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New species and records of the family Scleropactidae Verhoeff, 1938 from Venezuela (Crustacea, Isopoda, Oniscidea)

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Abstract: Eight species in the family Scleropactidae are recorded from Venezuela. Three species are described as new: *Colomboscia venezuelana* n. sp. from the departments of Aragua and Miranda, *Globopactes cristalinae* n. sp. from the department of Trujillo, and *Globopactes mucuyensis* n. sp. from the department of Mérida. *Globopactes senex* and *Neosanfilippia venezuelana* have their distribution extended to the departments of Aragua and Carabobo, respectively.

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Key words: *Colomboscia*; *Globopactes*; *Neosanfilippia*; Amazon Forest; Andean Cordillera; Neotropical region; cloud forests; páramo; new species.

Introduction

Terrestrial isopods (Oniscidea) comprise approximately 4,000 species in more than 500 genera distributed in 38 families, and occur in almost all types of terrestrial habitats (Schmalfuss 2003; Sfenthourakis and Taiti 2015; Javidkar et al. 2015; Dimitriou et al. 2019; Campos-Filho and Taiti 2021; WoRMS 2021).

The family Scleropactidae Verhoeff, 1938 comprises about 110 species in 29 genera (Sfenthourakis and Taiti 2015; Campos-Filho et al. 2017; Broly et al. 2018). The family shares characters with Philosciidae Kinahan, 1857 and Halophilosciidae Verhoeff, 1908 and its monophyly is doubted (Leistikow 2001; Schmidt 2002, 2003, 2008). Together with the Philosciidae, the Scleropactidae constitute one of the most diverse lineages of Oniscidea in the Neotropical region. To date, 72 species of Scleropactidae are known from the Neotropics (Souza et al. 2006; Schmidt 2007; Boyko et al. 2008; Campos-Filho and Araujo 2011; Campos-Filho et al. 2014, 2017; Broly et al. 2018).

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Examination of a collection of terrestrial isopods from Venezuela revealed eight species in the family Scleropactidae, of which three are new to Science and described here.

Materials and methods

Part of the material examined was collected by MGP on ground soils and suspended soils in cloud forests, páramo and subpáramo (Paoletti et al. 1988, 1991; Paoletti 1989; Paoletti and Furlan 2018). Some material was also collected by Carlos Bordon and a few students associated with La Salle Museum in Caracas.

Specimens were stored in 75% ethanol and identifications were based on morphological characters. The species were illustrated with the aid of a camera lucida attached to Wild M5 and M20 microscopes. One species is also figured with pictures taken with the scanning electron microscope. For each new species, the description, etymology and remarks are given; for already known species, previous citations for Venezuela, distribution and, when necessary, remarks are given. The material used for this study is deposited at the Museo di Storia Naturale, Sezione di Zoologia 'La Specola' (MZUF), Florence, Italy.

Systematic account

Family Scleropactidae Verhoeff, 1938
Genus *Colomboscia* Vandel, 1972

Type species: *Colomboscia cordillerae* Vandel, 1972, by monotypy.

Colomboscia venezuelana Campos-Filho, Paoletti and Taiti n. sp.

Figures 1-3, 11

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Material examined

Venezuela: Holotype ♂ (parts in micropreparations) (MZUF 9850), Parque Nacional Henri Pittier, Rancho Grande, department of Aragua, 1,400 m a.s.l., no date, leg. C. Bordon. Paratypes: 1 ♂ (parts in micropreparations), 1 ♀, 1 juv. (MZUF 9850), same data as holotype; 1 ♀ (MZUF 9851), Parque Nacional Guatopo, department of Miranda, 700 m a.s.l., 7.VI.1986, leg. C. Bordon.

Description

Maximum body length: ♂ 4.5 mm, ♀ 5.5 mm. Colour faded after conservation in alcohol. Body (Figure 1A,D) strongly convex with endoantennal conglobation; pereonite 1 epimera enlarged, anterior corners directed upwards slightly surpassing eyes, pereonites 2-7 subquadrangular, directed backwards; pleonites 3-5 epimera subquadrangular, continuing outline of pereonites (Figure 1A,D,E). Dorsal surface with small rounded tubercles disposed as follows: 2+2 on cephalon, 5+5 on pereonite 1, 3+3 in pereonites 2-4, 2+2 on pereonites 5-7, 1+1 on pleonites 1-3; pleonites 4-5 and telson smooth (Figure 1A-D). Noduli laterales inserted near posterior margins and at same distance from lateral margins of pereon epimera. Cephalon (Figure 1A-C) with semicircular transverse dorsal furrow, laterally reaching median portion of eyes; frontal lobe stout, rounded, protruding frontwards and slightly depressed dorsally; lateral lobes triangular and obliquely directed

outwards; frontal shield delimited superiorly by frontal line and separated from vertex; eyes laterally protruding with 13 ommatidia. Telson (Figure 1E) with distal margin widely rounded. Antennula (Figure 1F) of three articles, distal article conical with apical

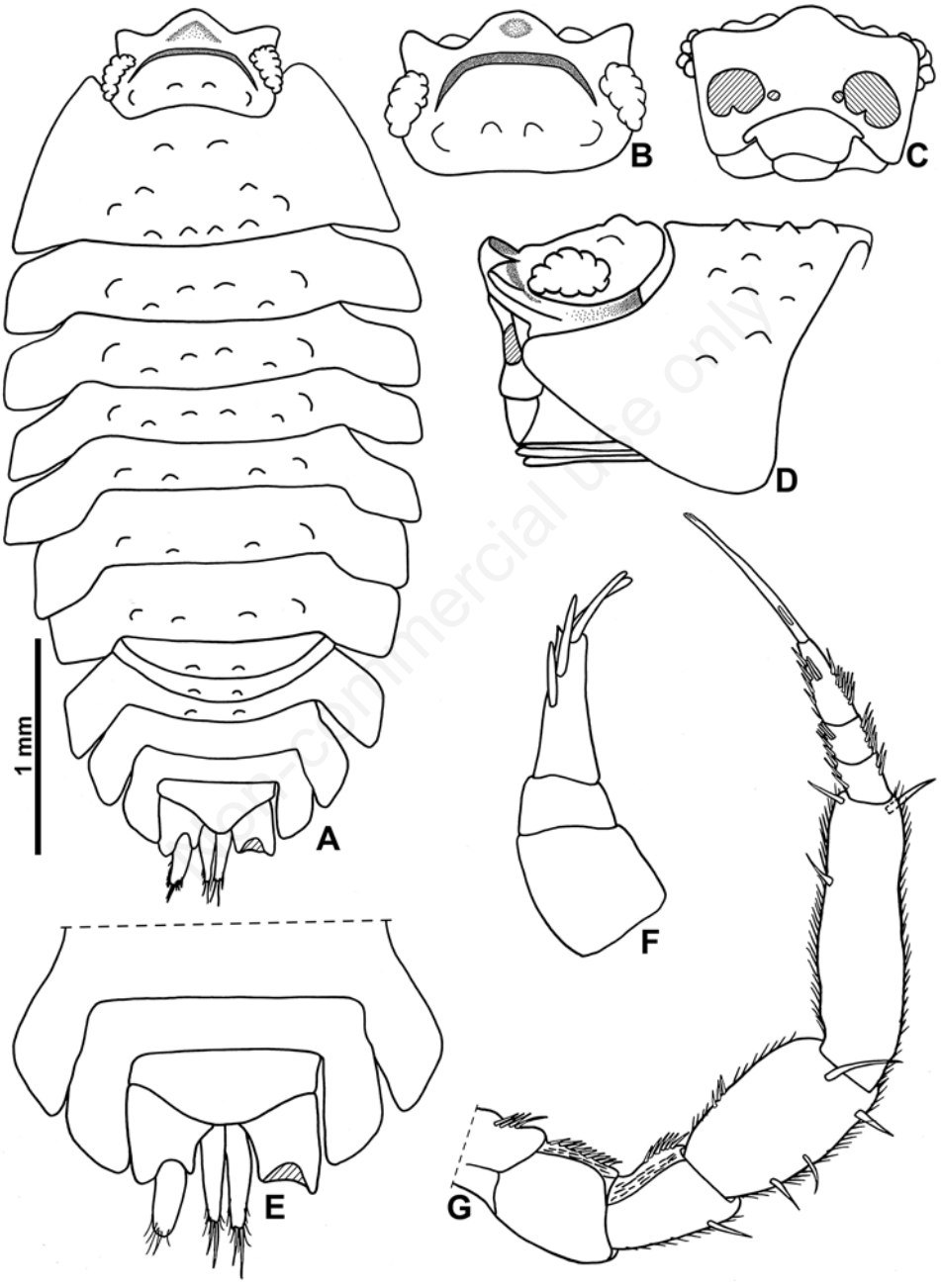

Figure 1. *Colomboscia venezuelana* n. sp., from Parque Nacional Henri Pittier, ♀ paratype: A, dorsal habitus; B, cephalon, dorsal view; C, cephalon, frontal view; D, cephalon and pereonite 1, lateral view; E, pleonites 4 and 5, telson and uropods. ♂ paratype: F, antennula; G, antenna.

