



***Triaina*, a new genus in the Janirellidae Menzies, 1956 (Crustacea: Isopoda: Asellota), with two new species from south-eastern Australia, and a new diagnosis for the family**

JEAN JUST

Natural History Museum (Zoological Museum), University of Copenhagen, Universitetsparken 15, DK-2100, Copenhagen, Denmark.
(Hon. Associate, Museum Victoria, Melbourne, Australia.). E-mail: ijust@snm.ku.dk

Abstract

The varying concepts of Janirellidae Menzies, 1956 are outlined, including its rejection by several authors. The view of Wilson and Wägele of Janirellidae being a valid family comprising *Janirella* Bonnier, 1896 and presumably *Dactylostylis* Richardson, 1911 (= *Spinianirella* Menzies, 1962) is accepted. Diagnoses of the Janirellidae subsequent to Menzies' original one were based on the inclusion of a diverse range of genera now recognised as not belonging in that family. A new diagnosis of Janirellidae is presented based on the inclusion of *Janirella*, *Dactylostylis*, and a new genus *Triaina* with two new species, *T. isodonte* and *T. makridonte*, from south-eastern Australia. The latter species represents the shallowest record (80 m) of the otherwise predominantly deep-water family. All species in the family are listed in an appendix, with area of type locality and depth range.

Key words: Isopoda, Asellota, Janirellidae, new diagnosis, *Triaina* gen. nov., *T. isodonte* sp. nov., *T. makridonte* sp. nov., Australia

Introduction

Members of the janiroidean asellote family Janirellidae Menzies, 1956a (as Ianirellidae) are found primarily in the deep sea, with 40 of the 42 known species (including one of the two new species described here) occurring at depth greater than 500 meters, and 19 of these found only at abyssal and hadal depths between 3000 and 9000 meters (see Appendix). Janirellidae have been reported in the Atlantic from south of Iceland through the Caribbean to off South Africa, as well as from the north-western and south-eastern Pacific and the Bougainville Trench in the Solomon Sea.

As originally conceived by Menzies (1956a) the family included only *Janirella* Bonnier, 1896. Subsequently Menzies (1962a) included *Spinianirella* Menzies, 1962a (= *Dactylostylis* Richardson, 1911, see Hessler 1968) and “possibly *Rachura* Richardson, 1911” in the family. Menzies (1962b: 83) re-diagnosed the family to include several genera that are now placed in other families or as Janiroidea *incertae sedis*: *Ianthopsis* Beddard and *Acanthaspidia* Stebbing (Acanthaspidiidae), and *Iolanthe* Beddard (= *Acanthaspidia*), see Brandt (2001); *Microprotus* Richardson (Munnopsidae), see Wilson *et al.* (1989); *Iolella* Richardson (= *Tole* Ortmann) and *Rachura* Richardson, both Janiroidea *incertae sedis*, see Wilson and Wägele (1994). Menzies (1962b) did not mention *Spinianirella* as part of the Janirellidae, and this genus has no cross reference in either of his two 1962 papers. The family diagnosis, with included genera, in Menzies and George (1972) is a repeat of Menzies 1962a.

The family Janirellidae was not accepted by Wolff (1962), Hessler (1968), Gamo (1982, 1983), or Kusakin (1988), all of whom placed *Janirella*, and in the cases of Wolff and Hessler also *Dactylostylis*, in a broad concept of the family Janiridae. Birstein (1963a) accepted Menzies' (1956a) original concept of the family. Kensley and Heard (1985) described a new species in *Spinianirella* which they placed in the Janiridae; they did not mention Hessler's (1968) transfer of the genus into *Dactylostylis*. Wägele (1989) retained the family Janirellidae at least for the genus *Janirella* pending further comparative studies. Wilson and Wägele (1994) in their comprehensive review of the Janiridae rejected the inclusion of *Janirella* and *Dactylostylis* in that family and referred them to Janirellidae as the only two genera in that family. George (2004), in presenting a diagnosis of Janirellidae, included *Janirella*, *Spinianirella*, and *Rachura* Richardson, 1908. He also included a new genus and species, *Chandra taylorae*, comparing it only to *Katianira* Hansen, 1916 (Katianiridae Svavarsson, 1987), and specifically to the type species *Katianira chelifera* Hansen, 1916. He did not mention Svavarsson's (1987) monographic revision of the Katianiridae. Shimomura and Akiyama (2006) removed *Chandra* to the Katianiridae and placed *C. taylorae* in synonymy of *Katianira bilobata* Gurjanova, 1930. George (2004) gave a brief summary of species of *Janirella*, but he listed only 23 of the then 37 known species.

In this paper Wilson and Wägele's (1994) concept of Janirellidae as comprising only *Janirella* and *Dactylostylis* is followed, and a third genus, *Triaina* **gen. nov.**, is included. A new diagnosis of the Janirellidae is presented, and a full list of all species in the family is given in the Appendix.

Janirellidae

The only valid diagnosis of Janirellidae is Menzies' original one (1956a), which included only the type genus *Janirella* Menzies (1956). All subsequent diagnoses, based on different combinations of included genera, are now recognised as erroneous. Menzies' (1956a) diagnosis is brief and does not cover the current concept of the family. An amended diagnosis is presented here based on the inclusion of *Dactylostylis* Richardson, 1911, *Janirella* Bonnier, 1896, and *Triaina* **gen. nov.**

Diagnosis. Cephalon free, without eyes; pereon subcylindrical or flattened; pereonites with or rarely without lateral spines. Pleon with no free pleonites, lateral margins with spines or irregular denticles, posterior margin evenly rounded to strongly projecting between uropods; anus ventral, covered by opercular pleopods; pleopodal chamber open posteriorly through more or less extended dorsal groove (e.g. Fig. 3, pt2), or groove absent. Antennula much shorter than antenna, not sexually dimorphic, article 1 much larger than succeeding articles. Antenna elongate, article 3 with articulated scale, or scale absent, articles 1–4 short, compact, 3 occasionally elongate. Mandibles with triturating apically serrate and setiferous molar, palp article 3 spoon-shaped. Maxillipedal palp articles 2 and 3 expanded medially. Pereopod I carposubchelate. Pereopods II–VII ambulatory, subsimilar; dactylar main claw large, posterior claw small or absent. Male pleopod I with nearly parallel sides, slightly tapering towards rounded, truncate or deeply bifid apices. Male pleopod II stylet straight to moderately curved. Pleopod III exopod shorter than endopod, 1- or 2-articulate, without plumose setae; endopod with 3 to 7 plumose setae on distal margin. Pleopod IV with short 1-articulate exopod, or exopod lacking, endopod a simple oval sack. Pleopod V without exopod, endopod a simple oval sack. Uropods uniramous, paucisetose, rod-like, inserting posterolaterally.

