

The genus *Nematopus* (Hemiptera: Heteroptera: Coreidae) of French Guiana with a description of one new species

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Abstract. A checklist of the species of the genus *Nematopus* Berthold, 1827 (Hemiptera: Heteroptera: Coreidae: Coreinae: Nematopodini) known from French Guiana is given. One new species, *N. persuasus* sp. nov., is described. New distributional records for *N. indus* (Linnaeus, 1758) and *N. nervosus* Laporte, 1832 are added. Dorsal view photographs and a key for the three known species are included. The pronotum and male genital capsule of *C. persuasus* and *C. spinulus* Brailovsky & Barrera, 2003 are illustrated.

Key words. Heteroptera, Coreidae, *Nematopus*, new species, taxonomy, key, French Guyana, Neotropical Region

Introduction

The genus *Nematopus* Berthold, 1827, is one of the most diverse genera of Nematopodini in the Western Hemisphere and is found primarily in the tropical and subtropical regions. It includes 30 species which are widely distributed from central Mexico throughout Central (Guatemala, El Salvador, Costa Rica, and Panama) and South America (Bolivia, Brazil, Colombia, Ecuador, French Guiana, Paraguay, Peru, Suriname, Venezuela), but absent from the Antilles, Uruguay, Argentina, and Chile (BRAILOVSKY & BARRERA 2003, PACKAUSKAS 2010). The genus is recognizable by having the hind tibia of both sexes cylindrical and not expanded; humeral angles usually rounded, angulate, or slightly exposed, but never produced anteriorly into wing-like expansions; body usually larger than 18.0 mm; pronotum not steeply declivent; lateral margins of abdomen more or less parallel; and male hind tibia not armed distally. In *Grammopoecilus* Stål, 1868, the most closely related genus, the male hind tibia is armed distally with ventral and dorsal spines, and the abdomen usually tapers inward from pronotum to the apex of the abdomen (O'SHEA 1980).

Previously only two species, *Nematopus indus* (Linnaeus, 1758) and *N. nervosus* Laporte, 1832, were known from French Guiana (PACKAUSKAS 2010). In this contribution, one new species is described, new distributional records for the taxa known from French Guyana are added and a key to identify the three species is given.

Material and methods

The following abbreviations are used for the collections housing the material examined:

- CMNH Carnegie Museum of Natural History, Pittsburgh, Pennsylvania, USA;
FSCA Florida State Collection of Arthropods, Gainesville, Florida, USA;
LACM Natural History Museum of Los Angeles County, Los Angeles, California, USA;
MNHN Museum National d'Histoire Naturelle, Paris, France;
UMSP University of Minnesota, Department of Entomology, St. Paul, Minnesota, USA;
UNAM Colección Entomológica, Instituto de Biología, Universidad Nacional Autónoma de México.

Taxonomy

Nematopus persuasus sp. nov.

