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JEHAIA STOCKI N.G., N. SP., A NEW INTERSTITIAL JANIROID ISOPOD FROM THE DOMINICAN REPUBLIC, HISPANIOLA (CRUSTACEA; ISOPODA; JANIROIDEA)*

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ABSTRACT

A new genus and species of interstitial janiroid isopod is described from the Barahona Province in the Dominican Republic (Hispaniola). It is not clear whether it belongs to the Janiridae or Microparasellidae, although it is provisionally supposed to belong to former family until a thorough revision is made of the Janiroidea.

INTRODUCTION

During the Amsterdam West Indian expedition to the Dominican Republic (Hispaniola) in 1987-1988, two samples containing specimens of a minute isopod were made at marine interstitial localities on the coast of Barahona Province. These animals proved to represent a new genus and species, which is named in honour of Prof. Dr J. H. Stock, on the occasion of his retirement. The name derivation is after the (Dutch) phonetical sound of the initials of his given names for the genus, and his surname for the species.

Jehaia n.g.

Diagnosis. — Body flattened and elongated; antennula 7-segmented; eyes rudimentary (3 ocelli); labrum cleft; molar process of mandibula conical; maxillipedal epipodite elongate, palp 5-segmented, and basipodal endite distally with ciliated scales and inner margin with 4 hooks; pereiopods equal, dactyli with 2 ungues; basis male pleopod 1 broader than distal portion, coalesced; in female pleopod 1 absent and pleopod 2 operculate; male pleopod 2 half moonshaped, carrying appendix masculina; pleopods 3-5 identical in both sexex; pleopod 3 biramous; pleopod 4 rudimentary; pleopod 5 absent; first pleonite free; pleotelson subcircular; uropods biramous, longer than pleotelson.

Type-species. — *Jehaia stocki* n. sp.

Jehaia stocki n. sp. (Figs. 1-4)

Material and localities. — 2 ♀♀ paratypes, sta. 87/628, Prov. de Barahona, Los Patos, 250 m E of bridge over Canada Los Hoitanos (river), 17°57′34″ N 71°10′44″W, 0 m MSL; in intertidal zone of beach, coarse pebbles (Ø 2-5 cm), milkwhite mud; temp. = 29.0 °C, 100% O_2,

*) Amsterdam Expeditions to the West Indian Islands, Report 63, (Report 62 is published in Bull. Zoöl. Mus. A'dam, 12110): 145-158).

conductivity 32.8 mS/cm; collected with Bou-Rouch-pump; pipe-depth 1 m; 21 November 1987; leg. H. P. Wagner & N. W. Broodbakker. Accompanying fauna: Crustacea: Amphipoda, Decapoda; Oligochaeta; Polychaeta; Mollusca: Gastropoda. The paratypes are preserved in the Zoölogisch Museum under coll. no. Is. 105.442.

1 ♂ (holotype), 24 ♂♂ and 26 ♀♀ paratypes, sta. 87/632, Prov. de Barahona, La Cienaga, at beach 100 m NE of Canada Baialla (river), 18°03'52"N 71°06'17"W, 0 m MSL; in intertidal zone of beach, pebbles (Ø 0.2-2 cm); temp. = 29.5 °C, 100% 0_2, conductivity 34.9 mS/cm; collected with Bou-Rouch-pump; pipe-depth 0.75 m; 21 November 1987; leg. H. P. Wagner & N. W. Broodbakker. Accompanying fauna; Crustacea: Isopoda (Anthuridea), Amphipoda, Decapoda; Polychaeta; Nematoda; Mollusca: Gatropoda. The holotype is preserved in the Zoölogisch Museum under coll. no. Is. 105.441a, the larger part of the paratypes are likewise deposited in that Museum (Is. 105.441b-e).