Type genus. *Janirella* Bonnier, 1896.

Genera included. *Dactylostylis* Richardson, 1911; *Janirella* Bonnier 1896, *Triaina* **gen. nov.**

Remarks. With reference to the diagnosis presented above, *Dactylostylis* differs from *Janirella* and the new genus *Triaina* on the following points: pleopodal chamber closed, without posterior groove; without antennal scale on article 3; pleopod III exopod longer than endopod, 2-articulate; pleopod IV without exopod.

Key to genera and subgenera in the Janirellidae

1. Cephalon with true rostrum, or pseudorostrum derived from frons/clypeus; front margin between antennulae > 2 times width of antennula base; posterior margin of pleotelson projecting between uropods; uropods normally > 0.2 length of pleotelson2
- Cephalon front without rostrum or pseudorostrum, front margin between antennulae equal to width of antennula base; posterior margin of pleotelson an even convex curve between uropods; uropods > 0.7 length of pleotelson.....*Dactylostylis*
2. Cephalon with true rostrum, simple or complex; body generally fusiforme, with lateral spines (for exceptions see Discussion)..... 3 *Janirella*
- Cephalon with distinctive pseudorostrum; body flattened, body margins parallel, pereonites laterally truncate without spines..... *Triaina* gen. nov.
3. Pleotelson with several lateral projections; lateral projections of pereonites setiferous (*Janirella*)
- Pleotelson with single lateral projection; lateral projections of pereonites without setae (*Parjanirella* Birstein, 1971)

Triaina gen. nov.

Diagnosis. Janirellidae with flattened body, body margins parallel. Pereonites lateral margins squarely truncate. Head broader than long, with distinctive pseudorostrum, front margin straight to slightly convex. Pleotelson irregularly rectangular; posterior projection short, broadly rounded or truncate, barely projecting beyond distolateral corners of pleotelson. Head, body and pleotelson without dorsal or lateral spines or robust setae. Uropods tiny.

Type species. *Triaina isodonte* sp. nov. Here designated.

Included species. *Triaina isodonte* sp. nov., *T. makridonte* sp. nov.

Etymology. The genus name is the Greek τριαινα (*triaina*) meaning trident, Poseidon's three-pronged fish spear, alluding to the shape of the pseudorostrum.

Remarks. *Triaina* differs from *Janirella* and *Dactylostylis* in possessing a distinctive pseudorostrum, in the flattened, parallel-sided body, in lacking lateral and/or dorsal spines or robust setae on pereon and pleon; and from *Dactylostylis* in the tiny uropods.

Triaina isodonte sp. nov.

Figs 1–4

Type fixation. Holotype, male, here designated. Australian Museum, AM P76939.

Type locality. Tasman Sea, off NE coast of Tasmania.

Material examined. **Holotype**, male, 7.5 mm (tip of pseudorostrum to apex of pleotelson), east of Swan Island, Tasmania, Australia, 40°45.94'S 149°01.62'E to 40°46.54'S 149°00.27'E, 2400–2500 m, light grey clay and mud, sledge, 10 December 1986, ORV *Franklin*, stn FR1086-4, Australian Museum, AM P76939.

Paratypes (14 specimens). Same data as holotype, AM P76941 (1 female). Same data as holotype, AM P76940 (2 females, 3 broken specimens). Tasmania, 48 km ENE of Cape Tourville, Freycinet Peninsula, 42°00.25'S 148°43.55'E to 41°57.77'S 148°42.08'E, 1264–1130 m, gravel, lumps of sandy mud, WHOI epibenthic sled, G.C.B. Poore *et al.*, 30 October 1988, ORV *Franklin*, stn SLOPE-81, Museum Victoria NMV J18674 (1 pleotelson). Tasmania, 54 km ENE of Cape Tourville, Freycinet Peninsula, 41°57.30'S 148°58.54'E to 41°56.86'S 148°56.97'E, 1770–1735 m, coarse biogenic sand, WHOI epibenthic sled, G.C.B. Poore *et al.*, 30 October 1988, ORV *Franklin*, stn SLOPE-82, NMV J18675 (1 juvenile male, 6 broken specimens).

