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A new asellote isopod of the genus *Microjanira* SCHIECKE & FRESI, 1970 (Crustacea: Isopoda: Asellota: Janiridae) from Japan

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ABSTRACT—*Microjanira pacifica* sp. nov. is described from the infralittoral zone of Wakayama Prefecture, middle Japan, as the first record for the genus from the Pacific. *Microjanira pacifica* differs from its congener in having posterolaterally projecting pleopod 1, distolaterally expanded pleopod 2, slender appendix masculina, and the exopod of pleopod 3 shorter than half of second article of the endopod.

KEY WORDS: *Microjanira*, Janiridae, Asellota, Isopoda, taxonomy, Japan

INTRODUCTION

Janiridae is one of the large families in the suborder Asellota, of twenty genera and more than 180 species in the world (WILSON & WÄGELE, 1994). *Microjanira* is a small genus in that family, now containing only two species: *Microjanira dentifrons* SCHIECKE & FRESI, 1970 from the Island of Ischia in the Bay of Naples and *M. biunguicula* (HOOKER, 1985) from the Florida Middlegrounds in the northeastern Gulf of Mexico.

Our recent coastal investigations in Wakayama, middle Japan, yielded a new species of *Microjanira* as the first record of this genus from the Pacific.

MATERIALS AND METHODS

The specimens were obtained from underside of stones in the infralittoral zone by picking with finger or rinsing with seawater, and were fixed in ca. 10% formalin and preserved in 70% ethanol. Each individual was dissected and appendages was mounted on glass microslides and observed using a differential interference contrast microscope. Total length was measured from the tip of the head to the end of the pleotelson.

The type series is deposited in the Kitakyushu Museum of Natural History & Human History (KMNH).

TAXONOMY

Microjanira pacifica sp. nov.

(Figs. 1-3)

Material examined. Holotype: male, 1.24 mm (KMNH IvR 500,209), 0.1 m deep in the lowest water, underside of stone on

coarse sand, rocky shore, Takurazaki, Wakayama Prefecture, Japan (34°16'N, 135°04'E), 7 June 2007, coll. H. Ariyama.

Paratypes: 1 male, 1.24 mm (KMNH IvR 500,210), 1 non-ovig. female, 0.95 mm (KMNH IvR 500,211), same data as holotype; 2 males, 1.11 mm (KMNH IvR 500,212), 1.08 mm (KMNH IvR 500,213), 1 non-ovig. female, 1.26 mm (KMNH IvR 500,214), same place as holotype, 30 June 2007, coll. H. ARIYAMA.

Diagnosis

Cephalon: frontal margin of rostrum nearly straight, with denticles; posterior margin of cephalon nearly straight. Eyes absent. Pereonites 5-7 extended laterally. Pleotelson wider than long. Pleopod 1 with pair of acute projections distolaterally. Pleopod 2 with slender short appendix masculina: protopod approximately 1.7 times as long as wide, expanded distolaterally. Pleopod 3: exopod approximately 2.8 times as long as wide, shorter than half of second article of the endopod.

Description of holotype

Body (Fig. 1A) approximately 2.5 times as long as maximum width, scattered with bright brown small pigments. Cephalon approximately 1.8 times as long as width, with short setae dorsally and laterally; rostrum about half as long as head. Pereonites laterally with short setae; pereonite 1 narrowest in all pereonites; pereonites 2-4 with triangulate processes anterolaterally; pereonites 5-7 subequal in width; pereonite 5 laterally rounded; pereonite 6 projecting posterolaterally; pereonite 7 partly hidden under pleotelson. Coxae on pereonites 2-6 visible in dorsal view; coxae of pereonites 2-4 lateral bilobed.