tip and two lateral aesthetascs plus apical pair. Antenna (Figure 1G) stout, not surpassing pereonite 1 when extended backwards; flagellum of three articles, second and third articles bearing lateral aesthetascs; apical organ as long as flagellum with two short free sensilla. Mandibles with molar penicil dichotomized, consisting of about six plumose setae, left mandible (Figure 2A) with 2+1 penicils, right mandible (Figure 2B) with 1+1 penicils. Maxillula (Figure 2C) inner endite with two apical plumose penicils; outer endite with 4+6 teeth, five of them apically cleft. Maxilla (Figure 2D) with rounded lobes subequal in width, inner lobe covered with thick setae, outer lobe covered with long thin setae. Maxilliped (Figure 2E) palp with one seta on basal article; endite subrectangular densely covered with thin setae, medial seta not surpassing distal margin, apical penicil near medial margin. Pereopods 1-7 stout, merus and carpus bearing strong setae comblike with long sensilla on sternal margin; pereopod 1 carpus and propodus bearing transverse antennal grooming brush; dactylus of two subequal claws, simple ungual seta longer than outer claw, dactylar seta much longer than outer claw and apically plumose. Uropod (Figure 3A) protopod subrectangular fitting gap between pleonite 5 and telson, endopod inserted proximally and bearing fringe of thin setae on outer and inner margins, exopod distally inserted, much shorter than endopod.

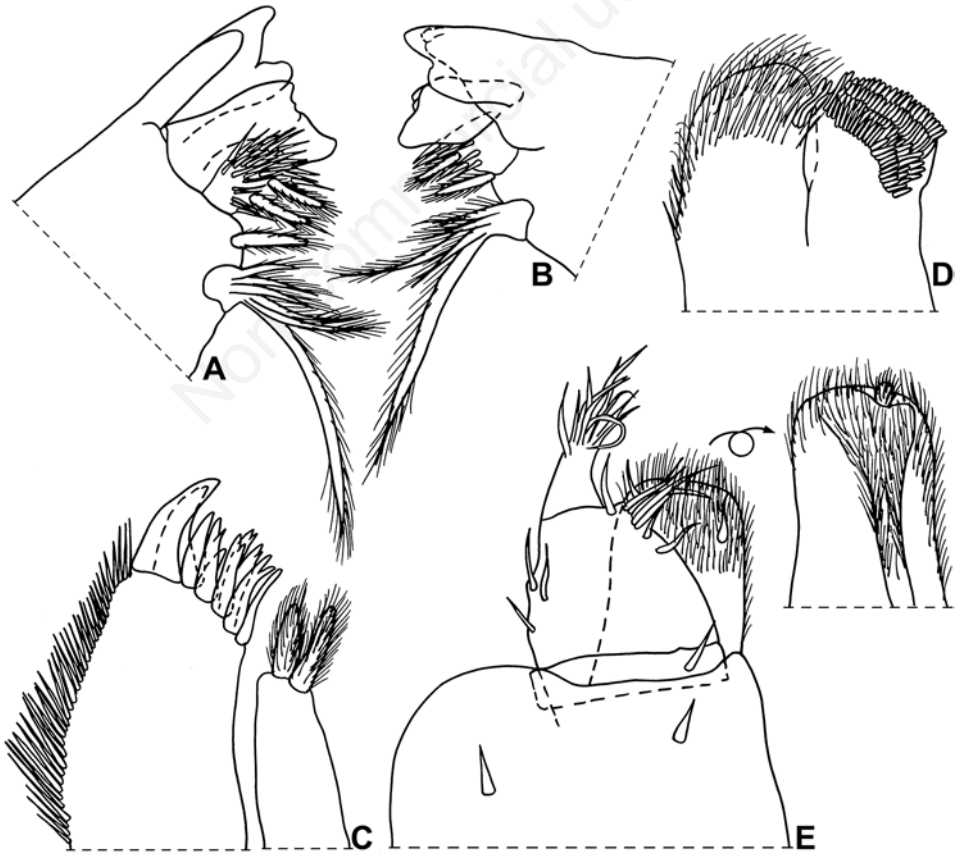

Figure 2. *Colomboscia venezuelana* n. sp. from Parque Nacional Henri Pittier, ♂ paratype: A, left mandible; B, right mandible; C, maxillula; D, maxilla; E, maxilliped.

Male: Pereopods 1 and 7 (Figure 3B,C) without any particular modifications. Pleopod 1 (Figure 3D) exopod ovoid; endopod four times as long as exopod, distal part tapering

