

A new genus and species of cirolanid isopod (Crustacea) from Zanzibar, Tanzania, western Indian Ocean

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Abstract: *Baharilana* gen. nov. is diagnosed and described. The genus contains two species and is distributed from the Red Sea to Tanzania, Western Indian Ocean from the shallow sub-tidal to a recorded depth of 1850 metres. The species included are the type species *Baharilana richmondi* sp. nov., which is here described and *Baharilana bisulcata* comb. nov. The genus is characterized by having a ventrally flat, pentagonal clypeus; pereopods 1–3 with the superior distal margin of the ischium moderately produced and setose, the merus anterodistal margin also moderately produced and setose but not overriding the propodus; paired flattened and articulating penial processes; pleopod 1 endopod narrow, half as wide as the sub-circular exopod; pleopod 2 appendix masculina sub-medially inserted, curving laterally around the ramus; and the uropod peduncle lateral margin with a row of plumose setae.

Résumé : *Un nouveau genre et une nouvelle espèce d'Isopode Cirolanidé (Crustacea) de la côte de Zanzibar, Ouest de l'Océan Indien.* La diagnose et la description du nouveau genre *Baharilana* gen. nov. sont données. Le genre contient deux espèces et sa répartition géographique s'étend de la Mer Rouge à la Tanzanie, Océan Indien Occidental, des régions infralittorales peu profondes jusqu'à 1850 mètres de profondeur. Les espèces du genre sont l'espèce type *Baharilana richmondi* sp. nov. qui est ici décrite et *Baharilana bisulcata* comb. nov. Le genre est caractérisé par un clypeus ventral plat et pentagonal; les périopodes 1–3 ont le bord distal supérieur de l'ischium modérément saillant et couvert de soies, le bord antérodistal du merus également modérément saillant et couvert de soies, mais ne recouvrant pas le propodus; des processus péniens pairs, aplatis et articulés; l'endopodite du pléopode 1 étroit, la moitié de la largeur de l'exopode sub-circulaire; l'appendix masculina du pléopode 2 inséré sub-médialement, courbé latéralement autour de la rame; et le bord latéral du pédoncule de l'uropode avec une rangée de soies plumueuses.

Keywords: Isopoda, Cirolanidae, Indian Ocean, taxonomy, coral reef, East Africa, Crustacea.

Introduction

The marine Cirolanidae of East Africa and the Western Indian Ocean have received sporadic attention over time,

with contributions in the twentieth century principally from Monod (1968), Jones (1971, 1976, 1983), Jones and Icely (1981), Bruce (1981a), Messina (1984), Hobbins and Jones (1993) and Kensley and Schotte (1994). Kensley (2001) lists all cirolanids known from the Indian Ocean. Recent collections from the coral reefs of Unguja Island (Zanzibar) made in 1995 and 1997 obtained many cirolanid species,

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several of which are undescribed. The use of baited traps was particularly successful in capturing large numbers of cirolanids.

This contribution describes one species collected at Matemwe and Mnemba Island in the north-eastern part of Unguja Island that was obtained solely by the use of baited traps. It is apparent that this species and three other Western Indian Ocean species (two of which are being described by Kensley and Schotte, personal communication) are united by several characters that we consider to be of generic merit, characters which also preclude the inclusion of these species in any other cirolanid genus. We therefore establish a new genus for these species.

Specimens have been deposited at the Zoologisk Museum, University of Copenhagen (ZMUC), the Australian Museum, Sydney (AM), with voucher specimens retained at Te Papa National Museum of New Zealand, Wellington (NMNV) and the Icelandic Museum of Natural History, Reykjavik (IMNH).

Abbreviations: CP— circumplumose; PMS— plumose marginal setae; RS— robust seta/setae.

Taxonomy

Family CIROLANIDAE Dana

Baharilana gen. nov.

Type species: *Baharilana richmondi* sp. nov., here designated.

Species included

In addition to the type species, *Baharilana bisulcata* (Hobbins and Jones, 1993) comb. nov., Red Sea, 748-1850 m; two further species from Moçambique and Somalia are being described by Brian Kensley and Marilyn Schotte (personal communication).

Diagnosis

Head without rostral point. Clypeus pentagonal, ventrally flat, not blade-like, not projecting. Pereopods 1-3 with ischium superior distal margins moderately produced, setose; merus anterodistal margin moderately produced, setose, not overriding propodus; pereopods 5-7 basis without long PMS, ischium and merus distally with long setae. Paired flattened articulating penial processes present on sternite 7. Pleopod 1 endopod narrow, half as wide as exopod; exopod sub-circular. Pleopod 2 appendix masculina sub-medially inserted, curving laterally around the ramus; apex bluntly rounded to sub-acute. Uropod peduncle lateral margin lacking acute RS, ventrolateral margin with row of plumose setae.

Description

Head wide, approximately 67-70% as wide as pereonite 1, anterior margin evenly rounded, not medially indented,

without rostral point. Body about 2.4–2.6 times as long as greatest width, pereonites unornamented; pereonite 1 about 1.7 times as long as pereonite 2. Pleon unornamented, with 5 unfused segments, pleonite 1 largely concealed by pereonite 7; pleonite 3 epimera not enlarged, not extending posteriorly to pleonite 4; pleonite 5 laterally overlapped by pleonite 4. Pleotelson usually with longitudinal carinae or ridges, with or without tubercles; posterior margin with PMS and robust setae.