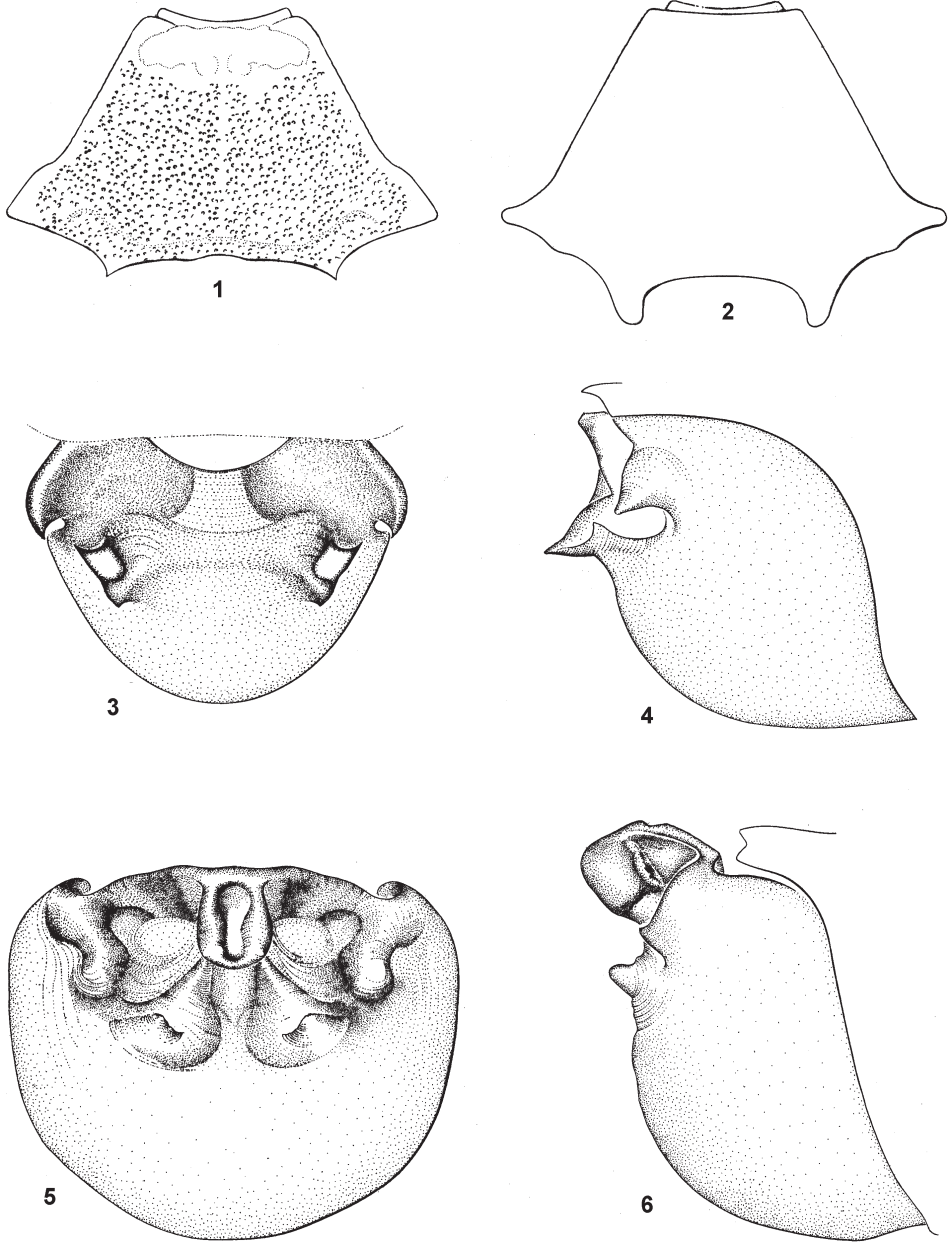
(Figs 2–4, 9)

Type material. HOLOTYPE: ♂, FRENCH GUIANA: Savane Roche (inselberg) de la Haute-Koursibo, light trap, 31.x.2013, P. H. Dalens (UNAM). PARATYPE: 1 ♀, same data as male holotype (UNAM).