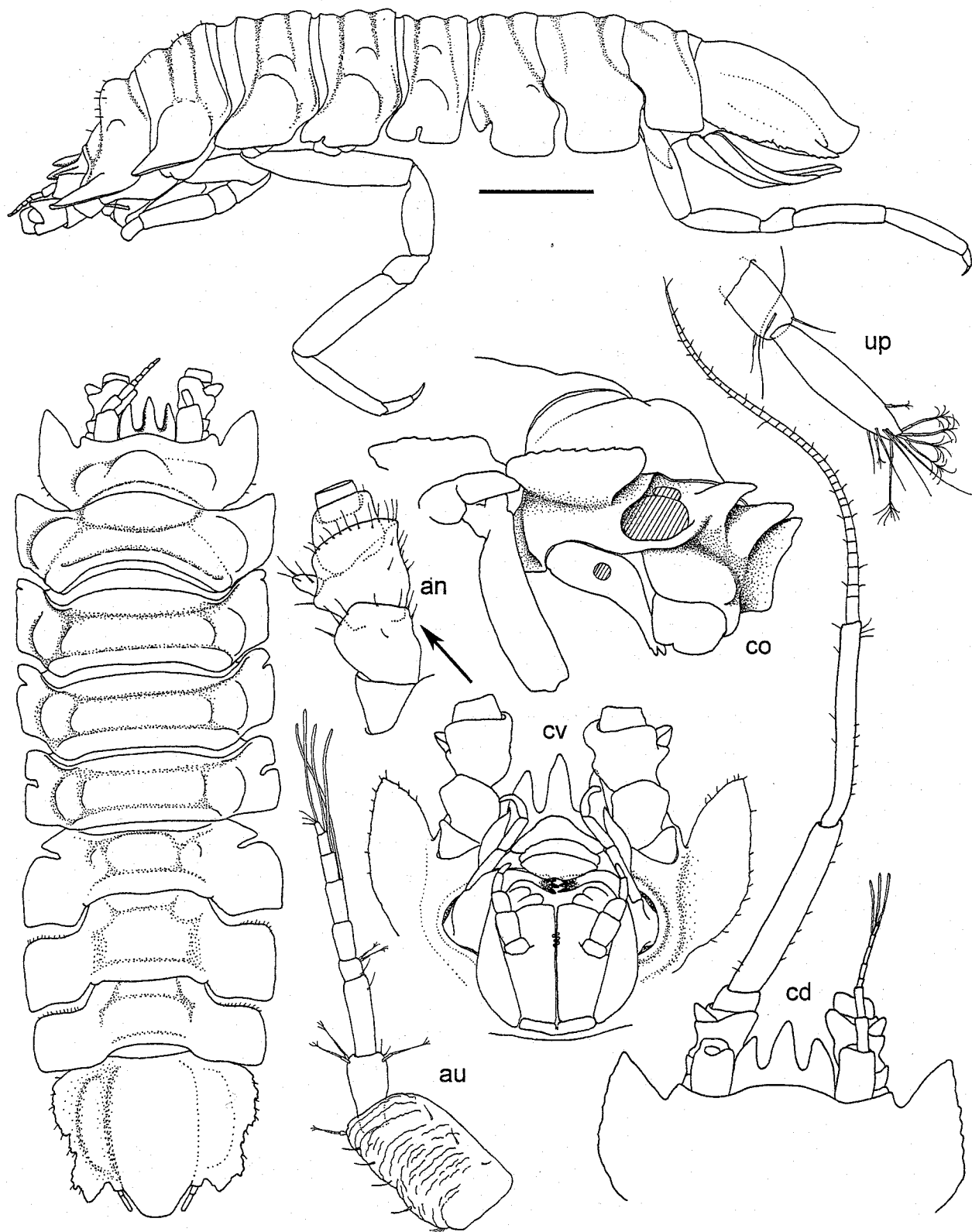


FIGURE 1. *Triaina isodonte* sp. nov. Holotype, male. Lateral and dorsal views. **an**, antenna articles 1–4 with antennal scale; **au**, antennula; **cd**, dorsal view of head with antennula and antenna; **co**, oblique anterolateral view of head, antennula and antenna insertions indicated by hatching; **cv**, ventral view of head; **up**, uropod. Scale bar for both habitus illustrations: 1 mm.



FIGURE 2. *Triaina isodonte* sp. nov. Holotype, male. II, lower lip; md r, right mandible; mx1 and mx2, maxilla 1 and 2; mxp, maxilliped.

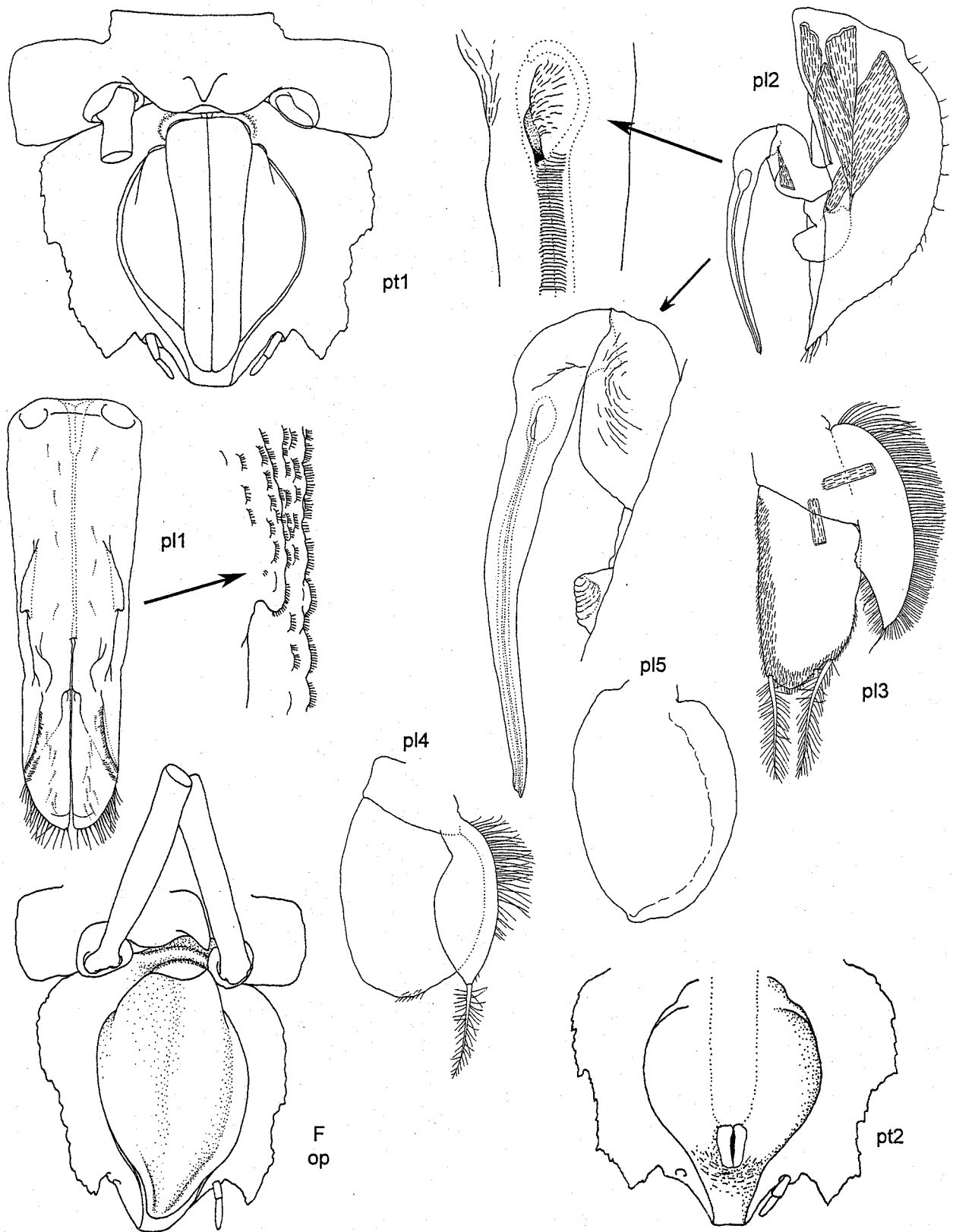


FIGURE 3. *Triaina isodonte* sp. nov. Holotype, male, except F, female paratype. **op**, female operculum in situ, oblique view; **pl1**–**pl5**, pleopods I–V; **pt1**, ventral view of pleon with pleopods in place; **pt2**, ventral view of pleon with pleopods removed, exposing anus.