Antennule peduncle articles collinear, not fused; peduncular article 2 not at right angles to article 1; article 3 well developed, subequal in length to articles 1 and 2; flagellum shorter than peduncle; without callynophore. Antenna peduncle comprised of 5 articles, peduncular articles 1–3 shortest, articles 4 and 5 subequal in length, longest; flagellum as long or longer than peduncle.

Frontal lamina pentagonal or rectangular, ventrally flat, approximately 3 times as long as basal width, not projecting anteroventrally from posterior. Clypeus ventral surface not projecting relative to frontal lamina. Mandible incisors wide, right incisor tricuspidate; spine row with 7–9 RS. Maxillule medial lobe with 4 CP robust setae. Maxilliped palp articles 3 and 4 each with medial margin weakly lobed; lateral margins of articles 2–5 with long simple setae; articles 3 and 4 distal margin width greater than proximal margin of article 4 and 5 respectively; endite with 1 (type species) or 2 coupling hooks.

Pereopods 1–7 dactylus with secondary unguis present. Pereopods 1 and 2 with ischium anterodistal angle moderately produced, not overriding merus; pereopod 1 merus anterodistal angle overriding carpus, pereopod 2 merus with anterodistal angle produced, extending to mid-point of carpus; dactylus shorter than propodus. Pereopod 7 basis not noticeably broader in distal half compared to proximal half; margins with few discontinuous setae; medial carina with setae; superior distal angle with cluster of long and short setae; ischium and merus not flattened, distal margin moderately expanded, inferior margins with long and short simple setae and acute robust setae.

Paired, flattened articulated penial process present at posterior margin of sternite 7.

Pleopod 1 rami lamellar, exopod large, sub-circular, 1.0–1.4 times as long as wide, endopod 0.20–0.25 as wide as exopod, 0.80–0.95 as long as exopod; peduncle quadrate 0.75 times as long as wide. Pleopod 2 appendix masculina slender, arising sub-medially, longer than endopod, curving laterally around endopod distal margin. Pleopods 1–5 with PMS present on all rami except endopod of pleopod 5. Uropod peduncle medial margin strongly produced, lateral margin with row of plumose setae (type species); rami extending beyond pleotelson; endopod and exopod margins with PMS; exopod lateral margin not excised.

Females

No ovigerous females present in the material at hand. Non-ovigerous females similar to males but slightly larger.

Remarks

There are several characters that exclude the type species and the other species here placed in *Baharilana* gen. nov. from *Cirolana* Leach, 1818 as diagnosed by Bruce (1986), Brusca et al. (1995) and other cirolanid genera. These characters are pereopods 1–3 with the superior distal margin of the ischium and merus being moderately produced and provided with numerous slender and robust setae (in *Cirolana* these margins are not produced and are weakly setose [see figures in Bruce 1986, 1995; Bruce and Ellis, 1983; Brusca et al., 1995]), pleopod 1 with a slender endopod and sub-circular exopod, pleopod 1 peduncle about three quarter as wide as long, pleopod 2 with the appendix masculina arising in a sub-medial position, and the uropod peduncle with a row of plumose setae along the lateral and ventral margins. Additionally all species being placed in the new genus have articulated flat penial processes and lack a rostral point, although both these characters are polymorphic in *Cirolana* as presently constituted.

The pereopod morphology, with the superior distal margins of the merus of pereopods 1–3 not produced and not overriding the carpus and proximal part of the propodus, excludes the species here placed in *Baharilana* gen. nov. from *Conilera* Leach, 1818 (see Brusca et al., 1995), *Conilorpheus* Stebbing, 1905 (see Bruce and Olesen, 2002), *Natatolana* Bruce, 1981b (see Bruce, 1986; Keable and Bruce, 1997), *Oncilorpheus* Paul and Menzies, 1971 (see Brusca et al., 1995), *Odysselana* Malyutina, 1995, *Parilcirolana* Yu and Li, 2001 and *Politolana* Bruce, 1981b. *Conilera* and *Oncilorpheus* have an operculate pleopod 1. The recently described *Parilcirolana* is further distinguished by the rami of pleopod 1 being of similar proportions (the exopod is ovate rather than nearly circular) and the appendix masculina being basally attached.

Two character states are shared with other genera: the lack of a rostral point together and the uropod peduncle having a row of setae on the ventrolateral margin, those genera being *Aatolana* Bruce, 1993, *Eurydice* Leach, 1814 (see Bruce, 1986; Bruce and Soares, 1996; Brusca et al., 1995) and *Plakolana* Bruce, 1993. *Eurydice* is abundantly distinct from *Baharilana*, while *Aatolana* can be distinguished by having expanded and posteriorly acute epimera on pleonite 3 which, in addition, has a ventrolateral row of setae (Keable, 1998). Furthermore, these genera have the anterior medial margin of the head weakly to moderately indented, The genus *Plakolana* Bruce, 1993, known from northern Papua New Guinea and tropical and eastern Australia (Bruce, 1993; Keable, 1999), appears to be most similar. However *Plakolana* has pleopod 1 with rami of similar size and width, the appendix masculina is sub-

basally attached and is straight, and the epimera of pleonite 3 are posteriorly produced and wide with a distinct posteromedial point whereas in *Baharilana* the epimera are not posteriorly produced and converge evenly to terminate in a simple point.