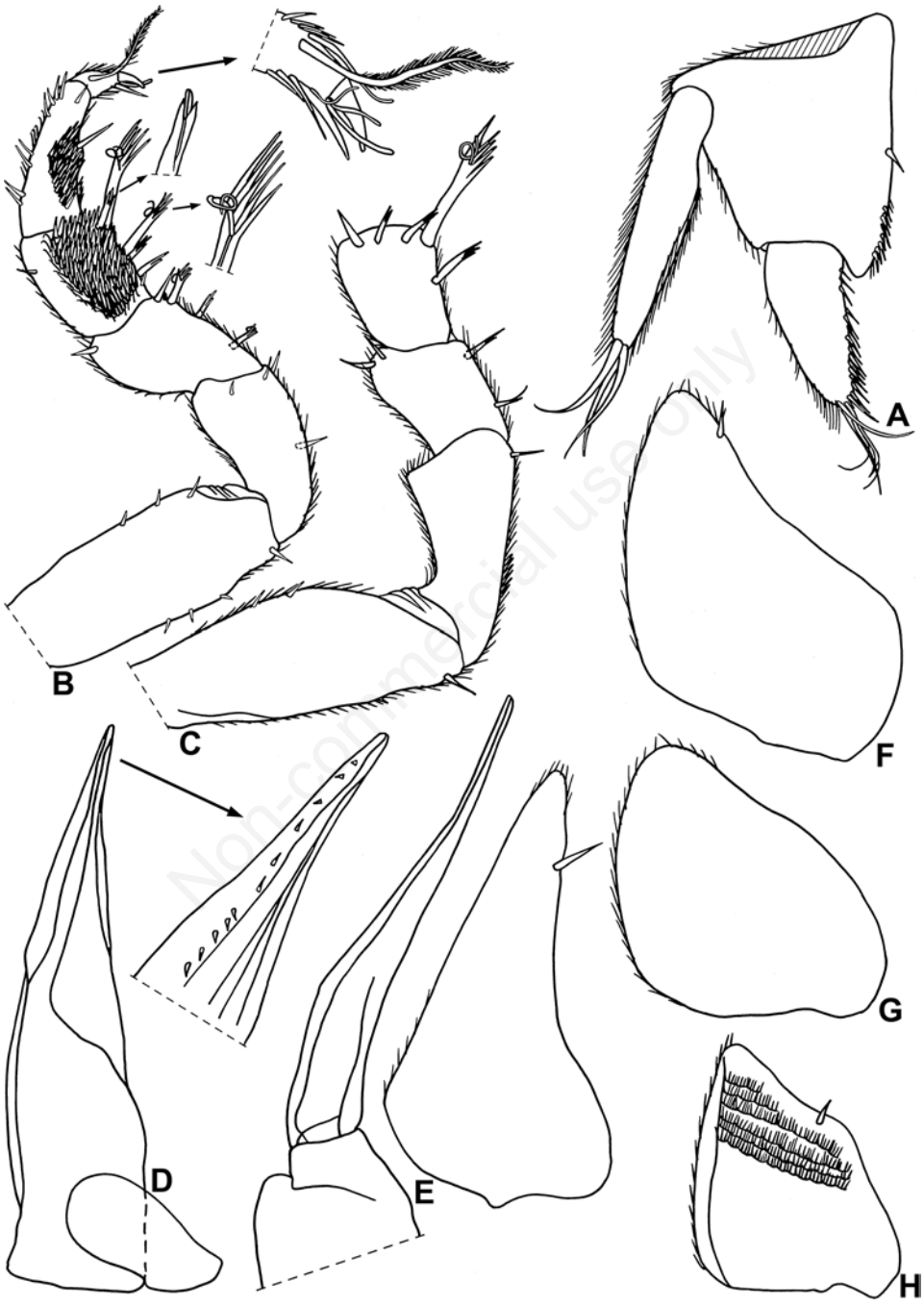

Figure 3. *Colomboscia venezuelana* n. sp. from Parque Nacional Henri Pittier, ♂ paratype: A, uropod; B, pereopod 1; C, pereopod 7; D, pleopod 1; E, pleopod 2; F, pleopod 3 exopod; G, pleopod 4 exopod; H, pleopod 5 exopod.

and bearing row of small setae near medial margin. Pleopod 2 (Figure 3E) exopod triangular, outer margin concave bearing one seta; endopod stout, slightly longer than exopod. Pleopod 3 and 4 exopods as in Figure 3F,G. Pleopod 5 exopod (Figure 3H) triangular with transverse fringes of thin setae, outer margin sinuous bearing one seta.

Etymology

The new species is named after Venezuela.

Remarks

At present, the genus *Colomboscia* comprises five species from Colombia: *C. andina* (Vandel, 1972), *C. bituberculata* Taiti, Allspach & Ferrara, 1995, *C. cordillierae* Vandel, 1972, *C. gaigei* (Pearse, 1915), and *C. parva* Schmidt, 2007. In having the dorsal surface with rounded tubercles, *Colomboscia venezuelana* n. sp. is similar to *C. gaigei*, *C. cordillierae* and *C. bituberculata*. It differs from *C. bituberculata* in having more numerous and less protruding dorsal tubercles, from *C. cordillierae* and *C. gaigei* in the male pereopod 7 merus without triangular process and the shorter male pleopod 1 exopod; from *C. gaigei* also in the protruding frontal lobes of the cephalon. The new species is readily distinct from *C. andina* and *C. parva* which have a smooth dorsum. This is the first record of the genus for Venezuela (Figure 11).

Genus *Globopactes* Schmidt, 2007

Type species: *Globopactes falconensis* Schmidt, 2007, by original designation.

Globopactes granulatus (Dollfus, 1893)

Figure 11

Slhaeroniscus [sic!] *granulatus* Dollfus, 1893: 341, 3 figs.
Sphaeroniscus granulatus; Van Name 1936: 303, fig. 178; Leistikow & Wägele 1999: 41; Schmalfuss 2003: 275.
Sphaeroniscus senex; Vandel 1952: 153, figs 64-66.
Scleropactes especie 2; Schmidt 2001: 3.
Globopactes granulatus; Schmidt 2007: 56, figs 141, 160-165.

Material examined

Venezuela: 1 ♂ (MZUF 9852), Parque Nacional Henri Pittier, Rancho Grande, Estacion Biológica, department of Aragua, 1,300 m a.s.l., VII.1988, leg. C. Bordon; 1 ♀ (MZUF 9853), same locality, 1,200 m a.s.l., cloud forest, II.1987, leg. M. G. Paoletti; 1 ♀ (MZUF 9854), same data; 2 ♀♀ (MZUF 9855), Sierra San Luis, department of Falcón, 900 m a.s.l., 25.VI.1983, leg. ?; 2 ♀♀ (MZUF 9915), same locality, 20.XII.1970, leg. V. Piñango; 3 ♂♂, 5 ♀♀ (MZUF 9916), same locality, 6.IV.1971, leg. J. Anispe; 3 ♂♂, 4 ♀♀ (MZUF 9917), same locality, 6.IV.1971, leg. F. Guzmán; 1 ♂, 3 ♀♀ (MZUF 9918), La Conchita, Hacienda El Limón, department of Aragua, 850 m a.s.l., 6.IV.1971, leg. C. Nuñez; 3 ♂♂, 1 ♀ (MZUF 9919), same locality and date, leg. J. Formos; 1 ♂, 2 ♀♀ (MZUF 9920), same locality and date, leg. I. Ramires; 2 ♂♂, 3 ♀♀ (MZUF 9921), El Guacatal, Hacienda El Limón, department of Aragua, 17.VI.1972, leg. L. Andreami; 3 ♂♂ (MZUF 9922), same locality, 1,440 m a.s.l., 30.III.1972, leg. G. Marquez; 1 ♂, 1 ♀ (MZUF 9923), same locality, 30.VII.1972, leg. M. Madriz; 1 ♂, 1 ♀ (MZUF 9924), same

locality, 9.VII.1972, leg. W. Ramo; 3 ♀♀ (MZUF 9925), same locality, 30.III.1972, leg. N. Cardenas; 2 ♀♀ (MZUF 9926), same locality and date, leg. J. M. Polarz; 1 juv. (MZUF 9927), same locality, 29.VII.1972, leg. J. A. Blondet; 3 ♂♂ (MZUF 9928), same locality, 12.II.1972, leg. C. Rivas; 1 ♂ (MZUF 9929), same locality, 28.VII.1972, leg. J. A. Blondet; 1 ♀ (MZUF 9930), same locality, 1.IV.1972, leg. M. Lehtino; 1 ♀ (MZUF 9931), same locality, 27.VII.1972, leg. S. Uzón; 1 ♂ (MZUF 9932), same locality, 30.VII.1972, leg. M. Madriz; 1 ♀ (MZUF 9933), same locality, 28.VII.1972, leg. W. Ramo; 1 ♀ (MZUF 9934), same locality, 30.VII.1972, leg. J.A. Blondet; 1 ♂, 1 ♀ (MZUF 9935), same locality, 28.VII.1972, leg. H. García; 2 ♀♀ (MZUF 9936), same locality, 30.VII.1972, leg. W. Ramo; 1 ♂, 1 ♀ (MZUF 9937), same locality, 28.VII.1972, leg. S. Uzón; 1 ♂ (MZUF 9938), same locality, 27.VII.1972, leg. J.A. Blondé; 1 ♀ (MZUF 9939), same locality and collector, 29.VII.1972; 1 ♂, 5 ♀♀, 4 juvs, 2 mancas (MZUF 9940), same locality, 13.XII.1970, leg. A. Pérez; 2 ♂♂, 3 ♀♀ (MZUF 9941), same locality, 9.VIII.1969, leg. C. Rubio; 2 ♂, 2 ♀♀ (MZUF 9942), same data; 1 ♂ (MZUF 9943), same locality and collector, 10.VIII.1969; 1 ♀ (MZUF 9944), same locality and collector, 8.VII.1969, leg. C. Rubio; 1 ♂ (MZUF 9945), same locality, 1,400 m, 28.VII.1972, leg. S. Uzón; 1 ♂, 6 ♀♀ (MZUF 9946), same locality, 12.II.1972, leg. W. Damo.

Distribution

This species is recorded from the departments of Falcón, Aragua, Miranda and Distrito Capital (Figure 11). The record of this species from Colombia by Richardson (1914) is most probably a misidentification (Schmidt 2007).

***Globopactes meridae* Schmidt, 2007**

Figure 11

Globopactes meridae Schmidt, 2007: 52, figs 141-147.

Material examined

Venezuela: 1 ♂, 1 ♀ (MZUF 9856), Parque Sierra Nevada en La Mucuy, department of Mérida, 2,300 m a.s.l., 14.II.1996, leg. M. G. Paoletti.

Distribution

This species is recorded only from the department of Mérida (Figure 11).

