862 (UNAB); 1 ♀, Leticia, comunidad indígena Monifue Amena, Km 9,8 vía Leticia-Tarapacá; [04.1416°S 69.9232°W]; 80 m; 3 May 2002; Mora et al. leg.; MPUJ_ENT0058581 (MPUJ); 1 ♀, same data; 70 m; Mar 2004; Salamanca leg.; MPUJ_ENT0010528 (MPUJ); 1 ♀, same data; 60 m; 12 Oct 2002; Varela et al. leg.; MPUJ_ENT0058524 (MPUJ); 1 ♂, same data; 26 Ago 2003; [colecta] manual; MPUJ_ENT0058499 (MPUJ); 1 ♀, same data; 31 Mar 2005; Farias; et al. leg.; [colecta] manual; MPUJ_ENT0058460 (MPUJ); 1 ♂, Leticia, Km 7 vía Tarapacá; 120 m; Nov 1996; Sistemática Animal UNAL exped.; ICN 036202 (ICN); 1 ♀, Leticia, Km 2 vía Tarapacá, sendero quebrada Tacana; 2°53′28.705″S, 69°44′27.862″W; 9 Nov 2001; E. Flórez leg.; ICN 036198 (ICN); 1 ♀, Leticia; Km 2 vía Tarapacá; 110 m; 27 Oct 2002; Sistemática Animal UNAL exped.; ICN 037559 (ICN); 1 ♀, same data; 100 m; 25 Abr 2002; ICN 037556 (ICN); 1 ♀, same data; 120 m; 29 Oct 2002; Sistemática Animal UNAL exped.; ICN 037552 (ICN); 1 ♀, Leticia, Km 25 vía Tarapacá; 27 Ago 1997; F. Fernández, leg.; bosque inundable; ICN 036199 (ICN); 1 ♂, Leticia, PNN [Parque Nacional Natural] Amacayacu; 5 Sep 1997; F. Fernández leg.; Tierra Firme, jama [insect net]; ICN 037549 (ICN: 1 male). **Guainía**: 1 ♀, Puerto Inírida, Com. La Ceiba [resguardo indígena La Ceiba, 28.6km SSE de Inírida]; 3°37′58.7″N; 67°53′22.1″W; 103 m; 21–25 Mar 1998; G. Amat, A. Gabanzo, C. Martinez leg.; bosque; ICN 029910 (ICN). **Guaviare**: 1 ♀, San José of Guaviare, vereda Playa Güio, sendero Las Iracos; 2°34′40.7″N, 72°42′24.5″W; 27 Oct 2012; C. Suarez leg.; jama [insect net]; ICN (ICN); 1 ♂, San José of Guaviare; Vereda Playa Güio; 2°34′40.7″N, 72°42′24.5″W; 28 Oct 2012; Sistemática Animal UNAL exped.; [colecta] manual; ICN sin código – 112 (ICN). **Meta**: 1 ♀, Acacias, Monte Bello; 20 Sep 2005; D. Gaitán leg. (ICN); 1 ♂, San Martín; Reserva Rey Zamuro-Matarredonda, ~37km ESE de San Martin; 03.53173°N, 73.40181°W; 8–12 Abr 2019; C. Salazar, L. Sáenz leg.; bosque de galería; red entomológica; MPUJ_ENT0064804 (MPUJ); 1 ♀, same data; S. Borda leg.; borde bosque de galería; colecta manual; MPUJ_ENT0065336 (MPUJ); 1 ♀, same data; S. Ochoa, V. Páez, L. Rodríguez leg.; bosque de galería; colecta manual; MPUJ_ENT0065907 (MPUJ); 1 ♀, Vista Hermosa, caño Cabra; 5 Jul 1968; C. Fowler, J. Fowler leg.; MPUJ_ENT0058511 (MPUJ); 1 ♀, La Macarena, PNN [Parque Nacional Natural] La Macarena, rio Guayabero; 16 May 1988; A. Medina leg.; [colecta] manual; ICN 037557 (ICN); 1 ♀, La Macarena; L. Solorzano leg.; UNAB No. 4862 (UNAB); 1 ♂, San Juan de Arama, cerca de la estación del Inderena, cuchilla el Tablazo; 650 m; Sep 1987; ICN 029911 (ICN). **Putumayo**: 1 ♂, Caucayá; 4 Dic 1948; ICN 037557 (ICN).

Diagnosis. Total length, females 24.5–25.2 mm (n = 5), males 20.3–21.0 mm (n = 3). General coloration brown (Figs 11B, D); membrane translucent yellow; tubercle of the anterior pronotal lobe subconic and slightly curved anteriad in males (Fig. 11E), slightly globose apically in females; elevation of the carina of the posterior pronotal lobe truncated dorsally (Fig. 11E); scutellum black, apically yellow (Fig. 11F); apex of corium usually bright red (Figs 11B, D); margin of connexivum nearly straight in females, slightly lobed in males (Figs 11A, C); abdominal sternites dark brown, ventral laterotergites dark brown but slightly paler than sternites and with a diffuse pattern (Figs 11A, C), dorsal laterotergites 6–7 pale yellow on their lateral margin; medial process of pygophore with base at least two times as wide as apex (Figs 12A, C); posterior margin of gonocoxa 8 strongly notched (Fig. 24A).

Variation. *Montina fumosa* is a commonly found species, but because of its intraspecific variability in size, coloration, structure of the connexivum, and even the structure of the carina of the posterior lobe of the pronotum, sometimes it might be challenging to identify. On one hand, the general coloration may be darker or redder; for instance, the holotype has the pronotum darker than most of the material examined (Fig. 33B). Also, specimens from the eastern plains (the Llanos), exhibit a lighter color, which makes more contrasting the dark stripe on the first segments of the laterotergites, than the specimens from the Amazon which are darker. In males, the margin of the connexivum is slightly lobed (Fig. 11A) and with the acute subangular structures of the posterior area in the segments 2–5 more marked than in females (Fig. 11B). The height of the elevation of the carina of the posterior pronotal lobe can be slightly variable. Nonetheless, other characters agree with the rest of the material, including the medial process of the pyrophore and the presence of the notch on the gonocoxa 8 and the strongly sclerotized U-shaped structure from the anterior dorsal region of the bursa copulatrix (Fig. 28A).

Differential diagnosis. Because of its overall brown coloration, *M. fumosa* is similar to *M. distincta* and *M. tikuna* sp. nov. Nonetheless, *M. fumosa* can be distinguished by its longer total length, the yellow apex of the scutellum (Fig. 11F), which is dark in both *M. distincta* and *M. tikuna* sp. nov., by the deep notch on the posterior margin of gonocoxa 8 (Fig. 24A), which in *M. distincta* and *M. tikuna* sp. nov. is not as deep (Figs 24D; 25F), and by the strong sclerotization of the inverted U-shaped sclerite on the anterior dorsal region of the bursa copulatrix (Fig. 28A), which is absent in *M. tikuna* sp. nov. (Fig. 29F) and less sclerotized in *M. distincta* (Fig. 28D). It can also be confused with *M. fenestrata* (Fig. 32), a species known from Brazil and not found so far in Colombia, because both share the overall brown coloration and the yellow apex of the scutellum. However, the elevation of the carina of the posterior pronotal lobe is very prominent in *M. fumosa* (Fig. 11E), whereas in *M. fenestrata* is low (Fig. 32A), and the forewing membrane is uniformly hyaline in *M. fumosa* (Figs 11B, D), whereas in *M. fenestrata* it is pale brown with a round translucent central area (Fig. 32B).

Distribution. Brazil, Peru (Maldonado 1990; Stål 1866, 1872), and Colombia (Amazonas, Guainía, Guaviare, Meta, Putumayo), with records between 50–650 m (Fig. 41).

Remark on type. Stål (1867) described *M. fumosa* based apparently on a single female from "Brasilia borealis". At the NHRS only one female specimen was identified as a type. In other collections no further specimens that might be considered syntypes were found. Therefore, we are considering this single female as the holotype of *M. fumosa*.

Montina gladiator Mejía-Soto & Forero, sp. nov.

(Figs 13; 14; 25A; 27A; 29A; 41)

Type locality. Colombia: Chocó: Riosucio, Sautatá.

Type material. Holotype: **COLOMBIA: Chocó:** 1 ♂, Riosucio, Sautatá; [07.4431°N, 77.1014°W]; Jul 1978; H. Echeverri leg., ICN 029956 / (red label) HOLOTYPE *Montina gladiator* A. Mejía-Soto & D. Forero, sp. nov. (ICN). Paratypes: **COLOMBIA: Chocó:** 1 ♀, Riosucio, Tilupo; [07.4383°N, 77.1151°W]; Abr 1978; H. Echeverri leg.; ICN 036201 (ICN); 2 ♀♀, same data; 12 Jun 1978; ICN 029954, ICN 029953 (ICN); 1 ♀, same data; 27 Jul 1978; ICN 029955 (ICN); 1 ♀, Quibdó, Yuto; [05.5340°N, 76.6308°W]; 90 m; 1 Nov 1983; F. Serna leg.; en maleza; MEFLG No. 7279 (MEFLG). **Santander:** 1 ♂, Guapotá, Carare; [06.3335°N, 73.3360°W]; 800 m; 3 May 1939; L. Richter; CTNI: No. 2539 (CTNI); 1 ♀, Landázuri; [06.2194°N, 73.8092°W]; 1000 m; 3 Ene 1938; L. Richter; CTNI: No. 2539 (CTNI). **Tolima:** 1 ♀, Mariquita; [05.1995°N, 74.8868°W]; 29 Ago 1987; MPUJ_ENT0058602 (MPUJ).

Diagnosis. Total length, females 23.5–24.0 mm (n = 3), males 16.3–19.0 mm (n = 2). General coloration red, with legs, scutellum, and abdomen black (Figs 13B, D); membrane translucent yellow; tubercle of the anterior pronotal lobe subconical with rounded apex, posterior pronotal lobe elevation of the carina truncated with its posterior margin slightly rounded (Figs 13E–F); connexivum dark brown to black with a red narrow band on its margin, sometimes a little diffuse (Figs 13A–D), segments 4–5 lobed, 6 straight, segments 2–4 with an acute posterior process on each segment, in males the processes are more conspicuous and also present in segment 5 (Figs 13A, C).

Description. ***Male.*** Total length 16.3–19.0 mm, head length, 3.6–3.8 mm, anterior pronotal length, 1.0–1.1 mm, posterior pronotal lobe length 2.2–2.9 mm, abdomen width 4.9–7.6 mm (n = 2). COLORATION. *Head* red to light red; scape and pedicel dark brown, flagellomeres reddish; labium brown, first visible segment dark red. *Thorax:* Anterior and posterior pronotal lobes red; pro-, meso- and metasternum brown. *Legs*: Coxae reddish, remaining segments of legs from dark brown to black. *Hemelytron*: Corium red, anterior margin of corium (R+M) dark red; membrane translucent yellow. *Abdomen*: Sternites dark brown with darker bands on segments 2–6; connexival segments dark brown to black with a narrow red band on its margin; pygophore bright yellow. VESTITURE. Body moderately setose. *Head* covered mainly by medium sized and short sized setae, and few longer setae on the postocular area and clypeus. *Thorax:* Anterior pronotal lobe with glabrous areas; posterior lobe less setose than anterior lobe, posterior margin with long setae; fore leg ventrally covered by dense, medium sized setae. *Abdomen:* Sternites and ventral laterotergites covered by decumbent golden setae; ventrolateral area of abdominal sternites with erect black setae near the posterior margin. STRUCTURE. *Head:* Eyes globular, prominent in dorsal view, about half the width of postocular area, ovoid in lateral view with posterior margin nearly straight; first visible labial segment shorter than

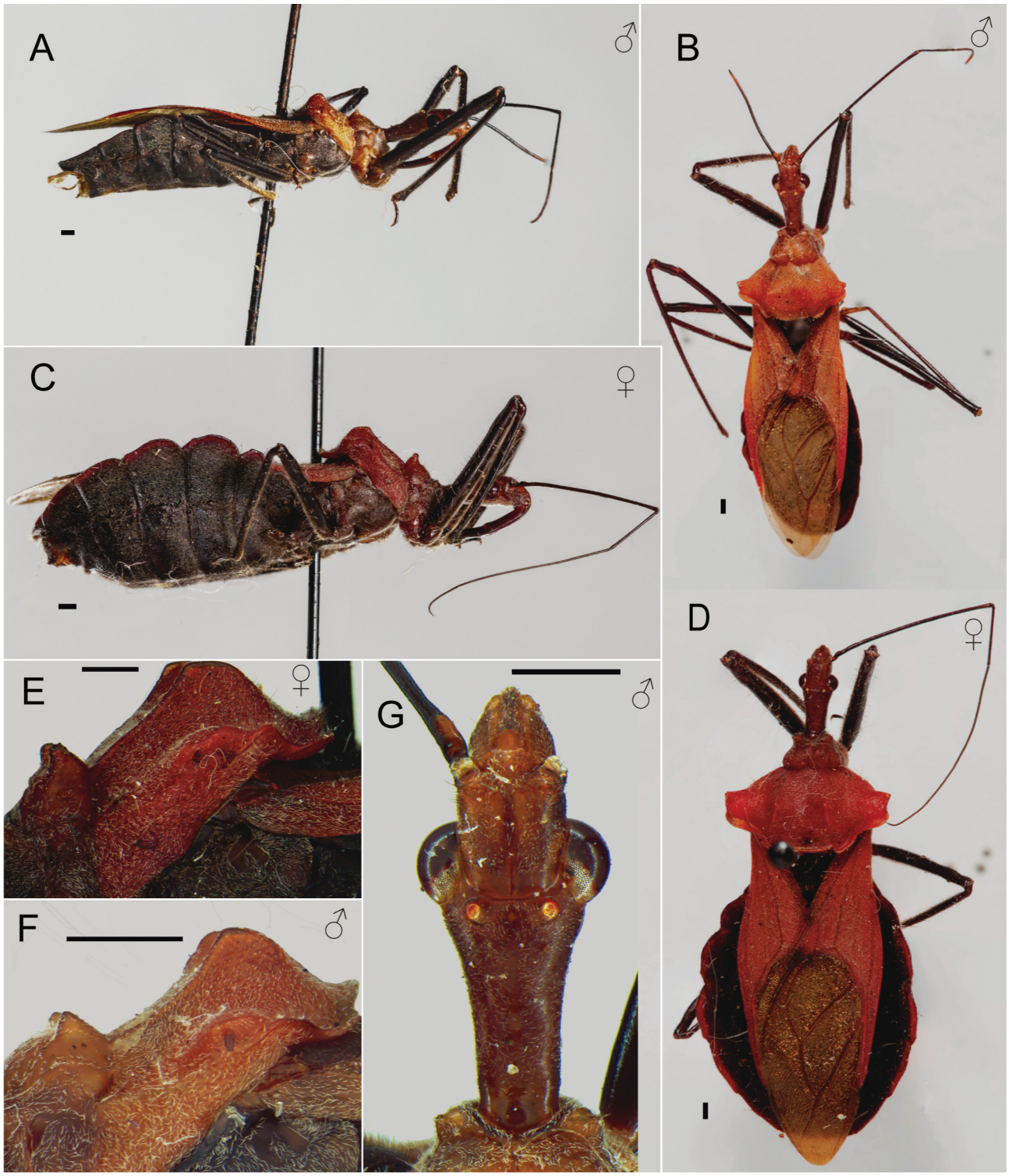

Fig. 13. *Montina gladiator* Mejía-Soto & Forero sp. nov. A – male holotype, lateral view; B – male holotype, dorsal view; C – female paratype, lateral view; D – female paratype, dorsal view; E – pronotum, female paratype, lateral left view; F – pronotum, male paratype, lateral left view; G, head, male paratype, dorsal view. Scale bar: 1 mm.

second. *Thorax:* Tubercles of anterolateral angles slightly prominent, apically acute; discal tubercles of anterior pronotal lobe subconical, apically rounded; elevation of the carina of the posterior pronotal lobe truncated, posterior margin slightly rounded; pronotal posterolateral process broadly triangular, apically rounded; scutellum short, apex slightly rounded but ends at a small tip. Membrane extends beyond the abdomen. *Abdomen:* Margin of connexival segments 2–3 straight, 3 with sharp posterior projection, 4–5 lobed each with subangular process posteriorly, more conspicuous on 4, 6–7 straight. *Genitalia:* Pygophore ovoid in lateral view, in dorsal view wider posteriorly (Fig. 14A); medial process (*mpp*) with parallel margins, cylindrical, in lateral view, straight, directed at about 45 degrees (Figs 14A–C); paramere slightly curved, body narrow on basal half, distal portion widened and rounded, apically with long setae (Figs 14A, C); articulatory apparatus (*apt*) with basal plate arms about as wide as basal plate bridge, lumen

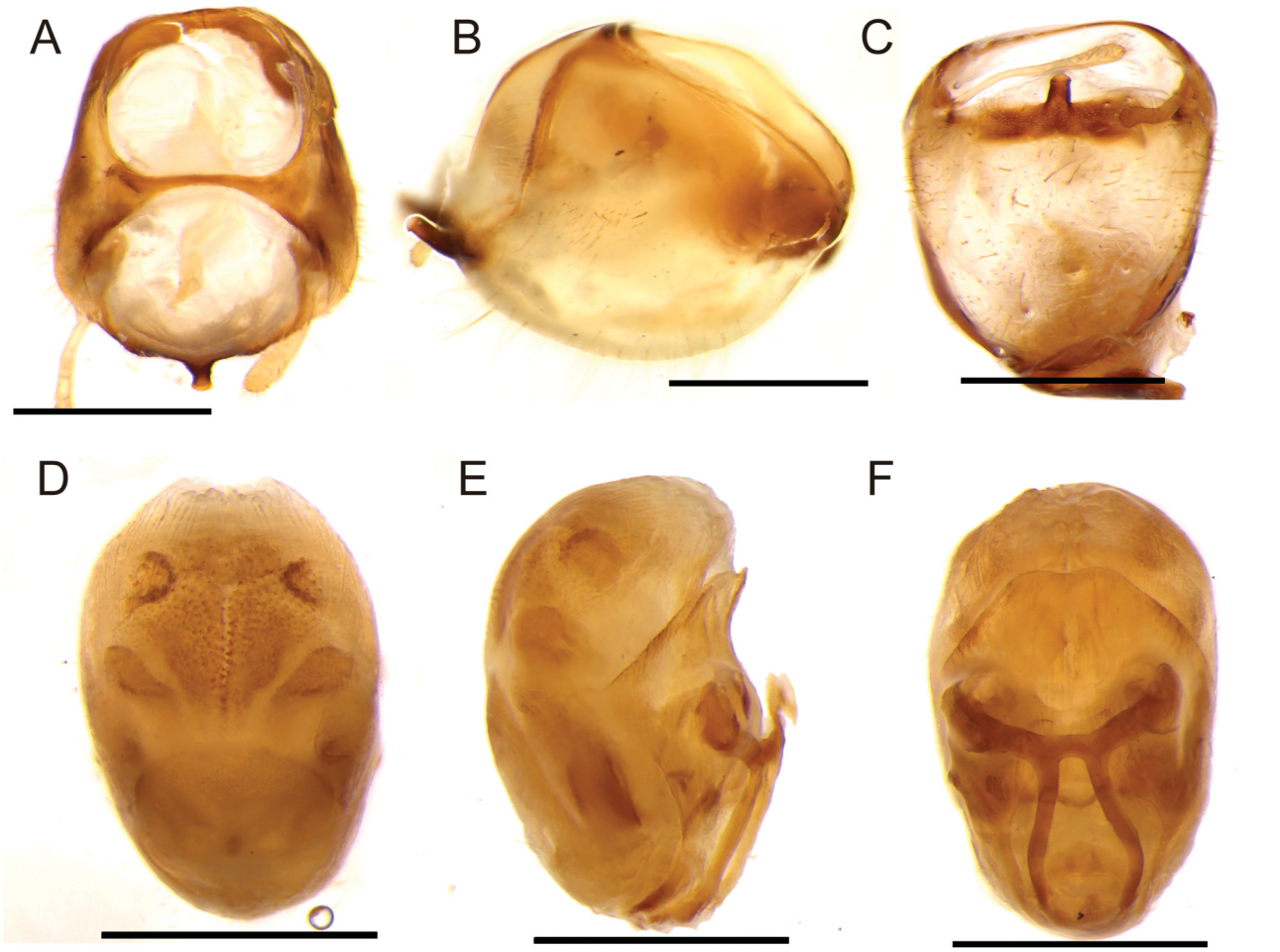

Fig. 14. *Montina gladiator* Mejía-Soto & Forero sp. nov., male genitalia, holotype. A – pygophore, dorsal view; B – pygophore, lateral right view; C – pygophore, caudal view; D – phallus, ventral view; E – phallus, lateral right view; F – phallus, dorsal view. Scale bar: 1 mm.

about as wide as one arm width (Fig. 14F); dorsal phallothecal sclerite (*dps*) narrowing apically, apex truncated and slightly emarginated, in lateral view *dps* concave; endosoma with distal ventral lobe (*dvl*) with numerous sclerotized microtrichia (Fig. 14D); distal dorsal lobe (*ddl*) oval; distal lateral lobes (*dll*) strongly sclerotized at margin; lateral lobes (*ll*) tear-shaped (Fig. 14D).

Female. Similar to male but larger, except in the following: total length 23.3–23.5 mm, head length 4.2–4.3 mm, anterior pronotal lobe length 1.2–1.4 mm, posterior pronotal lobe length 3.8–3.9 mm, abdomen width 7.7–10.0 mm (n = 3). COLORATION. Similar to the male, usually darker; pronotal lobes uniform in coloration. STRUCTURE. *Thorax:* Discal tubercles of anterior pronotal lobe larger, apex of equal width; elevation of carina of posterior pronotal lobe truncated (Fig. 13F). *Abdomen:* Connexival margin of segment 3 subtriangular, 5 less lobed than in male with smaller subangular process (Fig. 13C). *Genitalia:* Gonocoxa 8 subquadrangular, anterior margin (*am*) straight; gonoplac (*gpl*) apically slightly projected beyond joining area, obtuse, thick, glabrous; syntergite 9/10 with distal portion (*dp*) curved, in ventral view concave (Fig. 25A); bursa copulatrix trapezoidal, anterior margin straight; lateral protruding lobes (*lbs*) very wide, exceeding margin of anterior portion (Fig. 27A); U-shaped structure of dorsal area of bursa strongly sclerotized (Fig. 29A).

Variation. The examined specimens from Chocó and Tolima have a darker coloration than those from Santander, although they all share the same coloration pattern. No other variation was observed.

Differential diagnosis. *Montina gladiator* sp. nov. resembles *M. calarca* sp. nov., *M. nigripes,* and *M. scutellaris* because of the reddish coloration of the thorax and the margin of the connexivum, but easily distinguishable by the red coloration of the head (Figs 13B, D, G), which is either black or dark brown in the other species. Both *M. gladiator* sp. nov. and *M. nigripes* have the connexival margin of segment 6 nearly straight (Figs 13A, C; 35A) in both sexes, in contrast to having it lobed in *M. calarca* sp. nov. and *M. scutellaris* (Figs 5A, C; 19A, C), although in the latter it is more conspicuous in males.

