

PLANCTOLPIUM MARTINEZI, A NEW SPECIES OF HESPEROLPIIDAE (ARACHNIDA: PSEUDOSCORPIONES) FROM CUBA

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Abstract: *Planctolpium martinezi* n. sp. is described from the Cuban archipelago. It is the third species registered from the genus, and the seventh representative of the family Hesperolpiidae in the country.

Keywords: Pseudoscorpions, Hesperolpiidae, *Planctolpium*, Cuba

***Planctolpium martinezi*, una nueva especie de Hesperolpiidae (Arachnida: Pseudoscorpiones) de Cuba**

Resumen: *Planctolpium martinezi* sp. n. es descrita del archipiélago cubano. Esta es la tercera especie registrada del género y el séptimo representante de la familia Hesperolpiidae en el país.

Palabras clave: Pseudoscorpiones, Hesperolpiidae, *Planctolpium*, Cuba

Taxonomy / Taxonomía: *Planctolpium martinezi* sp. n.

Introduction

The genus *Planctolpium* is described for the first time within the subfamily Garypininae, family Garypidae with the species *P. arboreum* Hoff, 1964 from Jamaica (Hoff, 1964). Some years later Beier (1976) registered the same species from Dominican Republic and Muchmore (1977) from Yucatan, Mexico. Muchmore (1979) recognized the genus as a member of Olpiidae and described two new species, *P. peninsulae* Muchmore, 1979 from Florida, U.S.A. and *P. suteri* Muchmore, 1979 from Alabama and Florida, U.S.A. Barba (2020) registered *P. arboreum* Hoff, 1964 and *P. suteri* Muchmore, 1979 from Cuba within the family Hesperolpiidae.

The fourth representative of the genus *Planctolpium* is described here, *P. martinezi* n. sp., from Cuba, increasing the number of hesperolpiid species in the country to seven.

Materials and methods

The specimens studied herein were dissected and examined as temporary glycerine mounts in cavity slides. After examination, specimens were preserved in 70% ethanol in glass vials, with the dissected appendages separated in glass microvials. Microscopic examinations were carried out with a Zeiss Axiolab light microscope, which was also used to take measurements of the appendages. Illustrations were prepared through the photographed structures taken with a digital camera connected to the microscope, and later digitally traced using the computer software Corel Draw X6. The measurements follow Chamberlin's (1931) reference points and are given in millimeters. Proportions are given as length/breadth for carapace, chelicerae and pedipalps and as length/depth for legs. Terminology and reference points for measurements largely follow Chamberlin (1931), with modifications to the nomenclature of the segments of pedipalps and legs (Harvey, 1992). The use of the terms rallum, antiaxial and paraxial follows Judson (2007). The map was produced with the computer program MapInfo Professional Version 10.5 after the locality data were stored in an Excel database.

Abbreviations. CZACC: Zoological Collections of the Institute of Ecology and Systematics, Havana, Cuba.