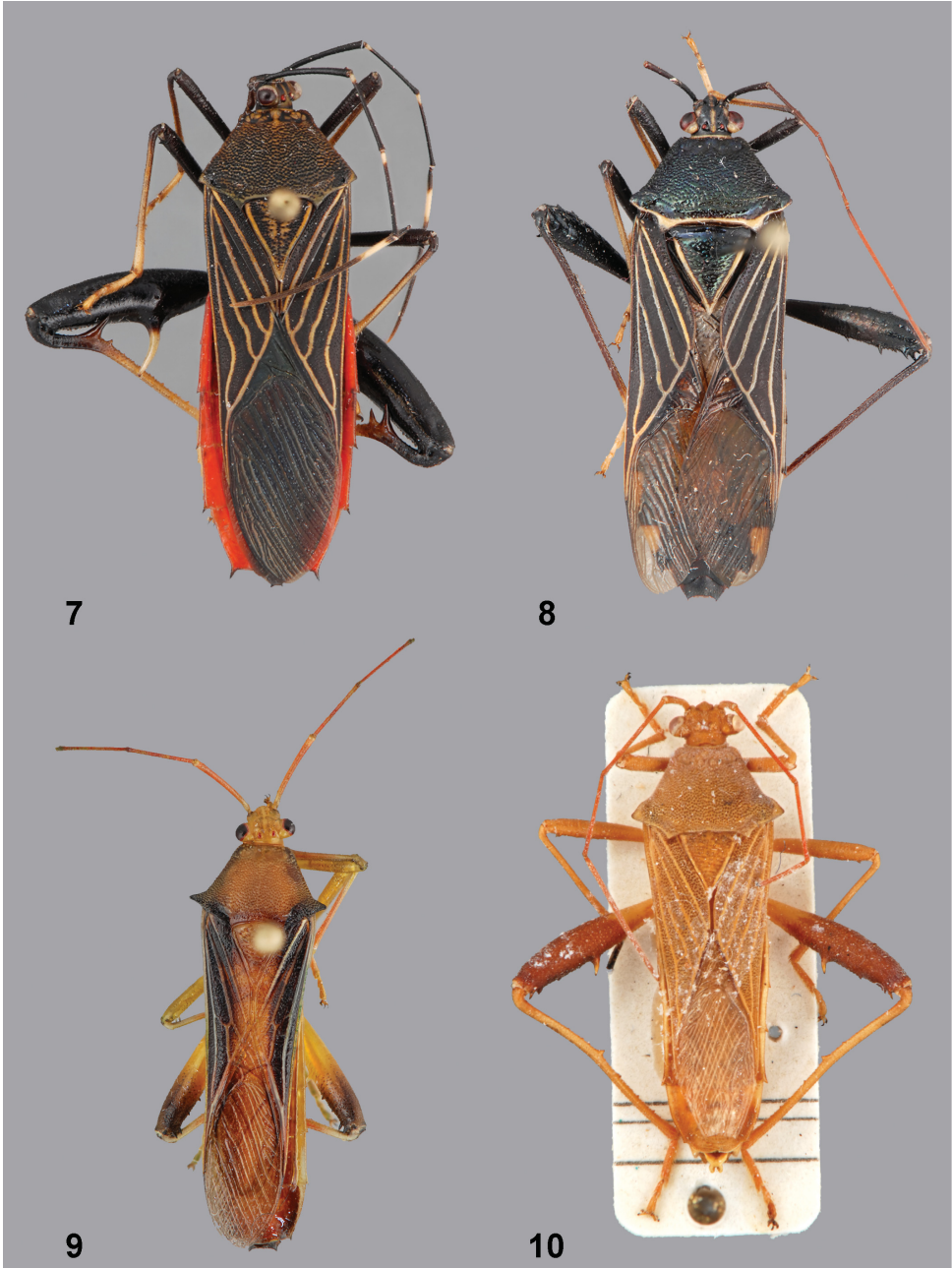
Description. *Male* (holotype). *Dorsal coloration.* Head shiny yellow; ocelli pale red; eyes dark red; antennal segments I to III pale castaneous orange with reddish marks, segment IV pale castaneous orange; pronotal disk yellow, punctures castaneous; anterolateral and posterolateral margins and humeral angles yellow with olive-brown to pale green sheen, and punctures dark reddish brown; scutellum shiny yellow, punctures castaneous orange; anterior third of clavus shiny dark brown, posterior third shiny orange; corium shiny dark brown, with costal margin, veins and apical margin yellow, suffused with olive-brown to olive-green marks; inner third of endocorium shiny orange; hemelytral membrane yellow; connexival segments III to VI yellow, VII dark reddish brown with upper margin yellow; dorsal abdominal segments shiny dark yellow with lateral margins dark brownish orange.

