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MICROCERBERUS INSULARIS N.SP. (CRUSTACEA, ISOPODA, ASELLOIDEA), A MARINE INTERSTITIAL SPECIES FROM TENERIFE

Stygofauna of the Canary Islands, 24

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Keywords Isopoda, Microcerberidae, marine stygobiont, Tenerife

ABSTRACT

Microcerberus insularis n. sp., a marine stygobiont of beaches on Tenerife, Canary Islands, is described. It belongs to the *remanei*-group and resembles in many aspects *M. renaudi* from the Bahamas.

RÉSUMÉ

Microcerberus insularis, nouvelle espèce stygobie des plages de Ténérife, Iles Canaries, est décritte. Cette espèce ressemble *M. renaudi* des Iles Bahamas de divers points.

Microcerberus insularis n. sp. was sampled from volcanic sands at two beaches on Tenerife.The new species shows no remarkable features, it is a 'normal' marine interstitial microcerberid.

The diagnostic character by which microcerberids are most clearly distinguished - the male second pleopod with appendix masculina - resembles that of *M. renaudi* Chappuis & Delamare Debouteville, 1956, from Bimini, Bahamas, rather than that of the geographically nearer *M. rossii* Baldari & Argano, 1982, from Sierra Leone, or *M. remanei lusitanicus* Galhano, 1970, from Portugal.

Baldari & Argano, 1984, have characterized 3 groups of species based on the shape of the male second pleopod and the appendix masculina. In their opinion the thus conceived intra-generic species groups are supported by geographic evidence.

The new species, *Microcerberus insularis*, fits easily in such a classification. It is a member of the '*remanei*'- group.

Microcerberus insularis n. sp.

(Fig. 1-3)

Material

1♂ holotype, 1 ♀ allotype, 4 paratypes. Canary Islands,

Tenerife.

Station 90-07: 1♂ holotype, Playa de San Juan (UTM coordinates CS 186221) in coarse sand at low-water mark, 0.5 m under substrate surface, Bou-Rouch biophreatical pump (see Bou, 1975); 4 March 1990 (ZMA Is. 105.521) Accompanying fauna: Bogidiellidae (Amphipoda).

Station 90-59: 1♀ allotype, 3 ♀♀, 1♂ paratypes, El Tablero (UTM coord. CS245624) in surf-exposed cobble beach with coarse sand, BR pump, 0.4 m under substrate surface; 22 March 1991 (ZMA Is. 105.522). Accompanying fauna: *Chaetogammarus* spec. (Amphipoda), Tanaidacea.

Samples collected by J. H. Stock and R. Vonk.

DESCRIPTION

Body semitransparent, no eyes (fig. 1a). Maximum body length 1.1 mm. Both sexes are described.

First antenna (fig. 1b) 5-segmented. First segment with distal plumose seta, fifth segment with 1 long apical aesthetasc on apex. Remaining setae not plumose.

Second antenna (fig. 1c) without aesthetascs and plumose setae.

Left mandible (fig. 1j) with 3 finely serrate spines proximate of 4-dentate pars incisiva. Lacinia mobilis not detected. Pars molaris pointed, palp 1-segmented and with 1 large simple seta on apex.

Right mandible (fig. 1i) with more strongly developed pars incisiva than in left mandible. Lacinia mobilis finely serrate on distal margin. Pars molaris with very long spine, palp 1-segmented with 2 large simple setae on apex.

First maxilla (fig. 1h): Outer lobe with a distal row of 7 denticulate spines, the innermost serrate; medial margin with 4 small pointed setae. Inner endite blunt, with 1 small pointed seta.

Second maxilla (fig. 1g): Apex with 2 toothed spines.

Maxilliped (fig. 1f) without special features.

Pereopod 1 (fig. 1k) subchelate. Propodus with 2 broad spines at base of palmar margin, each serrate along one edge; palmar margin with 3 denticulate spines, and 1 subterminal one on medial surface; claw long and curved, inner margin with 2 short spines on a protuberance.

Pereopods 2-7 (figs. 2a-f) all differ from each other in number and position of setae. P2-4 seem attached to lateral lobes of tergites 2-4 as can be oberved best in P4. Propodus of P2 with 5 setae on posterior margin; P3 with strong spiniform element, arising from shallow notch, on anterior margin of carpus; P4 with 4 setae and 1 tooth on inner margin of basis; P5 with 1 instead of 2 setae on outer distal part of propodus; P6 with 3 short setae on margin merus; P7 without such setae.

Pleopod 2 male (figs. 1a, 2k); exopodite small, bearing 1 apical seta; endopodite as long as protopodite, appendix masculina consisting of a thin tube.

Pleopods 3 and 4 (figs. 2i, j) without protopodite, inserting directly on pleotelson.

Uropod (fig. 2h) with small exopodite. Apex of endopodite with 3 setae.

In male 2 genital papillae (term by Lang, 1961) appaer ventrally on the last pereonite (fig. 1a). Female has 2 horizontal slits (fig. 2g) on the ventral side of pereonite 5.