Results

***Planctolpium martinezi* n. sp.**

Figs 1-7

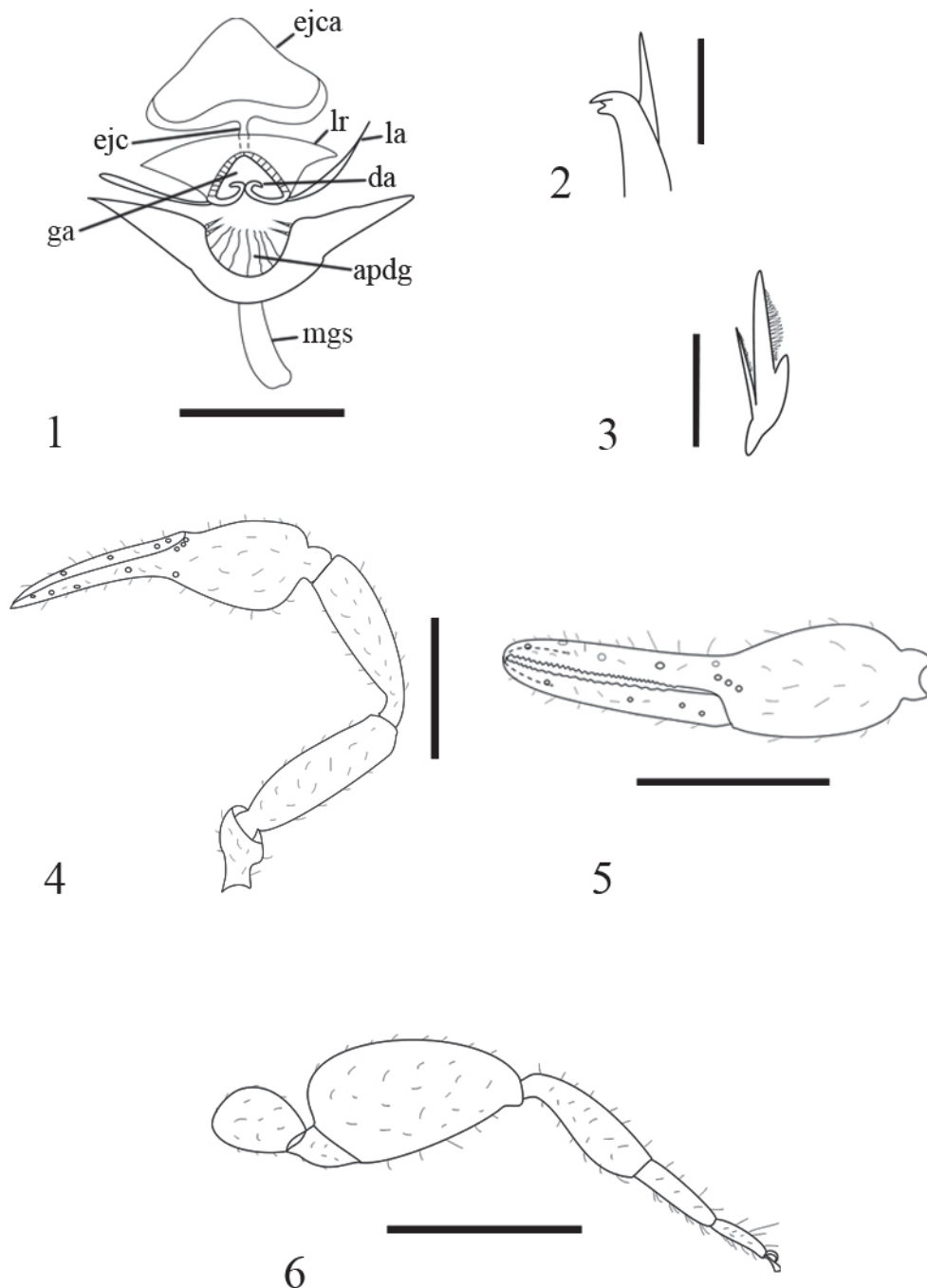
TYPE MATERIAL. ♂ holotype, Mogotes de Jumagua, Sagua la Grande, Villa Clara, 22,82055 N, -80,13861 W, 17-X-2009, collected by Carlos Martínez (CZACC 3.4448). ♀ paratype, in the surroundings of the cave Cueva del Vaho, Boca de Jaruco, Mayabeque, 23,18472 N, -82,01111 W, X-1996, collected by Debrás, Mahe, Janett, Abel (CZACC 3.4449). ♀ paratype, Cayo Caguanes, Yaguajay, Sancti Spiritus, 22,39083 N, -79,12111 W, 2-X-1997, collected by José M. Ramos Hernández, under stone, semi-deciduous forest (CZACC 3.4450). ♀ paratype, Cayo Romano, near Pica del Gallego, Camagüey, 22,02861 N, -77,64527 W, 3-XII-1997, collected by Arturo Ávila, under stone and rotten logs, semi-deciduous forest (CZACC 3.4451). ♀ paratype, Loma de Guanábana, Nueva Gerona, Isla de la Juventud, 21,845 N, -82,76472 W, III-1976, collected by Luis R. Hernández (CZACC 3.4452).

DIAGNOSIS (♂, ♀). *Planctolpium martinezi* n. sp. is similar to *P. suteri* Muchmore, 1979, from which it differs in size: length of pedipalpal femur 0.70 mm (♂), 0.59-0.65 mm (♀) in *P. martinezi* n. sp., 0.52 mm (♂), 0.52-0.58 mm (♀) in *P. suteri*; pedipalpal chela without pedicel 1.02 mm (♂), 0.91-0.98 mm (♀) in *P. martinezi* n. sp., 0.75 mm (♂), 0.82-0.88 mm (♀) in *P. suteri*; and the movable chela finger 0.62 mm (♂), 0.56-0.60 mm (♀) in *P. martinezi* n. sp., 0.45 mm (♂), 0.46-0.50 mm (♀) in *P. suteri*. Male genitalia with short and wide lateral rods.