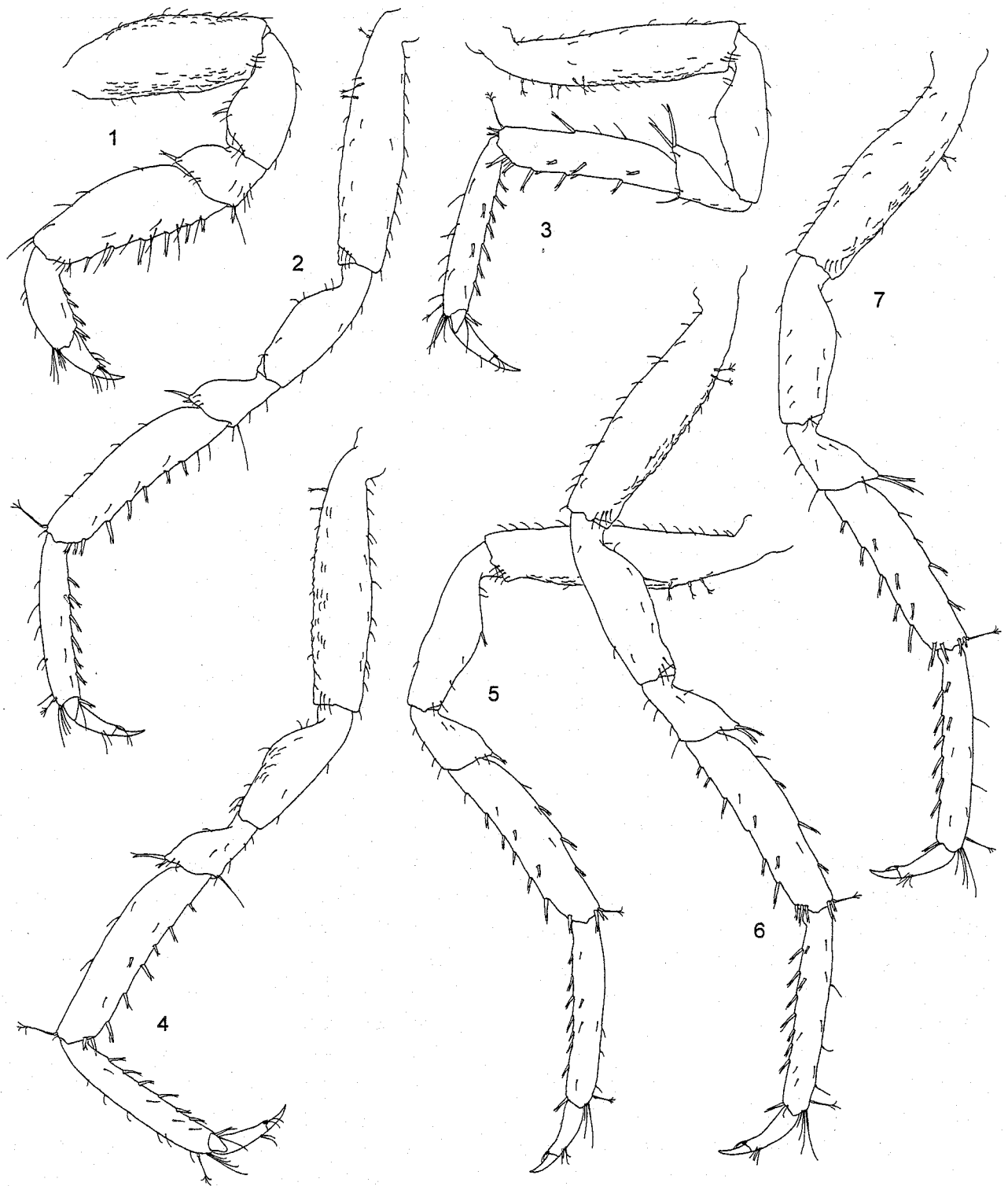


FIGURE 4. *Triaina isodonte* sp. nov. Holotype, male. 1-7, pereopods I-VII.

Description. Head approximately 4 times wider than long, *frontal margin* a low even curve; *pseudorostrum* with 3 equal sized prongs reaching just beyond article 1 of antennulae; dorsal surface of head with 3 rounded humps, middle one the largest; lateral margins straight, with forward pointing triangular projection.

Pereonites 1-6 of equal width, 7 slightly less wide; 1-4 and 6 of subequal length, 5 and 7 slightly shorter; all pereonites dorsally with 2 transverse grooves, 1-4 with 2 dorsolateral humps each side; lateral margins 1-4

flattened, truncate, 2–4 with small incision, smallest and most anteriorly in 2; pereonite 5 anterolateral margins with deeper, narrow incision, anterior lobe acute, posterior lobe broad, laterally truncate; pereonites 6–7 similar to 5, but without incision. Pereonite 7 with mid-ventral pointed, posteriorly curved spine.

Pleotelson nearly as wide as pereonite 7, as long as pereonites 1 and 2 combined; lateral margins convex in proximal half, concave distally merging into projecting bifid corners; entire lateral margins and projections irregularly serrate; posterior projection broadly rounded, margin smooth, reaching beyond lateral corners by half its length.

Antennula of 9 articles, reaching to half length of antenna article 5, article 4 distinctly shorter than 3 and 5, 6–9 with single aestetasc. *Antenna* as long as head, pereonites 1–5 and half of 6 combined, flagellum of approximately 40 articles (41 in Fig. 1cd); entire antenna with a few short simple setae.