Distribution

The genus appears restricted to the Western Indian Ocean, with records from the Red Sea (Hobbins and Jones, 1993), Somalia and Moçambique (Kensley and Schotte, personal communication) and Tanzania. All species are subtidal.

Etymology

The genus name uses the Kiswaheli word 'bahari' (meaning sea) and the ending *-lana* to indicate family affinity (gender female).

Baharilana richmondii sp. nov.

Figures 1–5

Material

All material is from the north-eastern end of Unguja Island (= Zanzibar), Tanzania.

Holotype: ♂ (6.5 mm), ZNZ-97/18, off Matemwe, 05°51.20'S, 39°22.08'E, 8–11 March 1997, off reef on rubble-covered, gentle slope, 25–40 metres, baited trap, coll. N.L. Bruce & T. Jansen (ZMUC CRU3720).

Paratypes: 6 ♂- (5.6 broken [part dissected], 5.8, 5.9, 5.9, 6.0 (specimen C part dissected), 6.2 [dissected] mm), 9 ♀ (ovig. 7.5, non-ovig. 6.9[?], 7.0, 7.0, 7.4, 7.5, 7.6, 7.6, 7.7 dissected, 8.2 mm), 4 manca (3.2–4.4 mm), 36 unmeasured, same data as holotype (ZMUC CRU3721, AM P61505).

Additional material: 87 ♂, ♀ and manca, Stn ZNZ-97/19. Matemwe, 5°51.21'S, 39°21.96'E, 8–11 March 1997, reef edge onto rubble, 20–25 metres, baited trap, coll. N.L. Bruce & T. Jansen (NMNZ Cr9845, IMNH 2002.01.10). 73 o-, o+ and manca, Stn ZNZ-97/21. Mnemba Island reef, 5°50.40'S, 39°23.31'E, 9–10 March 1997, reef edge, ca. 30–40 metres, baited trap, coll. N.L. Bruce & T. Jansen (AM P61506).

Type locality: Matemwe, Unguja Island, Tanzania, 5°51.21'S, 39°21.96'E.

Description

Body (Fig. 1A) about 2.6 times as long as greatest width; widest at pereonite 5. *Pereonite 1* 2.3 times as long as pereonite 2, pereonite 2=3<4<5>6<7; pereonite 2 shortest; all pereonites with weak transverse furrow, indistinct over dorsum, pereonite 4 epimera with 2 longitudinal curving lateral furrows. *Coxae* (Fig. 1B) all with entire oblique suture and fine ventral submarginal suture; posterior margins of coxae 2–3 posteriorly truncate, 4–6 posteriorly narrowly rounded, coxae of pereonite 6 weakly produced, coxae of pereonite 7 produced posteriorly beyond pereonite.