ETYMOLOGY. The species is named after the Cuban specialist in Myriapoda Carlos Martínez, who collected the holotype.

DESCRIPTION (♂ holotype). Species with big size within the genus, body length 2.25 mm. Carapace, chelicerae and pedipalps brown reddish; opisthosoma and legs yellowish.

Carapace. Longer than broad, strongly granulated. With four eyes well developed. With 40 setae, four in the anterior margin and six in the posterior one. With some lyrifissures and small pores over entire surface.



Figs 1-6. *Planctolpium martinezi* n. sp., male holotype: **1**, male genitalia, ventral view; **2**, distal end of movable cheliceral finger showing the galea and subdivided subapical lobe; **3**, cheliceral rallum; **4**, right pedipalp, dorsal view; **5**, left chela, antiaxial view, setae omitted; **6**, leg IV, antiaxial view. Abbreviations: apdg, atrium of posterior dorsal gland; da, dorsal apodeme; ejca, ejaculatory canal atrium; ejc, ejaculatory canal; ga, genital atrium; la, lateral apodeme; lr, lateral rods; mgs, median genital sac. Scale lines: 0.5 mm (Figs 4-6), 0.1 mm (Fig 1), 0.05 mm (Figs 2-3).

Coxal area. Manducatory process with 2 distal setae on each side, pedipalpal coxa with 13 setae, one longer in the anterior margin. Pedal coxa I: 9 setae, II: 8, III: 10, IV: 10.

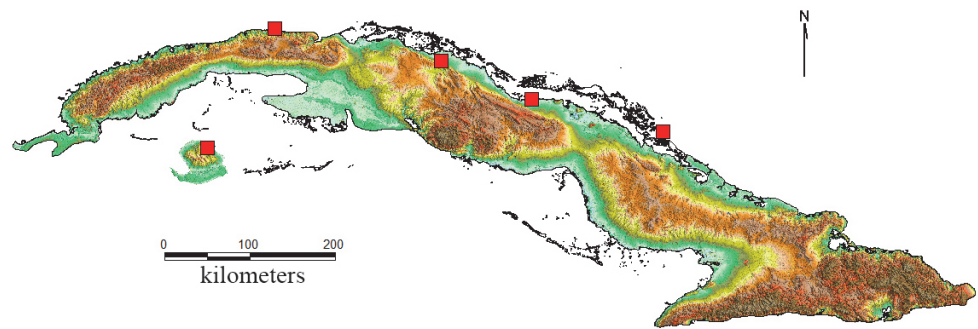
Opisthosoma. Oval, pleural membranes smooth and longitudinally striate. Chaetotaxy of tergites: 5:4:5:7:8:9:10:8:9:1T4T1:1T1TT1:2. Chaetotaxy of sternites: 6:[3-4]:(0)6(0):(0)8(0):9:8:8:8:1TT2:1T2TT2:2. Genitalia as shown in Fig. 1.

Chelicera. Five setae on hand and one on movable finger. Galea simple and sharpened (Fig. 2). Fixed finger with seven teeth, distal tooth larger than others. Lamina exterior with convex outer margin. Subapical lobe of movable finger

with tooth shape, subdivided at the distal end (Fig. 2). Rallum with two serrate blades, one blade bigger than the other (Fig. 3). Serrula exterior with 17 blades.

Pedipalps (Figs 4-5). With many granules in the surface. Trichobothria as in fig. 5. Fixed finger with trichobothrium *et* subdistal, *ist* near the half of the finger, *it* in the middle between *ist* and *et*, *est* in the middle between *ist* and the distal trichobothrium grouped at the base of fixed finger (*eb*, *esb*, *ib* and *isb*). Movable finger with trichobothrium *st* closer to *b* than to *t*. Both chelal fingers with venedens and venom apparatus, nodus ramosus of fixed finger near to trichobothrium *it*, in the movable finger is located at level of trichobothrium *t*.

Fig. 7. Geographic distribution of *Planctolpium martinezi* n. sp. in Cuba.