Paratype specimens are also deposited in the Rijksmuseum van Natuurlijke Historie, Leiden, The

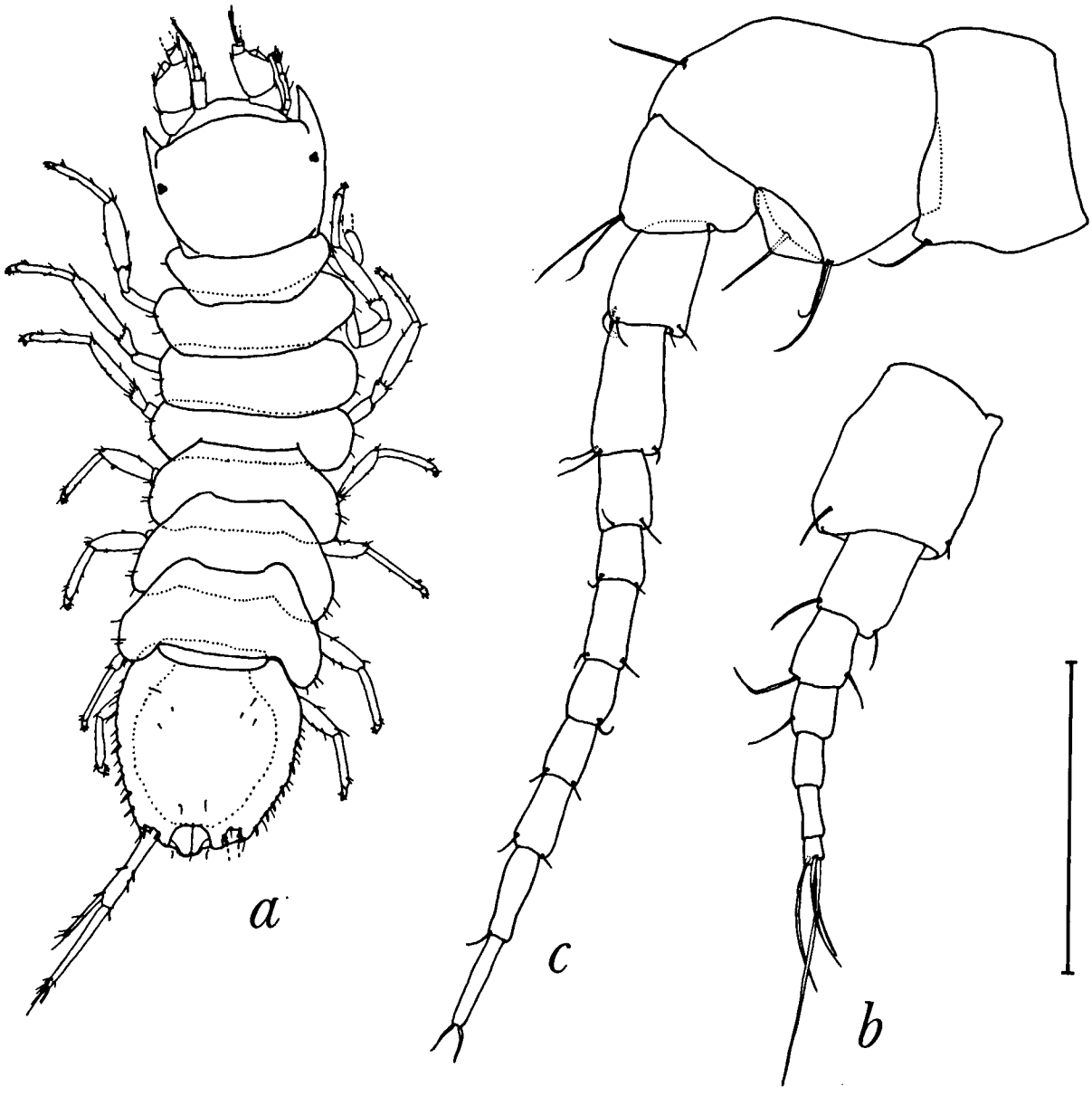

Fig. 1. *Jehaia stocki* n. sp.: A, habitus, ♀ paratype; b., right A1, ♂ holotype; c, right A2, ♂ holotype (a, bodylength 1040 µm; b-c, 0.1 mm indicated).

Netherlands (coll. no. I 7092); Museo Zoologico dell'Università di Firenze, Italy (coll. no. 1269); Museo Nacional de Historia Naturales, Santo Domingo, Dominican Republic; Zoologisk Museum, Copenhagen, Denmark; Smithsonian Institution, Washington, U.S.A.

Dissected specimens coloured by black chlorazol B cuticular staining.