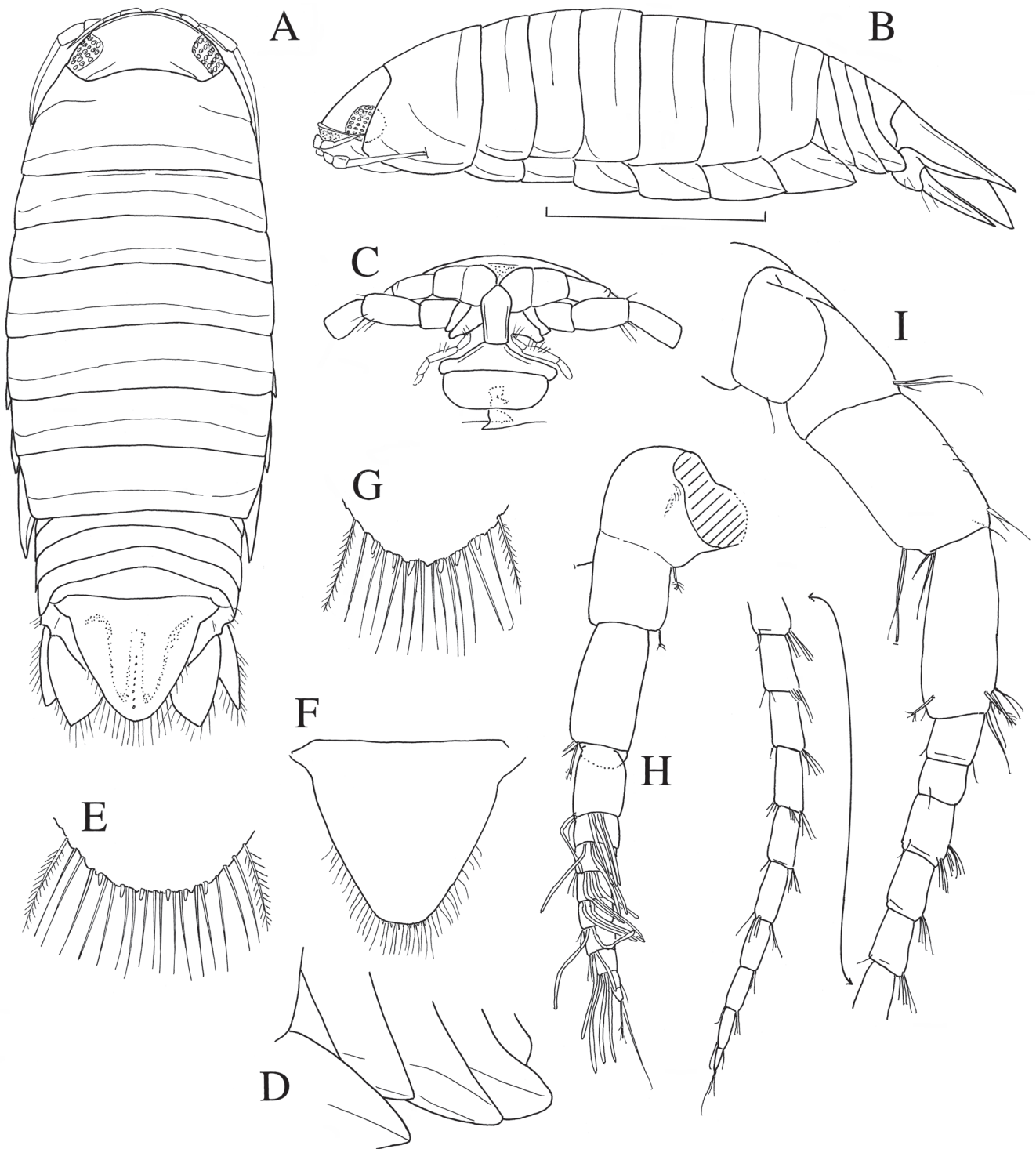


Figure 1. *Baharilana richmondi* sp. nov. **A–D.** holotype, remainder ♂ paratype (6.2 mm). **A.** dorsal view; **B.** lateral view; **C.** frons; **D.** pleonites, lateral detail; **E.** pleotelson apex; **F.** pleotelson; **G.** pleotelson apex; **H.** antennule; **I.** antenna. Scale bar = 2.0 mm.

Figure 1. *Baharilana richmondi* sp. nov. **A–D.** holotype, paratype ♂ restant (6.2 mm). **A.** Vue dorsale ; **B.** vue latérale ; **C.** vue antérieure ; **D.** pléonites, détail latéral ; **E.** extrémité du pléotelson ; **F.** pléotelson ; **G.** extrémité du pléotelson ; **H.** antennule ; **I.** antenne. Echelle = 2.0 mm.