Ventral coloration. Ground color shiny yellow; apex of rostral segment IV brown; mesopleura with large ovoid shiny castaneous brown spot; middle and hind acetabula with one creamy yellow callosity; coxae, trochanters, and femora shiny yellow, with pale green sheen; apex of femora with two pale reddish brown spots lateral to midline; posterior third of hind femur with spines and tubercles reddish brown; tibiae and tarsi pale yellowish orange, with pale green sheen; abdominal sterna III to VI with two rows of oval creamy yellow callosities lateral to middle line, one callosity located near anterior margin and the other near posterior margin; sternite VII with only one anterior callosity; middle third of abdominal sterna IV to VI with slender longitudinal creamy yellow callosity; genital capsule dark brown.

Structure. Elongated specimens, medium-sized, less than 20 mm, lean, not flattened, with connexivum exposed. Head wider than long; tylus enlarged, almost globose, projecting anteriorly from antenniferous tubercle, longer than juga which are reduced to short lateral flanges; preocular space without tubercle; antenniferous tubercle wide, unarmed, reaching base of antennal segment I; antennae long, slender; antennal segment I stoutest, II and III cylindrical, IV fusiform; postocular tubercle rounded, tiny, exposed, forming smooth curve with eye; head ventrally and behind each eye with small protuberance; rostrum reaching anterior third of mesosternum; rostral segment I short, not extending beyond middle third of eye.



Figs 1–6. *Nematopus* spp. 1–2 – pronotum: 1 – *N. spinulus* Brailovsky & Barrera, 2003; 2 – *N. persuasus* sp. nov. 3–6 – male genital capsule: 3–4 – *N. persuasus* sp. nov. (3 – caudal view, 4 – lateral view). 5–6 – *N. spinulus* Brailovsky & Barrera, 2003 (5 – caudal view, 6 – lateral view).



Figs 7–10. Dorsal view of *Nematopus* spp. 7 – *N. indus* (Linnaeus, 1758). 8 – *N. nervosus* Laporte, 1832. 9 – *N. persuasus* sp. nov. 10 – *N. spinulus* Brailovsky & Barrera, 2003.

Pronotum wider than long; calli barely raised above pronotal disk; calli, anterior margin and basal third of anterolateral margins broken up into a number of small tubercles; humeral angles expanded into medium-sized spine directed outward, clearly upward, and apically subacute; triangular process of posterolateral angle elongate, reaching anterior margin of scutellum, and apically almost rounded; mesosternum lacking sulcation; metasternal scent gland ostiole placed relatively close to lateral margin of metapleuron (Fig. 2). Scutellum transversely striate.

Legs. Trochanters unarmed; fore and middle femora armed with two stout subapical spines; hind femur incrassate in both sexes, but much more so in male, dorsally smooth and ventrally with double row of small irregular tubercles, two pairs of stout subapical spines and one slender medium-sized spine near middle third; hind tibiae sulcate, inner face with irregular tiny granules and one small cone-shaped spine near middle third; hind tibiae not armed distally.

Abdomen. Posterior angle of connexival segments IV to VII with short spine conspicuously acute; abdominal spiracles situated nearer anterior than lateral margin. Posteroventral margin of genital capsule with mesial keel, apically split in two long branches resembling winged expansions pointing to the sides and leaving concavity between them; keel delimited laterally by two short, strong projections which distally become sharper and slightly spiniform (Figs 3–4).

Measurements (mm). Total body length 16.40. Head length 1.48; width across eyes 2.20; interocular width 1.20; interocellar width 0.40; preocular length 1.00; length of antennal segments: I – 3.24; II – 2.68; III – 2.40; IV – 5.60. Pronotal length 2.92; width across humeral angles 4.92. Scutellar length 2.32; width 1.84.

Female. Habitus and color similar to male holotype. Pronotum with collar and anterior margin olive-brown; connexival segments VIII and IX black with anterior margin castaneous orange; hind femur yellow with pale green sheen and posterior third brown; dorsal abdominal segments VIII and IX dark yellowish orange; outer margin of metapleura and pleural margins of abdominal sterna III to VII tinged with green; gonocoxae I dark brown; paratergite VIII yellow with upper and inner border dark brown; paratergite IX dark brown with upper border yellow. Hind tibiae unarmed.