Description. — Bodylength of the holotype ♂ and both figured ♀ paratypes is 1040 µm (excluding antennae and uropods). The largest ♂ measures 1303 µm, the largest ♀ 1434 µm. General habitus (fig. 1a) elongate, resembling that of *Asellus*. Body devoid of pig-

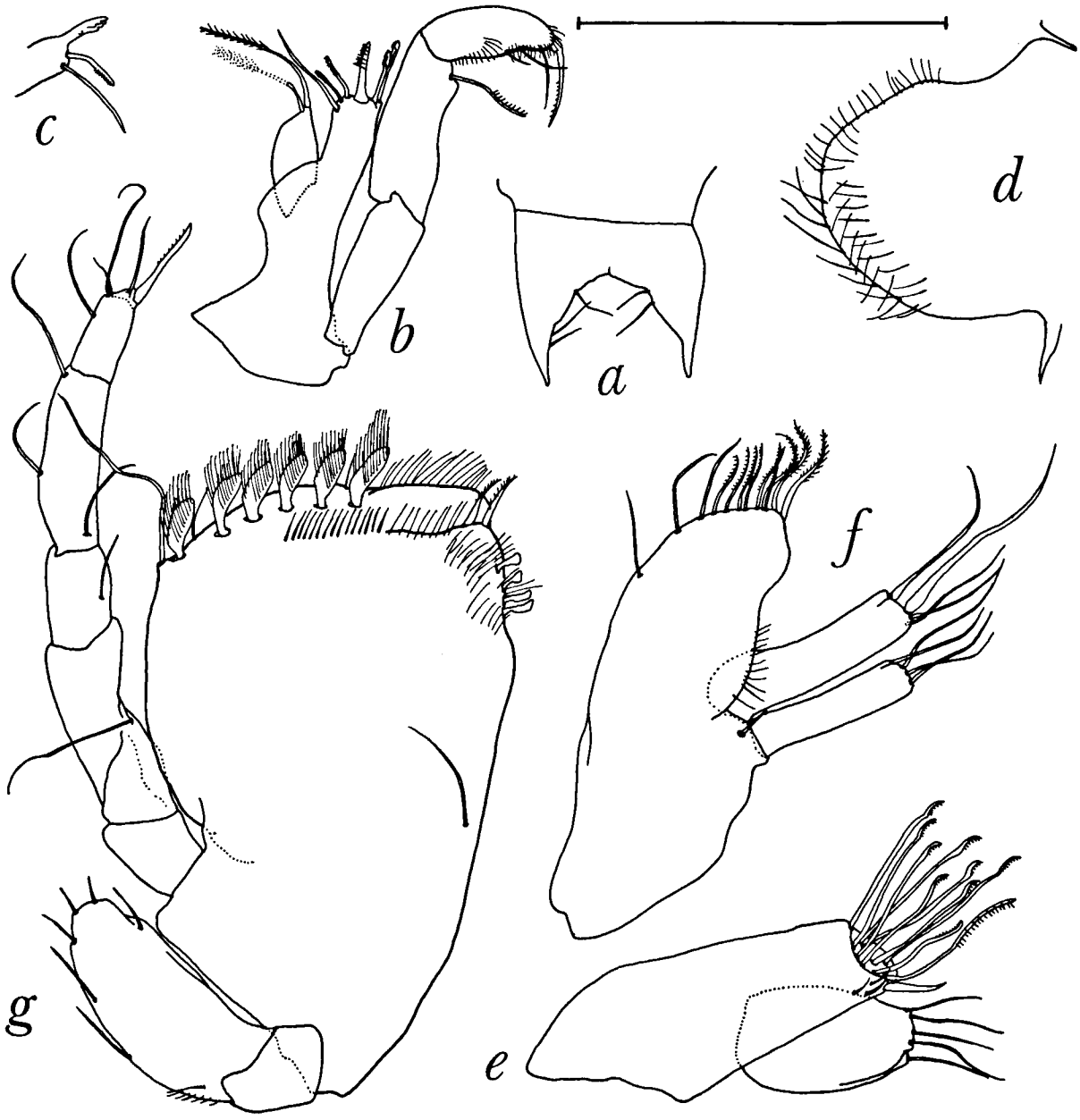

Fig. 2. *Jehaia stocki* n. sp., ♂ holotype: a, Lbr; b, left Md; c, part corpus mandibulae right Md; d, right paragnath of Lbi; e, left Mx1; f, left Mx2; g, left Mxp (all same scale: 0.1 mm indicated).

ment, eyes reduced, exsisting of 3 ocelli only.

