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New taxa of Neotropical Acanthocerini (Hemiptera: Heteroptera: Coreidae)

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Abstract. *Guilbertocoris guianensis* gen. & sp. nov from French Guyana, *Moronopelios flavoantennatus* sp. nov. from Ecuador, and *Moronopelios nigritus* sp. nov. from Brazil (Amazonas) and Peru are described and included in the tribe Acanthocerini (Coreidae: Coreinae). The relationships of these two genera are discussed. A detailed redescription of *Moronopelios* Brailovsky, 1988 and a key to identify its four known species are included. Photographs and drawings of the male genital capsule and parameres are added.

Key words. Heteroptera, Coreidae, Acanthocerini, taxonomy, new genus, new species, Neotropical Region

Introduction

The tribe Acanthocerini Bergroth, 1913, includes 20 genera and 53 species widely distributed in the Western Hemisphere from Canada and northern United States, through Greater and Lesser Antilles and Central America to South America, including Chile and Argentina (Packauskas 2010, Brailovsky 2015). The tribe is characterized by having all the tibiae sulcate, the hind tibiae unarmed at apex, tylus barely projecting beyond juga, the hind femur spinose or tuberculate, strongly incrassate in males, antenniferous tubercles prominent, projecting well anteriorly of tylus, and usually laterally armed, and the metathoracic scent gland peritreme with a single fused auricle or eventually auricle bilobed (O'Shea 1980; Packauskas 1994, 2010; Brailovsky 2015).

In this contribution, we describe a new genus, *Guilbertocoris*, and its type species, *Guilbertocoris guianensis* sp. nov., from French Guyana. The closely related genus *Moronopelios* Brailovsky, 1988, is redescribed in detail and two new species, *M. flavoantennatus* sp. nov. from Ecuador and *M. nigritus* sp. nov. from Brazil (Amazonas) and Peru, are described and included in a key to identify the four known species.

Material and methods

The following abbreviations are used for the institutions cited here:

FSCA Florida State Collection of Arthropods, Gainesville, Florida, USA;
MNHN Museum National d'Histoire Naturelle, Paris, France;
NHRS Naturhistoriska Riksmuseet, Stockholm, Sweden;
UNAM Colección Entomológica, Instituto de Biología, Universidad Nacional Autónoma de México, Mexico.

Taxonomy

Guilbertocoris gen. nov.

Type species. *Guilbertocoris guianensis* sp. nov., here designated.

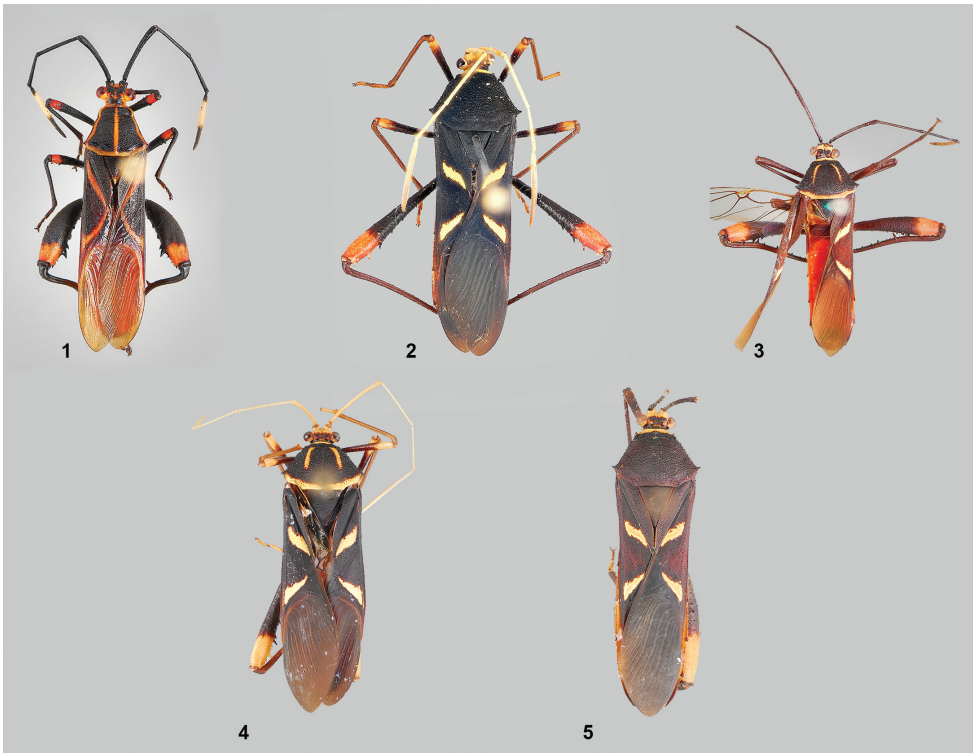
Description. Body elongate (Fig. 1), relatively narrow, medium-sized, less than 20 mm long.

