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A NEW SPECIES OF *CHARINUS* (AMBLYPYGI: CHARINIDAE) FROM SAINT VINCENT ISLAND, LESSER ANTILLES

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Abstract: A new species of the genus *Charinus* Simon, 1892 is described from Saint Vincent Island, Lesser Antilles, on the basis of a male and an immature female collected in 1897 and identified in 1981 by Diomedes Quintero, Jr. as a new species *in schedula* (not published). It resembles *Charinus perezassoi* Armas, 2010 from Puerto Rico, and *C. tomasmicheli* Armas, 2006 from central Cuba, from which it differs by having the tritosternum evidently shorter and leg I first tarsomere 1.3 times longer that the second one (both tarsomeres are equal in *C. tomasmicheli*, whereas in *C. perezassoi* the first tarsomere is three times longer than the second one).
Key words: Amblypygi, Charinidae, *Charinides*, taxonomy, West Indies, Windward Islands.

Una especie nueva de *Charinus* (Amblypygi: Charinidae) de la isla de San Vicente, Antillas Menores
Resumen: Se describe de la isla de San Vicente, Antillas Menores, una especie nueva del género *Charinus* Simon, 1892, a partir de un macho y una hembra inmadura recolectados en 1897 e identificados en 1981 por Diomedes Quintero, Jr. como una especie nueva *in schedula*, la cual nunca fue publicada. Esta especie nueva se asemeja a *Charinus perezassoi* Armas, 2010 de Puerto Rico y a *C. tomasmicheli* Armas, 2006 de la región central de Cuba, pero difiere de ambas por presentar el tritosterno evidentemente más corto y el primer tarsómero de la pata I 1,3 veces más largo que el segundo (en *C. tomasmicheli* ambos tarsómeros son iguales, mientras que en *C. perezassoi* el primero es tres veces más largo que el segundo).
Palabras clave: Amblypygi, Charinidae, *Charinides*, taxonomía, Antillas, Islas de Barlovento.

Taxonomy / Taxonomïa: *Charinus diomedesi* **n. sp.**

The genus *Charinus* Simon, 1892 is a diverse, widespread and almost cosmotropical taxon (Miranda *et al*., 2021). It is represented in the Americas by 79 species (Armas & Palomino-Cardenas, 2023), 16 of which are endemic from the Antilles: Cuba (6 spp.), Hispaniola (3 spp.), Puerto Rico (2 spp.), and one each in Jamaica, Virgin Islands, Saint-Barthelemy, Guadeloupe, and Dominica (Miranda *et al*., 2021).

Most charinid species are small arachnids (largest Antillean ones rarely reach 8.0 mm in total length), have light coloration (mostly pale brown) and inhabit in the litter, bromeliads, under stones and also into caves (Segovia *et al*., 2018).

The purpose of this contribution is to describe a new species of *Charinus* from Saint Vincent Island, Lesser Antilles (see details below).

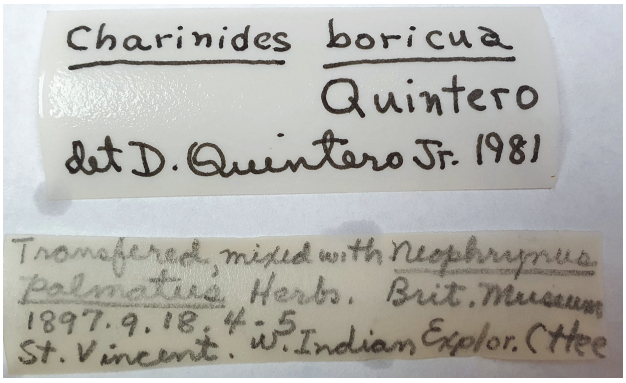

Fig. 1. Original hand-written label of the type-series of *Charinus diomedesi* sp. n. The proposed name (*in schedula*) by D. Quintero, Jr. was never published.

Material and methods

While working on the curatorial process of the amblypygid specimens deposited in the Museo de Invertebrados G. B. Fairchild (MIGBF), Facultad de Ciencias Naturales Exactas y Tecnología, Universidad de Panama, Panama City, which previously were under the care of D. Quintero Arias (Cambra *et al*., 2022), was detected a jar containing two specimens identified by D. Quintero in 1981 as a new species of *Charinides* Gravely, 1911 (now a junior synonym of *Charinus*). The proposed name was never published, because label data does not constitute a published work (ICZN, 2012: Art. 9.8). According with its label (Fig. 1), written by D. Quintero, these specimens went removed from a jar containing "*Neophrynus palmatus*" from Saint Vincent Island, Lesser Antilles. On the last decade of the 19th century, the name *N. palmatus* was applicate to more than a West Indian species, now in the genus *Phrynus* Lamarck, 1801, from Hispaniola, Puerto Rico, and Saint Vincent (Quintero, 1981). The manuscript name proposed by Quintero refers to an inhabitant of Puerto Rico; nevertheless, the accession books of the British Museum of Natural History, London (from which these specimens were obtained as a loan by D. Quintero Arias), only states St. Vincent as the locality of this material (Danielle Sherwood, pers. com. to LFA, March 29, 2023).