Variations

The mature male (holotype) has a more dense setation on the pereopods than the female , i. e. 5 setae on propodus of P3; P2-4 with short setae on anterior margin of carpus, instead of on P3 only.

Remarks

Microcerberus renaudi from the Bahamas is described rather superficially, however the male second pleopods are clearly depicted and look very similar to those of *M. insularis* . Differences in these pleopods and other features are:

- ♂ Pleopod 2 without 'une petite organe longuement plumeux' at the base of the endopodite in *M. insularis.*
- Antenna1 with plumose seta on first segment. No small swelling ('renflement') on third segment in *M.insularis.*
- Antenna 2 without spatulate plumose seta on fifth segment, and no apical aesthetascs in *M. insularis.*
- Uropod without plumose setae.

It is remarkable how few plumose setae *M. insularis* has. Also the spatulate apexes of such setae are absent.

A zoogeographical explanation of the occurrence of two phenetically closely related species on oceanic islands on both sides of the Atlantic may lie in the supposition that their ancestor occupied the shallow seafloor before the opening of the Atlantic. However, no microcerberids are known from completely sub-

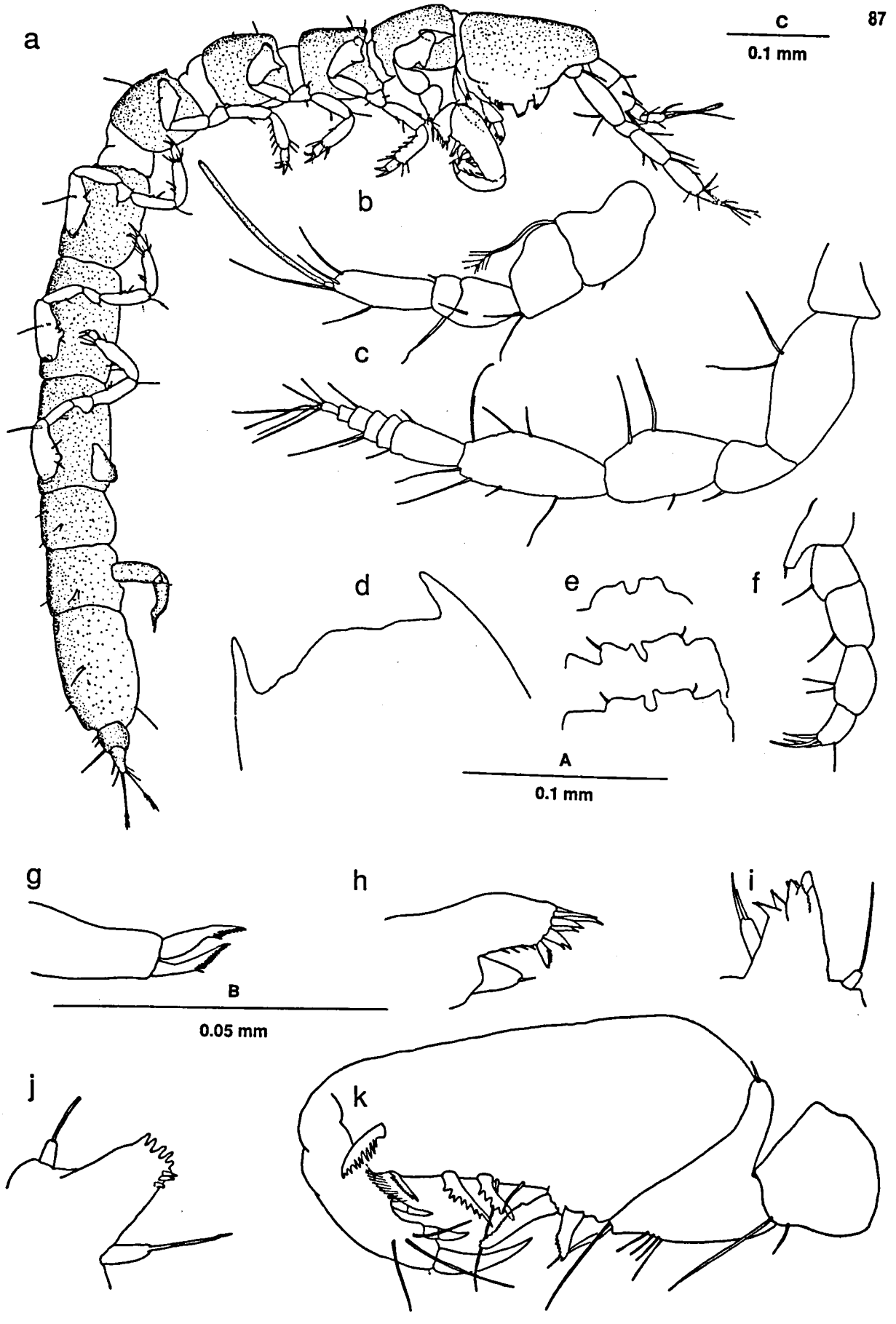

Fig. 1. *Microcerberus insularis* n. sp.: a, ♂ holotype (scale C); b, ♀ allotype, antenna 1 (A); c, antenna 2 (A); d, cephalothorax (A); e, ♂ paratype, tergites 1,2,3 (A); f, ♀ allotype, maxilliped (A); g, maxilla 2 (B); h, maxilla 1(B); i, right mandible (B); j, left mandible (B); k, pereopod 1 (B).

merged sediments (Coineau, 1986), but Wägele, 1982, states: 'The Microcerberidae of the coastal groundwater seem to be world-wide distributed organisms, which obviously can overcome geographic obstacles much more easily than the limnic species...'