***Globopactes senex* (Budde-Lund, 1893)**

Figure 11

Scleropactes senex Budde-Lund, 1893: 128; Jeppesen 2000: 259.
Sphaeroniscus senex; Budde-Lund 1904: 47; Van Name 1936: 303; Leistikow & Wägele 1999: 41; Schmalfuss 2003: 275.
Globopactes senex; Schmidt 2007: 54, figs 141, 148-153.
Nec *Sphaeroniscus senex*; Vandel 1952: 153, figs 64-66.

Material examined

Venezuela: 7 ♂♂, 1 ♀ (MZUF 9857), Parque Nacional Henri Pittier, Rancho Grande, department of Aragua, I.1987, leg. M. G. Paoletti; 2 ♂♂, 4 ♀♀, 6 juvs (MZUF 9863), páramo, department of Mérida, near the university, 8.VI.1995, leg. M. G. Paoletti.

Distribution

This species seems to be widely distributed in Venezuela as it is recorded from the departments of Mérida and Aragua (Figure 11).

Globopactes cristalinae Campos-Filho, Paoletti and Taiti n. sp.

Figures 4-8, 11

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Type material

Venezuela: Holotype ♂ (MZUF 9858), La Cristalina, Boconó, Andes, 2,500 m a.s.l., department of Trujillo, in bromeliads, I.1988, leg. M. G. Paoletti. Paratypes: 3 ♂♂ (one with parts in micropreparations) (MZUF 9858), same data as holotype; 1 ♀ (MZUF 9859), same locality and collector as holotype, VI.1987, in bromeliads.

Description

Maximum body length: ♂ 4.5 mm, ♀ 5.5 mm. Color faded after conservation in alcohol. Body (Figures 4A,F, 7A) strongly convex with endoantennal conglobation; pereonite 1 epimera enlarged, anterior corners directed upwards, distinctly surpassing eyes; pereonites 2-7 subquadrangular and directed backwards; pleonites 3-5 epimera suquadrangular, continuing outline of pereonites (Figure 4A,G). Dorsal surface bearing small scale-setae apically fan-shaped (Figures 4B, 7B); cephalon, pereon and pleon with small dorsal tubercles bearing short triangular setae (Figure 4A). Noduli laterales inserted near posterior margins and at same distance from lateral margins of pereon epimera (Figure 4A). Cephalon (Figures 4C-F, 7C) with transverse and strongly concave dorsal furrow, laterally reaching posterior portion of eyes; frontal shield directed upwards, median part triangular and bent backwards over vertex, laterally protruding and covering eyes in frontal view; frontal line delimiting frontal shield superiorly; eyes laterally protruding and composed of 16 ommatidia. Telson (Figures 4G, 7D) triangular with distal margin rounded. Antennula (Figure 7E) of three articles, distal article conical with apical tip, two lateral aesthetascs plus apical pair. Antenna (Figures 4H, 7F) stout, not surpassing pereonite 1 when extended backwards; flagellum of three articles, second and third articles bearing lateral aesthetascs; apical organ as long as flagellum bearing two short free sensilla. Mandibles with molar penicil dichotomized with about six plumose setae, left mandible (Figure 5A) with 2+1 penicils, right mandible (Figure 5B) with 1+1 penicils. Maxillula (Figure 5C) inner endite with two apical plumose penicils; outer endite with 4+5 teeth, four of them apically cleft. Maxilla (Figure 5D) inner lobe rounded, slightly wider than outer lobe and covered with thick setae; outer lobe covered with long thin setae. Maxilliped (Figure 5E) palp with one seta on basal article; endite subrectangular densely covered with thin setae, medial seta not surpassing distal margin, distal margin bearing one seta, apical penicil near medial margin. Pereopods 1-7 stout, merus, carpus and propodus bearing strong comb-like setae with long sensilla on sternal margin; carpus and propodus 1 bearing transverse antennal grooming brush; dactylus with two claws, ungual seta longer than outer claw and apically simple, dactylar seta much longer than outer claw and apically plumose. Uropod (Figure 6A) protopod subrectangular fitting gap between pleonite 5 and telson, endopod inserted proximally, slightly longer than exopod. Pleopod 1 and 2 exopods with respiratory areas on outer margin.

Male: Pereopods 1 and 7 (Figure 6B,C) without any particular modification. Pleopod

1 (Figure 6D) exopod ovoid; endopod three times as long as exopod, distal portion narrow bearing row of small setae. Pleopod 2 (Figure 6E) exopod triangular, outer margin concave bearing one seta; endopod longer than exopod. Pleopod 3 and 4 exopods as in Figure 6F,G. Pleopod 5 exopod (Figure 6H) triangular with transverse fringes of thin setae, outer margin sinuous bearing one seta.

Etymology

The species is named after La Cristalina, subpáramo near Boconó, where the specimens were collected.

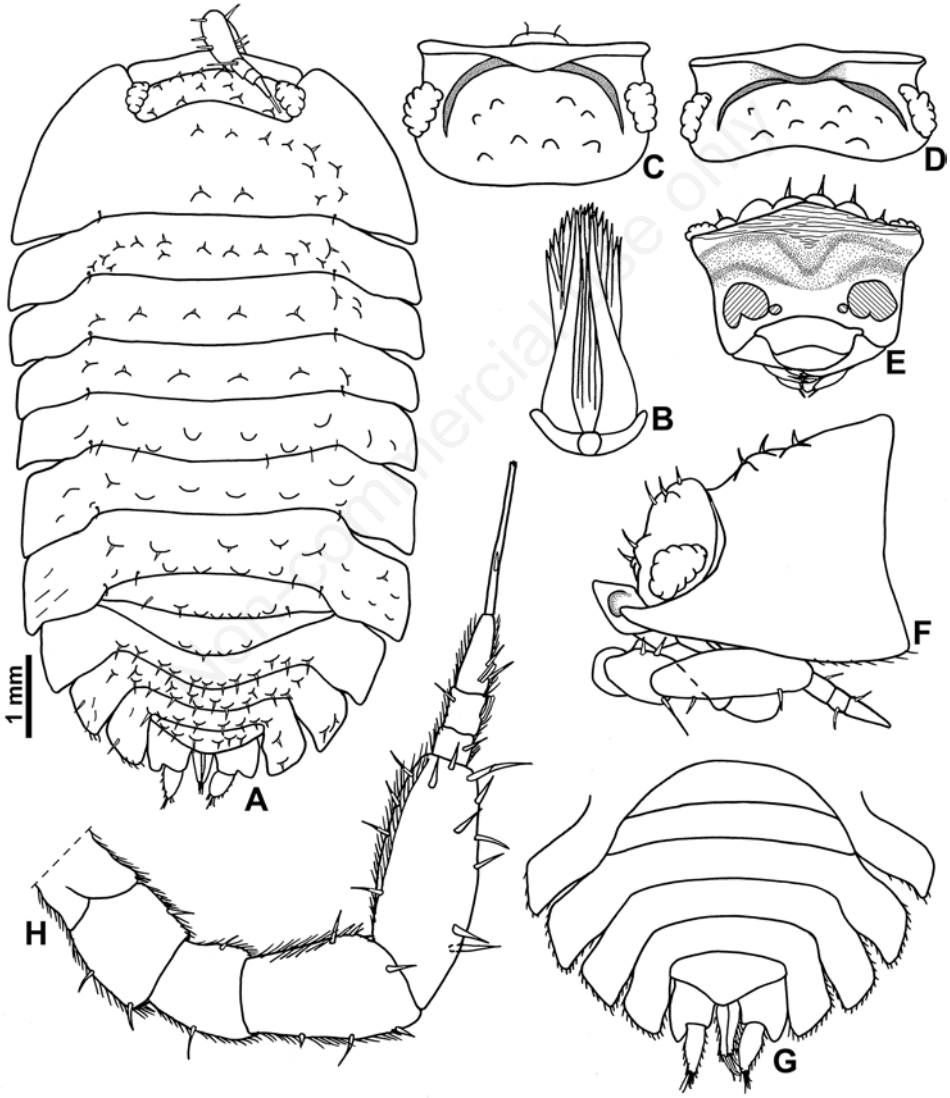

Figure 4. *Globopactes cristalinae* n. sp. from La Cristalina, ♂ paratype: A, dorsal habitus; B, dorsal scale-seta; C, cephalon, dorsal view; D, cephalon, back view; E, cephalon, frontal view; F, cephalon and pereonite 1, lateral view; G, pereonite 7, pleonites 1-5, telson and uropods; H, antenna.