The examined material is deposited in the MIGBF. All the measurements are given in millimeters (mm). Legs and pedipalp terminology are as in Armas & Palomino-Cardenas

(2023). The stacked images were taken with Leica MC 170 HD fitted to a Leica M 205 A. and processed with Leica application suite, version 4.12.0. Other images were taken with CMOS digital camera adapted to Leica S9i LED2500 stereomicroscope and processed with the software Leica Application Suite X. Gonopod terminology follows Giupponi & Kury (2013).

Taxonomy

Family **Charinidae** Quintero, 1986
Genus *Charinus* Simon, 1892

***Charinus diomedesi* n. sp.**
Figs. 1–4.

TYPE DATA. Male holotype (MIGBF), "Saint-Vincent, W. Indies. British Museum 1897.9.18.4-5, W. Indian Explor. Cttee.Transfered [by D. Quintero], mixed with *Neophrynus palmatus* Herbs." (Fig. 1). **Paratype**: immature female (MIGBF), same data as the holotype.

DISTRIBUTION. Only known from Saint Vincent Island, Lesser Antilles (Fig. 2).

ETYMOLOGY. This new species is named in honour to Diomedes Quintero Arias (1940-2022) for his relevant contribution to the knowledge of the amblypygids, other arachnids and insects.

DIAGNOSIS. The following combination of characters is diagnostic for this species: Adult size moderately small (5.95 mm) for the genus. Carapace with lateral eyes well developed, median ocular tubercle and median eyes absent, without underlying melanic pigment; frontal area widely convex. Cheliceral movable finger with five denticles. Pedipalp femur and patella each with three dorsal and three ventral spines. Leg I with 21 tibial and 37 tarsal articles. Leg IV basitibia with three pseudo-articles. Second tarsomere of legs II–IV with translucent membranous ring. Male gonopods having the lobus lateralis secundum (LoL2) distally projected as a stiletto-shaped structure.

DESCRIPTION OF THE MALE HOLOTYPE**.** Carapace and pedipalps blackish brown, abdominal tergites and legs brownish.

Carapace sub-ovate, 1.42 times wider than long, with wide frontal area (Fig. 3 A); frontal process not visible in dorsal view; anterior margin convex, with six setae; posterior margin slightly concave; ocular tubercle and median eyes absent, lateral ocelli well developed, separated 0.37 mm from the lateral margin; sulcus separated 0.62 mm from the posterior margin. Tritosternum short, 1.2 times wider than long (Fig. 3 B), with three pairs of large setae (distal, median and basal) and four small setae on the basal area. Tetrasternum and pentasternum each with a pair of large setae each on a distinct tubercle, four small posterior setae. Metasternum subpentagonal in shape, longer than wide, with two pairs of posterior moderate setae.

Genital plate 1.58 times wider than long; with some moderate submarginal setae on the lateral and anterior areas; a macroseta in each lateroposterior margin; posterior margin convex. Gonopods (Fig. 4): Lobus lateralis secundum (LoL2) distally protruded as a stiletto-shaped structure; lobus lateralis primus (LoL1) short, slender and slightly curved in its distal one-third; procesus internus (PI) digitiform; lamina medialis (LM) short.

Chelicera. Basal segment without denticles in the retrolateral surface; bifid tooth on basal segment with dorsal cusp larger than ventral cusp. Movable finger (claw) with five denticles.

Pedipalps (Fig. 3 C-D). Femur with three dorsal and three ventral spines, basal to the first dorsal spine there are two distinct setiferous tubercles; patella with three dorsal and three ventral spines, with a setiferous tubercle basal to the first dorsal spine and a larger one between the third spine and the apical margin. Patella with three dorsal and three ventral spines, with a setiferous tubercle basal to the first dorsal spine and a larger one between the third and the apical margin. Tibia with two dorsal spines, the basal approximately one-half as long as the distal; two ventral spines the in the distal one-half, being the largest one the distalmost. Tarsus with two dorsal spines.

Legs. Tibia of leg I with 21 articles; tarsus with 37 tarsomeres; leg I first tarsomere 1.33 times longer than second tarsomere. Leg IV basitibia composed by three pseudo-articles; distitibia with 16 trichobothria (3 basal and 13 distal), trichobotrium **bc** closer to **bf** than to **bsf**; **sc** and **sf** series each with three trichobothria. Legs II-IV tarsomere 2 with a white annulus distally.