Measurements (mm). Total body length 18.55. Head length 1.52; width across eyes 2.40; interocular width 1.30; interocellar width 0.46; preocular length 1.02; length of antennal segments: I – 3.00; II – 2.64; III – 2.48; IV – 5.64. Pronotal length 3.60; width across humeral angles 5.40. Scutellar length 2.72; width 2.36.

Differential diagnosis. This new species is related to *N. spinulus* Brailovsky & Barrera, 2003 in having the humeral angles strongly expanded (Figs 9–10). In *N. spinulus* the humeral angles are directed outward and apically rounded, the triangular processes of posterolateral angles of pronotum are small, broad, and apically subacute, and the color of pronotal disk pale orange with punctures chestnut orange, whereas in *N. persuasus* sp. nov., the humeral angles are strongly expanded with a medium-sized spine directed outward, clearly upward and apically subacute, the triangular processes are elongate, apically almost rounded, and the pronotal disk is yellow, punctures castaneous and anterolateral and posterolateral margins, and humeral angles yellow with olive-green to pale green sheen (Figs 1–2). The male genital capsule differs in the general shape (Figs 3–6).

Etymology. The species name is the Latin adjective *persuasus* (*a, um*), meaning persuasive, convincing, believable.

Distribution. Known only from French Guiana.

Nematopus indus (Linnaeus, 1758)

(Fig. 7)

Cimex indus Linnaeus, 1758: 447.

Material examined. FRENCH GUYANA: 3 ♂♂, Remire, 29.iii.1986, P. J. Clausen (UMSP); 1 ♀, Barrage de Petit Saut, 15.i.1998, P. Cerdan (MNHN); 1 ♂, Maison Vidal, 4.ix.1992, P. Gombauld (MNHN); 1 ♀, Demerara, Timebri, 0–50 m, 6°30'N 58°15'W, 24.i.1981, J. Longino (LACM); 1 ♂, 14 km E of N2 on Road to Degrad Correze, 108 m a.s.l., 04°29'N 050°20'W, 6.xii.2002, J. E. Eger (FSCA); 25 ♂♂ 16 ♀♀, Mana River, iii.1917, v.1917, vi.1917 (CMNH); 1 ♀, Roroia, x.1977 (MNHN); 1 ♂, Camopi, 1900, F. Geay (MNHN); 2 ♂♂, Les Roches de Kovrov, 1907, E. Le Moul (MNHN); 1 ♀, Kourou, km 15 SW, 6.viii.1976, D. Roubik (UNAM); 2 ♂♂, Reserve Naturelle de la Trivite, Roche Benitier, Comune de Mana, 4 °37'9.3"N 53°24'32.3"W, 8.xii.2010 (Piege vitre), S. Brulle, P. H. Dalens and S. Fernandez (MNHN); 11 ♂♂ 7 ♀♀, Point de vue du Belvedere de Saül, 250 m a.s.l., window trap on the top of the mountain, 3°37'22"N 53°12'34"W, 28.ii.2010, 30.xi.2010, 11.i.2011, 23.ii.2011, 14.–30.iii.2011, 20.–23.v.2011, 15.vi.2011, 15.vii.2011, 20.–24.xii.2011, S. Brulle, P. H. Dalens, and S. Fernandez (MNHN, UNAM); 5 ♂♂ 2 ♀♀, Montagne des Cheveaux, 20 m a.s.l., window trap, 04°43'0.12"N 52°25'0.12"W, 10.x.2007, 11.–23.xii.2011, 17.ii.2012, 2.xii.2012, 13.i.2013, S. Brulle, P. H. Dalens and S. Fernandez (MNHN, UNAM); 3 ♂♂ 7 ♀♀, Amazon Nature Lodge, 30 km SE Roura on Kaw Road, 300 m a.s.l., 04°33'57"N 05°12'43"W, 2.–13.vi.2005, 10.–18.iv.2007, J. E. Eger, D. G. Hall, and M. T. Messenger (FSCA, UNAM); 1 ♂ 2 ♀♀, vic. Remire, E of Cayenne, 21.iv.2007, J. E. Eger (FSCA, UNAM).