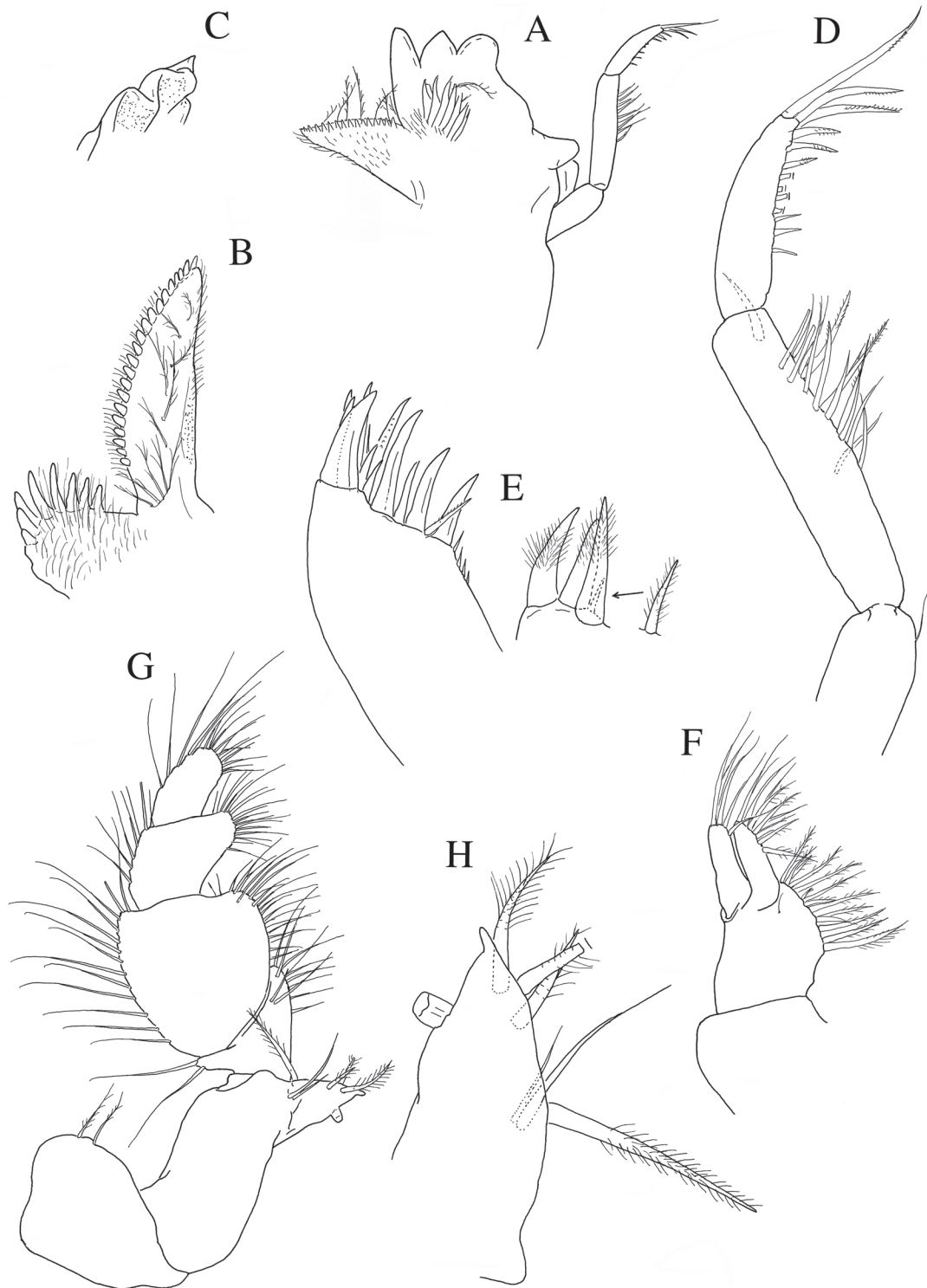


Figure 2. *Baharilana richmondi* sp. nov. All figs of ♂ paratype (6.2 mm). **A.** right mandible; **B.** spine row and molar process, left mandible; **C.** left mandible, incisor in oblique view; **D.** mandible palp; **E.** maxillule; **F.** maxilla; **G.** maxilliped; **H.** maxilliped endite.

Figure 2. *Baharilana richmondi* sp. nov. A–H sont du paratype ♂ (6.2 mm). **A.** mandibule droite ; **B.** rangée d'épines et processus molaire mandibule gauche ; **C.** mandibule gauche partie incisive en vue oblique ; **D.** palpe mandibulaire ; **E.** maxillule ; **F.** maxille ; **G.** maxillipède ; **H.** endite du maxillipède.



Pleonite 1 (Fig. 1A) largely concealed in dorsal and lateral view, visible only laterally at point of junction between pereonite 7 and coxae; pleonite 4 epimera (Fig 1D) posteriorly rounded, with longitudinal suture, extending posterior to pleonite 5.

Pleotelson (Fig 1F) about as long as greatest width, lateral margins evenly convex, converging to rounded apex, posterior margin (Figs 1E-G) with about 34 long PMS and 6 robust setae.

Antennule (Fig 1H) peduncle article 3 0.78 times as long as combined lengths of articles 1 and 2; flagellum 0.82 length of peduncle, extending to anterior margin of pereonite 1, with 9 articles, article 1 of which is longest, articles 1–8 with aesthetascs.

Antenna (Fig 1I) peduncle article 3 with 1 long and 1 short simple setae at superior distal angle; article 4 1.7 times as long as wide, inferodistal angle with 2 groups of 2 slender simple setae, superior distal angle with 2 short simple setae; article 5 slightly longer than article 4, 2.4 times as long as wide, inferior distal angle with single palmate seta, superior distal angle with 4 simple and 2 plumose setae; flagellum 1.4 times as long as peduncle, extending to posterior of pereonite 1, 15-articled, each article with anterodistal cluster of 4–6 short simple setae, inferodistal angle with 1–3 short simple setae.

Frontal lamina (Fig 1C) 2.3 times as long as basal width, lateral margin converging towards posterior.

Mandible (Figs 2A–D) spine row (Figs 2A, 2B) with 8 RS surrounded by numerous setae of varying length; molar process (Fig. 2B) with abundant microtrichs and plumose setae, with about 20 stout spines along anterior margin; palp (Fig. 2D) article 2 lateral margin with 14 biserrate and weakly serrate acute RS, article 3 with 13 biserrate RS, distal 3 of which are longest.

Maxillule (Fig. 2E) lateral lobe with 12 stout RS on gnathal surface, medial lobe with 3 large and 1 small CP robust setae.

Maxilla (Fig. 2F) lateral lobe with 5 slender simple setae, middle lobe with 9 long simple setae and CPS, medial lobe with about 14 CPS.

Maxilliped (Fig. 2G) palp articles 2–5 with both margins setose, those of lateral margins being longer than and less close-set those of medial margins; articles 2–5 lateral margins with 2, 13, 8 and 4 slender simple setae respectively; articles 2–4 medial margins with 11, 22 and 21 slender simple setae respectively; article 5 distal margin

with about 13 simple setae; endite (Fig. 2H) with minute acute distal lobe, with one coupling hook and 6 large CPS.

Pereopod 1 (Figs 3A, 3B) *basis* twice as long as wide, superior proximal margin with 2 small simple setae, superior distal margin with 2 long simple and 1 palmate distal setae, inferior distal angle with 1 acute RS and ~11 long slender simple setae; *ischium* 0.64 as long as basis, distal half of inferior margin with 4 acute and 1 molariform RS, superior distal angle with 5 long slender simple setae, mediolateral margin with 4 long and 1 short simple slender setae; *merus* about half as long as ischium, superior distal angle with about ~6 long slender simple setae and 1 robust seta, distomedial angle with 1 acute robust seta, inferior margin with 6 molariform robust setae between which are set 3 bifid RS each with prominent accessory flagellum and 2 simple acute RS; *carpus* inferodistal angle with 3 robust set, mediolateral margin with 3 short slender setae; *propodus* about 2.3 times as long as wide, 0.9 times as long as ischium, inferior margin with 2 RS on palm, each with prominent accessory flagellum, distally with 1 large robust seta and 2 slender setae opposing dactylus (Fig. 3B) superior distal angle with 2 slender setae; *dactylus* about 60% length of propodus.