Mouthparts. *Upper lip* rounded, asymmetrically notched apically. *Mandible:* lacinia mobilis of left mandible about as strong as incisor, with similar dentition; setal row on both side of approximately 10 setae, distal ones broad, serrate; palp articles 1 and 2 of subequal length, 2 with long hemiplumose setae distally, 2 and 3 with many cuticular combs on surface, 3 with dense row of stiff setae on concave margin. *Lower lip* with large rounded outer lobes set at 45° angle to midline; inner lobes small, rounded, adpressed in midline. *Maxilla 1* outer plate with 12 strong setae, all but distalmost 2–3 serrate, lateral margin with tufts of fine setules in middle; inner plate with two short robust setae on apex surrounded by simple setae, lateral margin with scattered long setules. *Maxilla 2* outer and middle lobes subequal, slender, curved; inner lobe broader, shorter, with rounded apex; outer lobe with 4 pectinate setae apically, lateral and medial margins with simple setae and setules; middle lobe apex as outer lobe, distal half of medial margin with dense row of stiff sharply pointed, microdentate setae; inner lobe with numerous simple setae distally, a single long hemiplumose seta on medial margin and many long setules more proximally. *Maxilliped,* epipod tapering distally, reaching to base of palp article 4, heavily covered with cuticular ridging, margins with fine setules; apex of endite concave with row of 5 broad fan-shaped setae surrounded by simpler setae; palp article 2 with cover of fine setules on ventrolateral surface.

Pereopod I shorter and more robust than succeeding legs; basis length 2.7 width; ischium expanded distally, 0.65 length of basis; merus 0.4 length of ischium, with short anterodistal triangular projection; carpus length 2.7 width, slightly tapering distally, posterior margin with row of 6 robust setae; propodus 0.6 length of carpus, with 4 robust setae along posterior margin; dactylus 0.7 length of propodus, main claw 0.4 length of dactylar body. *Pereopods II–VII* identical walking legs; basis length approximately 5 times width; ischium expanded dorsally in middle, length 0.54–0.60 length of basis; merus more slender than in pereopod I but of similar shape; carpus with parallel sides, length approximately 4 times width, with posterior row of short robust setae; propodus more slender than carpus, about 0.9 length of carpus, with posterior row of short robust setae; dactylus 0.4 length of propodus, main claw 0.4 length of dactylar body.

Male. *Pleopod I* length 3.2 proximal width, lateral margins straight, slightly tapering, apical lobes evenly rounded without corners, with dense fringe of simple setae; stylet guide groove opening distolaterally. *Pleopod II* protopod acutely pointed; stylet in retracted position reaching to tip of protopod, slightly curved. *Pleopod III* endopod subrectangular, part of lateral, distal and medial margins with dense cover of fine setules, apically with 3 plumose setae; exopod free part about half length of endopod, acutely pointed, lateral margin and distal half of medial margins fringed with long setules, apex with single simple seta. *Pleopod IV* exopod narrowly ovoid with pointed apex, as long as endopod, proximal 2/3 of lateral margin with fringe of long setules, apex with long plumose seta; endopod broadly oval, with a few tiny setules on apex. *Pleopod V* similar to but slightly larger than endopod pleopod IV, without apical setules. *Female operculum* ovoid, apex rounded.

Uropods not reaching apex of pleotelson posterior projection, ramus approximately twice length of protopod, with apical tuft of simple and penicillate setae.

Distribution. Eastern Tasmania, Australia, 1130–2500 m.

Remarks. *Triaina isodonte* sp. nov. differs from its only known congener, *T. makridonte* sp. nov. (see below), primarily by having all three prongs of the pseudorostrum of equal size (middle prong much longer than the two side prongs in *T. makridonte*) and by having incisions in the lateral margin of pereonites 2–5 (lateral margins entire).

Etymology. The species name is composed of the Greek ισος (isos) meaning equal and δόντι (donte) meaning tooth, alluding to the near equal size of the three pseudorostral prongs.

Triaina makridonte sp. nov.

Figs 5–7

Type fixation. Holotype, male, here designated. Australian Museum, AM P76938.

Type locality. Eastern Australia, New South Wales.

Material examined. Holotype, juvenile male (pleopods I and II not fully developed; left side of pereonite 3 damaged; antennae and all pereopods except pereopod I broken off), 6.8 mm (tip of pseudorostrum to apex of pleotelson), east of Port Jackson, New South Wales, Australia, 33°52'S 151°23'E, 80 m, mud, 2.5m sledge dredge, 11 December 1980, FRV *Kapala*, stn K80-20-11, Australian Museum, AM P76938.

Description. Head approximately 2.5 times wider than long, frontal margin nearly straight; pseudorostrum with middle prong 3 times longer and much broader than side prongs, middle prong reaching just beyond article 1 of antennulae; dorsal surface of head with single low, broad, rounded hump in proximal half; lateral margins straight, with forward pointing triangular projection.

Pereonites 1–3 of equal width, 4–7 successively slightly less wide; 1–2 of equal length, slightly longer than subequal length 3–7; pereonites 1–3 with single anterior transverse groove, 4 with 2 grooves, 5 with single posterior transverse groove and two oblique grooves more anteriorly, 6 with single, 7 with 2 grooves, 1–5 with single low dorsolateral hump each side; lateral margins 1–4 flattened, truncate, entire; pereonite 5 lateral margins entire, obliquely truncate; pereonites 6–7 rectangular; pereonite 7 with mid-ventral pointed spine.

Pleotelson nearly as wide as pereonite 7, as long as pereonites 1 and 2 combined; lateral margins straight, slightly tapering towards sharply acute corners; entire lateral margins and projections finely serrate; posterior projection short, truncate, margin smooth, reaching as far as lateral corners.

Antennula of 9 articles, reaching just beyond article 4 of antenna, article 7–9 with single aestetasc.

Maxilliped, epipod tapering distally, reaching 2/3 length of palp article 4, partly covered with cuticular ridging, distal half of medial margin and apex with fine setules; apex of endite concave with row of 5 slender fan-shaped setae surrounded by assortment of simple and plumose setae; palp article 2 without cover of fine setules on ventrolateral surface.