Fixed finger with 37, movable finger with 25 marginal teeth, the distal ones conical and pointed, the proximal ones flat until almost disappear at the finger base.

Legs. Surface of femur+patella granulated, the rest of the articles smooth with few granules. Leg I with femur longer than the patella. Leg IV (Fig. 6) with chaetotaxy of metatarsus 4-3-8-3.

Measurements (in mm) followed by ratios in parentheses. Body 2.25. Carapace 0.70/0.45 (1.56). Chelicera 0.17/0.11 (1.62). Pedipalp: trochanter 0.32/0.19 (1.68), femur 0.70/0.17 (4.12), patella 0.62/0.18 (3.44), chela with pedicel 1.10/0.30 (3.67), chela without pedicel 1.02/0.30 (3.40), hand without pedicel 0.40/0.28 (1.43), movable finger 0.62, ratio movable finger/hand without pedicel 1.55, femur/carapace 1.00, chela with pedicel/carapace 1.57. Leg I: trochanter 0.16/0.12 (1.30), femur 0.27/0.08 (3.38), patella 0.16/0.10 (1.60), tibia 0.21/0.07 (3.00), metatarsus 0.19/0.04 (4.42), tarsus 0.11/0.03 (3.67). Leg IV: trochanter 0.13/0.10 (1.30), femur+patella 0.61/0.28 (2.18), tibia 0.36/0.11 (3.27), metatarsus 0.21/0.06 (3.50), tarsus 0.22/0.05 (4.40).

FEMALE PARATYPES. Similar to the male, but with larger size. Carapace with 30-45 setae, four in the anterior margin and four or six in the posterior one, with some lyrifissures and small pores over entire surface.

Chelicera with serrula exterior with 18 blades. Pedipalpal coxa with 12-14 setae, one longer in the anterior margin, pedal coxa I: 7-9 setae, II: 9, III: 8-9, IV: 8-13. Pedipalpal chela with 30-34 teeth in the margin of the fixed finger and movable finger with 19-22. Chaetotaxy of tergites: 5:6-7:7:7-8:8-9:8:9-10:7-8:6-9:1T1TT1:T1TT1T:2. Chaetotaxy of sternites not visible in the studied specimens. Genitalia with two lateral cribriform plates and a group of small medial cribriform plates. Leg IV with chaetotaxy of metatarsus 4-3-8-3.

Measurements (4 females): Body 2.10-2.41. Carapace 0.60/0.67/0.43-0.50 (1.32-1.56). Chelicera 0.16-0.17/0.10-0.12 (1.39-1.55). Pedipalp: trochanter 0.28-0.30/0.16-0.17 (1.70-1.81), femur 0.59-0.65/0.15-0.17 (3.70-4.33), patella 0.49-0.56/0.16-0.18 (2.86-3.44), chela with pedicel 0.96-1.02/0.28-0.31 (3.20-3.53), chela without pedicel 0.91-0.98/0.28-0.31 (3.05-3.32), hand without pedicel 0.32-0.39/0.28-0.29 (1.21-1.24), movable finger 0.56-0.60, ratio movable finger/hand without pedicel 1.54-1.78, femur/carapace 0.97-1.14, chela with pedicel/carapace 1.51-1.79. Leg I: trochanter 0.14-0.15/0.11 (1.27-1.36), femur 0.24-0.27/0.07-0.09 (2.78-3.57), patella 0.13-0.15/0.07-0.09 (1.67-1.86), tibia 0.16-0.20/0.06-0.07 (2.59-3.33), metatarsus 0.16-0.19/0.04-0.05 (3.40-4.75), tarsus 0.10-0.11/0.03 (3.67-4.40). Leg IV:

trochanter 0.16-0.24/0.13-0.15 (1.23-1.71), femur+patella 0.50-0.53/0.20-0.23 (2.29-2.63), tibia 0.34-0.36/0.08-0.10 (3.35-4.27), metatarsus 0.20-0.22/0.06 (3.33-4.00), tarsus 0.14-0.15/0.03-0.04 (3.95-4.52).

REMARKS: *Planctolpium martinezi* n. sp. is a large species within the genus (♂) 2.25 mm, (♀) 2.10-2.41 mm. The cheliceral galea in the male is simple and sharpened in *P. martinezi* n. sp., while it is apically trifid in *P. suteri*. The species is known from western and central Cuba (Fig. 7), and was collected under stones and rotten logs.

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