Measurements (in mm): total length 5.95; carapace length/width 2.61/3.71; pedipalp (length): femur 2.0, patella 2.57, tibia 1.13, tarsus + claw 1.51; leg femora: I 5.59, II 3.59, III 4.11, IV 3.31.

COMPARISONS. By its size and external morphology, *C. diomedesi* sp. n. resembles the Puerto Rican *Charinus perezassoi* Armas, 2010, but it has carapace with broader frontal area, a shorter tritosternum, leg I first tarsomere 1.3 times longer that the second one (it is more than three times longer in *C. perezassoi*) and longer pedipalps. Also, *C. perezassoi* seems to be a parthenogenetic species (Armas, 2010). In Miranda *et al*. (2021), this new species keyed near the Cuban *C. tomasmicheli* Armas, 2006, from which it differs by having a shorter tritosternum, wider than long (in *C. tomasmicheli* it is twice as long as wide). Also, it is not the undescribed species recorded by L. F. de Armas in Teruel & Questel (2011: 15) from the Grenadines Islands, previously illustrated by Armas (2006: fig. 1) as an unidentified amblypygid.

REMARKS. As stated in the accession book of the British Museum of Natural History, this new species was originally identified by E. Simon as *Admetus* sp. and was collected in Saint Vincent, West Indies. It is a mystery for what reason Quintero proposed for this species a name that relates it to Puerto Rico.

Some years ago, the first author (LFA) examined photographed alive specimens of this new species from Johnston Mountain and L'Ance Mahoe, St. Vincent.

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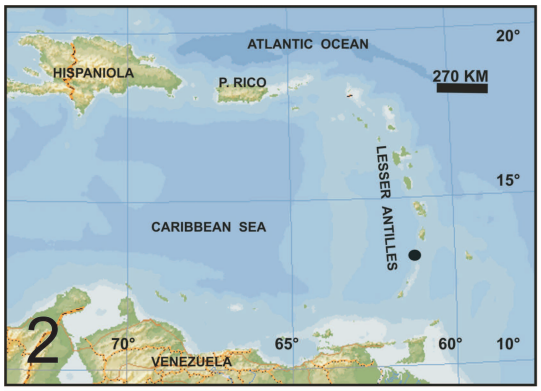

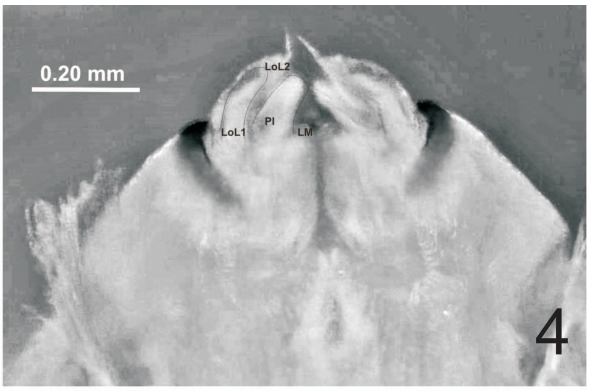

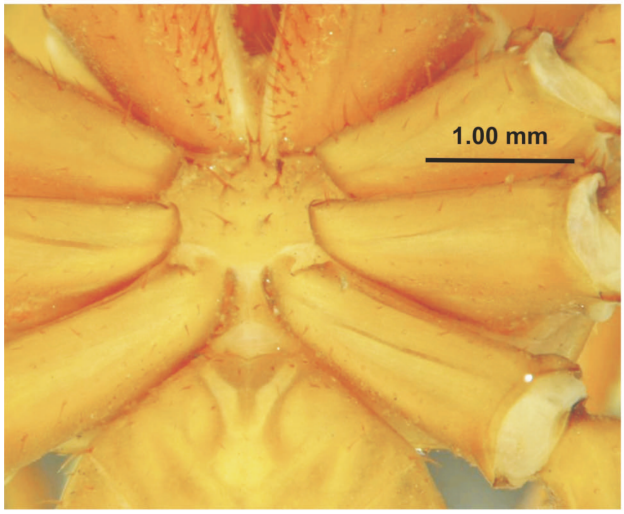

Fig. 2. Geographical distribution of *Charinus diomedesi* sp. n. **Fig. 3.** *Charinus diomedesi* sp. n. Male holotype. A, dorsal aspect; B, coxosternal area; C-D, pedipalp in dorsal (C) and ventral internal (D) aspect. **Fig. 4.** *Charinus diomedesi* sp. n. Male holotype, gonopods in dorsal aspect. Abreviations: LM = lamina medialis; LoL1 = lobus lateralis primus; LoL2 = lobus lateralis secundum; PI = procesus internus.

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