Etymology. The name is taken from the Latin *gladiator*, referring to the gladiators of ancient Rome because of the red coloration of their cape and tunica, similar to the coloration of the new species. The name is treated as a noun in apposition.

Distribution. Only known from Chocó, Santander, and Tolima in Colombia, with records ranging between 90–1000 m. (Fig. 41).

It is noteworthy that many of the known localities of *M. gladiator* sp. nov. are the same as those of *M. scutellaris* (Figs 41; 42), although the new species was found

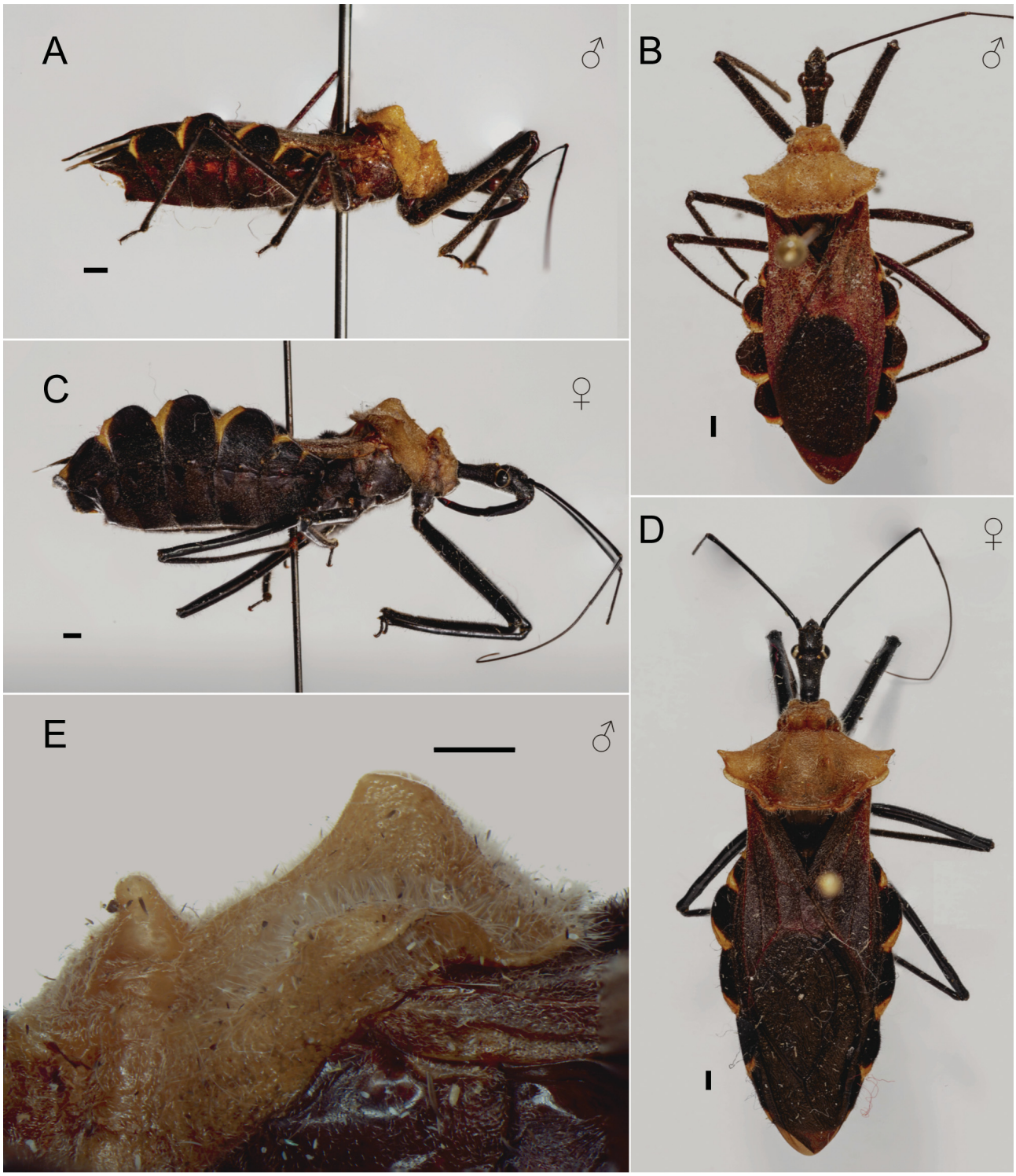

Fig. 15. *Montina lobata* Stål, 1859**.** A – male, lateral view. B – male, dorsal view. C – female, lateral view. D – female, dorsal view. E – pronotum, male, lateral left view. Scale bar: 1 mm. Scale bar: 1 mm.

restricted to lowland areas (below 1,000 m), whereas *M. scutellaris* can reach areas up to 1,600 m. Other species of *Montina* are apparently also sympatric, as in the case of *M. confusa*, *M. distincta*, and *M. testacea* (Figs 40; 42). Given the paucity of specimens of *M. gladiator* sp. nov. found among the examined material, it is unknown if *M. gladiator* sp. nov. is locally rare or if it is occupying a different habitat from that of *M. scutellaris*, thus being harder to collect in the field. Future fieldwork is required to explore these ideas.

***Montina lobata* Stål, 1859**

(Figs 15; 16; 25B; 27B; 29B; 34; 41)

Montina lobata Stål, 1859: 197 (new species).

Montina lobata: Walker (1873): 91 (checklist); Lethierry & Severin (1896): 195 (catalog); Gil-Santana (2019): 516 (new record).

Montina (*Montina*) *lobata*: Stål (1872): 73 (checklist, subgeneric placement).

Montina lobata: Lethierry & Severin (1896): 195 (catalog); Maldonado (1990): 234 (catalog).

Type locality. Brazil, Bahia.

Type material. Lectotype (here designated): [**BRAZIL – Bahia?**]: 1 ♂,

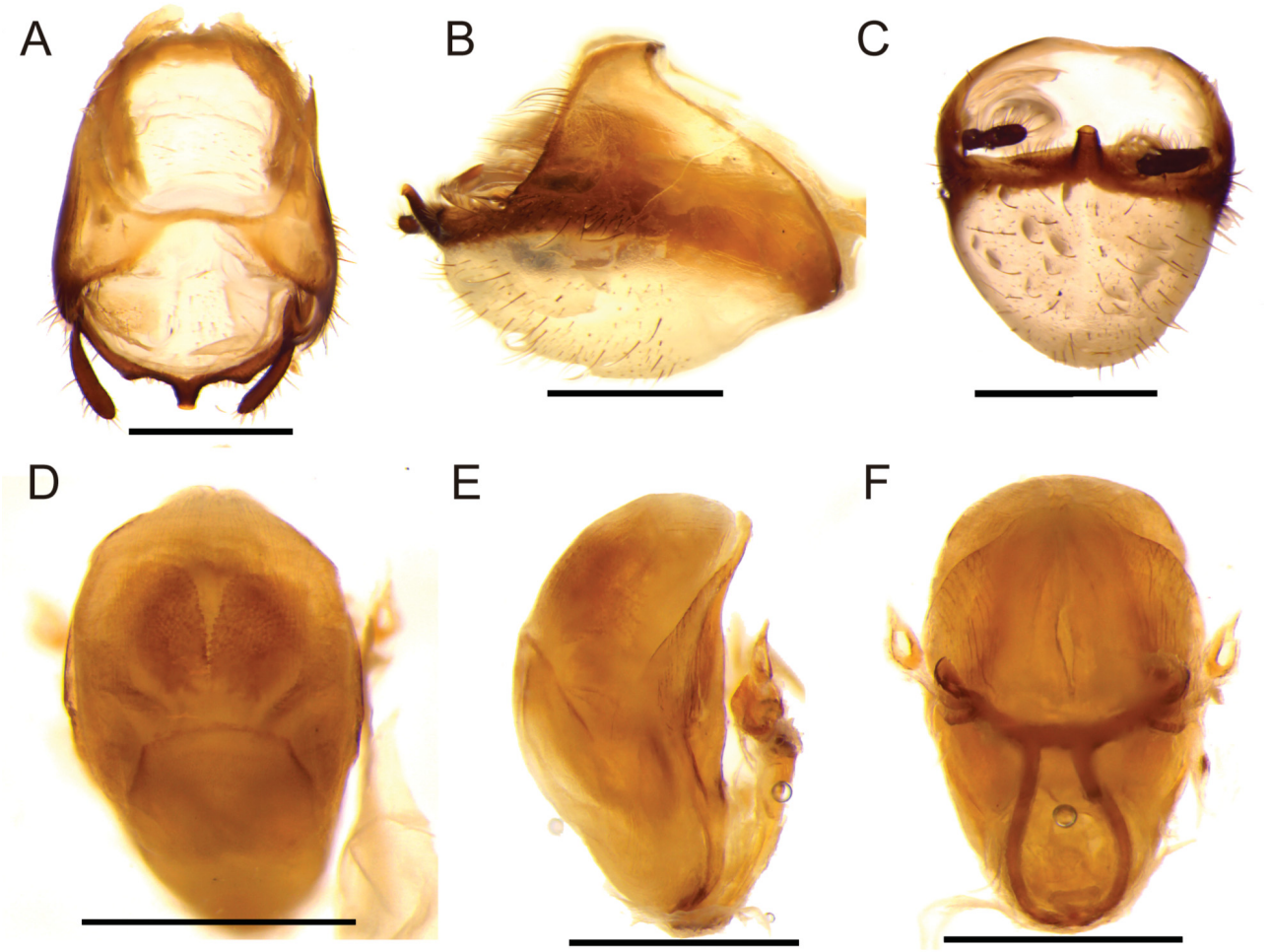

Fig. 16. *Montina lobata* Stål, 1859, male genitalia. A – pygophore, dorsal view. B – pygophore, lateral right view. C – pygophore, caudal view. D – phallus, ventral view. E – phallus, lateral right view. F – phallus, dorsal view. Scale bar: 1 mm.

(green label) "Bahia Gomez" / (red label) paratypus / "2560" / "**Montina lobata* ♂ Stål Paratypus" / (QR code) http://coll.mfn-berlin.de/u/e0b9ee / Lectotype *Montina lobata* Stål, 1859 Desig. by A. Mejía-Soto & D. Forero (ZMHB). Paralectotypes: [**BRAZIL – Bahia?**]: 1 ♀, 2560 / (green label) "Bah. Tello Gomez" / (green label) "Lobatus" / "*lobata* Stål" / (red label) Typus / (QR code) http://coll.mfn-berlin.de/u/e0b9cb (ZMHB); 1 ♂, (green label) "Bahia Gomez" / (red label) Paratypus / "2560" / "**Montina lobata* ♂ Stål Paratypus" / (QR code) http://coll.mfn-berlin.de/u/e0ba15 (ZMHB); 1 ♀, (green label) "Bahia Gomez" / (red label) Paratypus / "2560" / "**Montina lobata* ♀ Stål Paratypus" / (QR code) http://coll.mfn-berlin.de/u/e0bb9f (ZMHB); 1 ♀, (green label) "Bahia Gomez" / (red label) Paratypus / "2560" / "**Montina lobata* ♀ Stål Paratypus" / (QR code) http://coll.mfn-berlin.de/u/e0bb16 (ZMHB). [**BRAZIL**]: 1 ♀, Brazil / "*lobata* Stål" / (red label) Typus / (red label) 384 "82" / NHRS-GULI 000000609 (NHRS).

Other specimens examined. COLOMBIA: Boyacá: 1 ♀, Ventaquemada; 2630 m; 17 Sep 1994; Vargas leg.; UNAB No. 4859 (UNAB); 1 ♀, Santa María, sendero; 1200 m; Abr 1997; G. Amat leg. (ICN); 1 ♂, Santa María, La Cristalina, ~1.8 Km SWbS de Santa María; 04.8480°N, 73.2718°W; 850 m; 18 Sep 2015; J. Cruz, M. Piña, C. Pérez leg.; [colecta] manual, borde de bosque, sobre vegetación; MPUJ_ENT0040910 (MPUJ); 1 ♀, Santa María, sector La Almenara, ~1.7 Km NNE de Santa María; 04.8748°N, 73.2550°W; 1123 m; 13–17 Mar 2016; P. Erazo, C. Lesmes, L. López leg.; [colecta] manual, borde de bosque, sobre vegetación; MPUJ_ENT0050058 (MPUJ). **Cundinamarca:** 1 ♂, Guayabetal; 4°13′40″N, 73°48′59″W; 1200 m; 4 Sep 1969; J. Sarmiento leg.; UNAB No. 4859 (UNAB). **Risaralda:** 1 ♂, Pueblo Rico, corregimiento de Santa Cecilia, área Amurrupá, ~1.1 Km WSW de Santa Cecilia; 05.3378°N, 76.1553°W; 402 m; 19–23 Feb 2018; V. Casallas, S. Mayorga leg.; [colecta] manual; MPUJ_ENT0059620 (MPUJ). **Unknown department:** 1 ♀, no data; cerca de cultivos de cacao; UNAB No. 4859 (UNAB).

Diagnosis. Total length, females 28.0–28.2 mm (n = 2), male 19.8 mm (n = 1). General coloration dark brown and black with pale yellow areas (Figs 15B, D); head, legs, scutellum, and abdomen black, pronotum yellow to dark yellow; corium reddish brown to dark brown, membrane dark (Figs 15B, D); tubercle of the anterior pronotal lobe subconic, obtuse apically, slightly curved anteriad; elevation of the carina of the posterior pronotal lobe very prominent, with posterior margin slightly rounded (Fig. 15E); margin of posterior half of each connexival segment with a yellow oblique band on segments 2–6, on segments 4–6 the band can extend slightly to anterior margin of following segment (Figs 15A, C), margin deeply lobed on segments 3–5, with a subangular process on posterior half of each segment, giving the appearance of a notch (Figs 15A, C).

Differential diagnosis. *Montina lobata* is similar to *M. ruficornis* due to the coloration of the connexival segments, in which each segment has a posterior pale band contrasting with the dark segment. The two species can be separated by the larger size of *M. lobata* (females 28.0 mm, males 19.8 mm), the yellow pronotum contrasting with the dark body (Figs 15B, D), the deeply lobed connexival segments (Figs 15A, C), and the carinae on the posterior pronotal lobe markedly prominent (Fig. 15E). In *M. ruficornis* the total size is smaller (females 20 mm, males 15 mm), the pronotum is brown, similar to the rest of the body (Figs

17B, D), the connexival segments are not as lobed as in *M. lobata* (Figs 17A, C), and the posterior pronotal lobe has low carinas (Figs 17E–F).

Because of the general dark coloration, *M. lobata* might be confused with *M. sinuosa* (Fig. 38). Nevertheless, *M. sinuosa* has not been found in Colombia, and the two can be differentiated by the coloration of the pronotum, which is dark in *M. sinuosa* and yellow in *M. lobata*.

The aedeagus of the male genitalia (Figs 18D–F) does not show any particular characteristic except that the distal lateral lobes (*dll*) of the endosoma are poorly sclerotized in contrast to other species (Figs 14D; 12D). Female genitalia (Fig. 25B) show the curvature, not too deep, in the distal portion of the anterolateral area of gonocoxa 8.

Distribution. Brazil (Lethierry & Severin 1896, Stål 1859), Ecuador (Gil-Santana 2019), and Colombia (Boyacá, Cundinamarca, Risaralda), with records between 400–2600 m (Fig. 41).

Remark on types. Stål (1859) described *M. lobata* based on an unknown number of male and female specimens deposited at "Mus. Berol." (ZMHB). At ZMHB five specimens fitting the description and data from Stål's (1859) description were found. In addition, a female from NHRS bears an identification label in handwriting that seems to be from Stål, and thus, we are considering it as a syntype. All ZMHB specimens bear labels indicating they are from "Bahia". These labels seem to have been affixed only for curatorial purposes since they bear "typus" or "paratypus" labels although in the literature there has never been a formal lectotype designation. From this batch of specimens, we have selected a male as the lectotype because besides the structural characters on the pronotum matching those indicated above for this species, it has the characteristic pale posterior band on each connexival segment. The paralectotypes apparently do not exhibit the pale coloration on the posterior margin of the connexival segments. We are interpreting this as intraspecific variation for *M. lobata*. Given that specimens of *M. lobata* in Colombia exhibit low intraspecific variation with respect to the color pattern on the connexivum, even when comparing high and lowland specimens, we propose that the color difference between the Colombian specimens and the paralectotype series is due to an east-west clinal variation on the connexival coloration, being a pale band on the connexivum wider on specimens from Colombia, and very narrow to almost non-existent in specimens from Brazil. Further assessment of color variation with Brazilian specimens should be explored in the future.

Montina ruficornis (Fabricius, 1803)

(Figs 17; 18; 25C; 27C; 29C; 36; 42)

Zelus ruficornis Fabricius, 1803: 285 (new species).

Aristippus ruficornis: Stål (1868): 99 (new generic placement).

Montina (*Aristippus*) *ruficornis*: Stål (1872): 74 (checklist, new generic placement, *Aristippus* as subgenus).

Ploeogaster ruficornis: Walker (1873): 94 (checklist, new generic placement).

Montina ruficornis: Lethierry & Severin (1896): 195 (catalog, new generic placement); Maldonado (1990): 235 (catalog).

Type locality. "America Meridionalis" [country unknown].

Type material. Lectotype (here designated): [**UNKNOWN COUNTRY**]: 1 adult (sex not determined); "Z. ruficornis ex. Am:mer. Schmid" / (red label) Type / ZMUC 00 103073 / Lectotype *Zelus ruficornis* Fabricius Desig. by A. Mejía-Soto & D. Forero [http://www.daim.snm.ku.dk/digitized-type-collection-details-simple?catno=zmuc00103073] (ZMUC). Paralectotypes: [**UNKNOWN COUNTRY**]: 1 adult (sex unknown, abdomen missing); [illegible manuscript label] / (red label) / ZMUC 00 103072 [http://www.daim.snm.ku.dk/digitized-type-collection-details-simple?catno=zmuc00103072] (ZMUC); 1 adult (sex unknown, abdomen missing); (red label) Type / ZMUC 00 103074 [http://www.daim.snm.ku.dk/digitized-type-collection-details-simple?catno=zmuc00103074] (ZMUC).

Other specimens examined. COLOMBIA: Amazonas: 1 ♀, Leticia, comunidad indígena Monifue Amena, Km 9,8 vía Leticia-Tarapacá; [04.1416°S 69.9232°W]; [80 m]; 11 Oct 2002; A. M. Vélez leg.; MPUJ_ENT0058600 (MPUJ); 1 ♀, same data; 60 m; 1 May 2002; C. Ortiz leg.; MPUJ_ENT0058513 (MPUJ); 1 ♂, same data; 27 Ago 2003; MPUJ_ENT0058498 (MPUJ); 1 ♀, Leticia; 13 Oct 2002; Cotes et al. leg.; MPUJ_ENT0058523 (MPUJ). **Guainía:** 1 ♀, Puerto Inírida, Río Inírida, reserva indígena "La Ceiba" [resguardo indígena La Ceiba, 28.6km SSE de Inírida]; [03.6283°N, 67.8826°W]; 100 m; 2–9 Nov 1997; M. Sandoval leg.; [colecta] manual; MPUJ_ENT0058516 (MPUJ).

Diagnosis. Total length, female 20.3 mm (n = 1), male 15.4 mm (n = 1). General coloration brown (Figs 17B, D); tubercle of anterior pronotal lobe erect, subconical obtuse apex; posterior pronotal lobe elevation of carina very low (Figs 17E, F), posterolateral process with broad base and acute apex (Figs 17B, C); pronotum and corium brown, corium sometimes paler than pronotum; head, legs, and antennae reddish brown to pale brown, membrane yellow with a basal translucent area (Figs 17B, D); margin of posterior half of each connexival segment with a yellow oblique band on segments 2–6 (Figs 17A, C), margin lobed with an acute process on posterior half of each segment.

Variability. Two characters exhibit some sexual dimorphism, the overall coloration in females is darker than in males, and the acute processes of the connexival margin are more acute and projected in males than in females (Figs 17A, C).

Differential diagnosis. *Montina ruficornis* is similar to *M. lobata* due to the pale oblique bands on the posterior margin of each connexival segment. Nonetheless, *M. ruficornis* has a shorter total length (females 20.3 mm, males 15.0 mm), the pronotal carina is less elevated (Figs 17E, F), and it is mostly brown or reddish-brown in its overall coloration (Figs 17B, D). On the other hand, *M. lobata* is larger (females 28.0 mm, males 19.8 mm), mostly black with yellow pronotum (Figs 15B, D), and the carinas of the posterior pronotal lobe are much more elevated (Fig. 15E). Likewise, *M. ruficornis* is similar to *M. fenestrata* because of the overall brown coloration and the non-prominent elevation of the carina of the posterior lobe of the pronotum (Figs 32A, B). *Montina fenestrata* is only known from Brazil (Maldonado 1990) and has not been found in Colombia. Nevertheless, *M. ruficornis* can be differentiated from *M. fenestrata* because it has the tubercles of the anterior pronotal lobe smaller and spine like (Figs 17E, F), and a pale-yellow band on the posterior margin of each connexival segment, each one lobed with an acute posterior process (Figs 17A, C); whereas in *M. fenestrata* the tubercles of the anterior pronotal lobe are subconic and larger (Fig. 32A), the connexivum is uniformly brown without contrasting areas, and its margin is nearly straight with the processes blunt (Fig. 32B).