Antennula (A1) (fig. 1b): Short, 7-segmented. The 1st article twice as long as the 2nd, and much stouter; last article apically with 4 simple setae of different length.

Antenna (A2) (fig. 1c); Peduncle 5-segmented, its 2nd article being twice as large as the 1st; flagellum 8-segmented; exopodite broad and uni-articulate.

Labrum (Lbr) (fig. 2a): Cleft, with 2 sharp points.

Mandibula (Md) (fig. 2b-c): Consisting out of a palp and an asymmetrical masticatory part. Palp 3-segmented, carrying 1 uniseriate seta subapically on the outer margin of segment 2; 3 simple and 1 uniseriate setae are placed on the distal outer half of segment 3. Masticatory part with 2 immobile and 3 mobile teeth in the right Md; 1 immobile and 1 mobile tooth in the left Md, the molar process conical with 2 apical plumose setae.

Labium (Lbi) (fig. 2d): Bilobed, blunt and broad, apically with fine simple setae.

Maxilla 1 (Mx1) (fig. 2e): Exopodite distally carrying 10 combshaped setae, 3 small and 1 large spine; endopodite smaller, apically with 5 long simple setae.

Maxilla 2 (Mx2) (fig. 2f): Basipodal endite distinctly broader than endopodite and exopodite, carrying resp. 3 simple, 6 uniseriate, and 3 plumose setae apically; endopodite and exopodite each apically with 4 simple setae of variable size.

Maxilliped (Mxp) (fig. 2g): Epipodite elongate, with basally 1 large and several small setae on its outer margin, and 6 simple setae in its distal portion; palp 5-segmented with 1, 1, 3 and 5 (of the latter 1 being stouter and uniseriate) setae on resp. its 2nd till 5th segment; basipodal endite with 6 (♂) or 7 (♀) ciliated scales (some accompanied by an occasional simple seta) on its outer distal portion, and 2 uniseriate setae, 4 hooks, and 1 long simple seta are present in the inner margin.

Pereiopods (P1-P7) (figs. 3a-d): In general equal in shape, with some differences in chaetotaxy (P1 = P2, P4 = P5, P6 = P7 in chaetotaxy), dactyli in all having 2 ungues.

Pleopods (Pl.1-Pl.4) (figs. 4a-c): As described in generic diagnosis.

Pleotelson (T) (fig. 4d): Irregularly ornamented with spines and setae on its lateral margins; dorsally irregularly dispersed setae are present also; distally the armature of the pleotelson is symmetrical.

Uropods (U) (fig. 4e): Uropods somewhat longer than pleotelson, biramous.

Remarks. — The new taxon shows in first instance the most resemblance to *Protocharon arenicola* Chappuis, Delamare Deboutteville & Paulian, 1956[1]), in general shape, mouth parts, pereiopods, and pleopods. It can be distinguished, however, (character states of *Protocharon arenicola* in parentheses) by (1) the antennae (A1 and A2) that are quite different in shape and chaetotaxy, (2) the presence of hooks on the inner margin of the maxilliped (absent), (3) having the first pleonite free (coalesced), (4) the subcircular pleotelson (elongate), (5) the armature of the pleotelson, and (6) the long and slender uropods (distinctly shorter than pleotelson).

The taxonomical problem of the family assignment of the new genus remains unsolved so long as the Janiroidea are not thoroughly revised. In first instance it resembles rather a janirid than a microparasellid.

ACKNOWLEDGEMENTS

I am much obliged to Prof. Dr L. B. Holthuis (Rijksmuseum van Natuurlijke Historie, Leiden) and to my wife Elsa for critically reading the manuscript and commenting upon it. Drs T. Checa Romero is acknowledged for making the Spanish translation of the abstract. The fieldwork on which the present results are

[1]) Schiecke & Fresi (1970: 249) state that *P. arenicola* differs so sharply in some characters from *P. antarctica* Chappuis, 1958, that it is doubtfull that the two species belong to the same genus. Comparing the descriptions and drawings of both species (Chappuis et al., 1956; Chappuis, 1958) we found especially the chaetotaxy of the maxilliped different to such an extent that the 2 species indeed can not represent the same genus.