Remarks

At present, the genus *Globopactes* comprises six species: *Globopactes falconensis* Schmidt, 2007, *G. granulatus*, *G. hispidus* Schmidt, 2007, *G. meridae* and *G. senex* from Venezuela, and *G. talamancensis* (Leistikow, 1997) from Costa Rica (Schmidt 2007).

In having the dorsal surface slightly tuberculate, conferring a granulated aspect, *Globopactes cristalinae* n. sp. resembles *G. hispidus* from which it differs by the cephalon with the frontal shield directed upwards, partially covering the dorsal furrow on median portion and laterally protruding over eyes in frontal view (vs. frontal shield directed backwards, dorsal furrow covered on median and paramedian portions and laterally not protruding over eyes in frontal view), the antennula with two lateral aesthetascs (vs. five), the male pereopods 1-3 merus and carpus without large field of scales, the male pereopod 7 merus without proximal concave depression on sternal margin, and the male pleopod 1 exopod ovoid (vs. triangular).

According to the diagnosis of *Globopactes* by Schmidt (2007), one character of the genus is the presence of fields of scales on anterior pereopods. This character is not present in our specimens but all the other characters match the diagnosis and we include this species in *Globopactes*.

This interesting new species was collected inside the terrestrial endemic bromelia *Greigia alborosea* but not in the soil (Figure 8).

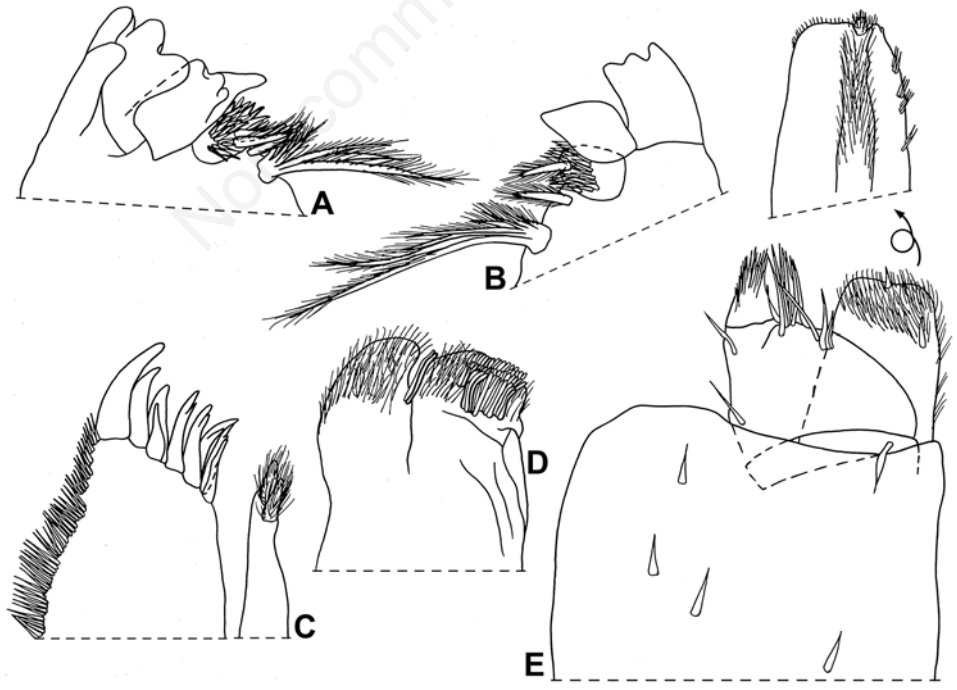

Figure 5. *Globopactes cristalinae* n. sp. from La Cristalina, ♂ paratype: A, left mandible; B, right mandible; C, maxillula; D, maxilla; E, maxilliped.

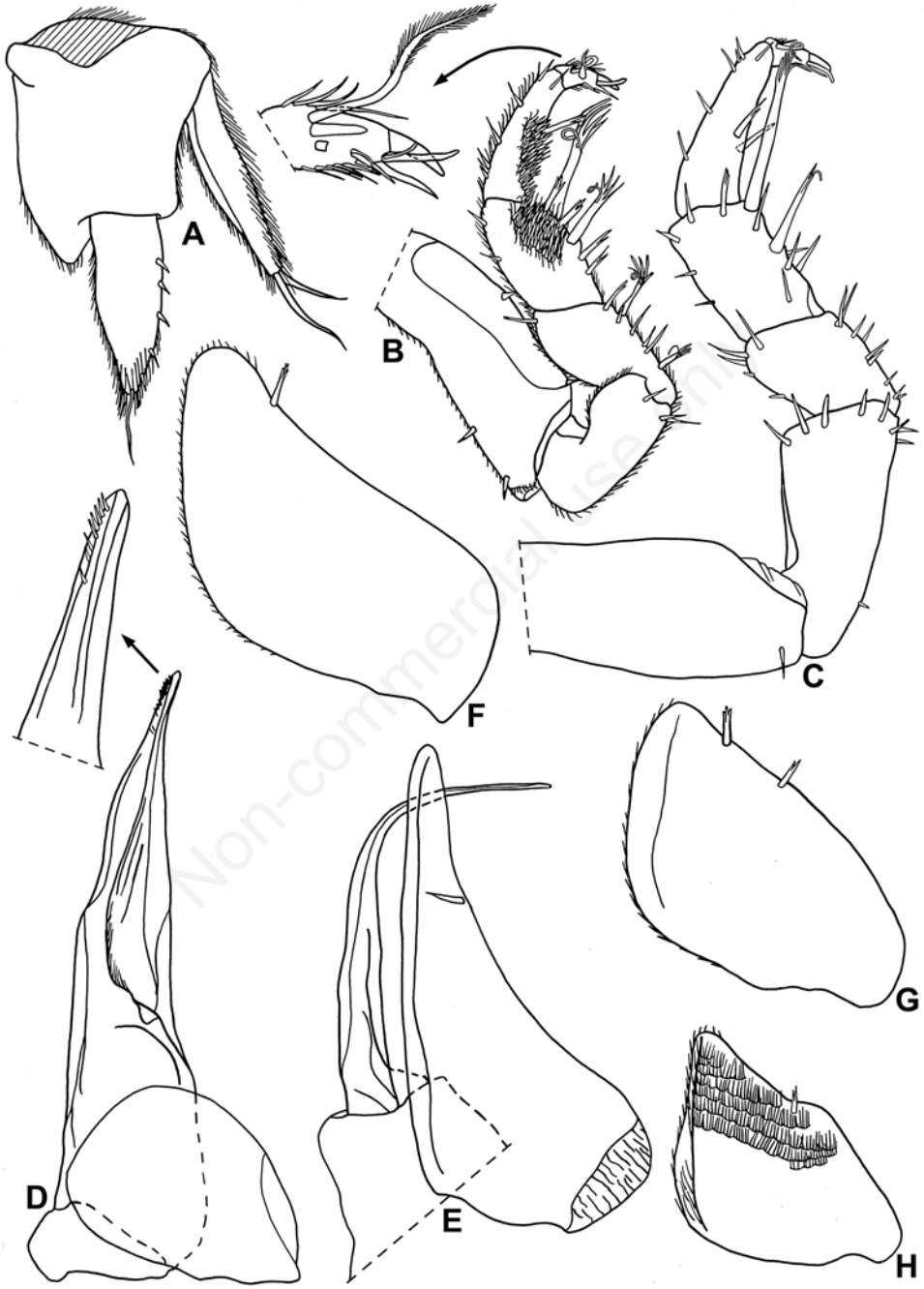

Figure 6. *Globopactes cristalinae* n. sp. from La Cristalina, ♂ paratype: A, uropod; B, pereopod 1; C, pereopod 7; D, pleopod 1; E, pleopod 2; F, pleopod 3 exopod; G, pleopod 4 exopod; H. pleopod 5 exopod.