Stål (1868) mentioned that the membrane of *M. rufi-*

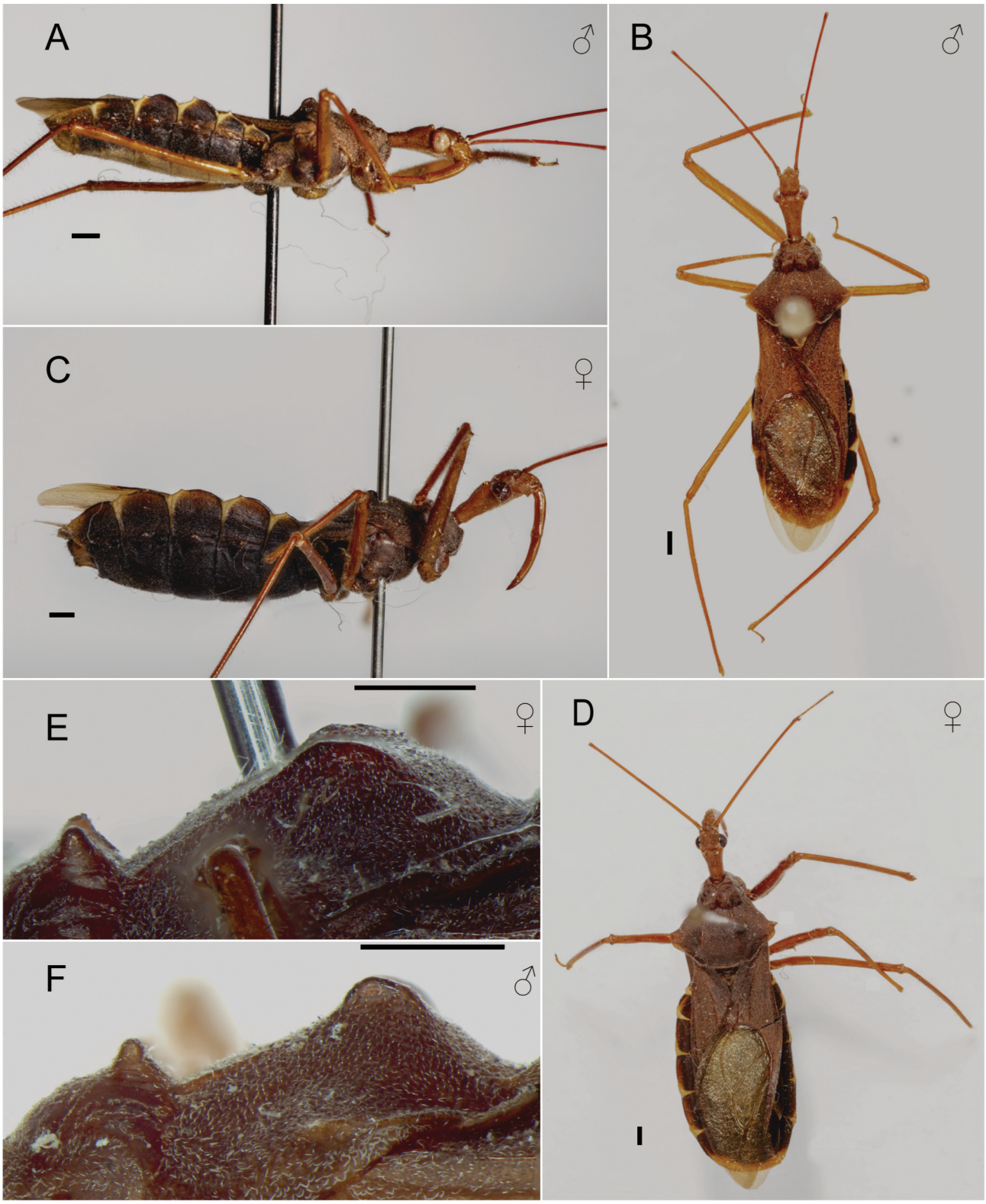

Fig. 17. *Montina ruficornis* (Fabricius, 1803). A – male, lateral view. B – male, dorsal view. C – female, lateral view. D – female, dorsal view. E – pronotum, female, lateral left view. F – pronotum, male, lateral left view. Scale bar: 1 mm.

cornis has the forewing membrane darkened, with a pale basal macula ("membrana fuscescente, macula maxima ante medium sita subdecolore"). Fabricius (1803) did not mention this character in his original description, but the specimen selected as the lectotype (see below) has the membrane yellow with a basal translucent area. In the Colombian specimens the apex of the membrane is apparently slightly darker and with a paler area covering most of the basal and discal cells, thus agreeing with the lectotype in this character.

The male genitalia have the distal lateral lobes (*dll*) of the endosoma poorly sclerotized (Figs 18D). The U-shaped sclerotization in the bursa copulatrix of females, present in most of the species examined, was not observed in *M. ruficornis* (Figs 27C; 29C). Because only one female was examined, additional specimens are needed to confirm the

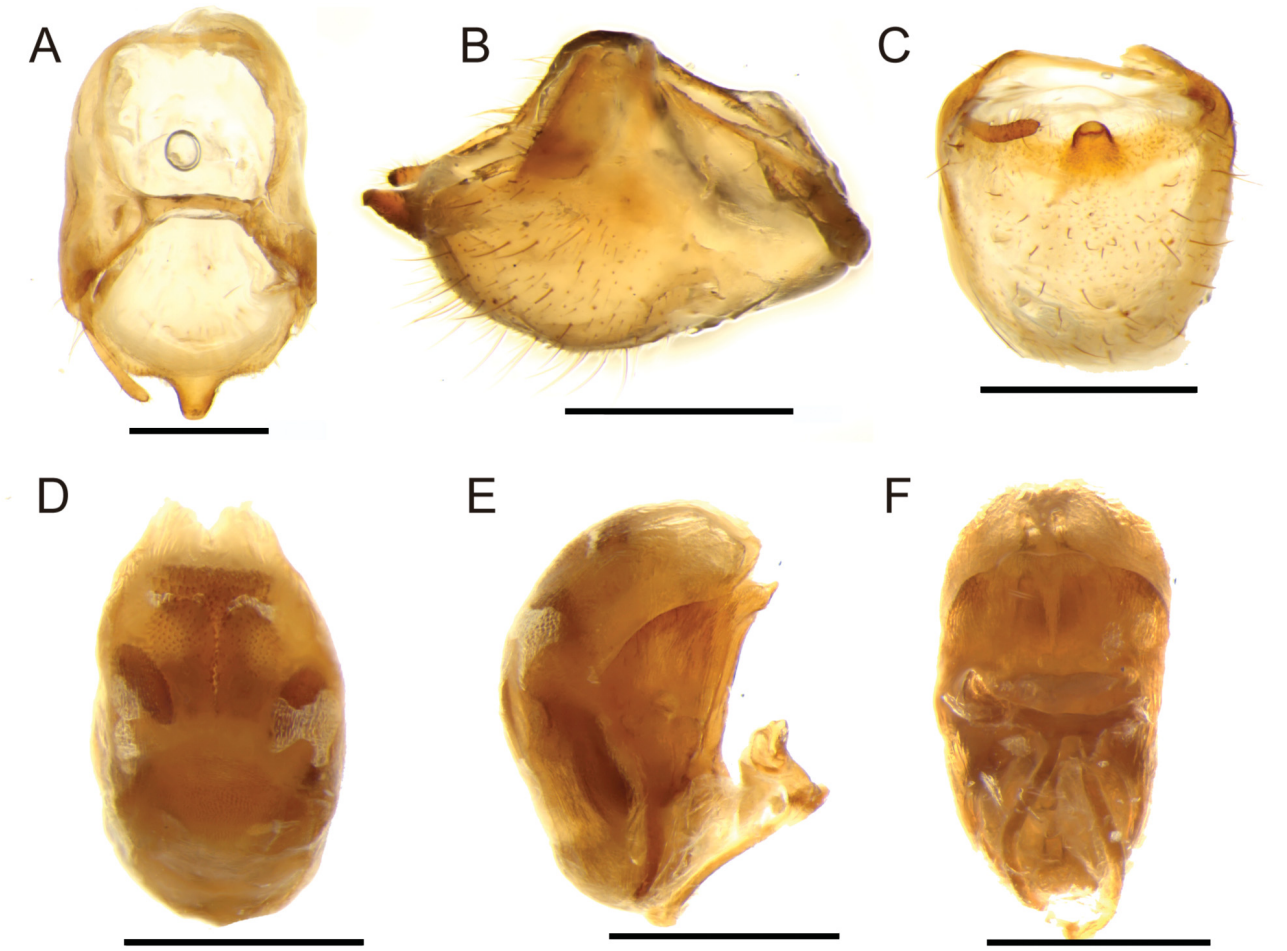

Fig. 18. *Montina ruficornis* (Fabricius, 1803), male genitalia. A – pygophore, dorsal view. B – pygophore, lateral right view. C – pygophore, caudal view. D – phallus, ventral view. E – phallus, lateral right view. F – phallus, dorsal view. Scale bar: 1 mm.

state of this structure. The gonocoxa 8 has a very slight curvature in the distal portion of its anterolateral area (Fig. 25C).

Distribution. "America Meridionalis" (ambiguous locality in tropical South America) (Fabricius 1803, Lethierry & Severin 1896), "Guiana" (ambiguous area in the Guianas) (Stål 1872), and Colombia (Amazonas, Guainía), with records between 0–100 m (Fig. 42).

Remark on types. Three syntype specimens belonging to *Zelus ruficornis* are deposited at ZMUC. One is badly damaged preserving only the head, thorax and a few legs; the other is missing the abdomen; and only one is complete and in a good shape, bearing Fabricius's labels of "*Zelus ruficornis*" and "America Meridionalis" fitting his description (Fabricius 1803) (Fig. 36). We are designating the latter as the lectotype.

Montina scutellaris Stål, 1859

(Figs 19; 20; 25D; 27D; 29D; 37; 42)

Montina scutellaris Stål, 1859: 197 (new species).
Montina scutellaris: Walker (1873): 91 (checklist); Lethierry & Severin (1896): 195 (catalog); Maldonado (1990): 235 (catalog).
Montina (Montina) scutellaris: Stål (1872): 74 (checklist, subgeneric placement).

Type locality. Costa Rica [no exact locality].
Type material. Holotype: [**COSTA RICA**]: 1 ♀, (green label) "Costa Rica Wagner" / "scutellaris Stål" / (red label) Typus / 2562 (ZMHB).

Other specimens examined. COLOMBIA: Antioquia: 2 ♂♂, Caucasia, sector las Malvinas, Hacienda La Cacaotera; 7°58′06.05″N, 75°11′54.52″W; 50 m; 20 Abr 2010; L. Pérez leg.; [colecta] manual; CEUA 99057, CEUA 99124 (CEUA); 1 ♀, same data; GEUA exped.; (CEUA); 1 ♂, Puerto Berrío, alto de Las Águilas, Hacienda Manaos; 6°27′10.09″N, 74°36′13.74″W; 440 m; 5–6 Jul 2013; M. Wolff leg.; jama [insect net], en bosque; CEUA 99096 (CEUA); 2 ♀♀, Occidente Antioqueño; Sep 1947; F. Gallego leg.; MEFLG No. 6848 (MEFLG); 1 ♀, Turbo; 4 m; Sep 1947; F. Gallego leg.; en maleza; MEFLG No. 6848 (MEFLG); 1 ♀, Cocorná; 1286 m; Ago 1958; F. Gallego leg.; MEFLG No. 6848 (MEFLG); 1 ♂, same data; Ago 1956; F. Gallego leg.; MEFLG No. 6848 (MEFLG); 1 ♂, same data; Abr 1956; F. Gallego leg.; en barbecho; MEFLG No. 6848 (MEFLG); 3 ♀♀, Mutatá, Villa Arteaga; 66 m; Sep 194?; F. Gallego leg.; MEFLG No. 6848 (MEFLG); 1 ♀, same data; Oct 1953; N. Delgado leg.; MEFLG No. 6848 (MEFLG); 1 ♀, same data; 1981; Patricia V. leg.; en maleza (CEUA); 1 ♂, Mutatá; 50 m; 1981; Patricia V. leg.; [colecta] manual, maleza (CEUA); 1 ♀, San Luis, Reserva Cañón de Rio Claro [Reserva Natural Cañon del Río Claro, km 152 via entre Medellín y Bogotá]; [05.9354°N, 74.8500°W]; 490 m; 4 Sep 1994; Zambrano, Cifuentes leg.; MPUJ_ENT0058624 (MPUJ); 1 ♀, same data; 440 m; 7 Sep 1994; Cantor, Pinedo leg. MPUJ_ENT0058633 (MPUJ); 1 ♂, same data; 6 Sep 1994; MPUJ_ENT0058622 (MPUJ). **Chocó:** 1 ♀, Acandí; E. Contreras leg.; [colecta] manual; CEUA 74950 (CEUA); 1 ♀, Quibdó, Tutunendo; 90 m; Nov 1983; F. Serna leg.; en maleza; MEFLG No. 7279 (MEFLG); 1 ♂, same data; R. Vélez; en maleza; MEFLG No. 7280 (MEFLG); 1 ♂, Quibdó, Yutó; Nov 1983; F. Serna leg.; en bosque; MEFLG No. 7280 (MEFLG); 1 ♂, Itsmina; Nov 1983; R. Vélez leg.; en bosque; MEFLG No. 7280 (MEFLG); 1 ♂ 1 ♀, Bahía Solano, Huina, camino Playa de los Deseos; 06.2725°N, 77.4625°W; 50 m; 28–31 Mar 2018; A. Mejía leg.; jama [insect net], bosque húmedo tropical, cerca de cuerpo de agua (CEUA); 1 ♀, R.[rio] San Juan; Ago 1954; L. Richter

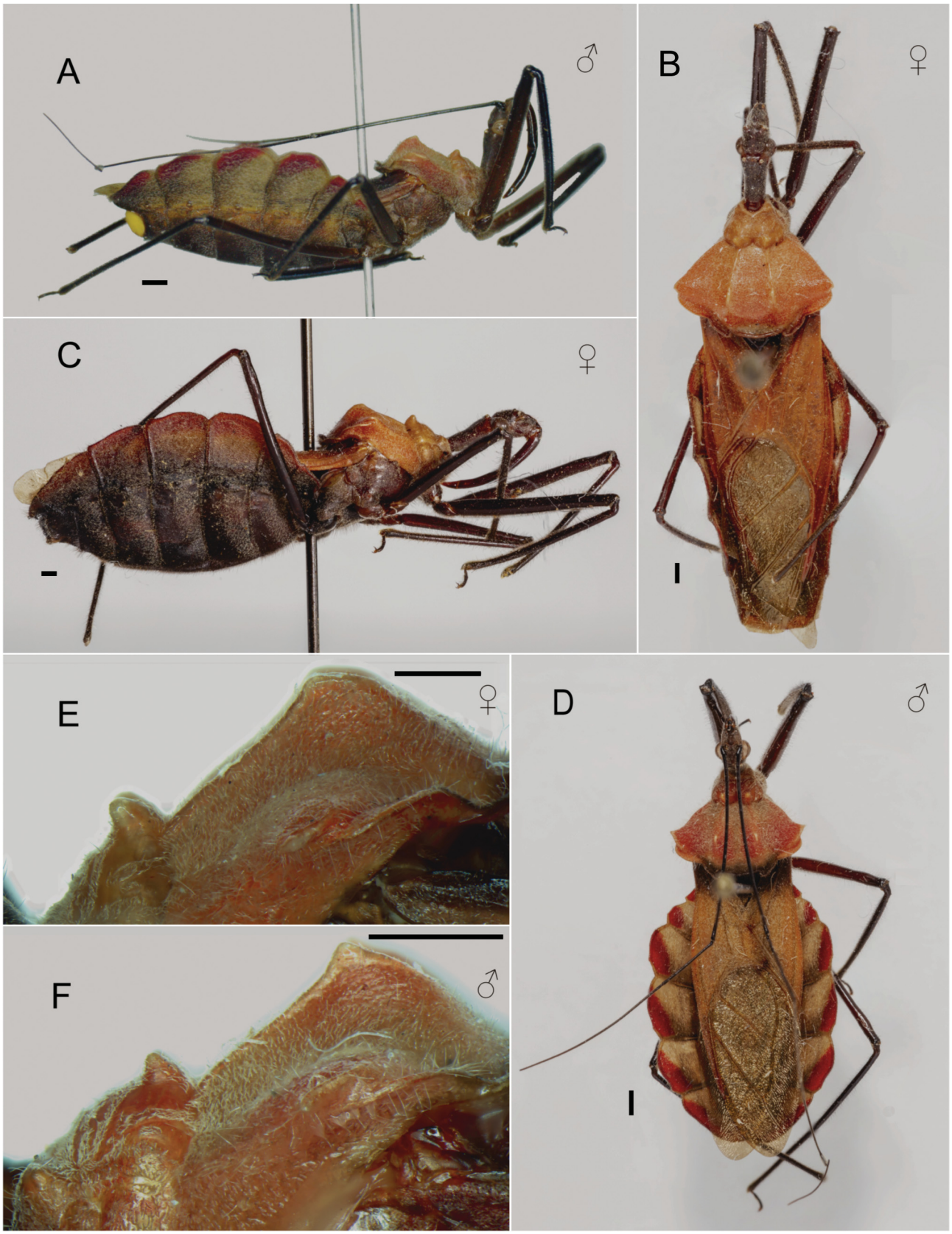

Fig. 19. *Montina scutellaris* Stål, 1859. A – male, lateral view. B – female, dorsal view. C – female, lateral view. D – male, dorsal view. E – pronotum, female, lateral left view. F – pronotum, male, lateral left view. Scale bar: 1 mm.

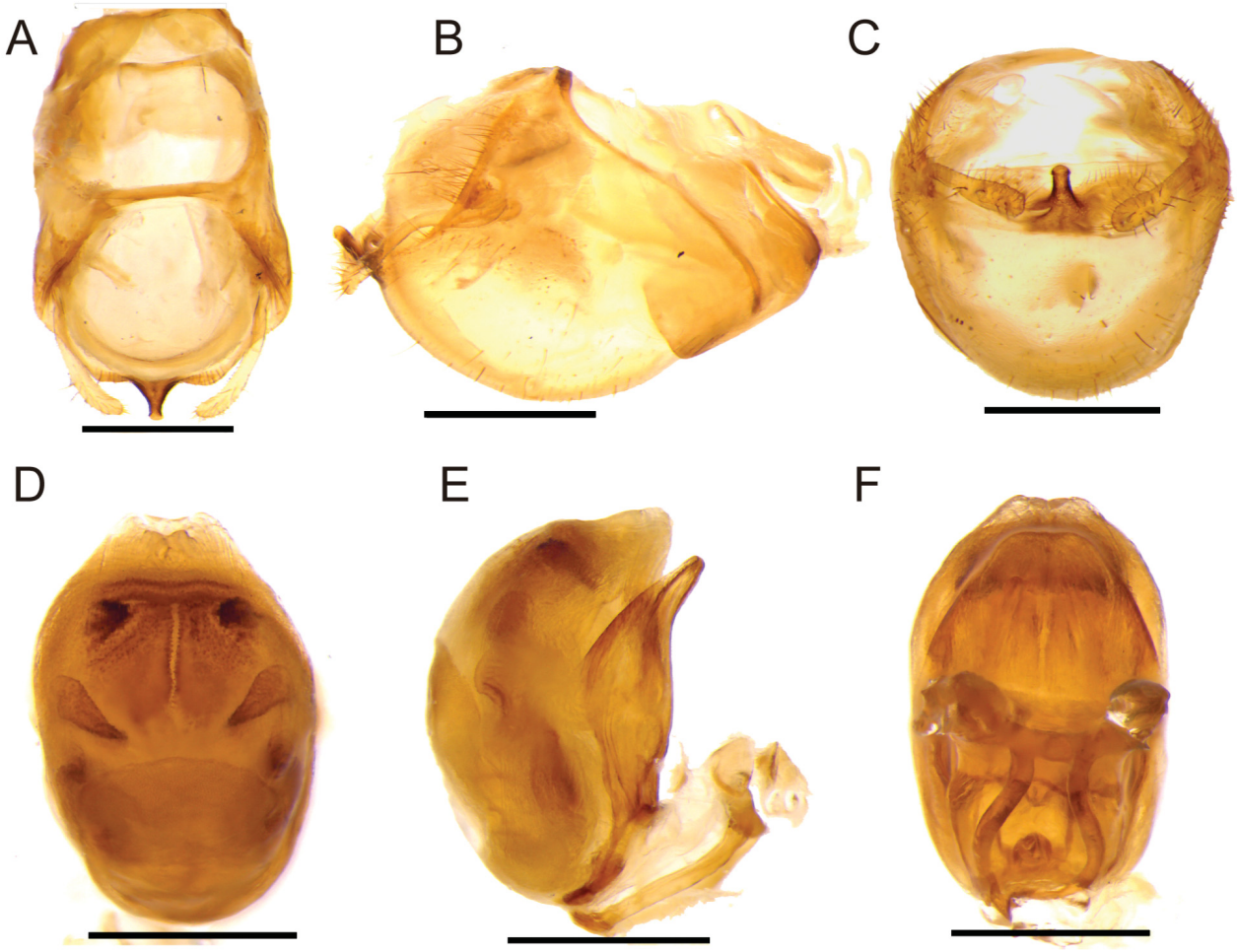

Fig. 20. *Montina scutellaris* Stål, 1859, male genitalia. A – pygophore, dorsal view. B – pygophore, lateral right view. C – pygophore, caudal view. D – phallus, ventral view. E – phallus, lateral right view. F – phallus, dorsal view. Scale bar: 1 mm.

leg.; ICN 037558 (ICN); 1 ♂, same data; 2 Ago 1954; L. Richter leg.; ICN 037555 (ICN); 1 ♀, Riosucio, cascada el Tilupo; 5 Abr 1978; H. Echeverri leg.; ICN 029909 (ICN). **Córdoba:** 1 ♀, Tierralta, vereda El Loro; 11 Ago 2006; H. G. Pertuz leg.; [colecta] manual, cultivo de yuca; MPUJ_ENT0058628 (MPUJ); 1 ♂, Tierralta, vereda El Silencio; 8º0′0″N, 76º09′0″W; 700 m; Feb 2005; H.G. Pertuz leg.; jama [insect net], sobre vegetación baja; MPUJ_ENT 0558629 (MPUJ). **Cundinamarca:** 1 ♀, Silvania; 4°24′21″N, 74°23′24″W; 1470 m; 29 Abr 1989; UNAB No. 4860 (UNAB). **Putumayo:** 1 ♂, Puerto Leguízamo, Caucayá; 200 m; 4 Dic 1948; ICN 029908 (ICN). **Santander:** 1 ♀, Landázuri; 1000 m; 18 Nov 1938; L. Richter leg.; MEFLG No. 6847 (MEFLG); 2 ♀♀, same data; L Richter leg.; CTNI: No. 2540 (CTNI); 1 ♂, Landázuri; 6°13′55″N, 73°40′39″W; 1600 m; 20 Jun 1996; A. Amado leg.; UNAB No. 4869 (UNAB). **Tolima:** 1 ♀, Mariquita; 334 m; 4 Abr 1992; V. Fonseca leg.; MPUJ_ENT0058623 (MPUJ). **Valle del Cauca:** 2 ♀♀, Bolo San Isidro de Palmira, Bolo bajo; Ene 1965; R. Vélez leg.; MEFLG No. 6848 (MEFLG); 1 ♀, Buenaventura, Bajo Calima; 70 m; 22 Abr 1995; MPUJ_ENT0058621 (MPUJ); 1 ♀, same data; 20 Abr 1995; M.E.L.Y. leg.; MPUJ_ENT 0558626 (MPUJ); 1 ♀, same data; Mar1998; MPUJ_ENT0058630 (MPUJ); 1 ♀, same data; 19 Abr 1995; JUF, Bottia leg.; MPUJ_ENT0058631 (MPUJ); 1 ♂, same data; 21 Abr 1995; MPUJ_ENT0058619 (MPUJ); 1 ♀, same data; 23 Mar 1995; C. Riaño leg.; MPUJ_ENT0058620 (MPUJ); 1 ♀, Buenaventura, Bajo Calima, Centro Forestal Bajo Calima; 70 m; Abr 1995; C. Leg leg.; bosque secundario; MPUJ_ENT0058627 (MPUJ); 1 ♀, same data; 18 Abr 1995; MPUJ_ENT0058632 (MPUJ); 1 ♂, same data; 21 Mar 1995; GEMA leg.; MPUJ_ENT0058618 (MPUJ).