Head wider than long, nearly quadrate with the specimen in dorsal view; dorsal surface finely granulate; tylus slightly projecting beyond juga; antenniferous tubercle prominent, projecting distinctly anteriorly of tylus, widely separated, armed laterally with a stout prominent spine; antennae relatively long, slender; antennal segment I cylindrical, slightly curved, more than three times as long as head; segments II–III cylindrical, IV fusiform; antennal segment I the longest, III the shortest, and IV longer than II; preocellar pit deep; ocelli close to eyes, on hypothetical line drawn between posterior borders of eyes; ocellar tubercle protuberant, conspicuously raised; eyes protruding, widely hemispherical, in lateral view globose, with upper margin located slightly above level of frons and vertex; postocular tubercle exposed, granulate; head in dorsal view with short longitudinal sulcus restricted to middle third of frons; bucculae short, subtriangular, with anterior angle elongate, subacute, not extending beyond middle third of eyes, meeting posteriorly and closed; rostrum reaching middle third of mesosternum; rostral segment I stout, reaching posterior third of head.

Thorax. Pronotum wider than long, slightly declivent, densely punctate; collar distinct; anterior, posterior, and posterolateral margins smooth; anterolateral margins smooth, except anterior third finely crenulate; humeral angles expanded laterally into short, stout spine; triangular process absent; calli convex, barely raised above pronotal disk, smooth; anterior angle rounded. Scutellum longer than wide; transversely striate; apex subacute. Mesosternum with light, almost obsolete longitudinal mesial depression; metasternum flat, smooth; metathoracic scent gland auricle closer to ventral margin of metapleuron, bilobed; anterior lobe more developed than posterior lobe; metapleuron lacking lateral process.

Legs. Fore and middle femora ventrally armed with one row of stout spines; hind femur incrassate, curved, dorsally finely tuberculate, and ventrally armed with double row of stout, large, and acute spines; fore femur almost twice as long as head; middle femur reaching posterior border of abdominal sternite III; hind femur reaching or slightly extending beyond abdominal sternite V; tibiae sulcate; hind tibiae flattened, curved, inner face armed with one row of stout acute spines.

Hemelytra. Macropterous, extending beyond apex of last abdominal segment; clavus and corium densely punctate.



Figs 1–5. Habitus in dorsal view. 1 – *Guilbertocoris guianensis* gen. & sp. nov., 2 – *Moronopelios flavoantennatus* sp. nov., 3 – *M. nigritus* sp. nov., 4 – *M. polystoides* Brailovsky, 1988, 5 – *M. vespiformis* Brailovsky, 1988.

Abdomen. Posterior angle of connexival segments VI–VII with very short spine; abdominal spiracles closer to lateral than to anterior margin.

Male genital capsule. Posteroventral edge with short expansion near midline; lateral angles straight (Fig. 6). Paramere short, elongate and apically subacute (Figs 13–14).

Etymology. Named after Eric Guilbert, distinguished French heteropterist and curator of the MNHN.

Differential diagnosis. *Guilbertocoris* gen. nov. (Fig. 1), appears to be related to *Moronopelios* Brailovsky, 1988 (Figs 2–5) in having the antenniferous tubercles laterally armed with a spine, body length between 19 to 22 mm, humeral angles sharply angulate, antennal segment III cylindrical, not dilated, fore and middle femora ventrally armed, and hind femur dorsally barely tuberculate and ventrally armed with double row of stout, large and acute spines.

In *Moronopelios* the antennal segment IV is the longest; eyes in lateral view are not conspicuously globose; postocular tubercle rounded, forming a smooth contour with eye; head dorsally with deep and large sulcus extending from frons to vertex; pronotum conspicuously

declivent with anterolateral margin densely tuberculate and spinose; calli raised above pronotal disk and densely tuberculate; anterior angle exposed, tuberculate to spinose; fore femur more than twice as long as head; middle femur reaching posterior border of abdominal sternite IV; and hind femur reaching base of genital capsule.