Diagnosis. This species is recognized by having the antennal segment IV black with yellow ring near basal third; antennal segments II and III black with basal joint yellow; connexivum and abdominal sterna III to VII shiny orange; male genital capsule and female genital plates black; thorax including the anterior and posterior lobe of metathoracic peritreme black (eventually the anterior lobe is dark yellow); femora entirely black; fore and middle tibiae black with apical third dark yellow; hind tibiae dark yellow with basal third black.

Distribution. Argentina, Bolivia, Brazil, Chile, French Guiana, Guyana, Suriname, Venezuela (AMYOT & SERVILLE 1843, WALKER 1871, PACKAUSKAS 2010). In French Guiana cited only from Cayenne (WALKER 1871).

Nematopus nervosus Laporte, 1832

(Fig. 8)

Nematopus nervosus Laporte, 1832: 30.

Material examined. FRENCH GUIANA: 4 ♂♂ 3 ♀♀, Point de vue du Belvedere de Saül, 250 m a.s.l., 3°37'22"N 53°12'34"W, 30.xi.2010, 4.–17.i.2011, 30.xi.2011, 10.–24.xii.2011, S. Brulle, P. H. Dalens, and S. Fernandez (MNHN, UNAM); 6 ♂♂ 3 ♀♀, Montagne des Cheveaux, 20 m a.s.l., window trap, 04°43'0.12"N 52°25'0.12"W, 11.–18.ix.2011, 8.iv.2012, 27.v.2012, 29.vii.2012, 3.xi.2012, 20.i.2013, 16.–27.ii.2013, S. Brulle, P. H. Dalens and S. Fernandez (MNHN, UNAM); 1 ♂, Amazon Nature Lodge, 30 km SE Roura on Kaw Road, 300 m a.s.l., 04°33'57"N 05°12'43"W, 18.–23.iv.2007, J. E. Eger (FSCA); 1 ♂, ca 10 km E. Cayenne, 51 m a.s.l., 04°53'23"N 05°15'74"W, 6.vi.2005, J. E. Eger and M. T. Messenger (FSCA); 1 ♀, EntomoTech Lodge, 30 km SE Roura on Kaw Road, 300 m a.s.l., 04°33'N 05°12'W, 1.–12.xii.2002, J. E. Eger (FSCA); 2 ♂♂ 3 ♀♀, 14 km E of N2 on road to Degrad Correze, 108 m a.s.l., 04°29'N 05°20'W, 6.xii.2002, J. E. Eger (FSCA).

Diagnosis. It is easily distinguished from other French Guianese species of *Nematopus* by having the antennal segment I reddish brown, and II to IV dark castaneous orange; triangular

process of pronotum broad, apically rounded; pronotal disk shiny reddish brown to black with metallic bluish sheen (collar, posterolateral margin, triangular process and posterior margin yellow); abdominal sterna III to VII reddish brown with bluish sheen, and pleural margins yellow; humeral angles barely exposed, apically almost rounded.

Distribution. Brazil, Colombia, French Guiana, Guyana, Panama, Suriname (AMYOT & SERVILLE 1843, STÅL 1870, WALKER 1871, DISTANT 1893, PACKAUSKAS 2010). In French Guiana cited only from Cayenne (WALKER 1871).

Key to the species of *Nematopus* known from French Guiana

- 1 Antennal segment IV black with yellow ring near basal third; antennal segments II and III black with basal joint yellow; connexivum shiny orange; abdominal sterna III to VII shiny orange; male genital capsule and female genital plates black (Fig. 7). *N. indus* (Linnaeus, 1758)
- Not with this combination of characters. 2
- 2 Fore and middle femora shiny reddish brown; hind femur shiny reddish brown to black; humeral angles barely exposed, rounded (Fig. 8). *N. nervosus* Laporte, 1832
- Fore and middle femora yellow with pale green sheen; hind femur yellow with pale green sheen, and with or without posterior third brown; humeral angles conspicuously expanded into medium size spine directed outward, and clearly upward, (Fig. 9). *N. persuasus* sp. nov.

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