Pereopod 2 (Fig. 3C) proportions similar to that of pereopod 1, slightly longer, *carpus* proportionally longer; *basis* superior proximal margin with 3 small palmate setae, superior distal margin with 2 long simple setae, inferior distal angle with ~10 long slender simple setae; *ischium* 0.76 as long as basis, distal half of inferior margin with 4 long acute, 2 long molariform RS and 3 short acute RS, superior distal angle with ~6 long slender simple setae, mediolateral margin with 2 long and 3 short simple slender setae; *merus* superior distal angle with about 5 long slender simple setae and 1 large and 1 short blunt RS, distomedial margin with 1 slender seta, inferior margin with 6 blunt long molariform setae which increase in size distally and 4 slender simple setae; *carpus* inferior margin with 1 stout robust setae and 3 small slender setae, mediolateral margin with 3 slender setae; *propodus* about 2.6 times as long as wide, 0.52 as long as ischium, inferior margin with 3 robust setae and stout RS opposing dactylus; *dactylus* about 61% length of propodus.

Pereopod 3 similar to pereopod 2.

Pereopod 4 (Fig. 3D) intermediate in form between pereopods 1–3 and 5–7.

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Figure 3. *Baharilana richmondi* sp. nov. All figs of ♂ paratype (6.2 mm). **A.** pereopod 1; **B.** pereopod 1, dactylus; **C.** pereopod 2; **D.** pereopod 4.

Figure 3. *Baharilana richmondi* sp. nov. A-D sont du paratype ♂ (6.2 mm). **A.** péréiopode 1 ; **B.** dactyle du péréiopode 1 ; **C.** péréiopode 2 ; **D.** péréiopode 4.



Pereopod 6 (Fig. 4A) basis 2.1 times as long as wide, superior margin distinctly convex, inferior margin straight, inferior margin with 15 evenly-spaced long slender simple and plumose setae, superior margin with 4 small widely-spaced setae, superior distal angle with ~ 9 long slender simple setae, medial carina distally with 4 long simple setae; *ischium* superior distal angle with 3 long simple setae and 5 large acute RS, mediobasal margin with 1 acute RS, inferior margin with 3 clusters of 2, 3 and 3 acute RS, inferobasal angle with 3 large RS and 3 simple setae; *merus* superior distal angle with 8 long simple and 2 biserrate RS, inferior margin with 2 clusters of 1 and 4 acute RS, inferobasal angle with 2 long and 4 short large RS; *carpus* superior distal angle with 5 long simple and 2 biserrate RS inferior margin with one cluster of 2 robust setae, inferior distal angle with about 6 simple and 1 biserrate setae; *propodus* superior angle with 1 slender seta, 1 acute RS and 1 palmate seta, posterior margin cluster of 1 RS and 2 slender seta, inferobasal angle with 2 blunt RS and 2 slender finely biserrate setae.

Pereopod 7 (Figs 4B–D) is largely similar to pereopod 6, but is slightly shorter and more slender; merus and carpus has abundant long biserrate RS.

Penes (Fig. 5A) separated by 0.8 basal width of penial process, 2.6 times as long as basal width, with sub-basal constriction; lateral margin weakly concave, medial margin convex giving appearance of each process curving weakly laterally; distally rounded.

Pleopod 1 (Fig. 5B) endopod 0.42 times as wide as exopod, medial margin straight, lateral margin very weakly concave, with ~24 PMS; exopod sub-circular in shape, with ~37 PMS, lateral and medial margins evenly rounded; peduncle with 5 coupling hooks.

Pleopod 2 (Fig. 5C) exopod and endopod with ~51 and 31 PMS respectively; peduncle with 4 coupling hooks; *appendix masculina* (Fig. 5C) distally acute, about 15 times as long as basal width. Pleopods 3–5 with exopod suture distinct and entire.

Pleopod 3 (Fig. 5D) exopod and endopod with ~53 and 13 PMS respectively, peduncle with 4 coupling hooks.

Pleopod 4 (Fig. 5E) exopod and endopod with ~53 and 10 PMS respectively, peduncle with 3 coupling hooks.

Pleopod 5 (Fig. 5F) exopod with about ~ 49 PMS.

Uropod peduncle lateral margin (Fig. 6A) with 7 plumose and 1 simple long slender setae, ventrodistal margin (Fig. 6D) with 1 large RS and 9 plumose and 1

simple long slender setae, distomedial margin with 4 PMS; *exopod* 4.2 times as long as greatest width, about as long as endopod, lateral margin with 4 acute RS and continuous row of short PMS, medial margin with 3 RS, both margins weakly convex proximally, appearing nearly straight, apex (Fig. 6C) weakly and widely bifid; *endopod* about as long as wide, lateral margin convex with 5 RS and 12 PMS, lateral margin with 3 RS and ~10 PMS, apex (Fig. 6B) weakly and widely bifid.

Variation

Robust setae: males (n=7) pleotelson RS 3+3 (100%), uropod exopod medial margin 3 (80%, 4 and 2 each occurring once), lateral margin 4 (50%) or 5 (50%); uropod endopod medial margin 5 (71%) or 6 (29%), lateral margin 3 (100%); females (n=10) pleotelson RS 3+3 (100%), uropod exopod medial margin 3 (79%), 4 and 2 (each 10.5%), lateral margin 4 (61%) or 5 (39%); uropod endopod medial margin 5 (75%) or 6 (25%), lateral margin 3 (95%) or 4 (5%). The proximal robust seta on the exopod lateral and medial margin is minute, and not readily observed by stereoscopic transmitted light microscopy. It is quite probable that the exopod in fact has 5 RS on the lateral margin and 4 RS on the medial.