In *Guilbertocoris* the antennal segment I is the longest; eyes in lateral view are protruding, globose; postocular tubercle exposed, granulate; head in dorsal view with short sulcus restricted to middle third of frons; pronotum slightly declivent with anterolateral margins smooth, except for barely crenulate anterior third; calli barely raised above pronotal disk, smooth; anterior angle rounded, not tuberculate or spinose; fore femur almost twice as long as head; middle femur reaching posterior border of abdominal sternite III; hind femur reaching or slightly extending beyond abdominal sternite V.

Guilbertocoris guianensis sp. nov.

(Figs 1, 6, 13–14)

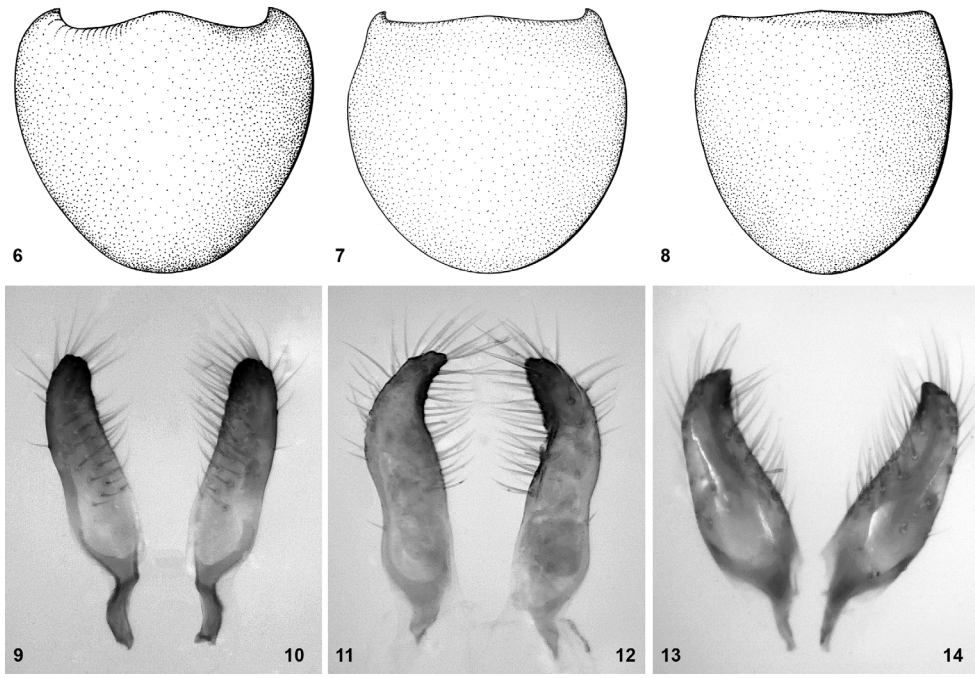
Type locality. French Guiana, Montagne de Chevaux.

Type material. Holotype: ♂, **FRENCH GUIANA:** Montagne de Chevaux, Matoury Automatic light trap (Blue), 11.ix.2015, P. H. Dalens [lgt.] (UNAM). Paratypes: 1 ♂ 1 ♀, same data as holotype (MNHN, UNAM).

Description. ***Male*** (holotype). *Dorsal coloration.* Head shiny black with following areas shiny yellowish: tylus (apex black), juga (apex black), interocellar space and postocular area; antennal segments I–III black, IV pale yellow with basal joint and apical third dull black; pronotal disk shiny black with collar, anterolateral and posterolateral margins, posterior margin, and longitudinal stripe running across middle third of disk shiny yellowish orange; scutellum shiny black, apex shiny yellowish orange; clavus dull black; corium dull black with yellowish orange curved streak along inner side of corial cleft, bordering claval suture and apical margin and extending to middle third near apical margin; costal margin entirely black; hemelytral membrane pale brown, with basal angle black; connexivum shiny yellowish orange with upper border of connexival segments III–VI black and VII yellow; dorsal abdominal segments shiny yellowish orange with posterior border of segment VII black.