Pereopod I basis length 3.5 width; ischium expanded distally, 0.54 length of basis; merus 0.47 length of ischium, with short anterodistal triangular projection; carpus length 3.0 width, slightly tapering distally, posterior margin with row of 10 robust setae; propodus 0.42 length of carpus, with 5 robust setae along posterior margin; dactylus 0.9 length of propodus, main claw 0.4 length of dactylar body.

Male (juvenile) pleopod I length 3.3 proximal width, lateral margins straight, slightly tapering, apical lobes evenly rounded without corners, with fringe of simple setae. Pleopod II protopod acutely pointed with apical simple setae. Pleopods III–V as in type species.

Uropods reaching well beyond apex of pleotelson posterior projection, ramus subequal in length to protopod, with apical tuft of simple and penicillate setae and 1 long simple seta.

Distribution. South-eastern Australia, 80 m.

Remarks. For comparison with *Triaina isodonte* sp. nov. see that species, above. *Triaina makridonte* sp. nov. represents the shallowest record of the family.

Etymology. The species name is composed of the Greek μακρίς (makris) meaning long, and δόντι (donte) meaning tooth, alluding to the middle pseudorostral prong being much longer than the two lateral ones.

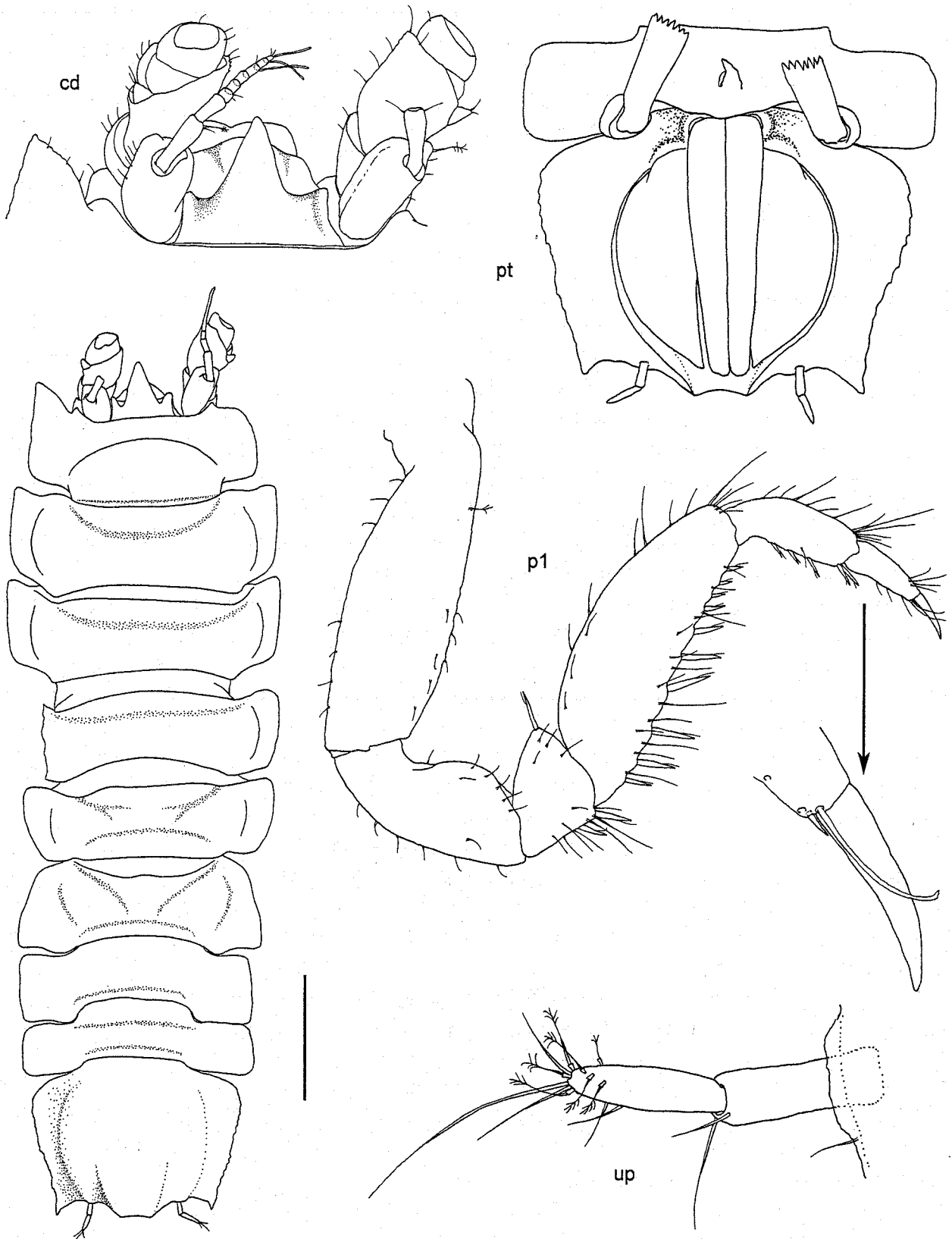


FIGURE 5. *Triaina makridonte* sp. nov. Holotype, male. **cd**, dorsal view of head; **p1**, pereopod I; **pt**, ventral view of pleotelson; **up**, left uropod. Scale bar: 1 mm.