Diagnosis. Total length, female 23.0–24.5 mm (n = 4), male = 17.6–21.0 mm (n = 3). General coloration orange red with dark areas (Figs 19B, D); head, legs, and scutellum dark brown to black; pronotum orange-reddish, medial area of posterior margin of pronotum black; corium paler, basal area of corium black, membrane translucent yellow; apex of scutellum with golden setae; lateral margin of each connexival segment with a red broad marking, wider on posterior half, extending onto the posterior margin of each segment, pattern more conspicuous on dorsal laterotergites (Figs 19A–D); tubercle anterior pronotal lobe subconical with a rounded and curved apex; posterior pronotal lobe elevation of carina acute in males (Fig. 19F), truncated in females (Fig. 19E); connexival margin of segments 4–6 markedly lobed with a subangular structure on posterior half of each one, from which margin is oblique posteriad (Figs 19A, C).

Variability. *Montina scutellaris* exhibit some intraspecific variation regarding the coloration pattern on the connexivum. Some specimens present dark red ventral laterotergites, unlike most of the examined specimens in which the coloration is paler. In Colombia, specimens from the Chocó region (on the Pacific coast) are most similar in the connexival color pattern to those from Panama (e.g., https://www.inaturalist.org/observations/59407637), having the dorsal laterotergites on the lateral margin with a broad red area extending almost obliquely posteriorly onto

the posterior margin of each segment, and by having the discal area of each segment black with the anterior half densely covered with white sericeous setae. Other specimens from Colombia have the lateral margin of each dorsal laterotergite with a broad oblique red band not reaching the anterior margin and with a much larger whitish area of sericeous setae. Despite these differences, the structure of the pronotum and connexival margin is constant.

In addition, in some males the total length was about 20 mm, similar in size to females, whereas in other males the total length was less than 18 mm. This total length variation was found indistinctly in specimens from the same localities. Regarding sexual dimorphism, the connexival margin of females on segments 4–6 are slightly lobed, whereas males have the segments much more lobed (Figs 19A, C).

Differential diagnosis. *Montina scutellaris* is similar in coloration to *M. calarca* sp. nov. and *M. nigripes*. *Montina scutellaris* can be distinguished because its lighter reddish coloration with the medial area of the posterior margin of the pronotum and the basal area of the hemelytron dark, forming a dark transverse band (Fig. 19D), the connexival margin of segments 4–6 have subangular structures towards the apex, not completely rounded (Figs 19A, C), and by having the tubercles of the anterior lobe produced and subconical (Figs 19E, F). *Montina calarca* sp. nov., on the other hand, has a darker reddish coloration with the medial posterior margin of the pronotum yellow and the basal half of the clavus darkened, not forming a transverse dark band (Figs 5B, D), has the margin of the connexivum rounded without strong posterior processes (Figs 5A, C), and has the tubercles of the anterior lobe of the pronotum much smaller (Figs 5E, F). *Montina nigripes* (Fig. 35) exhibit a more reddish coloration, in contrast to the more orange one in *M. scutellaris*, does not have the area of the hemelytron and posterior margin of the pronotum black, and the connexival margins have a narrow pale-yellow band. In addition, *M. scutellaris* can also be confused with *M. gladiator* sp. nov. because of overall reddish coloration and the structure of the margin of the connexivum with subangular processes on the posterior half of each segment, however, *M. gladiator* sp. nov. has a dark red coloration including the head, and the margin of the connexival segment 6 is straight and not rounded in males (Fig. 13).

Distribution. Costa Rica (Stål 1859), Panama (Champion 1899), and Colombia (Antioquia, Cordoba, Chocó, Cundinamarca, Santander, Tolima, Valle del Cauca, Putumayo), with records between 50–1500 m (Fig. 42).

Champion (1899) recorded *M. nigripes* from Panamá based on 12 specimens, although this species is so far only known from Brazil (*Stål 1859)*. The illustration provided by Champion (1899) match the connexival coloration pattern of *M. scutellaris*, not that of *M. nigripes*. Therefore, we argue that those records from Panama are based on a misidentification and correspond to *M. scutellaris*, which is also congruent with the present known distribution. This misidentification also happened in some specimens from Colombia (MEFLG) in which they were previously identified as "*M. nigripes*" although they correspond to *M. scutellaris*.

Remark on type. Stål (1859) described *M. scutellaris* based apparently on a single female from Costa Rica deposited in "Mus. Berol" (ZMHB). We examined a female from ZMHB that matches Stål's description and label data (Fig. 37). Because we have been unable to find additional specimens, even at NHRS, that might be considered syntypes, we are considering this specimen as the holotype.

Montina testacea (Stål, 1859)

(Figs 21; 22; 25E; 27E; 29E; 39; 42)

Ploeogaster testaceus Stål, 1859: 197 (new species).
Aristippus testaceus: Stål (1868): 99 (new generic placement, key).
Montina (*Aristippus*) *testacea*: Stål (1872): 74 (checklist, new generic placement, *Aristippus* as subgenus).
Montina testacea: Lethierry & Severin (1896): 195 (catalog); Maldonado (1990): 235 (catalog).

Type locality. Brazil, Bahia.

Type material. Lectotype (here designated): [**BRAZIL**]: 1 ♀, (green label) "Bahia Tello. Fr." / "*Ploeogaster testaceus* Stål" / (red label) Typus / 2564 / Lectotype *Ploeogaster testaceus* Stål, 1859 Desig. by A. Mejía-Soto & D. Forero (ZMHB). Paralectotype. [**SURINAM?**]: 1 ♀, (green label) "Surin. Volxem" / "**Ploeogaster testaceus* Stål ♀" / (red label) Paratypus / "2564" (ZMHB).

Other specimens examined. COLOMBIA: Meta: 1 ♂, La Macarena; 25 Mar 1997; L. Solórzano leg.; UNAB No. 4858 (UNAB); 2 ♀♀, Villavicencio, vía Puerto Colombia, Finca El Naranjal; 4°2′91″N, 73°36′15″W; 150 m; Dic 1997; J. G. Molano leg.; ICN 027674, ICN: 027670 (ICN); 1 ♀, Llanos orientales; Jun 1950; Medem leg.; ICN 029951 (ICN); 1 ♀, Puerto López; 300 m; 18 Mar 1993; D. Díaz leg.; [colecta] manual; MPUJ_ENT0061389 (MPUJ); 1 ♀, Puerto López, Remolinos, Cafam llanos [Puerto López, Remolinos, Centro Cafam Llanos, ~55km W Puerto Gaitán]; [04.2751°N 72.5408°W]; 140 m; 20 Abr 2011; Coral et al. leg.; [colecta] manual; MPUJ_ENT0058578 (MPUJ); 1 ♂, Puerto Gaitán, Hacienda Yamato; 4°31′29.8″N, 71°48′29.8″W; 105 m; 2–9 Nov 1996; D. Forero leg.; MPUJ_ENT0058572 (MPUJ).

Diagnosis. Total length, female 24.0–24.5 mm (n = 3), male 19.4–20.1 mm (n = 2). General coloration red to dark red; membrane translucent yellow (Figs 21B, D); scutellum apically pale red; tubercle of anterior pronotal lobe slightly curved anteriad, slender, subcylindrical and apically obtuse (Fig. 21E), posterior pronotal lobe elevation of carina very prominent and truncated (Fig. 21E); posterolateral process acute (Figs 21B, D); margin of connexivum nearly straight (Figs 21A, C), connexivum with dorsal laterotergites black with lateral margin pale yellow (Figs 21B, D), ventral laterotergites uniformly colored (Figs 21A, C); abdominal sternites with an area of erect black setae near the posterior margin of segments 3–7, surrounding setae decumbent and golden which in males can be of silver coloration (Figs 21F, G).

Differential diagnosis. *Montina testacea* is similar to *M. confusa* because of the overall red coloration (Figs 7B, D; 21B, D), but it can be separated from it because in *M. testacea* the scutellum is elongated apically, the tubercles of the anterior lobe of the pronotum are subcylindrical (Fig. 21E), the ventral laterotergites are uniformly colored (Figs 21A, C, F), and the abdominal sternites have a conspicuous cluster of black erect setae (Figs 21F, G). On the other hand, in *M. confusa* the scutellum is apically rounded (Fig. 7F), the tubercles of the anterior lobe of the pronotum have a preapical constriction and markedly globose apically (Fig. 7E), the ventral laterotergites 3–5 have a black band on the lateral half contrasting with the pale yellow on the medial

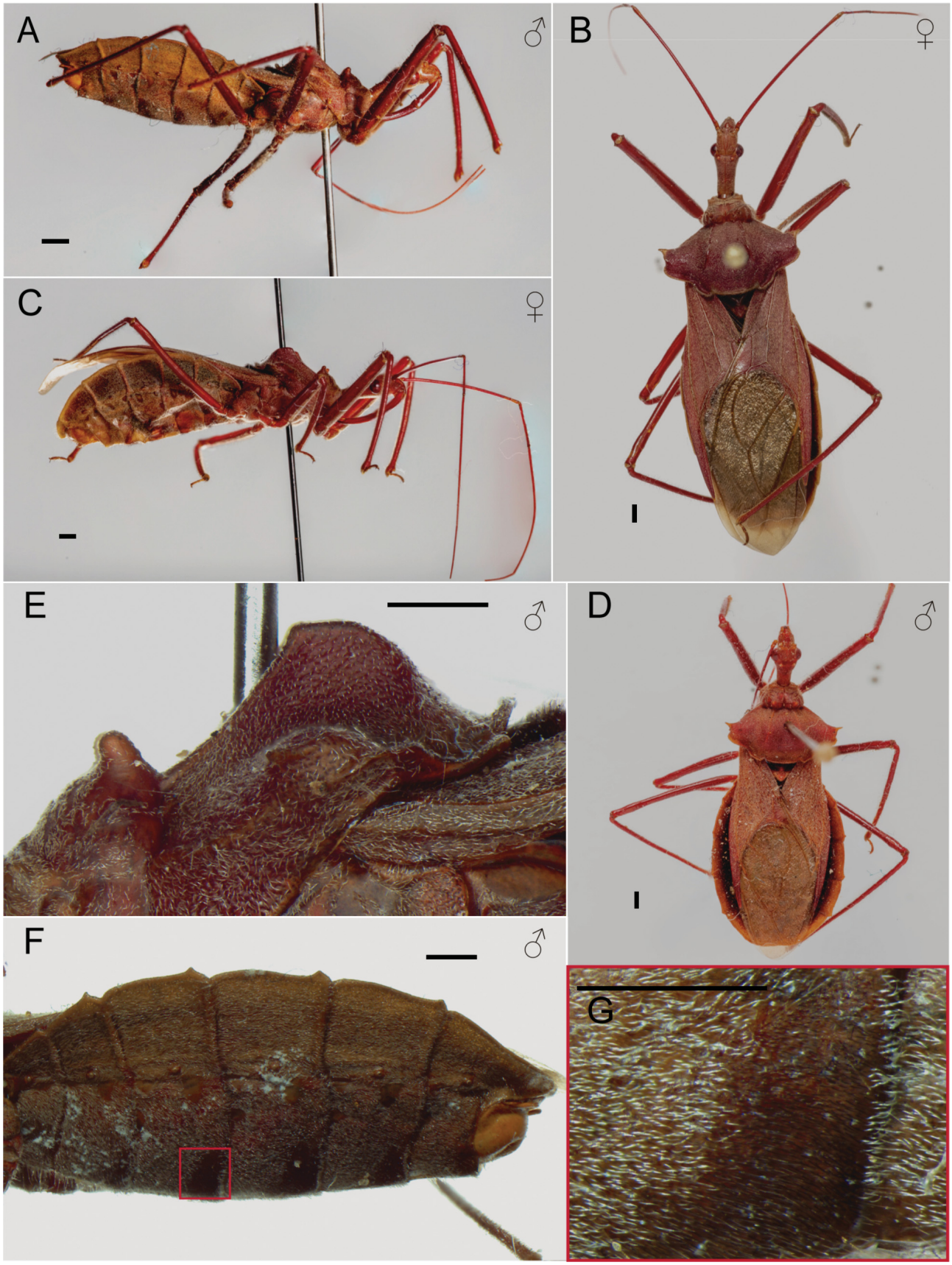

Fig. 21. *Montina testacea* (Stål, 1859). A – male, lateral view. B – female, dorsal view. C – female, lateral view. D – male, dorsal view. E – pronotum, male, lateral left view. F – abdomen, male, lateral left view. G – detail of the vestiture of abdominal sternites. Scale bar: 1 mm.

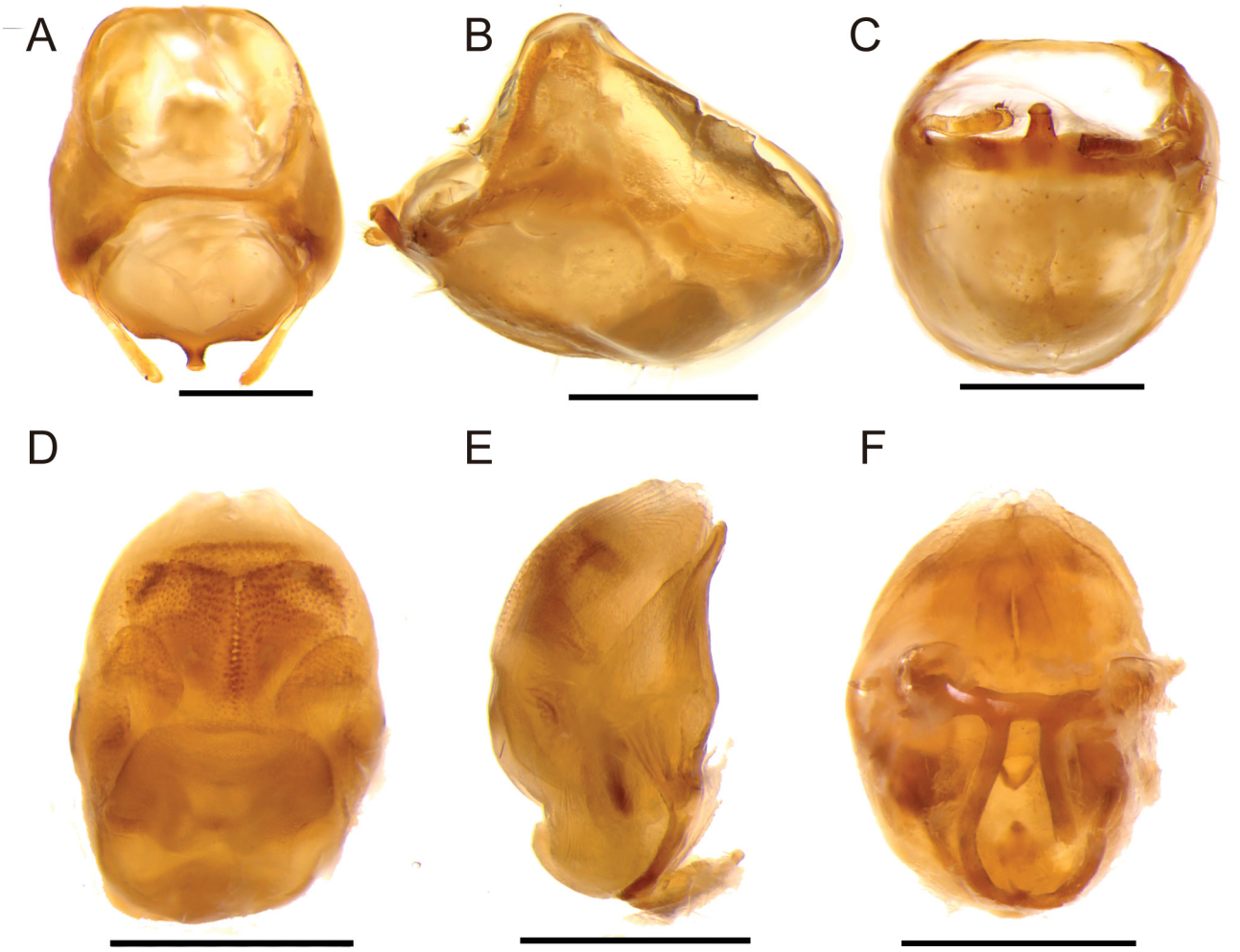

Fig. 22. *Montina testacea* (Stål, 1859), male genitalia. A – pygophore, dorsal view. B – pygophore, lateral right view. C – pygophore, caudal view. D – phallus, ventral view. E – phallus, lateral right view. F – phallus, dorsal view. Scale bar: 1 mm.

half (Figs 7A, C), and the abdominal sternites have uniform golden decumbent setae (Figs 7A, C). In addition, in *M. testacea* the medial process of the pygophore is nearly parallel (Fig. 22C), whereas in *M. confusa* it is basally much wider than the apex (Figs 8A, C).

Distribution. Brazil (Stål 1859), Suriname, and Colombia (Meta), with records from 100–300 m (Fig. 42).

Remark on types. Stål (1859) described *Ploeogaster testaceus* from an undefined number of female specimens from "Brasilia", and he did not indicate where the depository was of these specimens. At ZMHB we found three specimens that are under "*testaceus*" and are labelled as types. We are selecting one female as the lectotype because it fits its description, and it bears a label of "Bahia" (Fig. 39). One of the other specimens is designated as a paralectotype, because it fits the description, although it has a label from "Surin." (probably Surinam). The third specimen, though, despite having a similar reddish coloration and a label indicating that this is a "*testaceus*" specimen, does not match certain diagnostic characters for the species, such as the setal area on the abdominal sternites, and more importantly the coloration of the ventral laterotergites. In this specimen the coloration of the dorsal laterotergites is as in *M. distincta*, where the lateral half of each connexival segment is pale yellow and the medial half is black. Furthermore, this specimen bears a label from "Para" which is the same locality as the lectotype of *M. distincta*. Therefore, we are assigning this specimen to the type series of *M. distincta* (see above).

Montina tikuna Mejía-Soto & Forero sp. nov.

(Figs 23; 25F; 27F; 29F; 42)

Type locality. Colombia, Amazonas, Parque Nacional Natural Amacayacu.

Type material. Holotype: **COLOMBIA: Amazonas:** 1 ♀, PNN [Parque Nacional Natural] Amacayacu; [03.8202°N, 70.2630°W]; 125m; 27 Sep 1993; A. Cárdenas leg.; MPUJ_ENT0058525 / (red label) HOLOTYPE *Montina tikuna* Mejía & Forero, sp. nov. (MPUJ). Paratype. **COLOMBIA: Amazonas:** 1 ♀, PNN [Parque Nacional Natural] Amacayacu; [03.8202°N, 70.2630°W]; 120m; 25 Sep 1993; Quinteros leg.; MPUJ_ENT0058510 (MPUJ).

Diagnosis. Total length, females 21.2 mm (n = 2). General coloration reddish-brown, scutellum and abdomen dark brown to black; membrane translucent yellow (Fig. 23B); pronotal anterolateral angles reduced and obtuse (Figs 23B, D); tubercle of anterior pronotal lobe thick, subconic, strongly curved anteriad, apex obtuse (Fig. 21C); elevation of the carina of the posterior pronotal lobe prominent, posterior margin slightly rounded (Fig. 23C); posterolateral process prominent, acute, slightly curved (Fig. 23B); connexival margin nearly straight, segments 2–4 with

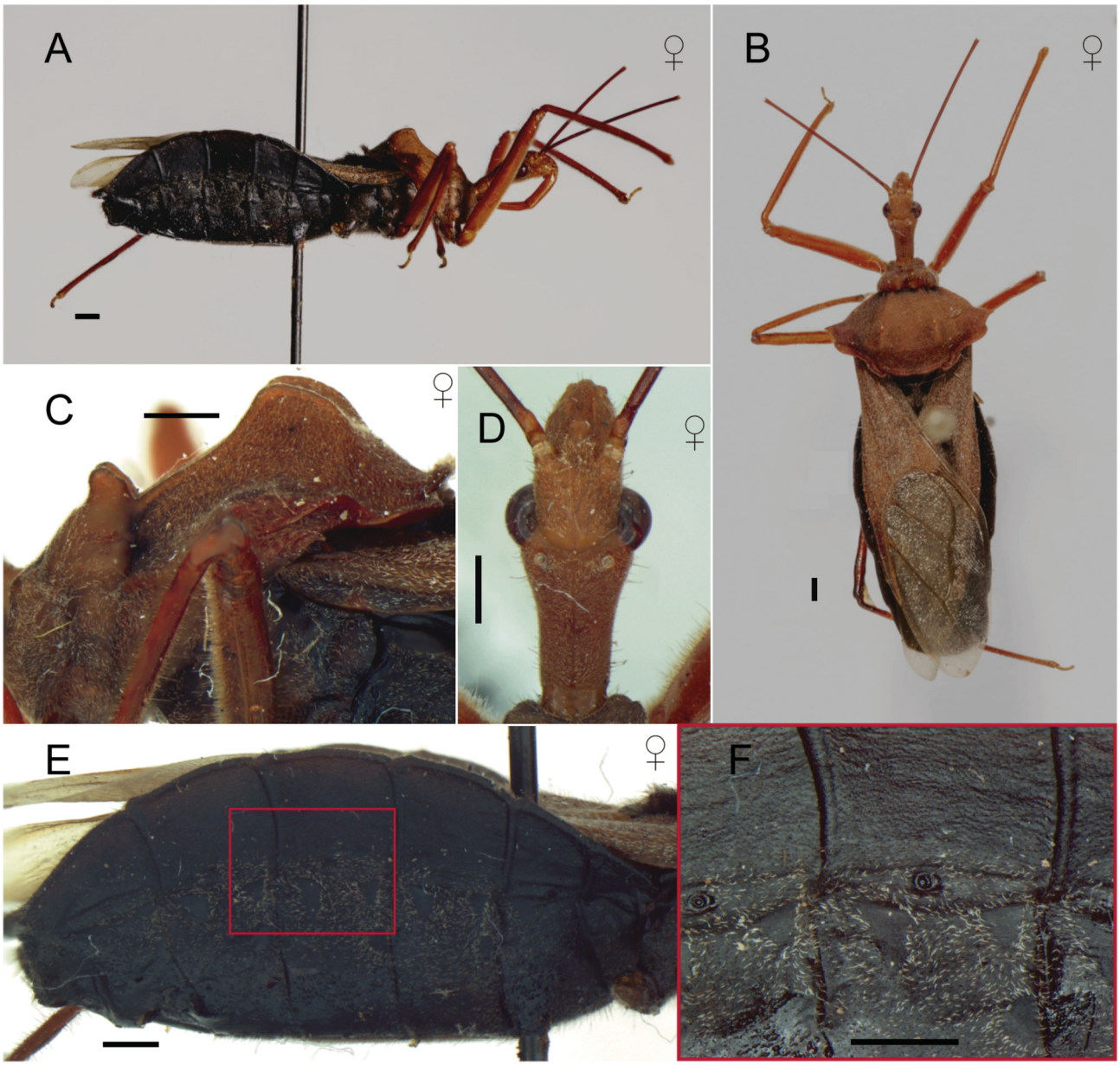

Fig. 23. *Montina tikuna* Mejía-Soto & Forero sp. nov., female holotype. A – lateral view. B – dorsal view. C – pronotum, lateral left view. D – head, dorsal view. E – abdomen, lateral right view. F – detail of the vestiture of the abdomen on sternites and ventral laterotergites. Scale bar: 1 mm.

small posterior acute process, 5–6 with obtuse process (Fig. 23A); ventral laterotergites only with black scattered erect setae, in contrast to silver to gold decumbent setae on abdominal sternites (Figs 23E, F); bursa copulatrix without U-shaped sclerotization on dorsal region (Fig. 29F).