Ventral coloration. Head yellow with black transverse stripe near middle third; bucculae black with external border dark yellow; rostral segments black; pro-, meso-, and metasternum shiny yellowish orange; pro-, meso-, and metapleura shiny black with acetabula and posterior margin shiny yellowish orange; anterior and posterior lobe of metathoracic scent gland auricle shiny black; coxae, trochanters, tibiae and tarsi shiny black; femora shiny black with wide shiny reddish orange to shiny yellowish orange ring at apex; abdominal sterna yellowish orange with two longitudinal black stripes running laterally to midline from sternite II to VI; pleural border III–VI black and VII yellow; male genital capsule black with middle third including posterolateral edge shiny yellowish orange.

Female. Habitus and color similar to male holotype. Prosternum black; hind femur not incrassate, with double row of short and acute spines; hind tibiae not conspicuously curved and its inner face armed with one row of short acute spines; connexivum shiny yellowish orange; abdominal segments III–VIII shiny yellowish orange, IX black; abdominal sterna yellowish orange with wide black longitudinal stripe running from sternite III to VI; sternite VII yellowish orange with middle third black; genital plates yellowish orange.



Figs 6–14. 6–8 – male genital capsule, caudal view: 6 – *Guilbertocoris guianensis* gen. & sp. nov., 7 – *Moronopelios nigritus* sp. nov., 8 – *M. polystoides* Brailovsky, 1988. 9–14 – paramere: 9–10 – *M. nigritus* sp. nov., 11–12 – *M. polystoides*, 13–14 – *G. guianensis* gen. & sp. nov.

Measurements (male / female; mm). Total body length 19.10 / 19.32. Head: length 1.45 / 1.65; width across eyes 2.95 / 2.95; interocular width 1.40 / 1.40; interocellar width 0.51 / 0.54; length of antennal segments: I – 4.70 / 4.60; II – 3.85 / 3.75; III – 2.75 / 2.85; IV – 4.40 / 4.50. Pronotum: length 3.80 / 3.75; width across humeral angles including the spiny projection 4.75 / 4.75. Scutellum: length 2.05 / 2.20; width 1.70 / 1.85.

Etymology. The species epithet is a latinized adjective *guianensis* (*-is*, *-e*), given for its occurrence in French Guiana.

Distribution. Known only from French Guiana.

Moronopelios Brailovsky, 1988

Moronopelios Brailovsky, 1988: 171–173 (original description).

Redescription. Body elongate (Figs 2–5), relatively narrow, medium-sized, slightly longer than 20 mm.

Head wider than long, nearly quadrate in dorsal view; dorsal surface finely granulate; tylus slightly projecting beyond juga; antenniferous tubercle large, occupying most of anterior head, widely separated, projecting anteriorly of tylus, armed laterally with a spine; antennae relatively

long, slender; antennal segment I cylindrical, slightly curved, more than three times as long as head; segments II–III cylindrical, IV fusiform; antennal segment IV longest, III shortest, and I longer than II; preocellar pit deep; ocelli close to eyes, on hypothetical line drawn between posterior borders of eyes; ocellar tubercle protuberant, raised; eyes hemispheric, in lateral view not conspicuously globose, with upper margin in lateral view located slightly above level of frons and vertex; postocular tubercle rounded, forming smooth contour with eye; head in dorsal view with deep longitudinal sulcus extending across frons and vertex; bucculae short, subtriangular, with anterior angle elongate, subacute, not extending beyond middle third of eyes, meeting posteriorly and closed; rostrum reaching middle third of mesosternum; rostral segment I stout, reaching posterior border of head.

Thorax. Pronotum wider than long, conspicuously declivent, densely punctate; collar distinct; anterior and posterior margins smooth; posterolateral margins smooth with anterior third tuberculate; anterolateral margins densely tuberculate and spinose; humeral angles expanded laterally into narrow sharp to obtuse spine; triangular process absent; calli convex, raised above pronotal disk, densely tuberculate; anterior angle exposed, tuberculate to spinose. Scutellum longer than wide; transversely striate; apex subacute. Mesosternum with light, almost obsolete longitudinal mesial depression; metasternum flat, smooth; metathoracic scent gland auricle placed relatively ventrally, bilobed; anterior lobe more developed than posterior lobe; metapleuron lacking lateral process.

Legs. Fore and middle femora ventrally armed with one row of stout spines; hind femur incrassate, curved, dorsally finely tuberculate, and ventrally armed with double row of stout, large, and acute spines; fore femur more than twice as long as head; middle femur reaching posterior border of abdominal sternite IV; hind femur reaching the base of genital capsule; tibiae sulcate; hind tibiae flattened, curved, inner face armed with one row of stout acute spines.