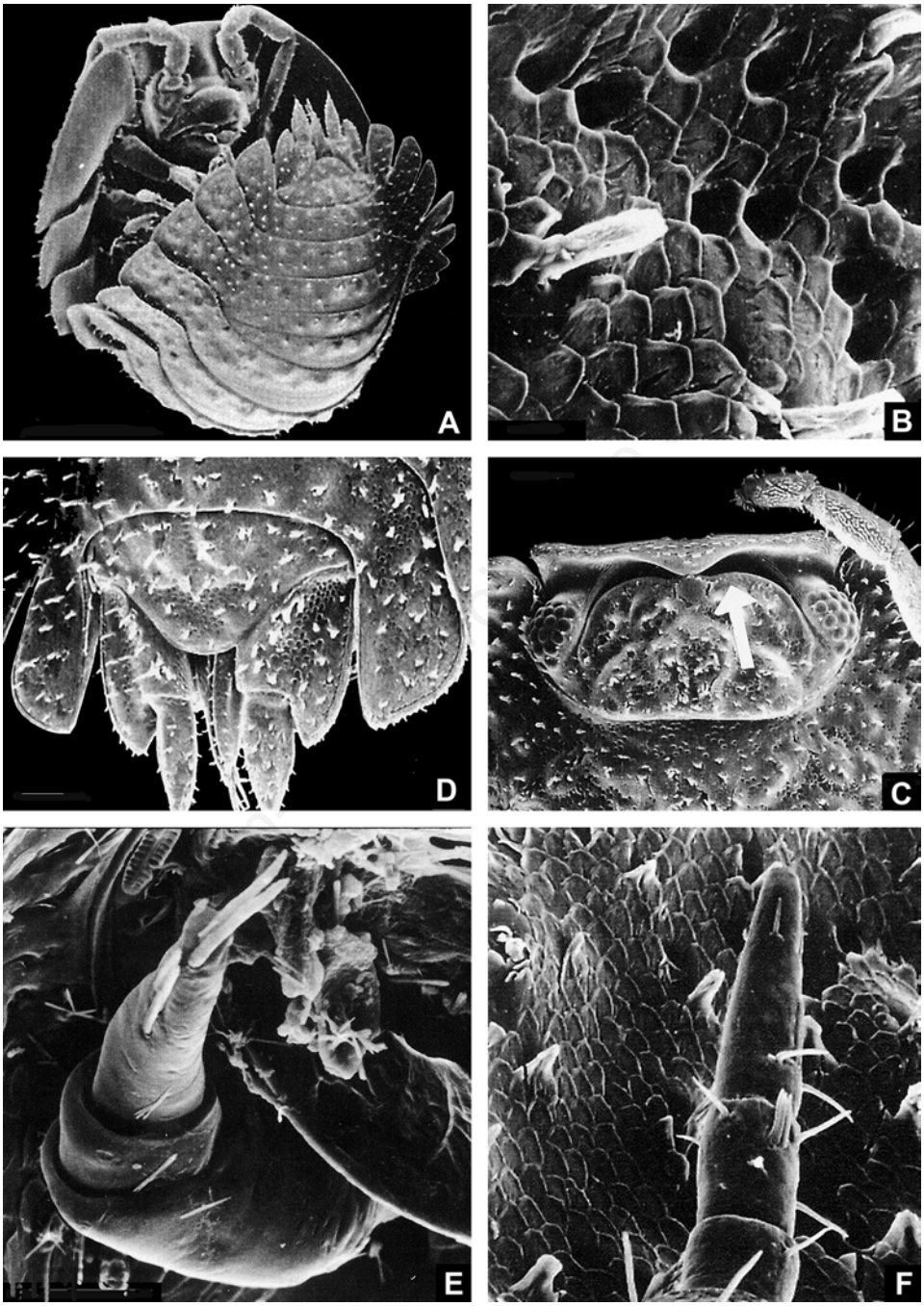

Figure 7. *Globopactes cristalinae* n. sp. from La Cristalina, ♀ SEM photos: A, animal in total view; B, dorsal surface and dorsal scale-setae; C, cephalon and pereonite 1, dorsal view; D, pleonite 5, telson and uropods; E, antennula; F, antennal flagellum.

Figure 8. Elfin-cloud forest, subpáramo, at La Cristalina (A, B), 2,500 m a.s.l., where *Globopactes cristalinae* n. sp. occurs inside the terrestrial bromelia *Greigia alborosea* (C).

Globopactes mucuyensis Campos-Filho, Paoletti & Taiti n. sp.

Figures 9-11

urn:lsid:zoobank.org:act:C1E1BCB0-4B3D-410A-94BA-FB02E52C59F8

Type material

Venezuela: Holotype ♂ (MZUF 9860), La Mucuy, department of Mérida, 2,300 m a.s.l., 14.V.1976, leg. M. G. Paoletti. Paratypes: 3 ♀♀ (one with parts in micropreparations), 3 juvs (MZUF 9860), same data as holotype; 1 ♂ (parts in micropreparations), many juvs (MZUF 9861), same locality and collector, 14.II.1996; 1 ♀ (MZUF 9862), same as previous, leaf litter, in *Eucalyptus* wood.

Description

Maximum body length: ♂ 5 mm, ♀ 6 mm. Color brown, cephalon, pereonites 1-7 epimera and median portion, pleon, telson and uropods strongly pigmented; pereonites 1-7 with unpigmented spots on paramedian portion. Body (Figure 9A,E) strongly convex with endoantennal conglobation; pereonite 1 epimera enlarged, anterior corners directed frontwards, not surpassing eyes; pereonites 2-7 subquadrangular and directed backwards; pleonites 3-5 epimera subquadrangular, continuing pereonites outline. Dorsal surface of cephalon, pereon, pleon and telson with small rounded tubercles bearing fringed triangular scale-setae (Figure 9A-E). One line of small noduli laterales per side inserted on posterior margins and at same distance from lateral margins of pereonites. Cephalon (Figure 9C-E) with X-shaped depression on vertex; transverse dorsal furrow, almost reaching posterior part of eyes; frontal line delimiting frontal shield superiorly; frontal shield slightly directed frontwards, median portion with slightly depression in frontal view, upper corners laterally slightly protruding not covering eyes; eyes of about 20 ommatidia. Telson (Figure 9F) triangular with distal margin rounded. Antennula (Figure 9G) of three articles, distal article conical with apical tip, three lateral aesthetascs plus apical pair. Antenna (Figure 9H) stout, not surpassing pereonite 1 when extended backwards; flagellum of three articles; apical

organ as long as second and third articles together, bearing two short free sensilla. Buccal pieces as in *Globopactes cristalinae* n. sp. Pereopods 1-7 stout, merus, carpus and propodus bearing strong setae apically cleft with long sensilla on sternal margin; dactylus of two subequal claws, ungual seta longer than outer claw and apically simple, dactylar seta much