In immature males the appendix masculina is shorter and not obviously laterally curved as well as being more distally attached. Otherwise adult specimens appear similar.

The posterior margin of the pleotelson shows a slight variation in some specimens being slightly flattened or indented in others appearing evenly rounded.

Colour

Specimens are translucent when alive or freshly captured, changing to opaque white on preservation. Some specimens, usually the smaller ones, have a few minute chromatophores on the lateral body margins adjacent to the join with the coxae.

Size

Males 5.6–6.1 mm, one immature male at 6.0 mm; females 6.9–8.2 mm, manca measured at 3.2–4.4 mm. It is not possible to determine the sex of specimens of a size less than 6 mm in the absence of evident penial processes or appendix masculina.

Remarks

Baharilana richmondi sp. nov. is best separated from the other species in the genus by the evenly rounded pleotelson

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Figure 4. *Baharilana richmondi* sp. nov. All figs of ♂ paratype (6.2 mm). **A.** pereopod 6; **B.** pereopod 7; **C.** medial margins of carpus, pereopod 7; **D.** dactylus, pereopod 7.

Figure 4. *Baharilana richmondi* sp. nov. A–D sont du paratype ♂ (6.2 mm). **A.** péréiopode 6 ; **B.** péréiopode 7 ; **C.** bord médial du carpus, péréiopode 7 ; **D.** dactylus, péréiopode 7.

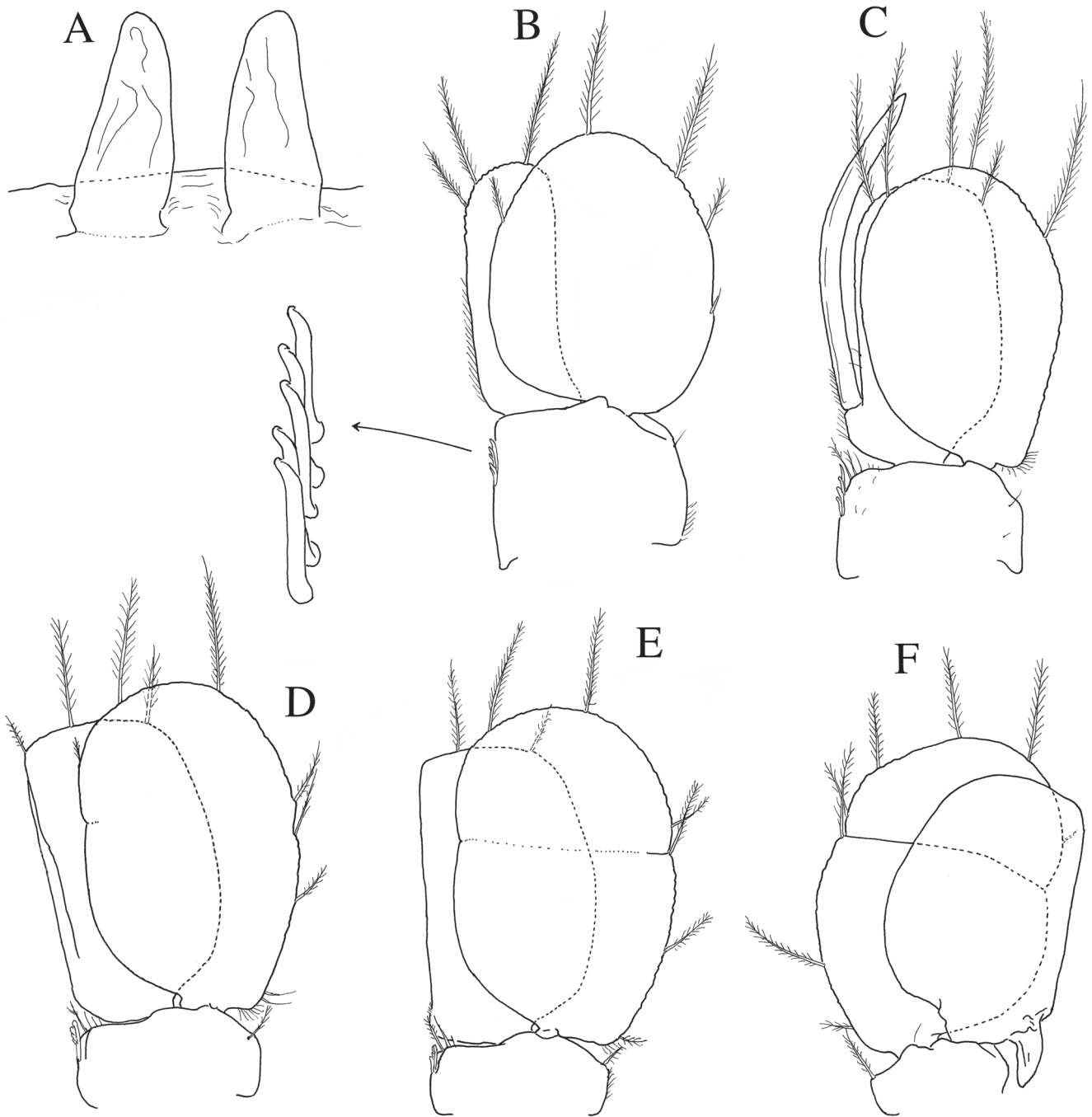


Figure 5. *Baharilana richmondi* sp. nov. All figs of ♂ paratype (6.2 mm). **A.** penes; **B–F,** pleopods 1–5 respectively.