We can only add the expectation that in future sediment samples from deeper waters, microcerberids will be present.

Etymology

The species name refers to the occurrence on an island.

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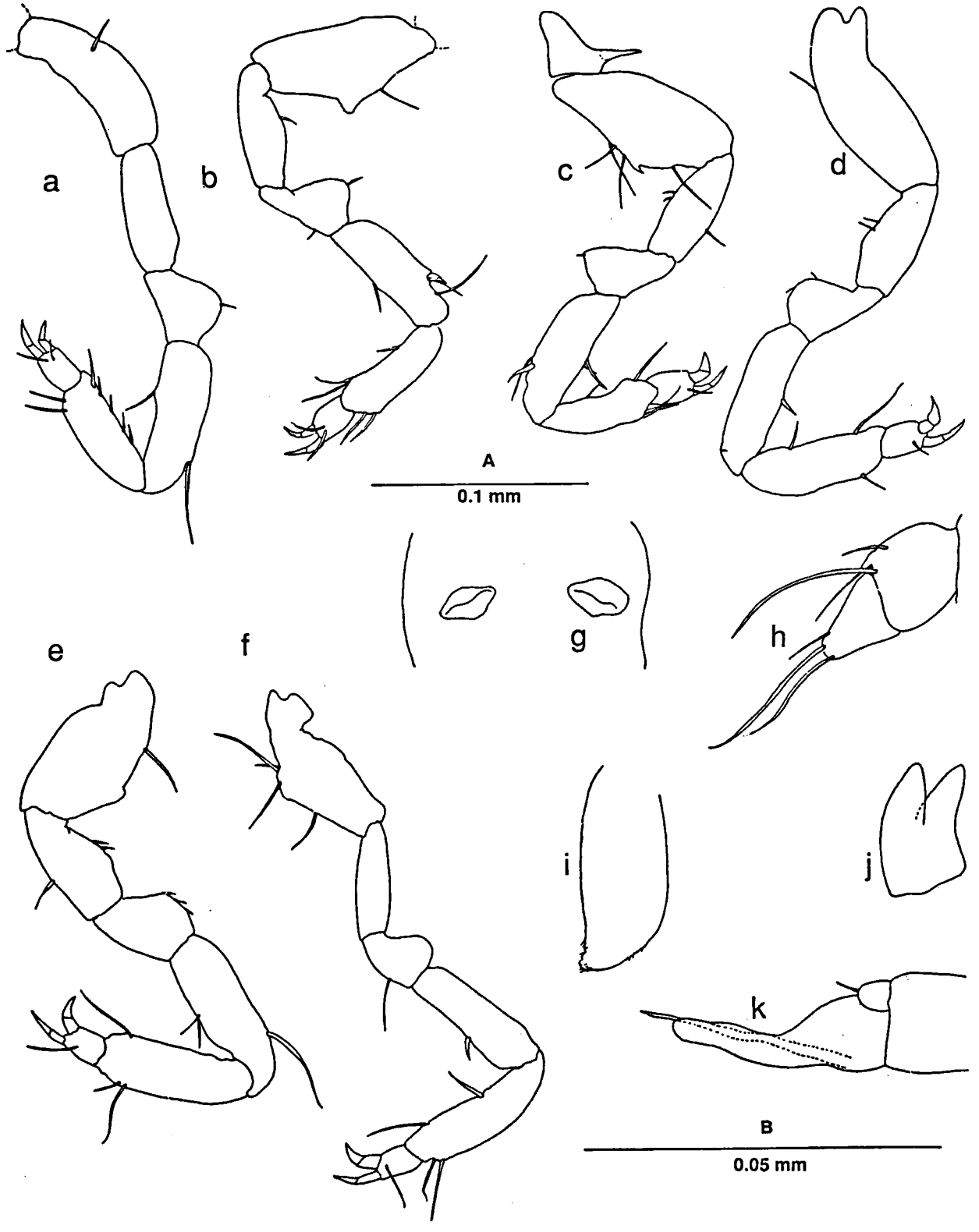

Fig. 2. *Microcerberus insularis* n. sp.: a-f, ♀ allotype, pereopods 2-7 (scale A); g, female genital papillae on ventral side of fifth tergite (A); h, uropod 3 (A); i, ♂ paratype, third pleopod (A); j, fourth pleopod (A); k, second pleopod (B).