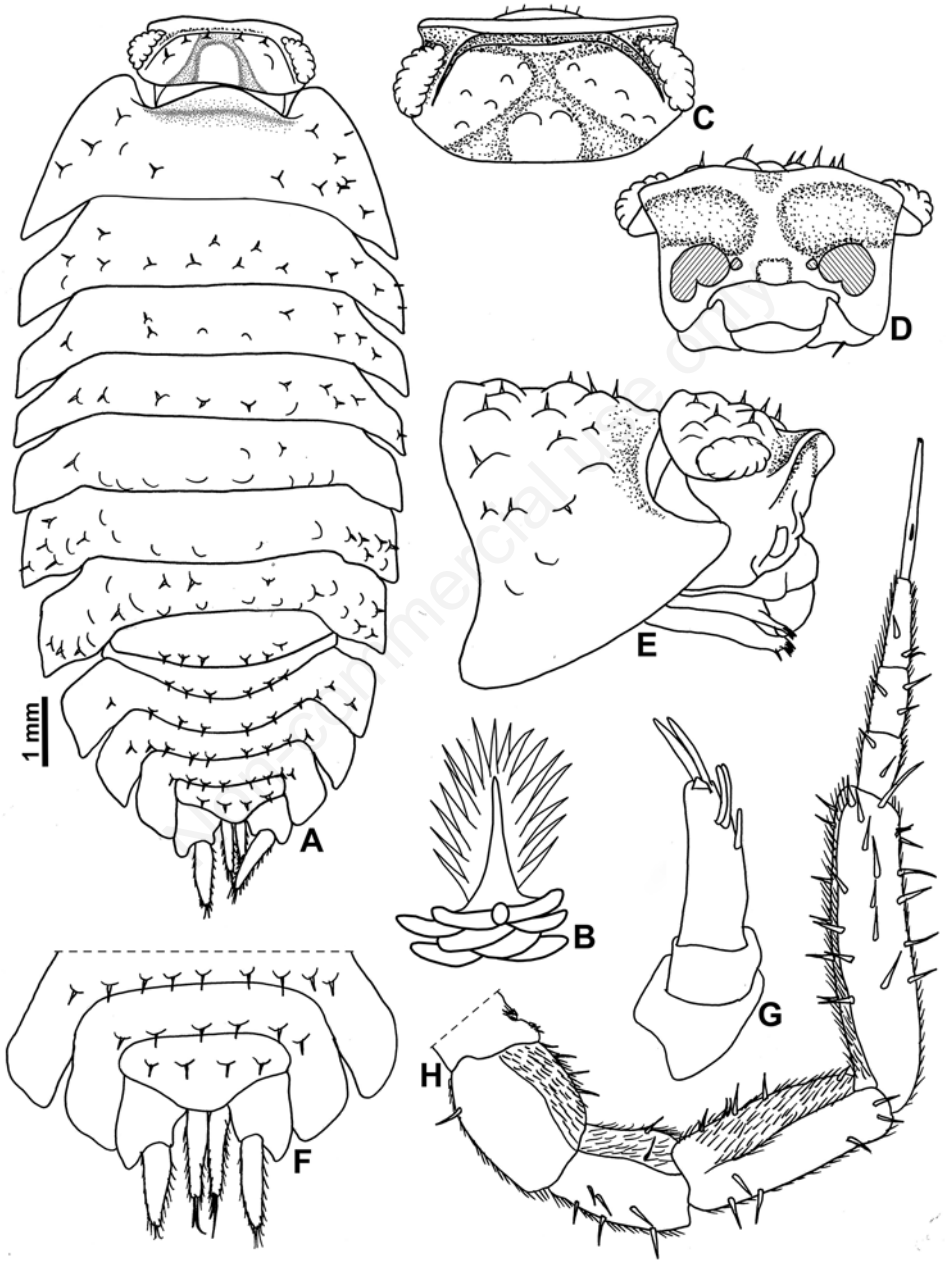

Figure 9. *Globopactes mucuyensis* n. sp. from La Mucuy, ♀ paratype: A, dorsal habitus; B, dorsal scale-seta; C, cephalon, dorsal view; D, cephalon, frontal view; E, cephalon and pereonite 1, lateral view; F, pleonites 4 and 5, telson and uropods: G, antennula; H, antenna.

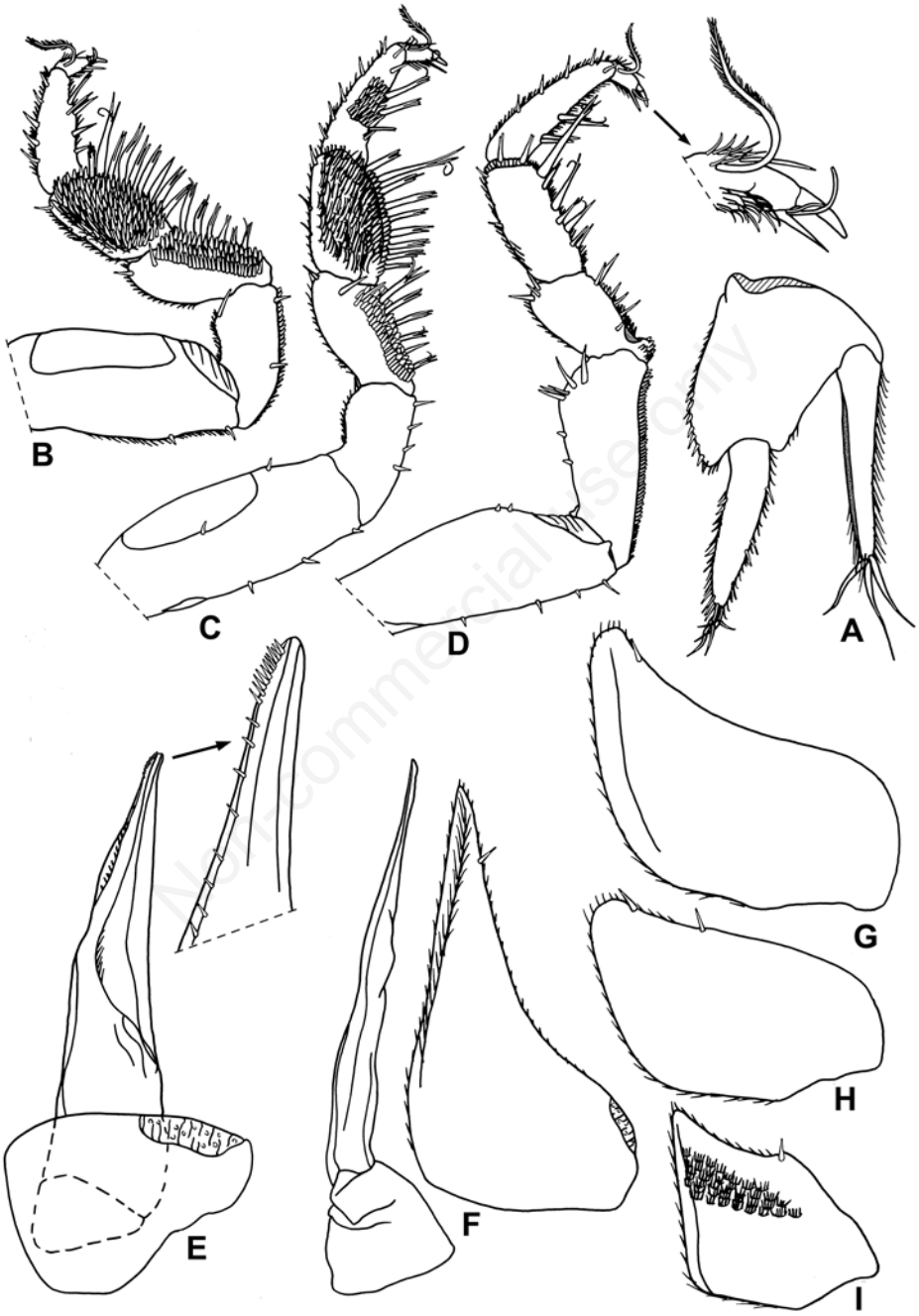

Figure 10. *Globopactes mucuyensis* n. sp. from La Mucuy, ♀ paratype: A, uropod. ♂ paratype: B, pereopod 1; C, pereopod 2; D, pereopod 7; E, pleopod 1; F, pleopod 2; G, pleopod 3 exopod; H, pleopod 4 exopod; I, pleopod 5 exopod.

longer than outer claw and apically plumose. Uropod (Figure 10A) protopod subrectangular fitting gap between pleonite 5 and telson, exopod as long as endopod, endopod inserted proximally and bearing fringe of thin setae on outer margin. Pleopod 1 and 2 exopods with respiratory areas on outer margin.

Male: Pereopods 1 and 2 (Figure 10B,C) merus and carpus with large fields of scales. Pereopod 7 (Figure 10D) ischium bearing fringe of scales on sternal margin, merus with proximal concave depression and proximal lobe on sternal margin. Pleopod 1 (Figure 10E) exopod triangular; endopod almost three times as long as exopod, distal part bearing line of small setae near inner margin. Pleopod 2 (Figure 10F) exopod triangular, outer margin concave bearing one seta; endopod slightly longer than exopod. Pleopod 3 and 4 exopods as in Figure 10G, H. Pleopod 5 exopod (Figure 10I) triangular with transverse fringes of thin setae, outer margin sinuous bearing one seta.

Etymology

The new species is named after La Mucuy, where the specimens were collected.

Remarks

In having the dorsal surface tuberculate, *Globopactes mucuyensis* n. sp. resembles *G. cristalinae* n. sp. and *G. hispidus*. It differs from both in having the cephalon with an X-shaped depression on vertex, dorsal furrow not covered by frontal shield, frontal shield slightly directed frontwards, and the male pereopod 7 merus with a proximal lobe on sternal margin.