Figure 5. *Baharilana richmondi* sp. nov. A–F sont du paratype ♂ (6.2 mm). **A.** pénis ; **B–F,** pléopodes 1–5 respectivement.

with smoothly convex margins, the dorsal surface of which has two weakly-defined longitudinal sub-median ridges.

Distribution

Known only from north-eastern Unguja Island at Matemwe and off the nearby Mnemba Island reef, at depths of

approximately 20–40 metres, on sand and mixed sand and rubble bottoms, close to but not on the hard reef.

Etymology

We take pleasure in naming this species for Dr Matt Richmond (formerly of the Institute of Marine Sciences,

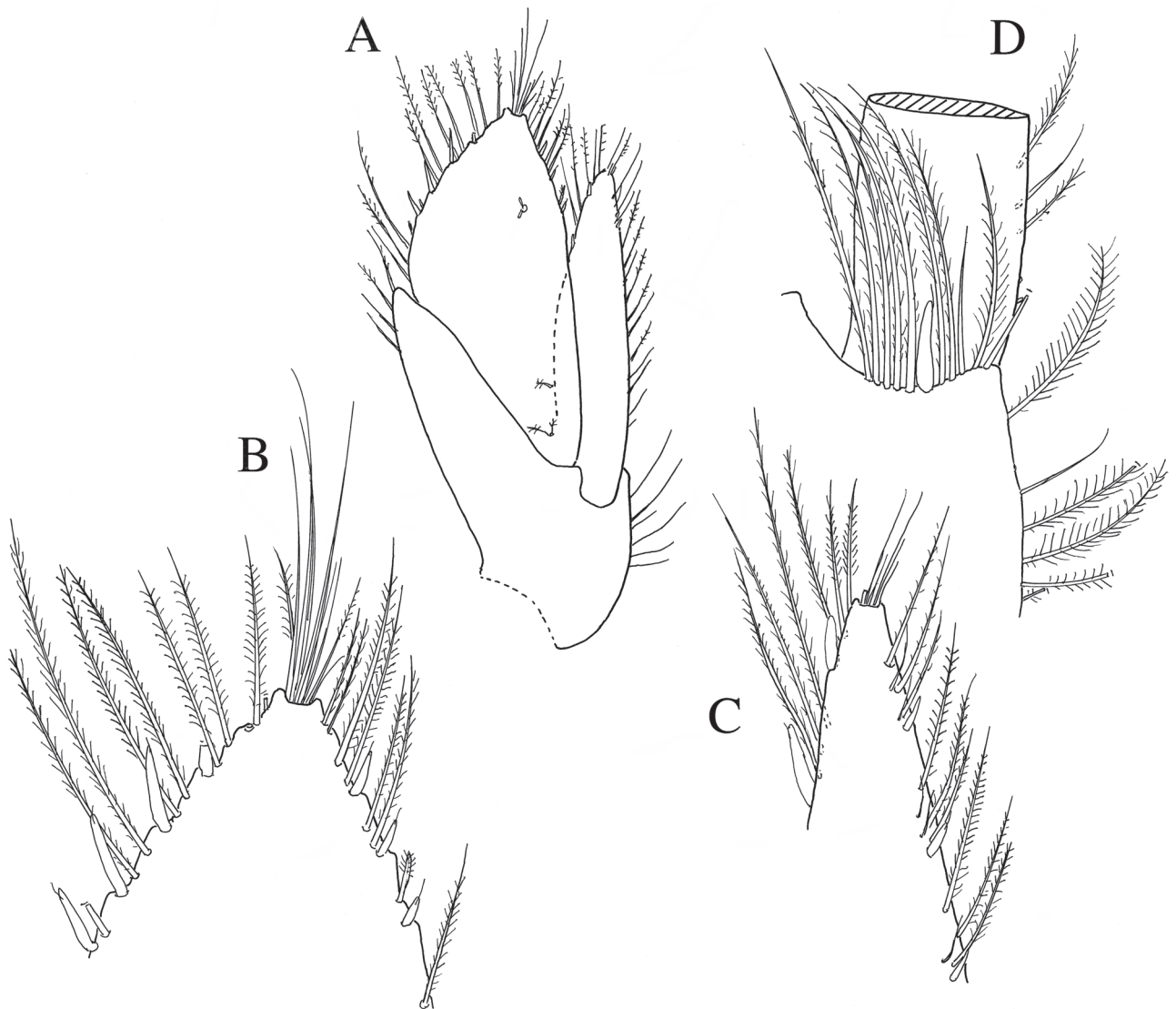


Figure 6. *Baharilana richmondi* sp. nov. All figs of ♂ paratype (6.2 mm). **A.** uropod; **B.** uropod endopod apex; **C.** uropod exopod apex; **D.** uropod peduncle ventrolateral margin.

Figure 6. *Baharilana richmondi* sp. nov. A–D sont du paratype ♂ (6.2 mm). **A.** uropode ; **B.** sommet de l'endopodite de l'uropode ; **C.** sommet de l'exopodite de l'uropode ; **D.** bord ventro-latéral du pédoncule de l'uropode.

University of Dar es Salaam at Zanzibar) in recognition of his contribution to the marine sciences in the Western Indian Ocean both directly and through generous assistance to visiting taxonomists such as ourselves.

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