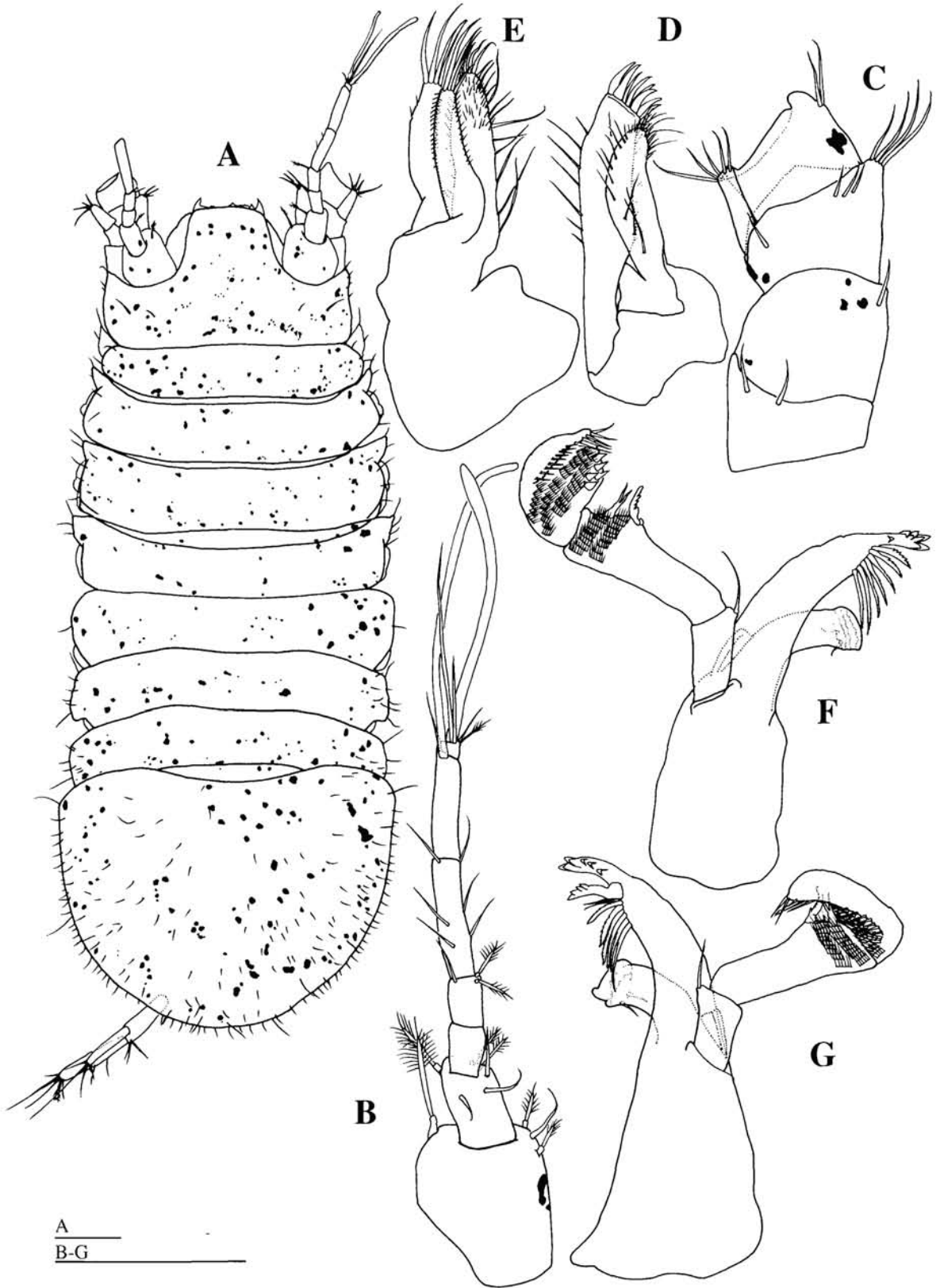


Fig. 1. *Microjanira pacifica* sp. nov. A-G, holotype male (KMNH IvR 500,209): A, habitus, dorsal; B, right antennula, dorsal; C, articles 1-4 of right antenna, ventral; D, right maxillula, ventral; E, right maxilla, ventral; F, right mandible, ventral; G, left mandible, ventral. Scales = 100 μ m.

Pleotelson approximately 1.3 times as long as width, with many short setae dorsally and laterally.

Antennula (Fig. 1B): article 1 widest at anterior part, with 1 long distomedial broom seta, distolaterally with 1 simple and 2 short broom setae; article 2 approximately half as long as article 1, with 3 simple and 3 short broom setae; article 3 about half as long as article 2, without setae; article 4 as long as article 3, with 1 simple and 2 short broom setae distally; article 5 approximately 2.5 times as long as article 4, with 6 simple setae; article 6 as long as article 5, distally with simple seta and aesthetasc; article 6 minute, distally with 3 simple and 1 short broom setae, and aesthetasc.

Antenna (Fig. 1C): article 1 broader than long, with 2 simple setae ventrally; article 2 with 1 simple seta distolaterally; article 3 with 4 simple setae distomedially and 4 simple setae ventrally, and with antennular scale bearing 5 simple setae; article 4 narrower than articles 1-3, with 2 simple setae medially; article 5 to flagellum broken.

Maxillula (Fig. 1D) with inner lobe bearing many simple setae marginally and 3 simple setae ventrally; outer lobe apically with 8 stout simple setae, and with 7 lateral and 11 medial simple setae.