Description. ***Male.*** Unknown.

Female. Total length 21.2–22.0 mm, head length 3.9–4.0 mm, length of the anterior lobe of the pronotum 1.0–1.1 mm, length of the posterior lobe of the pronotum 3.7–3.8 mm, width of the abdomen 6.0– 6.1. mm (n = 2). COLORATION. *Head* brown, postocular area reddish brown (Fig. 23D); labial segments brown, tip of the last segment dark brown. *Thorax:* Pronotum brown with transverse sulcus dark brown, posterior pronotal margin and humeral angles redder and darker (Fig. 23B); prosternum brown, darker than the head; mesosternum dark brown; metasternum, meso- and metacoxa dark grey; scutellum dark brown to black with the apex lighter. *Legs*: Procoxa reddish brown, meso- and metacoxa dark grey; remaining segments reddish-brown. *Hemelytron*: Corium brown, anterior margin (R+M) red; membrane golden. *Abdomen:* Sternites, dorsal and ventral laterotergites dark brown to black; genitalic sclerites same color as remaining abdomen. VESTITURE. Moderately setose body. *Head* covered mainly by very short, golden setae with few black erect, medium, and long sized setae, located mainly dorsally of the postocular area and clypeus. *Thorax* covered by medium, golden setae with the tubercles of the anterior lobe and the lateral margins glabrous; posterior lobe with lower setae density. Lateral margins of the scutellum densely covered by long, thick, and black setae, dorsally in smaller proportion; apex with few golden setae. Pro- and mesofemur with erect, medium, and long setae dorsally and laterally; pro- and mesotibia ventrally with medium-thick setae, similar to a comb; hind leg covered by erect medium setae. *Abdomen:* Sternites with a fringe of erect black

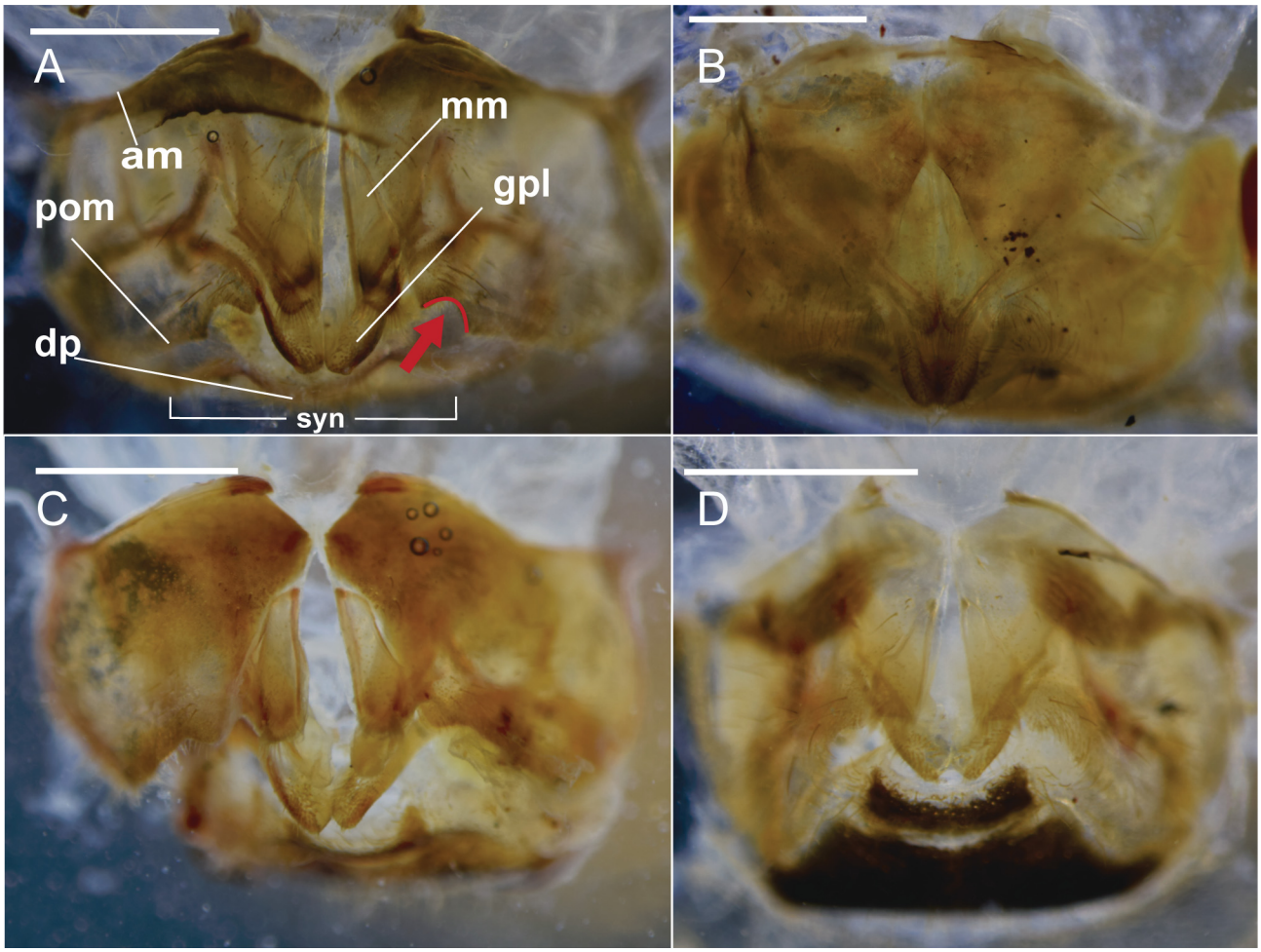

Fig. 24. *Montina* spp., external female genitalia, ventral view. A – *M. fumosa* (Stål, 1867); B – *M. calarca* Mejía-Soto & Forero sp. nov.; C – *M. confusa* (Stål, 1859); D – *M. distincta* (Stål, 1859). Abbreviations: am – anterior margin of gonocoxa 8, dp – distal portion of syntergite 9/10, gpl – gonoplac, mm – medial margin of gonocoxa 8, pom – posterior margin of gonocoxa 8, syn – syntergite 9/10, red arrow – emargination of gonocoxa 8 in the distal portion of the posterior margin. Scale bar: 1 mm.

setae near posterior margin of segments 4–6, in ventral view setal patch with falciform shape, surrounding setae decumbent, golden to silver, and few sparse erect black setae; ventral laterotergites with sparse black erect setae; sternites silver to gold decumbent setae (Figs 23E, F). STRUCTURE. *Head* very elongated, length/width ratio = 2.4; eyes globular, prominent in dorsal view, ovoid in lateral view with posterior margin nearly straight. *Thorax:* Anterolateral angles with reduced and flattened tubercles; discal tubercles of anterior pronotal lobe thick, subconic, strongly curved anteriad, apex obtuse; posterior pronotal lobe elevation of carina prominent, posterior margin slightly rounded (Fig. 23C); posterolateral process apically sharp and slightly curved backwards. *Abdomen:* Margin of connexival segments nearly straight, segments 2–4 with small posterior acute process, 5–6 with obtuse process (Fig. 23E). *Female genitalia:* Gonocoxa 8 with posterior margin (*pm*) concave, posterior medial angle truncated, oblique, and curvature at end of anterior area prolongation shallow (Fig. 25F); gonoplac (*gpl*) with markedly divergent distal region beyond joining area, apex acute with setae on outer margin; bursa copulatrix trapezoidal (Fig. 27F), with narrow basal area; lateral lobes (*lbs*) narrow, not exceeding margin of anterior portion (Fig. 27F); dorsal region of bursa without U-shaped sclerotization (Fig. 29F).

Differential diagnosis. *Montina tikuna* sp. nov. is very similar to *M. distincta* and *M. fumosa* in the overall brown coloration and the nearly straight margin of the connexivum. *Montina tikuna* sp. nov. can be easily differentiated by the entirely black coloration of the abdomen (Fig. 23E), the ventral laterotergites only with black erect scattered setae without decumbent golden setae (Fig. 23F), and the bursa lacking a U-shaped sclerotization on the anterior dorsal region (Fig. 29F). *Montina distincta* has the ventral laterotergites with a medial black band (Figs 9A, C) and *M. fumosa* has at least the dorsal laterotergites 6 and 7 pale-yellow (Figs 11A, C). In both *M. distincta* and *M. fumosa* the ventral laterotergites have a mix of both erect and decumbent setae. With regard of the anterior area of the bursa copulatrix, it is sclerotized in the remaining species except *M. ruficornis* (Fig. 29C).

No males have been found for *Montina tikuna* sp. nov., which is not unusual because females were almost three times more common than males, at least based on the examination of specimens deposited in collections. Male specimens found close to the type locality all belonged to either *M. distincta* or *M. fumosa,* and none presented the vestiture and coloration characteristic of the abdomen of

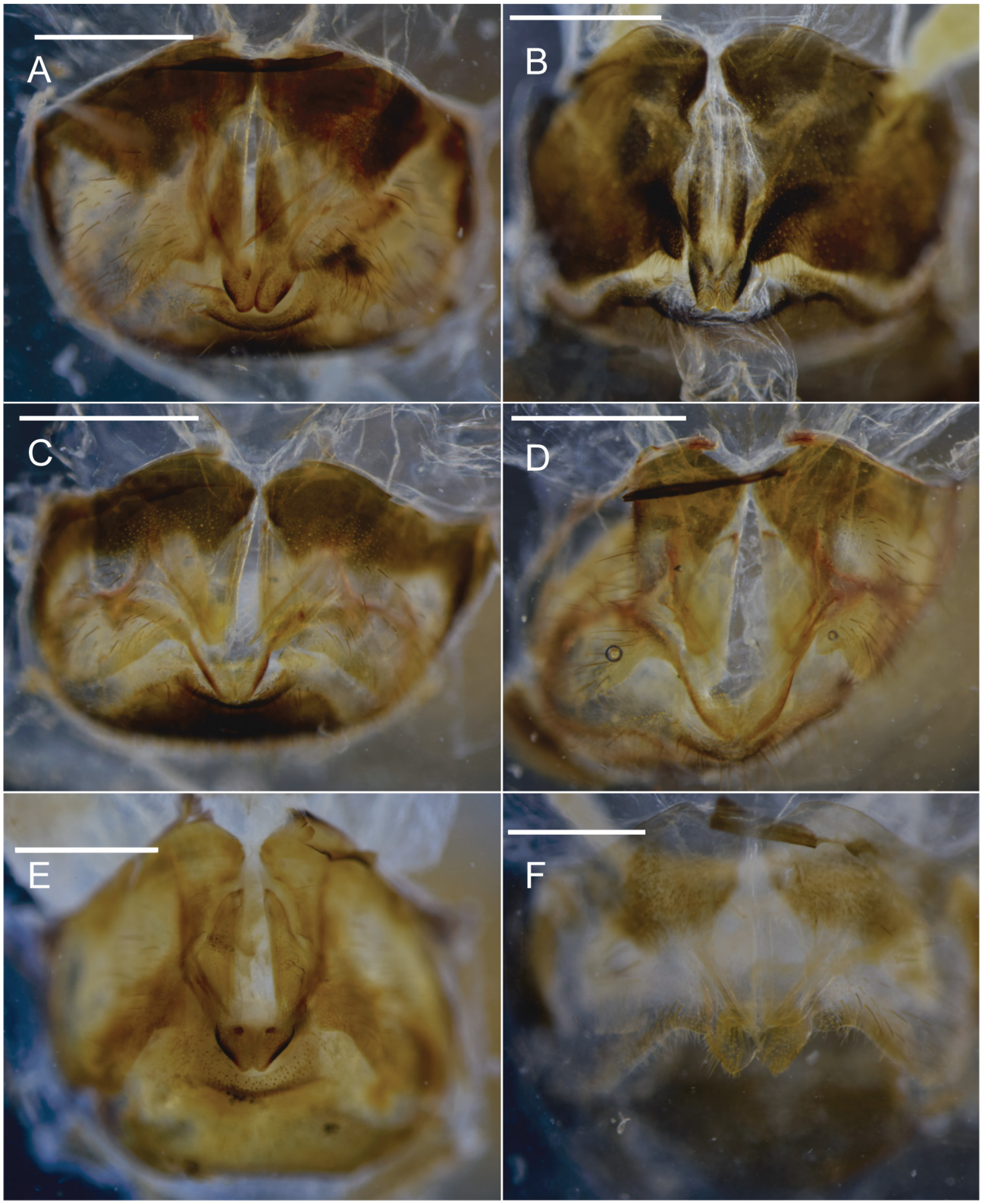

Fig. 25. *Montina* spp., external female genitalia, ventral view. A – *M. gladiator* Mejía-Soto & Forero sp. nov.; B – *M. lobata* Stål, 1859; C – *M. ruficornis* (Fabricius, 1803); D – *M. scutellaris* Stål, 1859; E – *M. testacea* (Stål, 1859); F – *M. tikuna* Mejía-Soto & Forero sp. nov. Scale bar: 1 mm.

M. tikuna sp. nov. We hypothesize that the male genitalia will have characters that will help distinguish this species. **Etymology.** This new species is named after the Tikuna indigenous people, which inhabit areas of Brazil, Peru, and Colombia, including the Amacayacu National Park, where the new species was found. Their name "Tikuna" is translated as "man" and "black" because of the custom of the people to paint their bodies with black pigment (Mora & Zarzar 1997). The coloration of the abdomen of *M. tikuna* sp. nov. is completely black whereas the rest of the body is reddish-brown, reminiscent of the paint use by the Tikuna people. The name is treated as a noun in apposition. **Distribution.** Colombia, only known from a single locality in the Amazonas department at 120 m (Fig. 42).

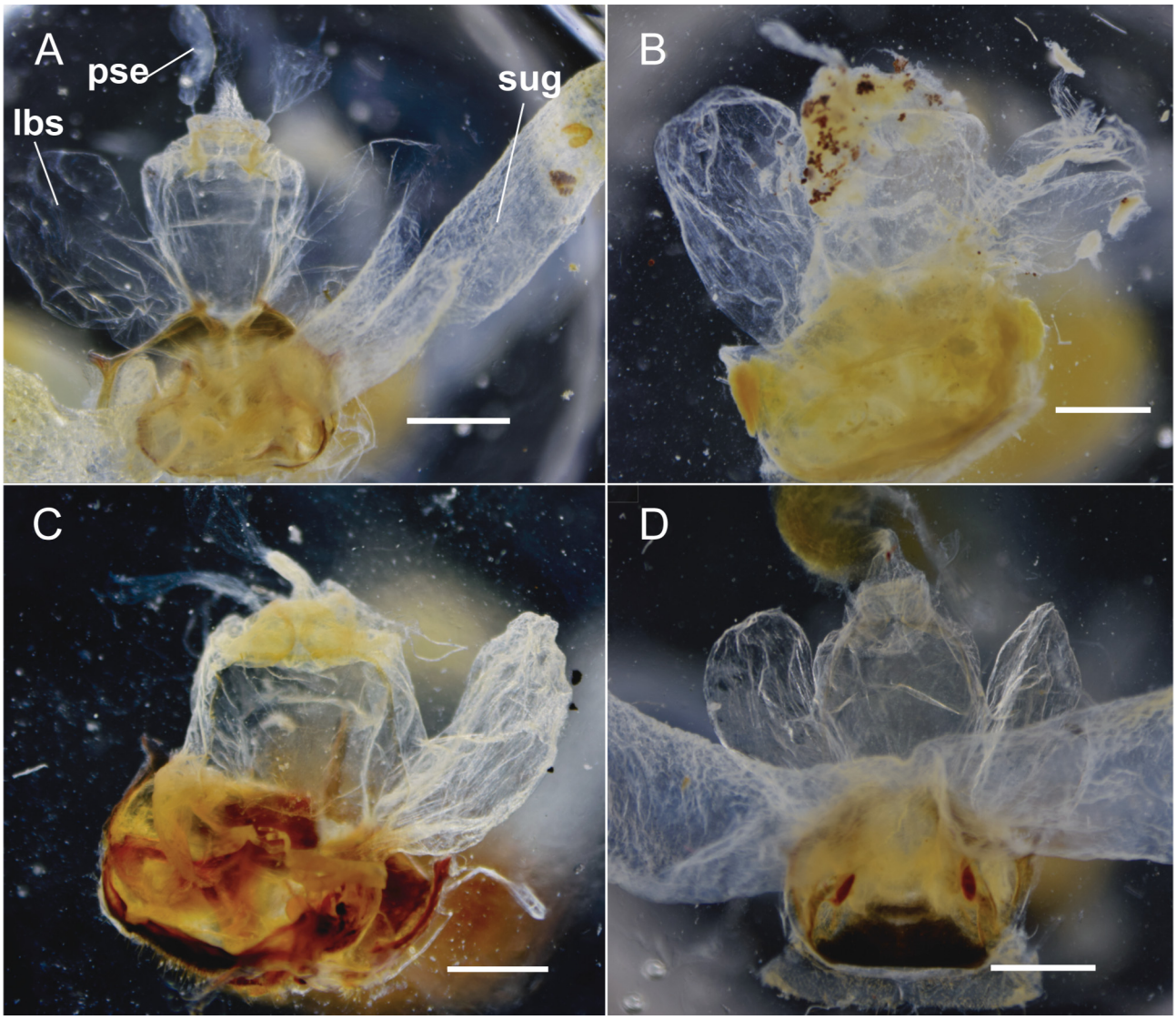

Fig. 26. *Montina* spp., bursa copulatrix, dorsal view. A – *M. fumosa* (Stål, 1867); B – *M. calarca* Mejía-Soto & Forero sp. nov.; C – *M. confusa* (Stål, 1859); D – *M. distincta* (Stål, 1859). Abbreviations: lbs – lateral lobes of bursa; pse – pseudospermathecae; sug – subrectal glands. Scale bar: 1 mm.

Other species of *Montina* not found in Colombia

Montina fenestrata (Stål, 1867)

(Fig. 32)

Aristippus fenestratus Stål, 1867: 299 (new species).
Montina (*Aristippus*) *fenestrata*: Stål (1872): 74 (checklist, new generic placement, *Aristippus* as subgenus).
Ploeogaster fenestratus: Walker (1873): 94 (new generic placement).
Montina fenestrata: Lethierry & Severin (1896): 195 (catalog); Maldonado (1990): 234 (catalog).

Type locality. "Brasilia borealis" [= Northern Brazil].

Type material. Holotype. [**BRAZIL**]: 1 ♀, "Amazon" / "Stevens" / "*fenestratus* Stål" / (red label) 382 "82" / (red label) Typus / NHRS-GULI 000000607 (NHRS).

Diagnosis. General coloration dark grey to dark reddish brown, with head and legs light reddish-brown, membrane pale-yellow with a very conspicuous medial oval hyaline spot (Fig. 32B); elevation of the carina of the posterior pronotal lobe very low (Fig. 32A); connexivum margin nearly straight.

Differential diagnosis. *Montina fenestrata* is similar in coloration to *M. fumosa* and *M. tikuna* sp. nov. Nonetheless, *M. fenestrata* can be distinguished by the hyaline spot in the membrane, which is absent in both species, and the very low elevation of the carina of the posterior pronotal lobe (Fig. 32A), which is prominent in both *M. fumosa* (Fig. 11E) and *M. tikuna* sp. nov. (Fig. 23C). Since we have only examined images of the female holotype, we do not know if there is any sexual dimorphism.

Distribution. Only known from Brazil (Lepeletier & Serville 1825, Maldonado 1990).

Remark on type. Stål (1867) indicated that he examined a single female from northern Brazil ("Brasilia borealis"). The holotype deposited at NHRS bears a label "Amazon", thus being congruent with Stål's indication.

Montina nigripes Stål, 1859

(Fig. 35)

Montina nigripes Stål, 1859: 197 (new species).
Montina (*Montina*) *nigripes*: Stål (1872): 73 (checklist, new generic placement, *Montina* as subgenus).
Montina nigripes: Lethierry & Severin (1896): 195 (catalog); Maldonado (1990): 235 (catalog).

Type locality. Brazil, Bahia.

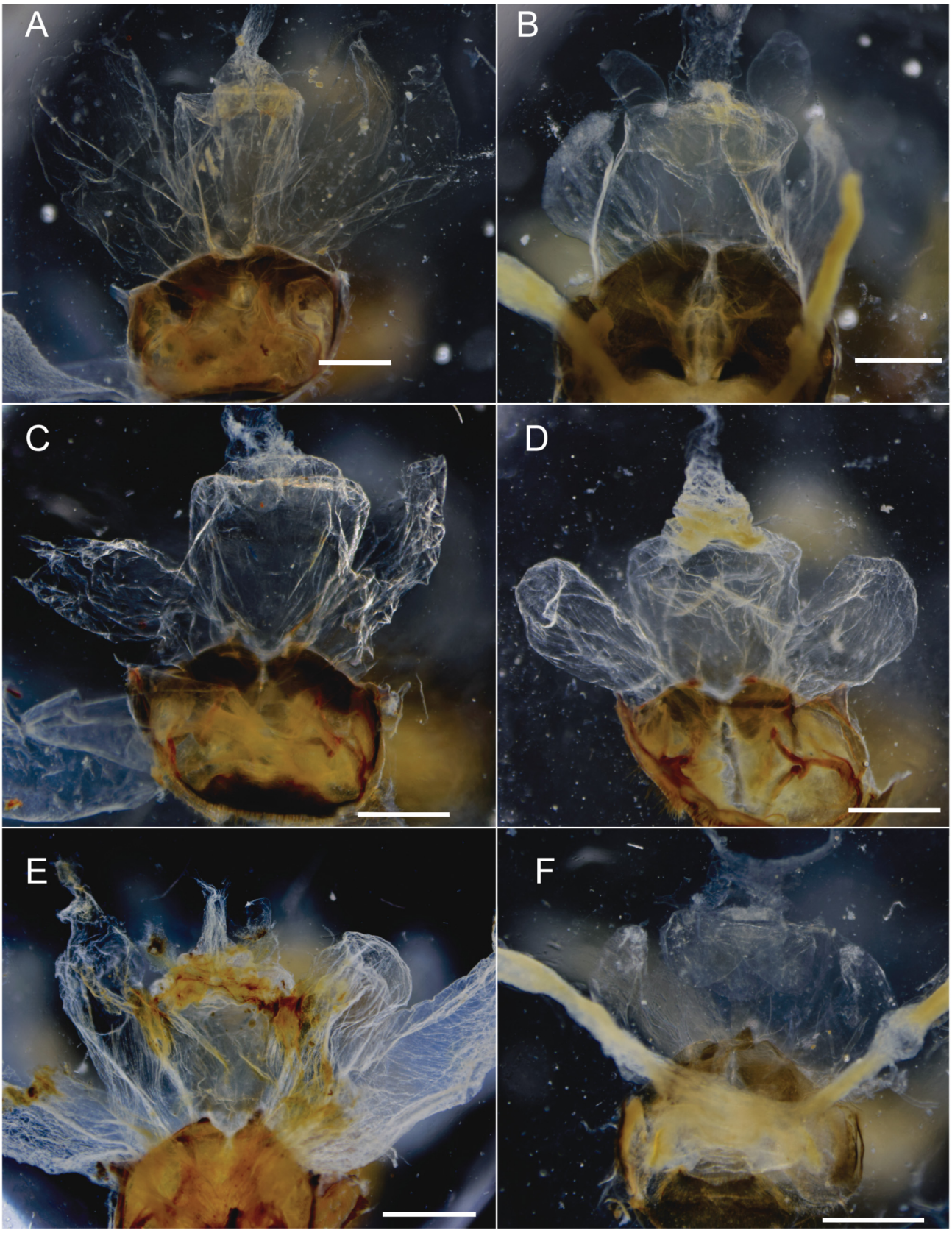

Fig. 27. *Montina* spp., bursa copulatrix, dorsal view. A – *M. gladiator* Mejía-Soto & Forero sp. nov.; B – *M. lobata* Stål, 1859; C – *M. ruficornis* (Fabricius, 1803); D – *M. scutellaris* Stål, 1859; E – *M. testacea* (Stål, 1859); F – *M. tikuna* Mejía-Soto & Forero sp. nov. Scale bar: 1 mm.