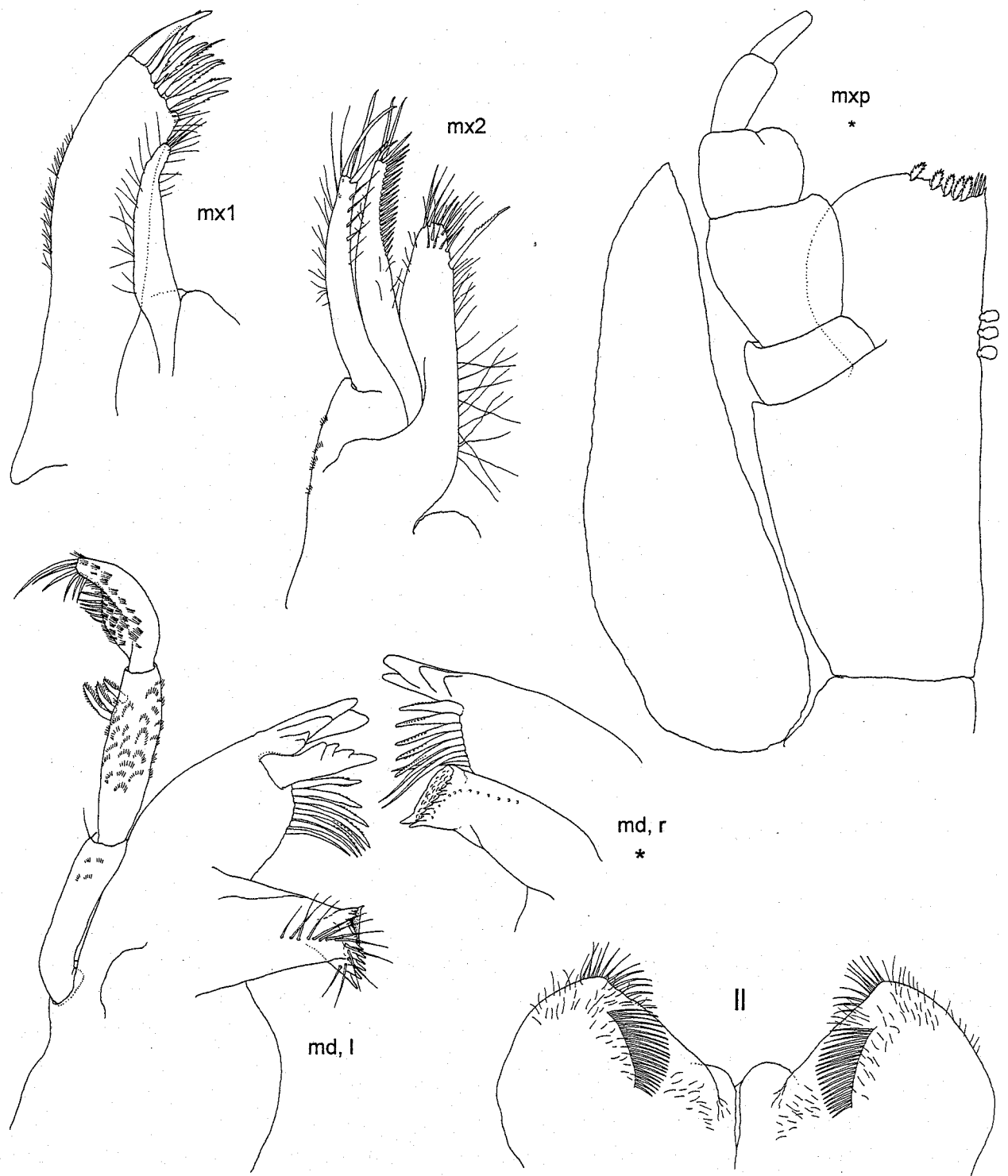


FIGURE 6. *Triaina makridonte* sp. nov. Holotype, juvenile male. II, lower lip; md, mandible; r, right; l, left; mx 1–2, maxilla 1 and 2; mxp, maxilliped. Asterisk: some setae omitted.

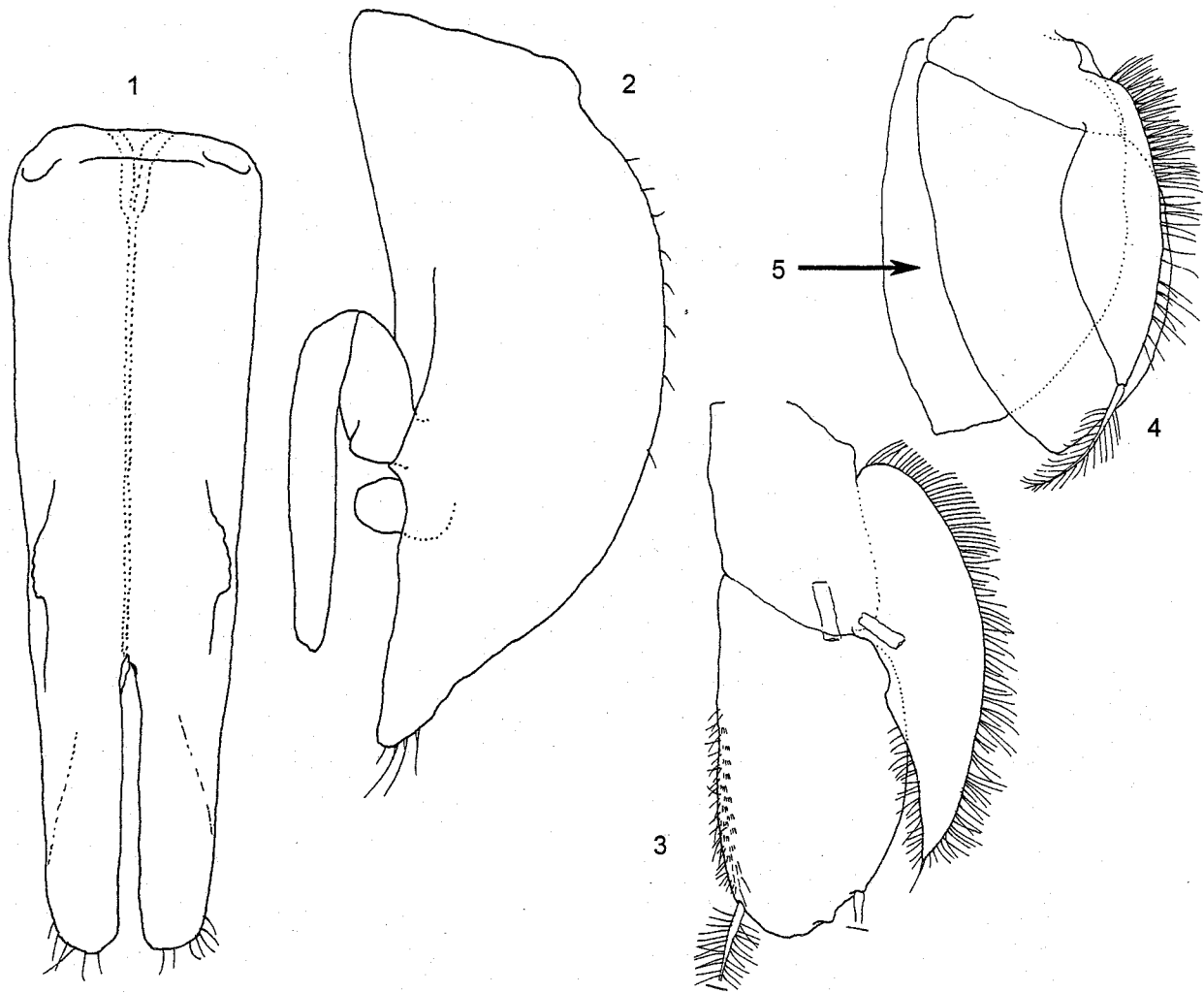


FIGURE 7. *Triaina makridonte* sp. nov. Holotype, juvenile male. 1-5, pleopods I-V.