Hemelytra. Macropterous, extending beyond apex of last abdominal segment; clavus and corium densely punctate.

Abdomen. Posterior angle of connexival segments VI–VII with very short spine, sometimes obsolete; abdominal spiracles closer to lateral than to anterior margin.

Male genital capsule. Posteroventral edge with short expansion near midline; lateral angles straight (Figs 7–8). Paramere simple, elongate, apically rounded to subacute (Figs 9–12).

Moronopelios flavoantennatus sp. nov.

(Fig. 2)

Type locality. Ecuador, Aguarico Province, Yasuní.

Type material. Holotype: ♀, **ECUADOR: Aguarico Province:** Aguarico-Yasuni, 230 m a.s.l., 10.xi.1996, T. Enriquez [lgt.] (UNAM).

Description. ***Female*** (holotype). *Dorsal coloration*. Head yellow with apex of tylus, juga, upper border of antenniferous tubercle, ocellar tubercle, and wide transverse stripe black; antennal segments I–III yellow and IV pale yellowish orange; pronotum black with collar yellow; scutellum black with apex dark yellow; clavus black; corium black with two yellow rectangular stripes – one near middle third, the other along apical margin (apical border black); hemelytral membrane dark brown; connexival segments III–VI shiny orange with

upper border dark brown, and VII black with anterior third shiny orange; abdominal segments III–VI shiny orange and VII–IX black.

Ventral coloration. Head including bucculae black with wide yellowish area in middle third; rostral segments dark brown with castaneous reflections; prothorax black with yellow collar; mesosternum yellow and laterally pale brown; metasternum dark brown with dark orange reflections; mesopleura black with small yellow spot at inner angle of posterior margin; metapleura black with posterior margin and acetabula yellow; anterior and posterior lobe of metathoracic scent gland auricle black; coxae and trochanters dark brown with dark orange reflections; fore and middle femora black with apical third dark yellow; hind femur black with apical third shiny yellowish orange; tibiae and tarsi dark castaneous orange; abdominal sternite III black with posterior margin pale yellowish orange; sterna IV–VI pale yellowish orange; sternite VII black with anterior angle including the abdominal spiracles orange; genital plates black.

Measurements (mm). Total body length 21.62. Head: length 1.48; width across eyes 2.85; interocular width 1.55; interocellar width 0.62; length of antennal segments: I – 5.76; II – 4.40; III – 3.47; IV – 6.01. Pronotum: length 4.46; width across humeral angles included the spiny projection 6.21. Scutellum: length 2.54; width 2.29.

Male. Unknown.

Differential diagnosis. *Moronopelios flavoantennatus* sp. nov. (Fig. 2) is most similar to *M. polystoides* Brailovsky, 1988 (Fig. 4), both sharing the yellow antennal segments I–III; dark yellow to orange posterior third of fore and middle femora, yellow posterior margin of metapleura; black abdominal sternite III with yellow posterior margin; and black sternite VII with yellow anterior angle.

However, *M. flavoantennatus* differs in the combination of black pronotum with yellow collar, and entirely black propleura and mesopleura. In *M. polystoides* the pronotum is black to reddish brown with collar, posterolateral margins, posterior margin and two short longitudinal stripes running from below calli to posterior third of pronotal disk yellow, and fore and middle acetabula, and posterior margin of propleura and mesopleura yellow.

Etymology. The species epithet is a Latin adjective, composed of *flavus* (*-a, -um*; = yellow) and *antennatus* (*-a*, *-um*; = antennate), referring to the yellow colouration of the three basal antennal segments.

Distribution. Known only from Ecuador.

Moronopelios nigritus sp. nov.

(Figs 3, 7, 9–10)

Type locality. Brazil, Amazonas, Fonte Boa, 02°31′S, 66°80′W, 112 m a.s.l (cf. Erwin 2000).

Type material. Holotype: ♂, **BRAZIL: Amazonas:** 'Amazon, Fonteboa, [D.] Hahnel [lgt.]' (NHRS). Paratype: ♀, **PERU: Loreto Province:** nr. jct. [= near junction of] Rio Marañon and Ucayali, 4.8°S 73.5°W, 6.–20.viii.1994, P. E. Skelley [lgt.] (UNAM).