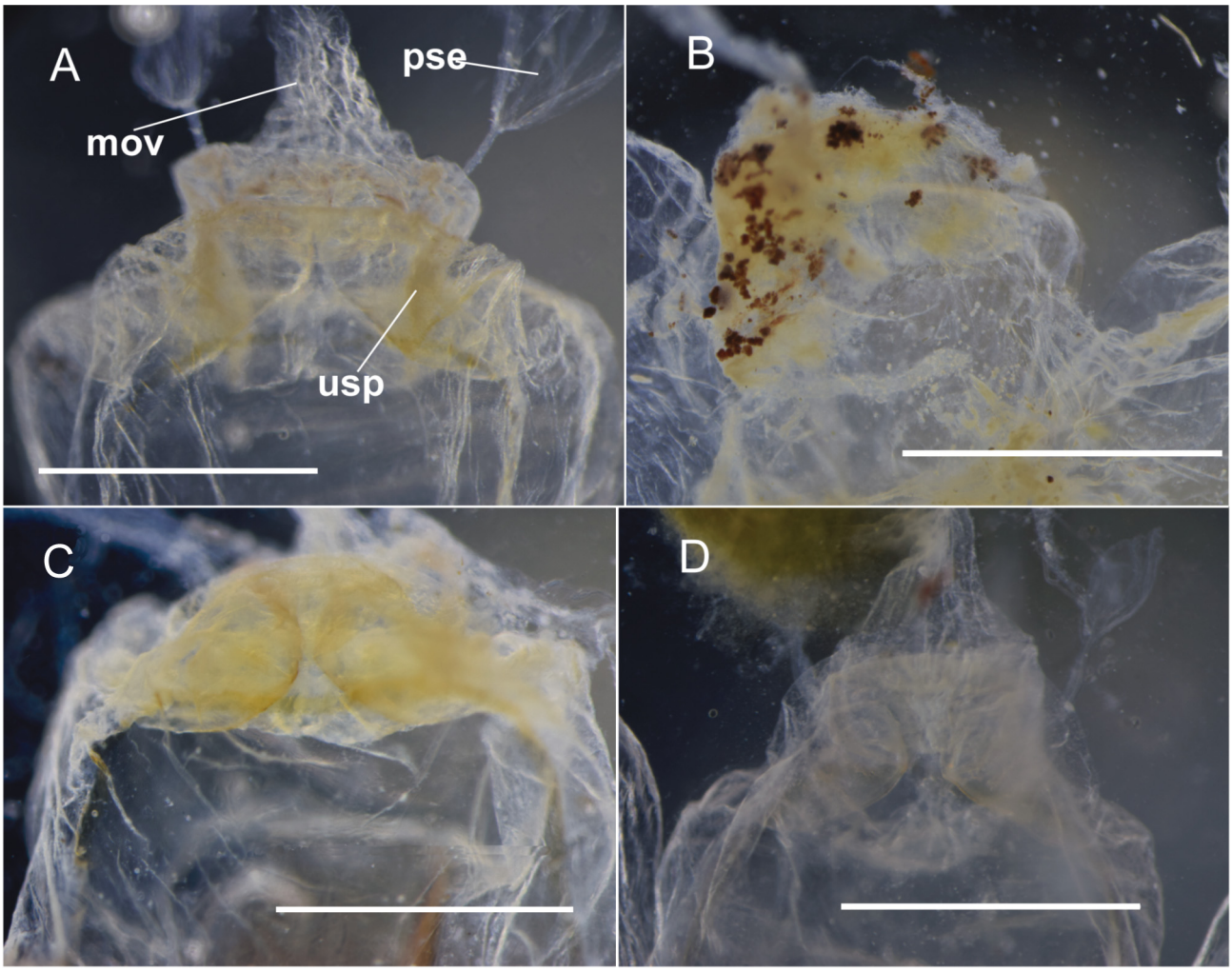

Fig. 28. *Montina* spp., detail of the anterior portion of the bursa copulatrix, dorsal view. A – *M. fumosa* (Stål, 1867); B – *M. calarca* Mejía-Soto & Forero sp. nov.; C – *M. confusa* (Stål, 1859); D – *M. distincta* (Stål, 1859). Abbreviations: mov – median oviduct, pse – pseudospermathecae, usp – U-shaped sclerotization. Scale bar: 1 mm.

Type material. Holotype: [**BRAZIL**]: 1 ♀, (green label) "Bahia Gomez" / "*nigripes* Stål" / (red label) Typus / 2561 (ZMHB).

Diagnosis. General coloration reddish brown, with head, legs, and scutellum black (Fig. 35B); apex of posterolateral process of the pronotum sharp, almost spinelike; membrane translucent; margin of connexivum slightly lobed, more so in segments 4 and 5, darkened with narrow yellow margin (Fig. 35A).

Differential diagnosis. *Montina nigripes* is similar to *M. scutellaris* and *M. calarca* sp. nov. due to their reddish and black overall coloration. *Montina nigripes* can be differentiated from *M. scutellaris* because it has a general dark red coloration, having the proximal portion of the hemelytron and the posterior margin of the pronotum reddish (Fig. 35B), and the connexival margin has a pale-yellow band (Fig. 35A), whereas in *M. scutellaris* the overall coloration is orange, the proximal portion of the hemelytron and posterior margin of the pronotum is darkened (Figs 19, 37), and the connexival margin has red areas larger posteriorly, in *M. scutellaris* (Figs 19A, D). *Montina nigripes* can easily be distinguished from *M. calarca* sp. nov. because of the sharp apex of the pronotal posterolateral process (Fig. 35B), in contrast with the obtuse apex found in *M. calarca* sp. nov. (Figs 5B, D), and the presence of a pale-yellow band on the margin of the connexivum (Fig. 35A) in contrast to a red band in *M. calarca* sp. nov. (Figs 5A, C).

Distribution. Only known from Brazil (Stål 1859). The record from Panama (Champion 1899, Maldonado 1990) is a misidentification of *M. scutellaris* (see above).

Remark on type. Stål (1859) indicated that he examined a single female from Bahia, Brazil. At ZMHB there is a single specimen bearing a label from "Bahia", thus we interpret it as the holotype.

Montina sinuosa (Lepeletier & Serville, 1825)

(Fig. 38)

Reduvius sinuosus Lepeletier & Serville, 1825: 277 (new species).
Montina sinuosa: Amyot & Serville (1843): 363 (new generic placement).
Montina (*Montina*) *sinuosa*: Stål (1872): 73 (checklist, new generic placement, *Montina* as subgenus).
Montina sinuosa: Lethierry & Severin (1896): 195 (catalog); Maldonado (1990): 235 (catalog).

Type locality. Brazil.

Type material. Lectotype (here designated): [**BRAZIL**]: 1 ♂ [pygophore missing]; "Bahia" Coll. Signoret / "*sinuosa*" det. Signoret / (red label) Typus? etik. Hecher 1996 / Lectotype *Reduvius sinuosus* Lepeletier & Serville, 1825 Desig. by A. Mejía-Soto & D. Forero (NHMW). Paralectotype. **BRAZIL:** 1 ♂ [pygophore missing]; "Brasil" Coll. Signoret / "Bahia" (NHMW).

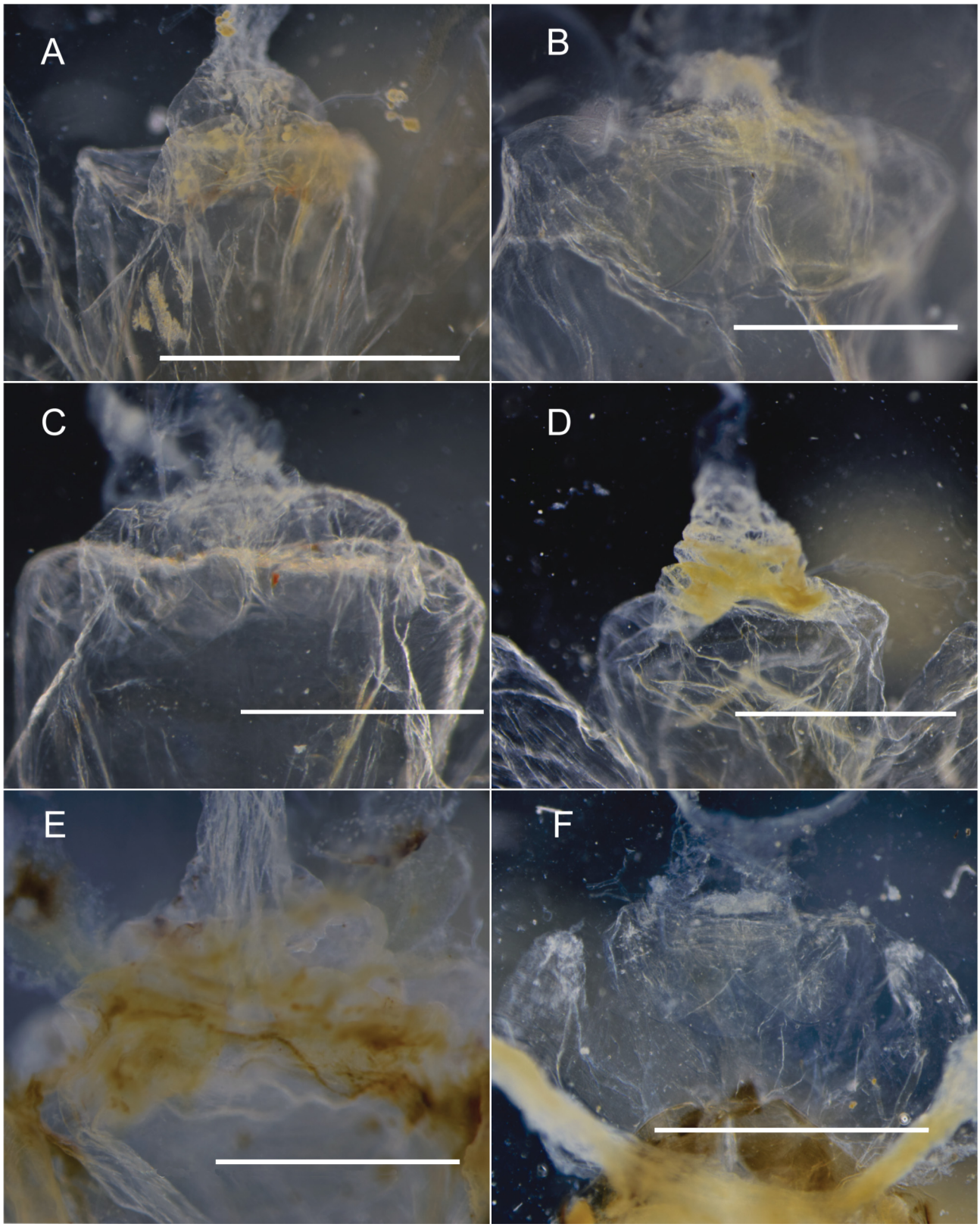

Fig. 29. *Montina* spp., detail of the anterior portion of the bursa copulatrix, dorsal view. A – *M. gladiator* Mejía-Soto & Forero sp. nov.; B – *M. lobata* Stål, 1859; C – *M. ruficornis* (Fabricius, 1803); D – *M. scutellaris* Stål, 1859; E – *M. testacea* (Stål, 1859); F – *M. tikuna* Mejía-Soto & Forero sp. nov. Scale bar: 1 mm.

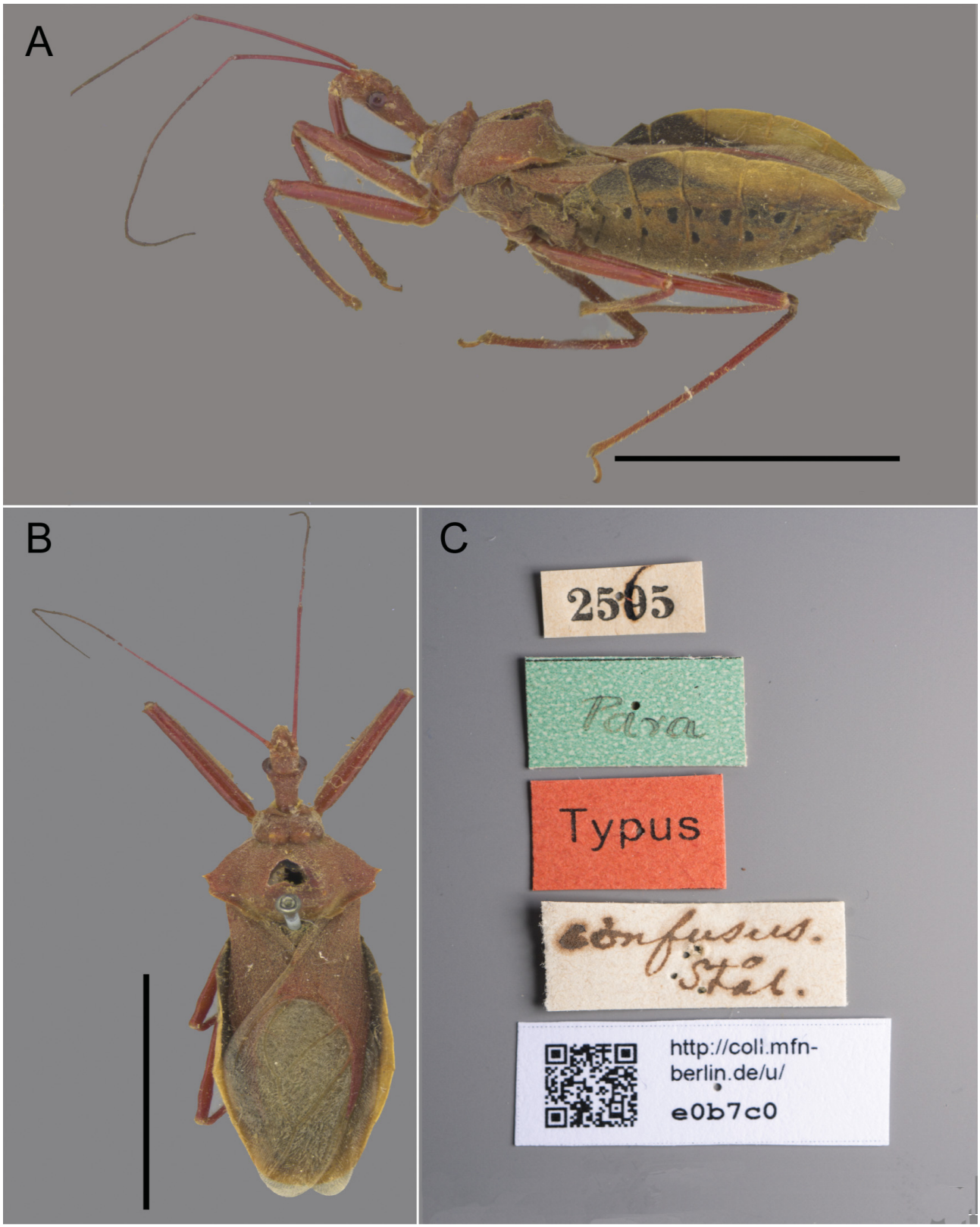

Fig. 30. Female lectotype of *Ploeogaster confusus* Stål, 1859 [now *Montina confusa* (Stål, 1859)], deposited at ZMHB. A – dorsal view; B – lateral view; C – labels. Scale bar: 10 mm.

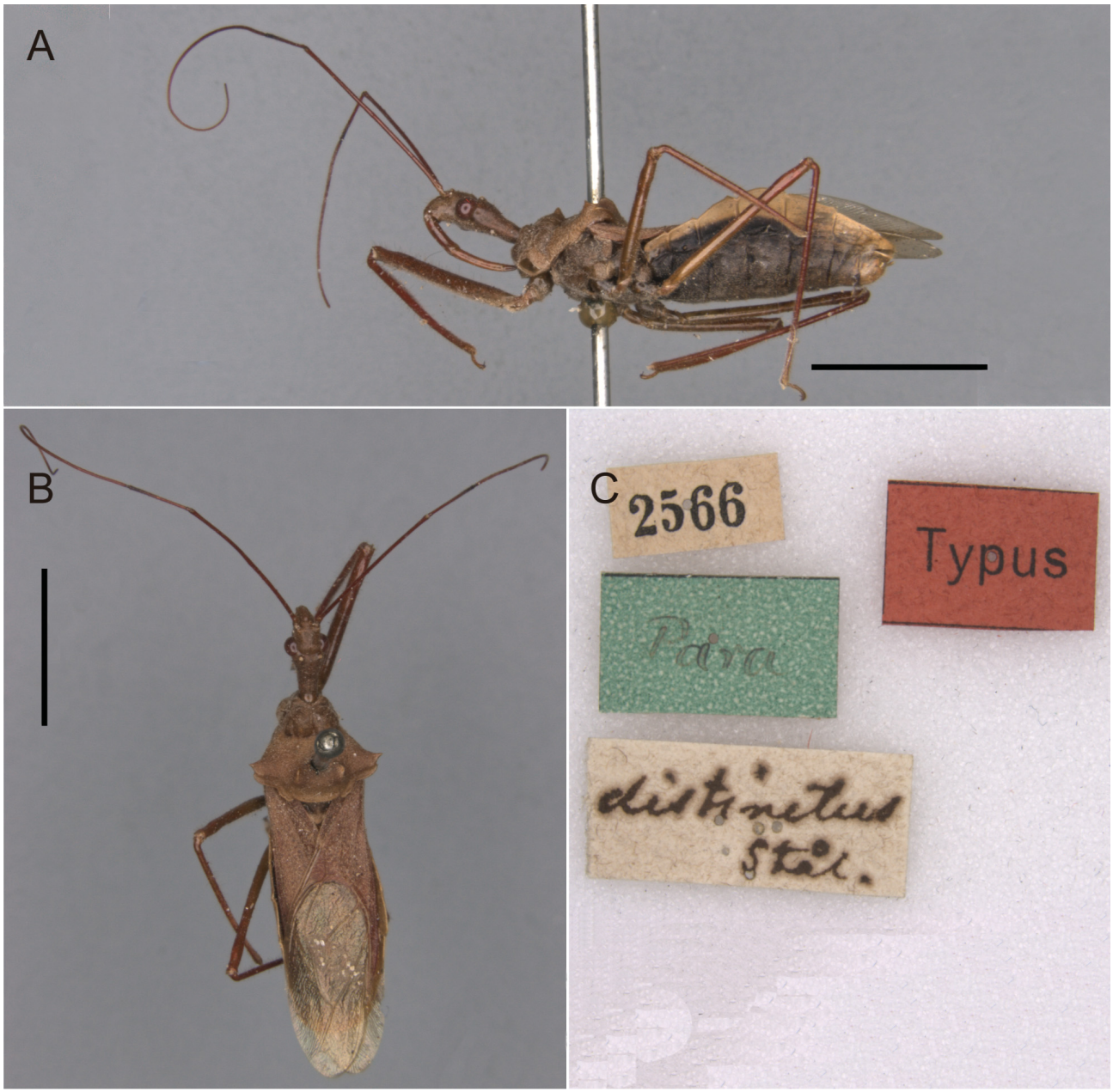

Fig. 31. Male lectotype of *Ploeogaster distinctus* Stål, 1859 [now *Montina distincta* (Stål, 1859)], deposited at ZMHB. A – lateral left view; B – dorsal view; C – labels. Scale bar: 10 mm.

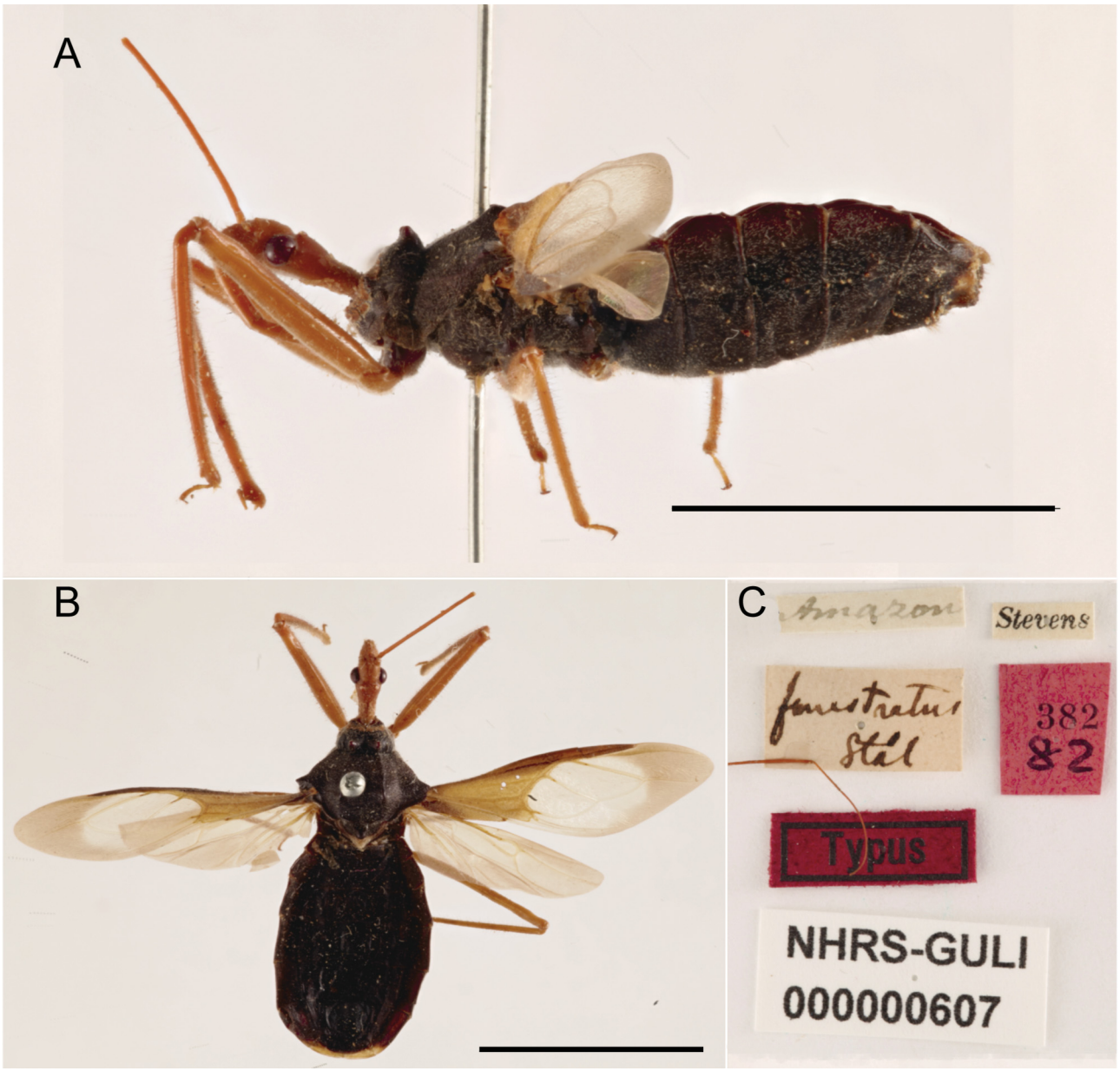

Fig. 32. Female holotype of *Aristippus fenestratus* Stål, 1867 [now *Montina fenestrata* (Stål, 1867)], deposited at NHRS. A – lateral left view; B – dorsal view; C – labels. Scale bar: 10 mm.