Genus *Neosanfilippia* Brian, 1957

Type species: *Neosanfilippia venezuelana* Brian, 1957, by monotypy.

Neosanfilippia venezuelana Brian, 1957

Figure 11

Neosanfilippia venezuelana Brian, 1957: 352, figs 1-20; Schultz 1981: 551; Paoletti 1989: 439; Manicastri 1991: 34; Leistikow & Wägele 1999: 39; Schmalfuss 2003: 174; Schmidt 2007: 20, figs 25-31.

Material examined

Venezuela: 1 ♂ (MZUF 9864), Parque Nacional Henri Pittier, Rancho Grande, department of Aragua, under fallen tree barks, 29.VIII.1980, leg. M. G. Paoletti; 1 ♂ (MZUF 9865), Parque Nacional San Esteban, department of Carabobo, woods, in humus, 30.VIII.1980, leg. M. G. Paoletti; 6 ♂♂, 1 ♀, 1 juv. (MZUF 9866), Boconó, Parque Nacional Guaramacal, La Laguna, department of Trujillo, 2,000 m a.s.l., humid mountain forest, II.1987, leg. M. G. Paoletti; 1 ♀ (MZUF 9867), same data and collector, I.1988; 3 ♀♀ (MZUF 9868), Carretera Trujillo-Boconó, east of Trujillo, department of Trujillo, 2,500 m a.s.l., 2.VIII.1981, leg. C. Bordon; 1 ♀ (MZUF 9869), Boconó, Ande, Guaramacal, páramo, department of Trujillo, 3,000 m a.s.l., II.1987, leg. M. G. Paoletti.

Distribution

This species is widely distributed in the western part of Venezuela, with records from the departments of Falcón, Lara, Trujillo, Yaracuy and Carabobo (Figure 11).

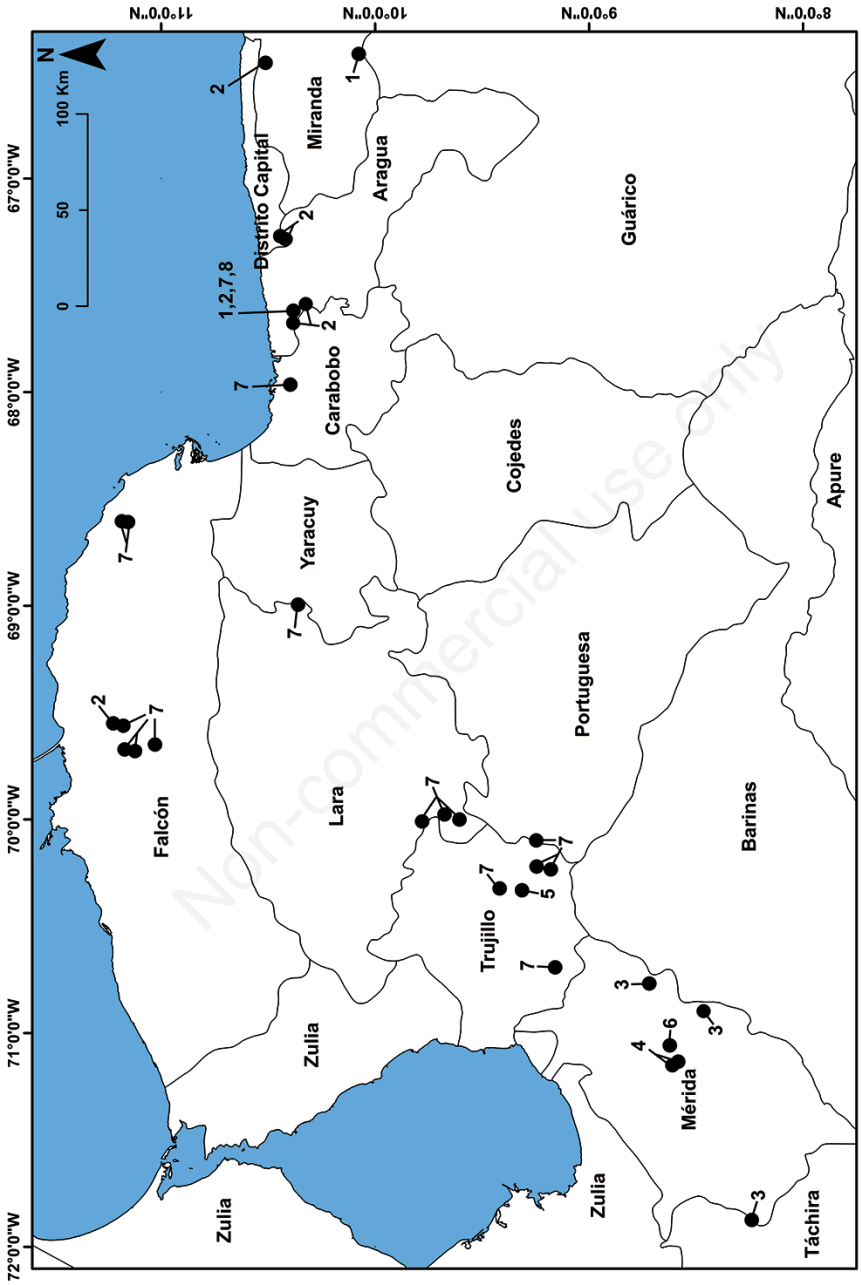

Figure 11. Recorded distributions of the species. **1**, *Colomboscia venezuelana* n. sp.; **2**, *Globopactes granulatus* (Dollfus, 1893); **3**, *Globopactes meridae* Schimidt, 2007; **4**, *Globopactes senex* (Budde-Lund, 1893); **5**, *Globopactes cristalinae* Campos-Filho, Paoletti and Taiti n. sp.; **6**, *Globopactes mucuyensis* Campos-Filho, Paoletti & Taiti n. sp.; **7**, *Neosanfilippia venezuelana* Brian, 1957; **8**, *Spherarmadillo nebulosus* Schmidt, 2007.

Genus *Spherarmadillo* Richardson, 1907

Type species: *Spherarmadillo schwarzi* Richardson, 1907, by original designation and monotypy.

Spherarmadillo nebulosus Schmidt, 2007

Figure 11

Spherarmadillo nebulosus Schmidt, 2007: 29, figs 55, 65-71.

Material examined

Venezuela: 5 ♀♀ (MZUF 9870), Parque Nacional Henri Pittier, Rancho Grande, department of Aragua, 1,200 m a.s.l., in litter, 5.I.1986, leg. M. G. Paoletti; 1 ♀ (MZUF 9871), same locality and collector, in litter, 27.XII.1985.

Distribution

This species is recorded only from the Parque Nacional Henri Pittier, department of Aragua (Figure 11).

Discussion

Previous to this study, 10 species of Scleropactidae were recorded from Venezuela, i.e. *Colomboniscus tristani* (Arcangeli, 1930), *Globopactes falconensis*, *G. granulatus*, *G. hispidus*, *G. meridae*, *G. senex*, *Neosanfilippia venezuelana*, *Scleropactoides bonitanus* (Van Name, 1942), *S. curvatus* Schmidt, 2007, and *Spherarmadillo nebulosus* (Schmidt 2007). In this contribution, three new species are added to the scleropactid fauna of the country: *Colomboscia venezuelana* n. sp., *Globopactes cristalinae* n. sp. and *G. mucuyensis* n. sp.. Twelve species seem to be endemic to Venezuela, only *Colomboniscus tristani* is also recorded from Costa Rica (Arcangeli 1930; Schmidt 2007). The genus *Globopactes* is the mostly represented in Venezuela with seven species, only one more species, *Globopactes talamacensis* (Leistikow, 1997), occurs in Costa Rica.

With the present contribution, the total number of Oniscidea species recorded from Venezuela is 84 (Schmidt 2001, 2007; Leistikow 2001; Schmalfuss 2003; Schmidt and Leistikow 2005; WoRMS 2021), a number that will certainly increase when more intensive investigations in the country are performed, as it is common for any tropical country.

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Conflict of interest

The authors declare no potential conflict of interest.

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Contributions

MGP conceived the study and collected the material, FG sorted the collections, ISC-F and ST identified and studied the material, and all authors wrote the text.

Availability of data and materials

All data generated or analyzed during this study are included in the published article.

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