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RESUMEN

Se describe un nuevo género y especie de isopodos janiroidos de marina interstitial, originario de la provincia de Barahona, en la

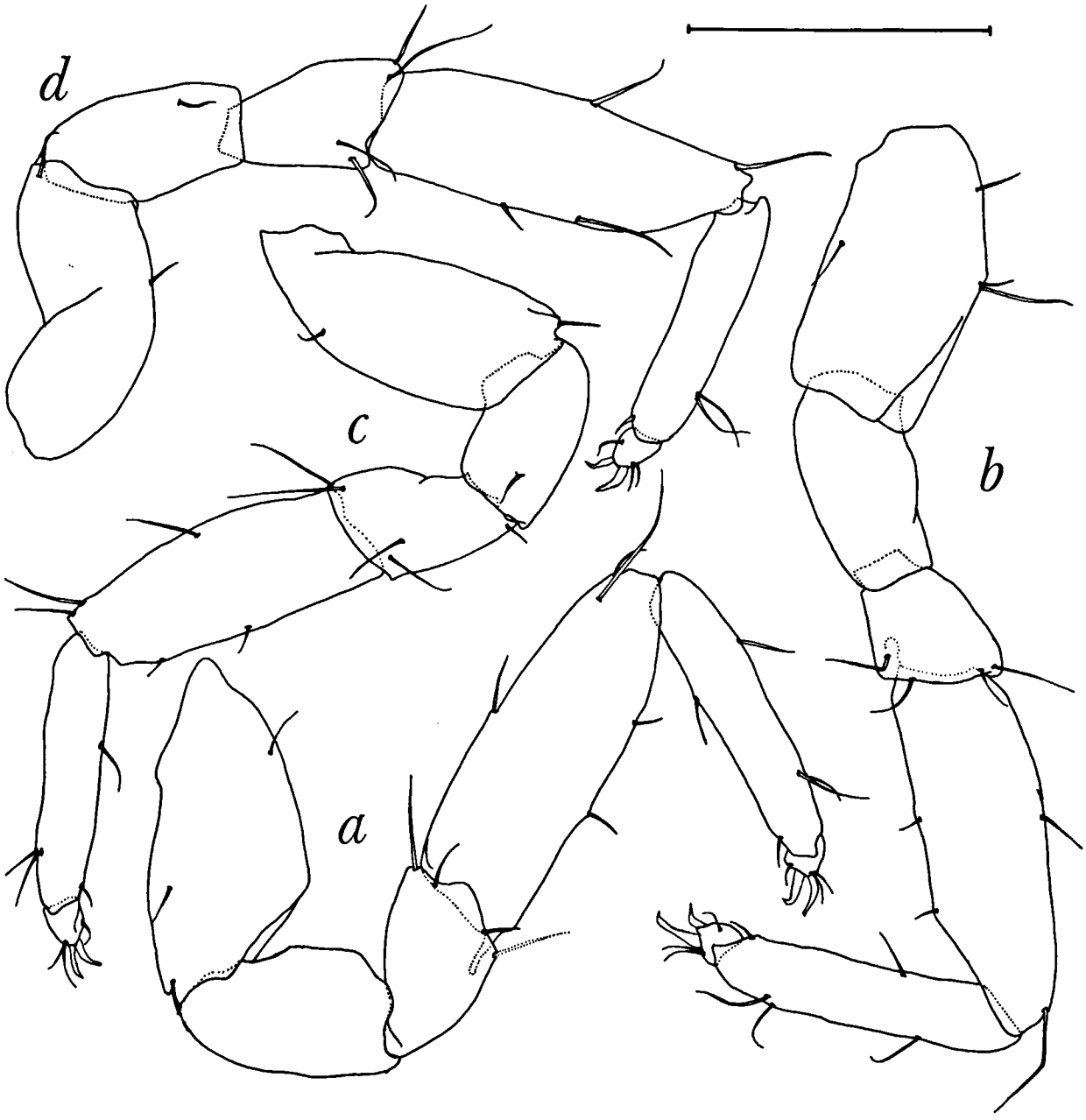

Fig. 3. *Jehaia stocki* n. sp., ♂ holotype: a, right P1; b, right P3; c, right P5; d, right P7 (all same scale: 0.1 mm indicated).