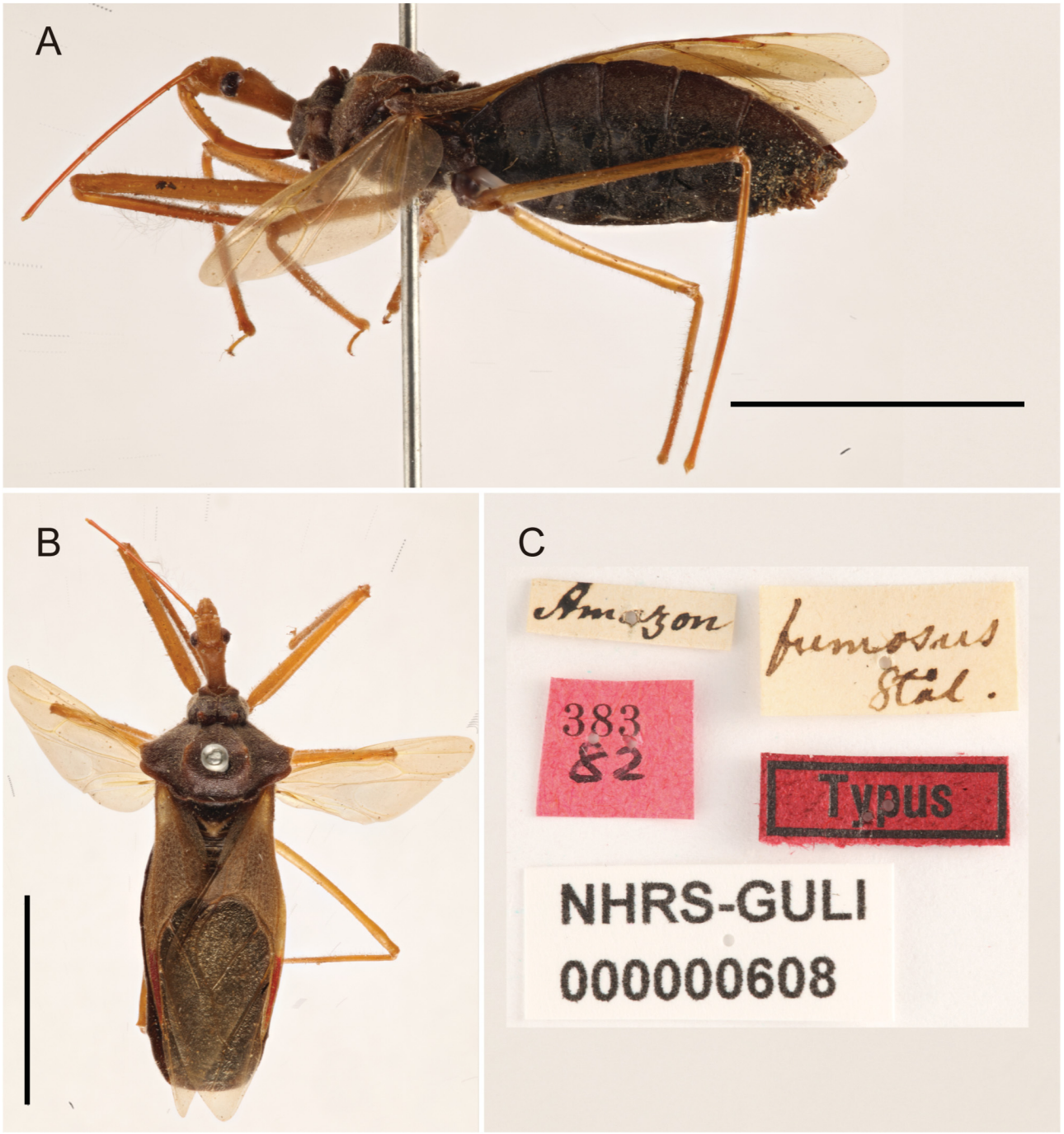

Fig. 33. Female holotype of *Aristippus fumosus* Stål, 1867 [now *Montina fumosa* (Stål, 1867)], deposited at NHRS. A – lateral left view; B – dorsal view; C – labels. Scale bar: 10 mm.

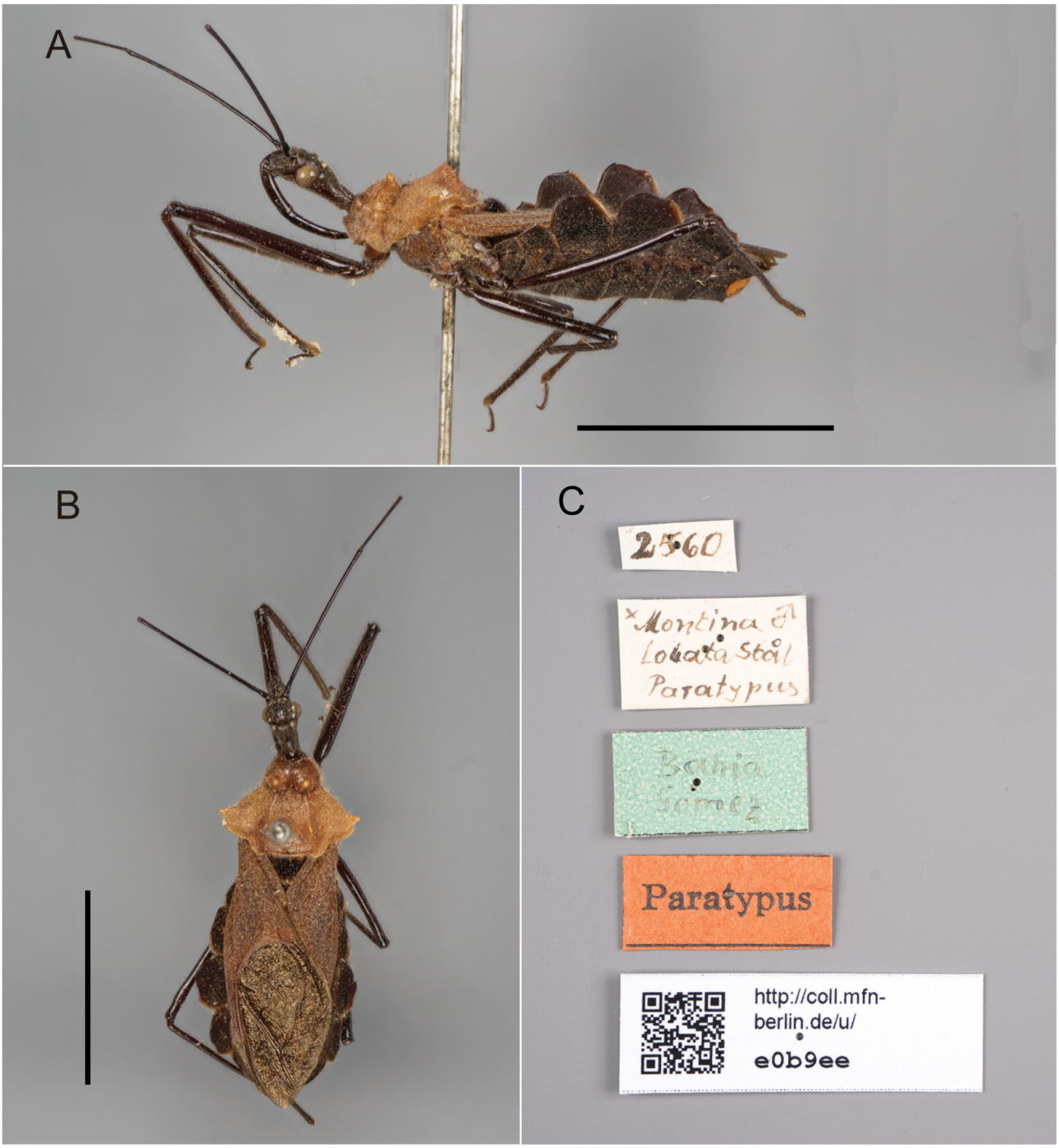

Fig. 34. Male lectotype of *Montina lobata* Stål, 1859, deposited at ZMHB. A – lateral view; B – dorsal view; C – labels. Scale bar: 10 mm.

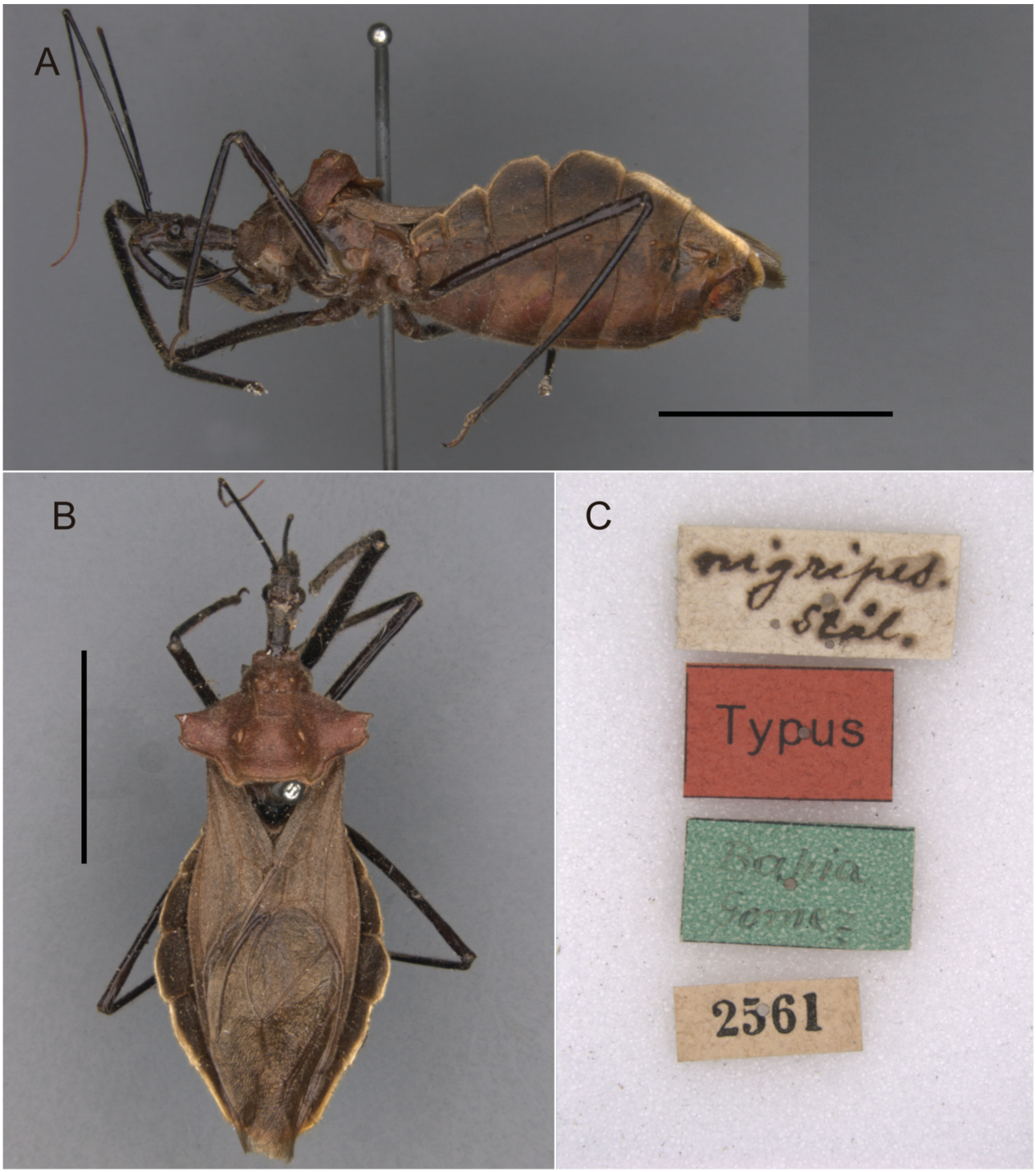

Fig. 35. Female holotype of *Montina nigripes* Stål, 1859, deposited at ZMHB. A – lateral left view; B – dorsal view; C – labels. Scale bar: 10 mm.

Fig. 36. Lectotype (sex undetermined) of *Zelus ruficornis* Fabricius, 1803 [now *Montina ruficornis* (Fabricius, 1803)], deposited at ZMUC. A – dorsal view; B – labels. Scale bar: 5 mm.

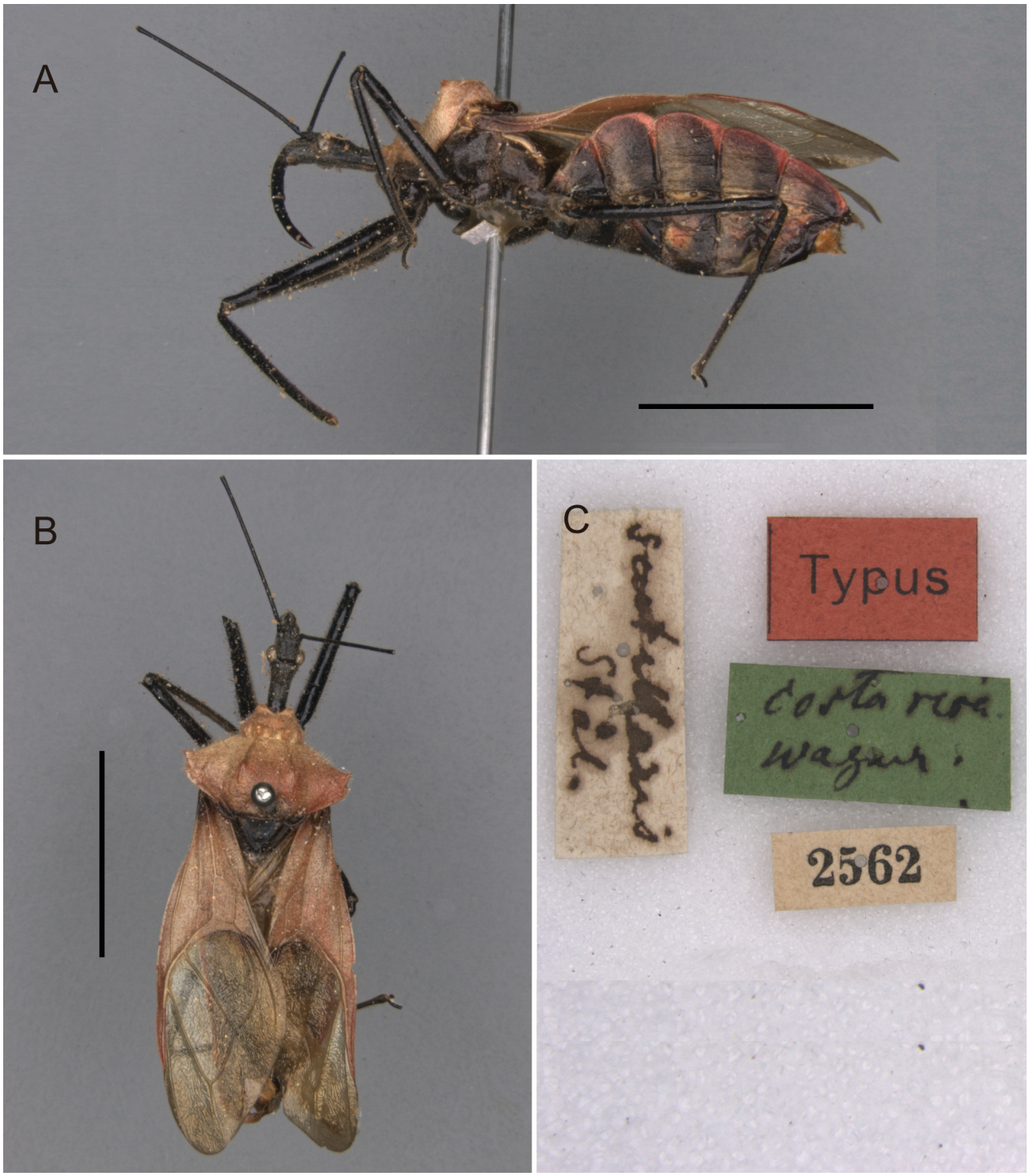

Fig. 37. Female holotype of *Montina scutellaris* Stål, 1859, deposited at ZMHB. A – lateral left view; B – dorsal view; C – labels. Scale bar: 10 mm.

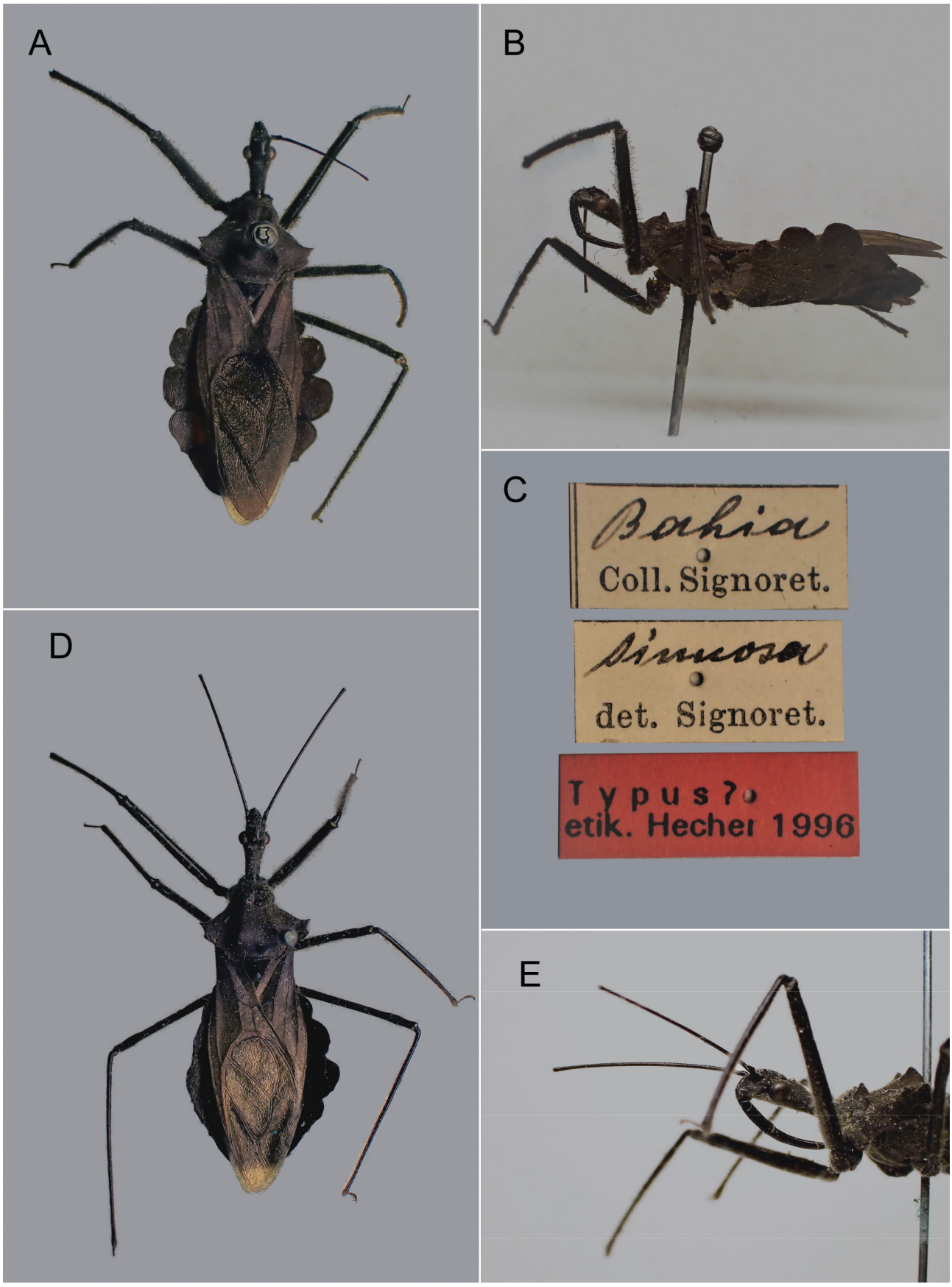

Fig. 38. *Reduvius sinuosus* Lepeletier & Serville, 1825 [now *Montina sinuosa* (Lepeletier & Serville, 1825)], deposited at NHMW. A – male lectotype, dorsal view; B – male lectotype, lateral view; C – male lectotype, labels; D – male paralectotype, dorsal view; E – male paralectotype, lateral view of thorax. Images taken without scale.