Description. ***Male*** (holotype). *Dorsal coloration*. Head yellow with tylus (base yellow), juga, ocellar tubercle, upper border of antenniferous tubercle, and interocular space including the neck black; antennal segments I–III black and IV pale yellowish orange; pronotum black with collar, posterolateral margins, posterior margin, and two longitudinal stripes lateral to

midline and running from posterior border of calli to posterior margin yellow, only with posterior border black; scutellum black, apex dark yellow; clavus dark to reddish brown; corium black to reddish brown with two yellow rectangular marks, one above midline, the other near apical margin; membrane pale brown with basal angle black and metallic green reflections; connexival segment III dark brown, IV–VI yellow with posterior angle dark brown, and VII dark yellow with posterior half dark brown; dorsal abdominal segment II pale brown, III–VI shiny orange, and VII black with anterior angle shiny orange.

Ventral coloration. Head yellow with wide transverse pale brown quadrate mark near midline; rostral segments I, III–IV dark castaneous, segment II pale castaneous orange; pro-, meso-, and metasternum pale brown; propleura black to reddish brown with collar, acetabula, and posterior margin yellow; meso- and metapleura black to reddish brown with acetabula and posterior margin yellow; anterior and posterior lobe of metathoracic scent gland auricle black; fore and middle leg dark castaneous brown; hind leg dark castaneous brown with apical third of femur shiny yellowish orange; abdominal sternite III black with posterior margin yellow; sterna IV–VI pale yellow, and VII black to dark castaneous brown, with basal angle pale yellowish orange; genital capsule dark brown. Paramere simple, elongate, apically rounded (Figs 9–10).

Female. Habitus and color similar to male holotype. Head ventrally with basal half yellow and apical half black; rostral segments I–IV dark castaneous brown; connexival segments VIII–IX, dorsal abdominal segments VIII–IX, abdominal sternite VII and genital plates black.

Measurements (male / female; mm). Total body length 20.04 / 21.50. Head: length 1.48 / 1.48; width across eyes 2.72 / 2.79; interocular width 1.37 / 1.36; interocellar width 0.50 / 0.50; length of antennal segments: I – 5.39 / 5.76; II – 4.40 / 4.34; III – 3.59 / 3.34; IV – 5.76 / 5.82. Pronotum: length 3.72 / 4.15; width across humeral angles including the spiny projection 5.70 / 6.01. Scutellum: length 2.35 / 2.48; width 2.10 / 2.10.

Differential diagnosis. *Moronopelius nigritus* sp. nov. (Fig. 3), resembles *M. vespiformis* Brailovsky, 1988 (Fig. 5), in having the antennal segments I–III black; abdominal sternite III black with posterior margin yellow; meso- and metasternum black to dark reddish brown; and posterior margin of metapleura yellow. In *M. nigritus* the pronotum is black to reddish brown with the following areas yellow: collar, posterolateral margins, posterior margin, and two longitudinal stripes lateral to midline; and posterior margin of pro- and mesopleura yellow. In *M. vespiformis* the pronotum is black with only the collar yellow, and the posterior margin of pro- and mesopleura black.

Etymology. The species epithet is a Latin adjective, *nigritus* (*-a, -um*; = blackish) referring to the black coloration of three basal antennal segments.

Distribution. Only known from Brazil (Amazonas) and Peru.

Key to the known species of *Moronopelios* Brailovsky, 1988

1 Antennal segments I–III black. 2
– Antennal segments I–III yellow. 3
2 Posterior margin of propleura and mesopleura yellow; pronotal disk black with the following areas yellow: collar, posterolateral margins, posterior margin, and two longitudinal stripes lateral to midline (Fig. 3). ..... ***M. nigritus* sp. nov.**

– Posterior margin of propleura and mesopleura black: pronotal disk black with only the collar yellow (Fig. 5). ..... ***M. vespiformis*** Brailovsky, 1988

3 Posterior margin of propleura and mesopleura yellow; pronotal disk black with collar, posterolateral margins, posterior margin and two longitudinal stripes lateral to midline yellow (Fig. 4). ..... ***M. polystoides*** Brailovsky, 1988

– Posterior margin of propleura and mesopleura black; pronotal disk black with only the collar yellow (Fig. 2). ..... ***M. flavoantennatus*** **sp. nov.**

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