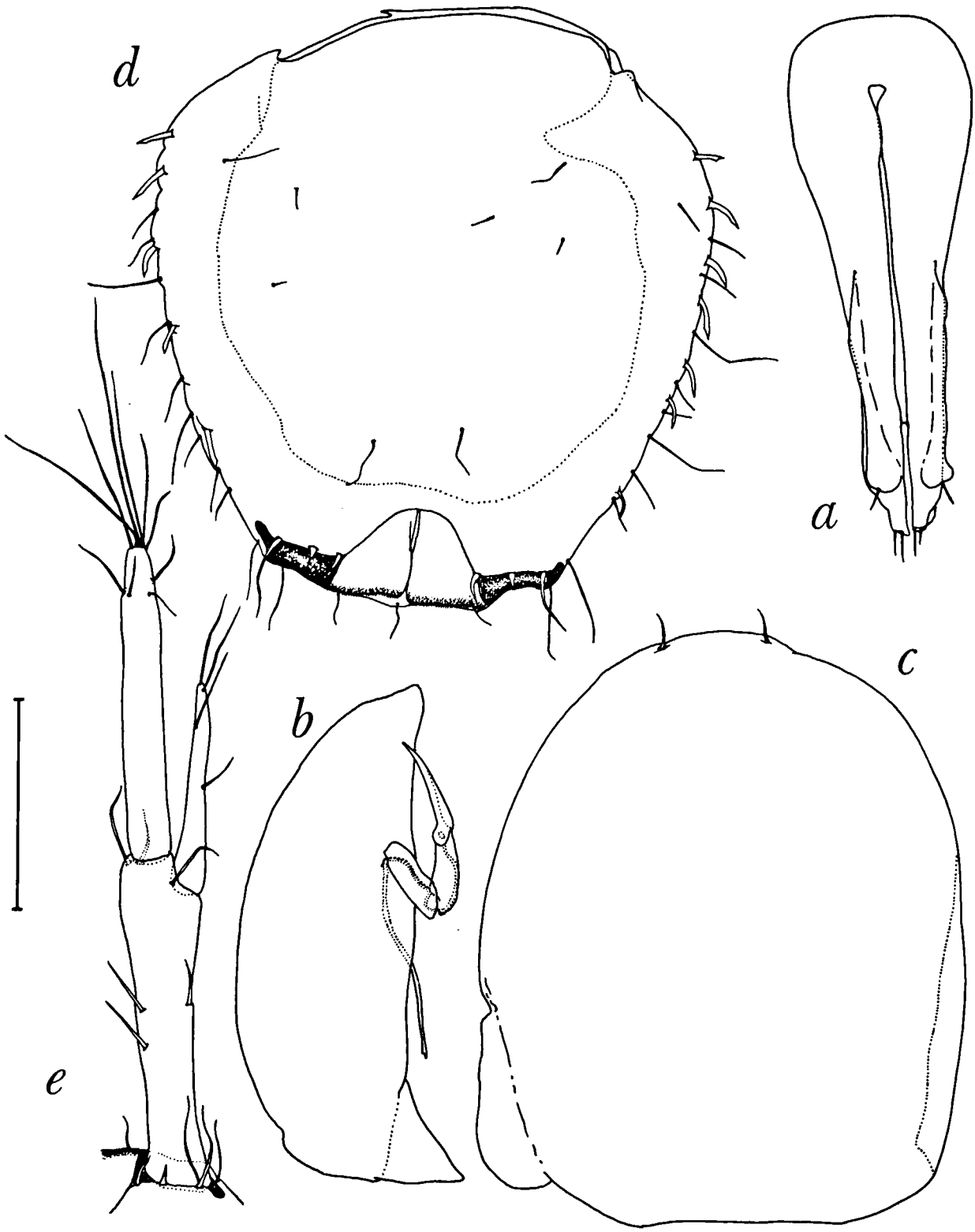

Fig. 4. *Jehaia stocki* n. sp.: a, Pl.2, ♂ holotype; b, Pl.2, ♂ holotype; c, Pl.1, ♀ paratype; d, T, ♂ holotype; e, left U, ♂ holotype (all same scale: 0.1 mm indicated).

República Dominicana (Hispaniola). Por ahora no está claro si pertenece a las Janiridae o Microparasellidae, aunque, provissionalmente, se supone que pertenece a una familia anterior, hasta que no se lieve a cabo una profunda revisión de las Janiroidea.

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