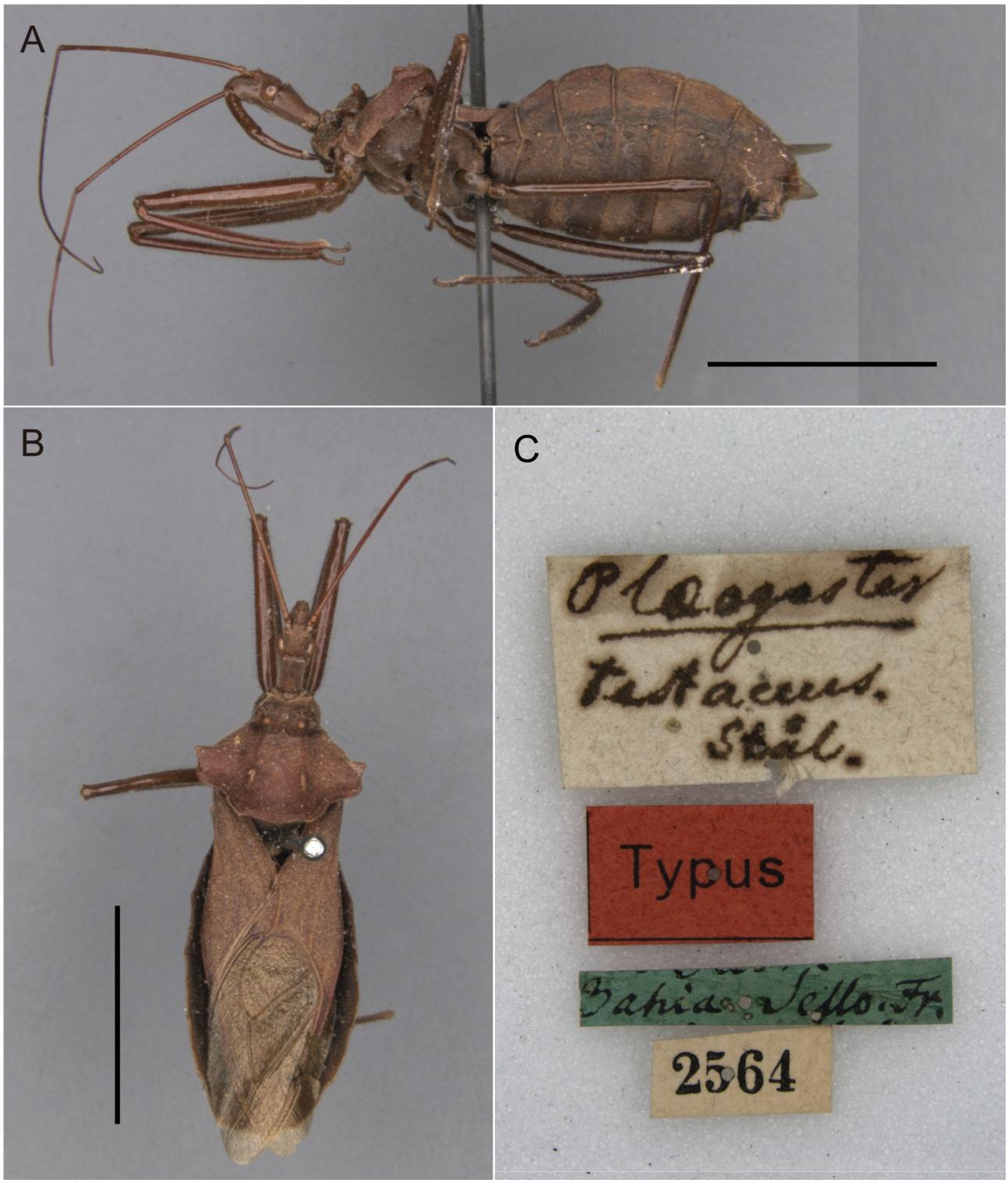

Fig. 39. Female lectotype of *Ploeogaster testaceus Stål, 1859* [now *Montina testacea* (*Stål, 1859)*], deposited at ZMHB. A – lateral left view; B – dorsal view; C – labels. Scale bar: 10 mm.

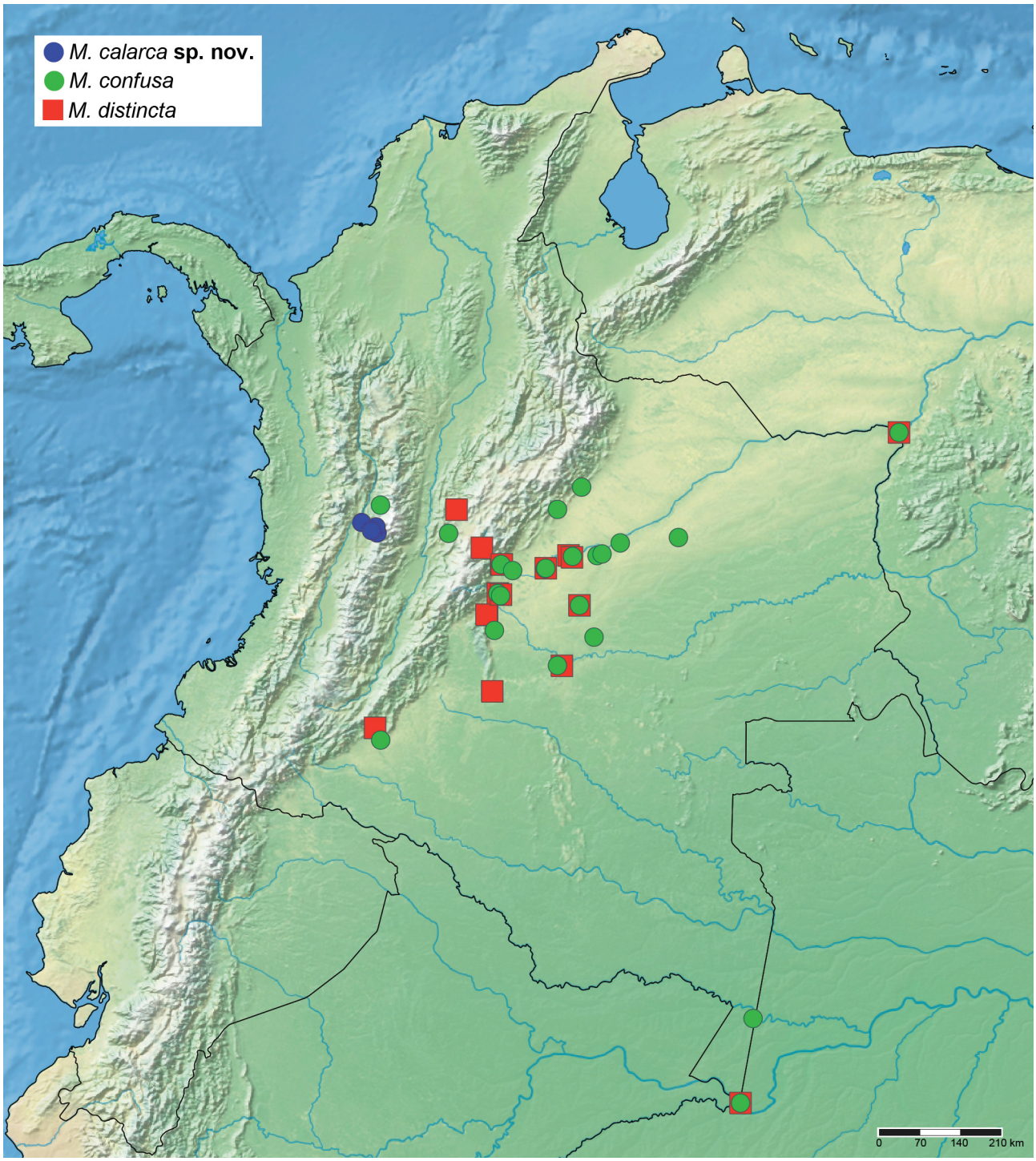

Fig. 40. Distribution map of *Montina calarca* Mejía-Soto & Forero sp. nov., *M. confusa* (Stål, 1859), and *M. distincta* (Stål, 1859) in Colombia.

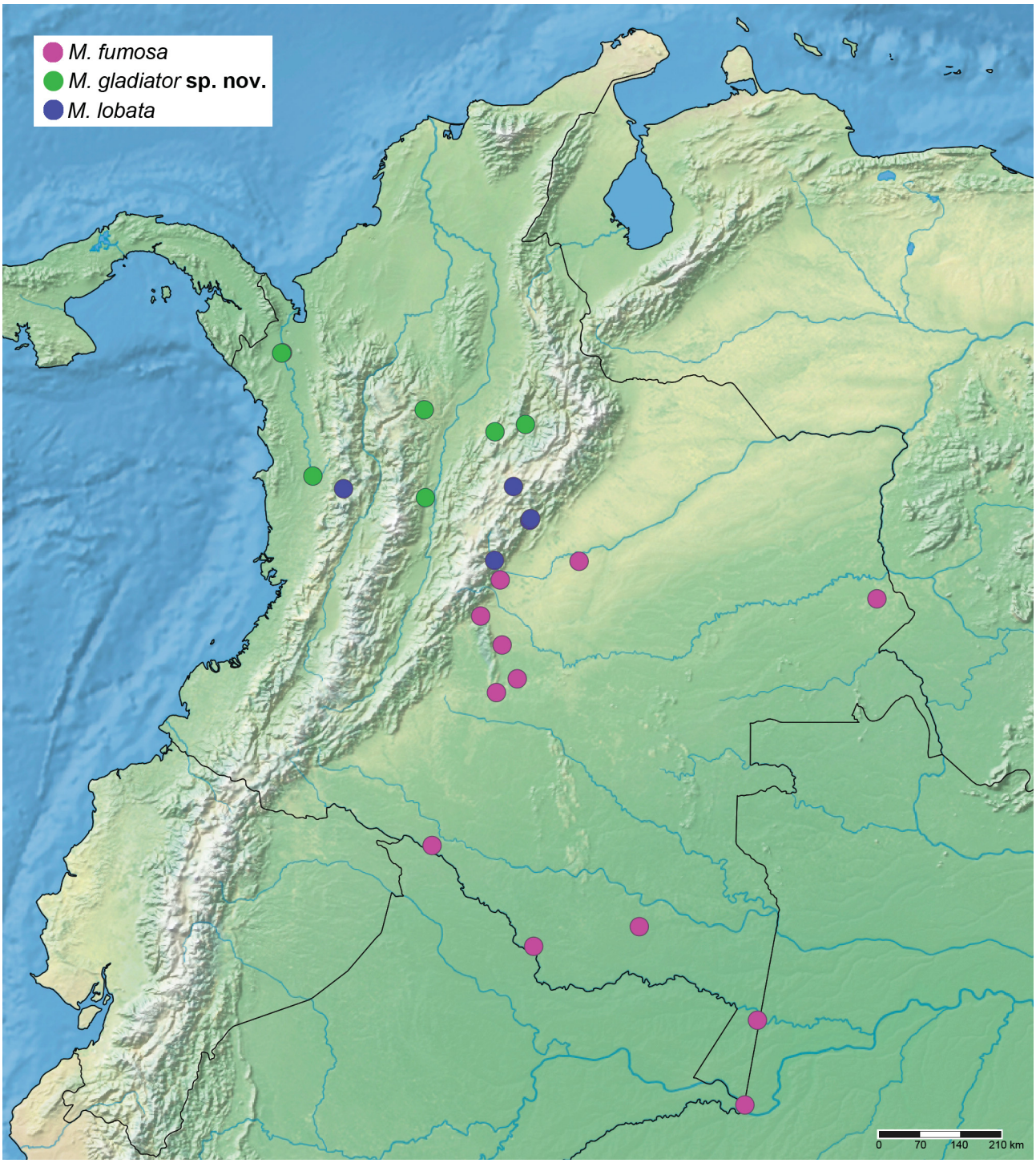

Fig. 41. Distribution map of *Montina fumosa* (Stål, 1867), *M. gladiator* Mejía-Soto & Forero sp. nov., and *M. lobata* Stål, 1859 in Colombia.

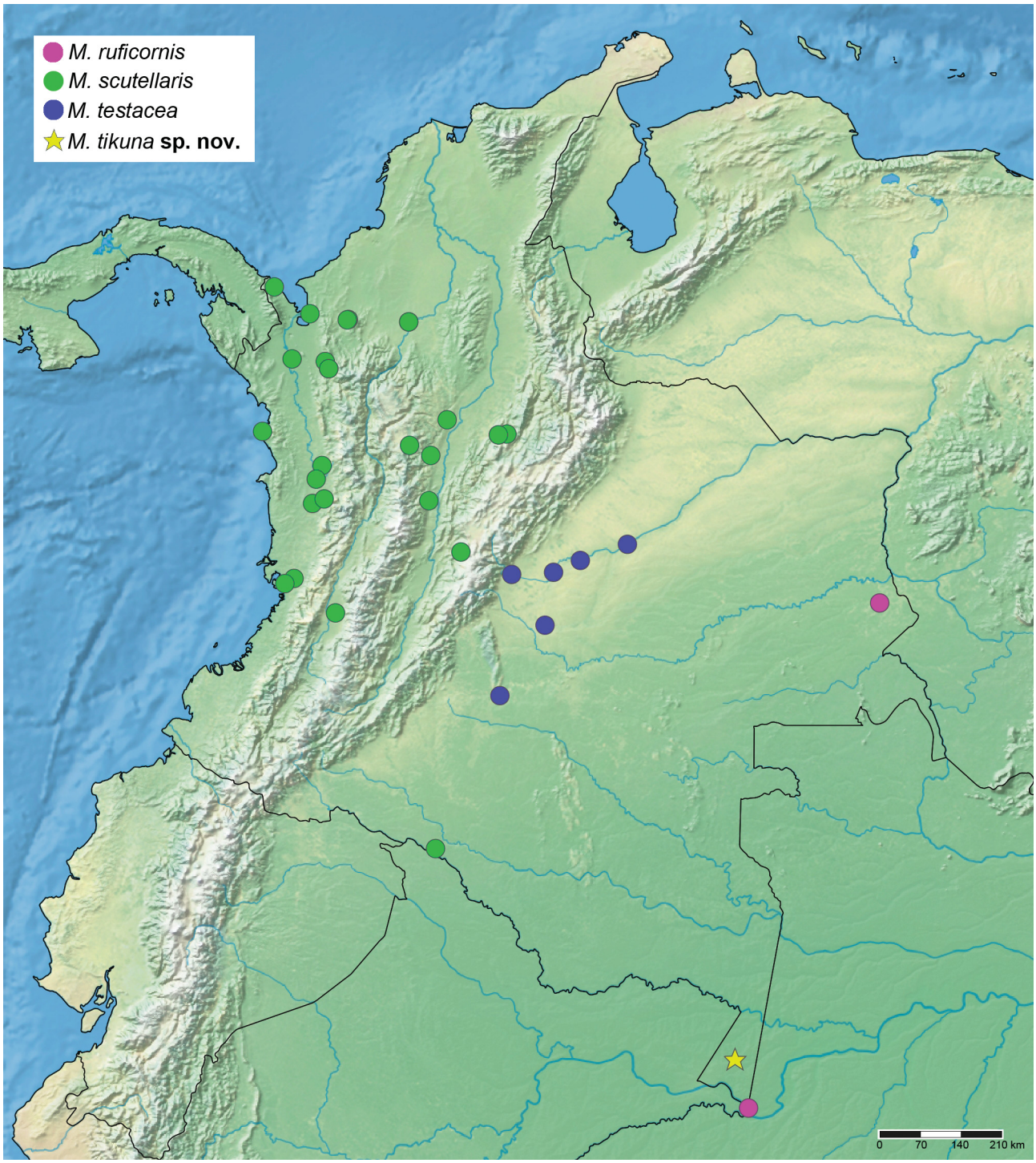

Fig. 42. Distribution map of *Montina ruficornis* (Fabricius, 1803), *M. scutellaris Stål, 1859*, *M. testacea* (Stål, 1859), and *M. tikuna* Mejía-Soto & Forero sp. nov. in Colombia.

Diagnosis. General coloration completely dark with no contrasting areas (Figs 38A–B, D–E); margin of connexivum markedly lobed (Fig. 38B), and body very setose.

Differential diagnosis. *Montina sinuosa* is similar to *M. lobata* due to their overall dark coloration and markedly lobed connexivum, however, *M. sinuosa* is completely dark, without any contrasting spots or bands in the connexivum or the pronotum (Fig. 38), whereas in *M. lobata* each connexival segment has a posterior pale band contrasting with the dark segment (Figs 15A, C). We only had images of male specimens of *M. sinuosa*, but Gil-Santana (2019) provided images of a female specimen, which agree with the lectotype and paralectotype in its overall dark coloration without pale or contrasting areas on the pronotum or connexivum. The only colored area in the female is the terminalia on the abdomen, which is bright yellow, therefore, we hypothesize that the male pygophore could be bright yellow as well.

Distribution. Known from Brazil (Lepeletier & Serville 1825, Maldonado 1990) and Ecuador (Gil-Santana 2019).

Remark on types. Heteroptera specimens of Lepeletier are in principle in the Serville collection (D. Pluot-Sigwalt, pers. comm.), and the Heteroptera portion of the Serville collection was deposited in Vienna (Austria) via V. Signoret (Horn & Kahle 1935). Sehnal (2000) indicated that at the NHMW there are two specimens of *Reduvius sinuosus* of indeterminate sex that can be considered syntypes. We agree that those two specimens deposited in NHMW bearing labels of "Coll. Signoret" are syntypes of *Reduvius sinuosus*. Not only they do agree about being part of the Serville collection and deposited in Vienna, but also both specimens lack the genitalia (Sehnal 2000) a fact indicated by Lepeletier & Serville (1825). We interpret those specimens as being males, because in lateral view the shape of abdominal segment 7 is clearly of males, indicating a missing pygophore. Before the international metric system was adopted, the French line was a common measurement used (Stearn 1985). Lepeletier & Serville (1825) gave the length of the specimens being 12 to 14 lines ("lignes"). If two specimens were examined by them, this would fit the two specimens at NHMW. Therefore, we have selected the specimen with an identification label of "*sinuousus*" as the lectotype.

Authors' contribution

D.F. conceived the idea; A.M.-S. collected the data; A.M.-S. and D.F. analyzed the data; A.M.-S. wrote the manuscript; M.W. and D.F. reviewed and edited the final version.

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APPENDIX

Clave a las especies conocidas de *Montina*

1 Margen del conexivo, al menos los segmentos 4 y 5, notablemente lobulados (Figs 13A, C; 15C; 19A); si es ligeramente lobulado (Figs 19C; 17A), la coloración general es naranja con la cabeza y las patas negras o marrones (Figs. 19A–D), o la coloración general es marrón pálido con los laterotergitos ventrales oscuros con una banda oblicua de color amarillo pálido en el margen posterior de los segmentos 2–6 (Figs 17A, C). 2

– Margen del conexivo recto o, a lo sumo, ligeramente lobulado (Figs 7A; 9A; 11D; 21A, C; 23A); si los segmentos 4 y 5 están ligeramente lobulados (Fig 11A), la coloración general es marrón, con los laterotergitos ventrales oscuros sin zonas pálidas contrastantes (Figs 11A, B). 8

2 Laterotergitos ventrales con coloración completamente oscura sin ninguna zona contrastante (Figs 38A–B). .... ***M. sinuosa*** (Lepeletier & Serville, 1825)

– Laterotergitos ventrales oscuros con áreas contrastantes más pálidas, rojas o amarillas. 3

3 Laterotergitos ventrales oscuros con áreas contrastantes amarillas pálido, sean una banda oblicua en el margen posterior de los segmentos 2–6 (Figs 15A, C; 17A, C), o en todo el margen dorsal de los segmentos 2–7 (Fig. 35A). 4

– Laterotergitos ventrales con una banda roja en el margen dorsal de cada segmento, a veces no muy visible (Figs 5A, C; 13A, C; 19A, C), pero las áreas contrastantes nunca son amarillas. 6

4 Margen de conexivo no profundamente lobulado, con un proceso corto y agudo en la mitad posterior de los segmentos 2–6, más agudo en los machos (Fig 17A); coloración general marrón pálido (Figs 17B, D). .... ***M. ruficornis*** (Fabricius, 1803)

– Margen del conexivo profundamente lobulado en los segmentos 4–5 (Figs 15A, C; 38B); coloración oscura a negra. 5

5 Pronoto amarillo opaco, densamente hirsuto (Fig 15E); bandas amarillas pálidas en el margen posterior de cada segmento del conexivo (Figs 15A–D). .... ***M. lobata*** Stål, 1859

– Pronoto rojizo oscuro, setas no densas (Fig. 35B); margen superior del conexivo con banda angosta amarillo pálido (Fig. 35A). ..... ***M. nigripes*** Stål, 1859

6 Margen del conexivo con los segmentos 4–6 profundamente lobulados (tanto machos como hembras), sin un proceso agudo visible en cada segmento (Figs 5A, C); tubérculos discales del lóbulo anterior del pronoto no bien desarrollados (Figs 5E–F). .... ***M. calarca*** Mejía-Soto & Forero **sp. nov.**

– Margen del conexivo sólo con los segmentos 4 y 5 lobulados, margen posterior de cada segmento oblicuo, con un proceso corto y agudo en la mitad posterior (Figs 13A, C; 19A, C); tubérculos discales del lóbulo anterior del pronoto subcónicos y bien desarrollados (Figs 13E, F; 19E, F). 7

7 Cabeza roja (Figs 13B, D, G); margen posterior del pronoto rojo; porción proximal del corio rojo (Figs 13B, D). ... ***M. gladiator*** Mejía-Soto & Forero **sp. nov.**

– Cabeza negra (Figs 19B, D); margen posterior del pronoto generalmente con una banda oscura transversal que conecta las bases de los lóbulos paramediales; porción proximal del corio oscuro (Figs 19B, D). .... ***M. scutellaris*** Stål, 1859

8 Membrana del ala anterior con un área hialina medial conspicua (Fig. 32B). ..... ***M. fenestrata*** (Stål, 1867)

– Membrana del ala anterior uniformemente coloreada (Figs 21B; 23B). 9

9 Laterotergitos ventrales uniformemente negros, con setas erectos negras dispersas (Figs 23E–F); esternitos abdominales completamente negros, con setas plateadas decumbentes (Fig. 23F). .... ***M. tikuna*** Mejía-Soto & Forero **sp. nov.**

– Laterotergitos ventrales con coloración contrastante (Figs 7A, C; 9A, C), si aparentemente tienen coloración homogénea (Figs 11A, C; 21A) tienen numerosas setas decumbentes y carecen de setas erectas; los esternitos abdominales no son completamente negros, y tienen setas erectas plateadas o negras. 10

10 Coloración dorsal general y patas rojas (Figs 7B, D; 21B, D). 11

– Coloración dorsal general y patas de marrón a marrón pálido (Figuras 9B, D; 11B, D). 12

11 Laterotergitos dorsales con segmentos 2–4 en su mayoría negros, 5–7 negros con una banda dorsal ancha y conspicua de color amarillo o naranja que aumenta de tamaño hacia los segmentos posteriores (Figs 7B, D), tubérculos del lóbulo anterior del pronoto rectos, constreñidos en el medio y ápice marcadamente globoso (Fig. 7E). ..... ***M. confusa*** (Stål, 1859)

– Laterotergitos dorsales con segmentos 3–7 negros con una banda naranja estrecha y uniforme en su margen lateral (Figs 21B, D), tubérculos del lóbulo anterior levemente curvados hacia el frente, sin constricción en el medio (Fig. 21E). ..... ***M. testacea*** (Stål, 1859)

12 Laterotergitos ventrales mayormente de color marrón oscuro (Figs 11A, C). ..... ***M. fumosa*** (Stål, 1867)

– Laterotergitos ventrales con una banda dorsal ancha de color amarillo pálido que contrasta con la zona ventral negra (los machos en los segmentos 4–5 con el negro alcanzando el margen dorsal) (Figs 9A, C). .... ***M. distincta*** (Stål, 1859)