Discussion

Generally species in the Janirellidae are easily assigned to genus according to the key presented herein. A single described species of *Janirella* may, however, cause difficulties. *Janirella hessleri* Chardy, 1975 has a body shape which is closer to *Triaina* than to other species of *Janirella*, flattened with near parallel lateral margins without prominent lateral spines on pereonites. The species does, however, have a distinct pointed rostrum, which places it outside *Triaina* as here diagnosed. A few described species of *Janirella* appear to lack or nearly lack a rostrum, notably *J. vemae* Menzies, 1962a and *J. aculeate* Gamô, 1983. Menzies reported his species (holotype) as being 'intersex', which would seem to indicate that it is a juvenile male. Gamô's species is based on a 'juvenile female' (= manca). Whilst little has been documented about the morphological development in Janirellidae it is not unreasonable to assume that a stronger rostrum will be present in more mature specimens of those species.

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Appendix. Composition of Janirellidae, with type locality area and depth range.

<i>Janirella</i> Bonnier, 1896 (<i>Janirella</i>) Bonnier, 1896	Type locality	Depth range
<i>J. abyssicola</i> Richardson, 1911	SW of Spain	1205
<i>J. aculeata</i> Gamo, 1983	W Pacific [Japan?]	5350–5370
<i>J. bicornis</i> Gamo, 1982	Sagami Bay, Japan	1678
<i>J. bifida</i> Menzies, 1962b	SE Atlantic	4885
<i>J. bocqueti</i> Chardy, 1974	N Atlantic	3465–4166
<i>J. bonnieri</i> Stephensen, 1915	W Mediterranean	1227
<i>J. caribbica</i> Menzies, 1956b	Jamaica	1169
<i>J. erostrata</i> Birstein, 1963b	Bougainville Trench	8980–9043
<i>J. eximia</i> Mezhov, 1981	N Central Pacific	5104–6051
<i>J. extenuata</i> Birstein, 1971	NW Pacific	5005–5200
<i>J. fusiformis</i> Birstein, 1963a	NW Pacific	6156–6207
<i>J. glabra</i> Richardson, 1911	Canary Islands	946
<i>J. gomoiui</i> George, 2004	off N Carolina	2720
<i>J. hessleri</i> Chardy, 1975	NE Atlantic	1877
<i>J. hirsuta</i> Birstein, 1963	NW Pacific	3960–4070
<i>J. laevis</i> Hansen, 1916	N Atlantic	2258–2702
<i>J. latifrons</i> Menzies & George, 1972	Peru-Chile Trench	2571–5123
<i>J. latifrons occidentalis</i> Mezhov, 1981	N Central Pacific	5850
<i>J. laubieri</i> Chardy, 1974	N Atlantic	3663
<i>J. lobata</i> Richardson, 1908	Off Georges Bank	2480–3235
<i>J. macrura</i> Birstein, 1963a	NW Pacific	6435–7230
<i>J. magnifrons</i> Menzies, 1962b	SE Atlantic	4588
<i>J. nanseni</i> Bonnier, 1896	Bay of Biscay	950
<i>J. ornata</i> Birstein, 1963a	NW Pacific	5680–5690
<i>J. polychaeta</i> Birstein, 1963a	NW Pacific	3860
<i>J. priseri</i> Chardy, 1972	N Atlantic	2456–4166
<i>J. rotundifrons</i> Gamo, 1982	Sagami Bay, Japan	1678–5370
<i>J. spinosa</i> Birstein, 1963a	NW Pacific	6435–8430
<i>J. spongicola</i> Hansen, 1916	SW of Iceland	875–913
<i>J. sydneyae</i> George, 2004	off N Carolina	3100–3155
<i>J. tuberculata</i> Birstein, 1963a	NW Pacific	5350–5817
<i>J. vema</i> Menzies, 1956a	Puerto Rico Trench	5104–5122
(<i>Parjanirella</i>) Birstein, 1963		
<i>P. diplospinosa</i> Birstein, 1971	NW Pacific	2770–3250

...continue

<i>Janirella</i> Bonnier, 1896 (<i>Janirella</i>) Bonnier, 1896	Type locality	Depth range
<i>P. hexaspinosa</i> Birstein, 1971	NW Pacific	1995
<i>P. quadrituberculata</i> Birstein, 1963	NW Pacific	5290–6150
<i>P. sedecimtuberculata</i> Gamo, 1983	Japan Trench	5350–6450
<i>P. verrucosa</i> Birstein, 1971	NW Pacific	5350–6215
<i>Dactylostylis</i> Richardson, 1911 (syn. <i>Spinianirella</i> Menzies, 1962a, by Hessler, 1968)		
<i>D. acutispinus</i> Richardson, 1911	NE Atlantic	698
<i>D. serrata</i> (Kensley & Heard, 1985)	Puerto Rico	350
<i>D. walfishensis</i> (Menzies, 1962a)	SE Atlantic	1816–2970?
<i>Triaina</i> gen. nov.		
<i>T. isodonte</i> sp. nov.	SE Australia	1264–2500
<i>T. makridonte</i> sp. nov.	SE Australia	80

Note: George (2004) gave *Janirella hanseni* Bonnier, 1896 as type of the genus. This is a *lapsus calami* for *J. nanseni*. George (2004: 71) listed a species as *Janirella hanseni* Menzies, 1956, Caribbean Sea. Menzies did not describe such a species, and the name 'Janirella hanseni' does not exist anywhere else in the literature.