Maxilla (Fig. 1E) with many simple setae marginally and short simple setae ventral-distally; medial lobe with 4 long simple setae apically and many short simple setae medially; outer lobe with 4 simple setae apically, many short simple setae medially and 2 short setae laterally.

Right mandible (Fig. 1F): incisor with 5 cusps; setal row with 7 setae; molar process stout, bearing 2 short setae. Palp article 1 with simple seta distally; article 2 approximately twice as long as article 1, with 1 bifurcate seta and 1 serrated seta, and with many fine setae distally; article 3 spoon-shaped, slightly longer than article 1, with 5 simple setae distally, and with 5 triangulate and many fine setae medially.

Left mandible (Fig. 1G): incisor with 5 cusps; lacinia mobilis with 4 teeth; setal row with 8 setae; molar process stout, bearing 2 short setae. Palp similar to that of right mandible in morphology.

Maxilliped (Fig. 2A): article 1 of palp as broad as article 2, with 1 distomedial seta; article 2 largest in all articles of palp, expanded medially, with 10 medial, 1 distolateral and 1 dorsal setae; article 3 trapezoidal, about half as long as article 2, with 5 medial and 1 distolateral setae; article 4 approximately 1.5 times as long as article 3, with 5 distal setae; article 5 narrower and shorter than article 4, with 6 setae; endite about 2.9 times as long as width, bearing 6 simple and 4 denticulate setae distally, and with many simple setae ventrally and 2 coupling hooks medially; epipod lanceolate, approximately 3.3 times as long as width, with acute apex.

Pereopod 1 (Fig. 2B): basis robust, broadest, with 2 simple and 2 broom setae dorsally, and with 2 simple setae ventrally; ischium approximately 0.8 times as long as basis, with 2 simple

setae dorsally and ventrally; merus trapezoidal, about half as long as ischium, with 2 simple setae distodorsally and 3 simple setae distoventrally; carpus longest, about 2.3 times as long as merus, with 4 simple setae dorsally and 4 simple setae and many fine setae ventrally; propodus approximately 0.8 times as long as carpus, with 10 simple setae dorsally and 7 simple setae ventrally; dactylus narrowest, with 5 simple setae subapically and 2 curved claws.

Pereopod 2 (Fig. 2C) longer than pereopod 1: basis with 2 simple and 2 broom setae dorsally and 1 simple seta distoventrally; ischium approximately 0.7 times as long as basis, with 2 simple setae dorsally and ventrally; merus about half as long as ischium, with 2 simple setae dorsally and 3 simple setae ventrally; carpus with 4 simple setae dorsally and 2 simple setae and 2 setulate scales ventrally; propodus as long as carpus, with 6 simple setae dorsally, 3 simple setae ventrally and 1 simple seta medially; dactylus with 5 simple setae subapically and 2 curved claws.

Pereopods 3-7 similar to pereopod 2 in shape and chaetotaxy.

Pleopod 1 (Fig. 2D, E) approximately 2.5 times as long as width, tapering to apex, with 3 pairs of simple setae distolaterally and 13 simple setae apically.

Pleopod 2 (Fig. 2F): protopod approximately 1.7 times as long as wide, expanded distolaterally, with many short setae submarginally and distoventrally and many fine setae laterally.

Pleopod 3 (Fig. 2G): article 2 of endopod approximately 1.9 times as long as article 1, with 3 plumose setae distally and fine setae distomedially; exopod having acute apex, with simple short seta subapically and many fine setae marginally.

Pleopod 4 (Fig. 2H): article 2 of endopod approximately 1.7 times as long as width; exopod slightly longer than endopod, with long plumose seta apically and many fine setae laterally and medially.

Pleopod 5 (Fig. 3A) approximately 2.7 times as long as wide, without setae.

Uropod (Fig. 3C): protopod with 6 simple setae distally; endopod approximately 1.5 times as long as protopod, with 10 short and 2 long simple setae and 6 broom setae; exopod approximately 0.6 times as long as endopod, with 1 simple seta laterally and 7 simple setae apically.

Description of paratype female (KMNH IvR 500,214)

Operculum (Fig. 3B) as long as broad, with many fine setae laterally, short simple setae submarginally and anteroventrally.

Remarks. The present new species is assigned to *Microjanira* SCHIECKE & FRESI, 1970, having a set of the following characters: cephalon laterally rounded with broadly pointed anterolateral margin lacking denticles; apex with long and broad, apically truncate rostral projection separating bases of antennulae; pleonite 1 very short, narrower than pereonite 7 or pleotelson;

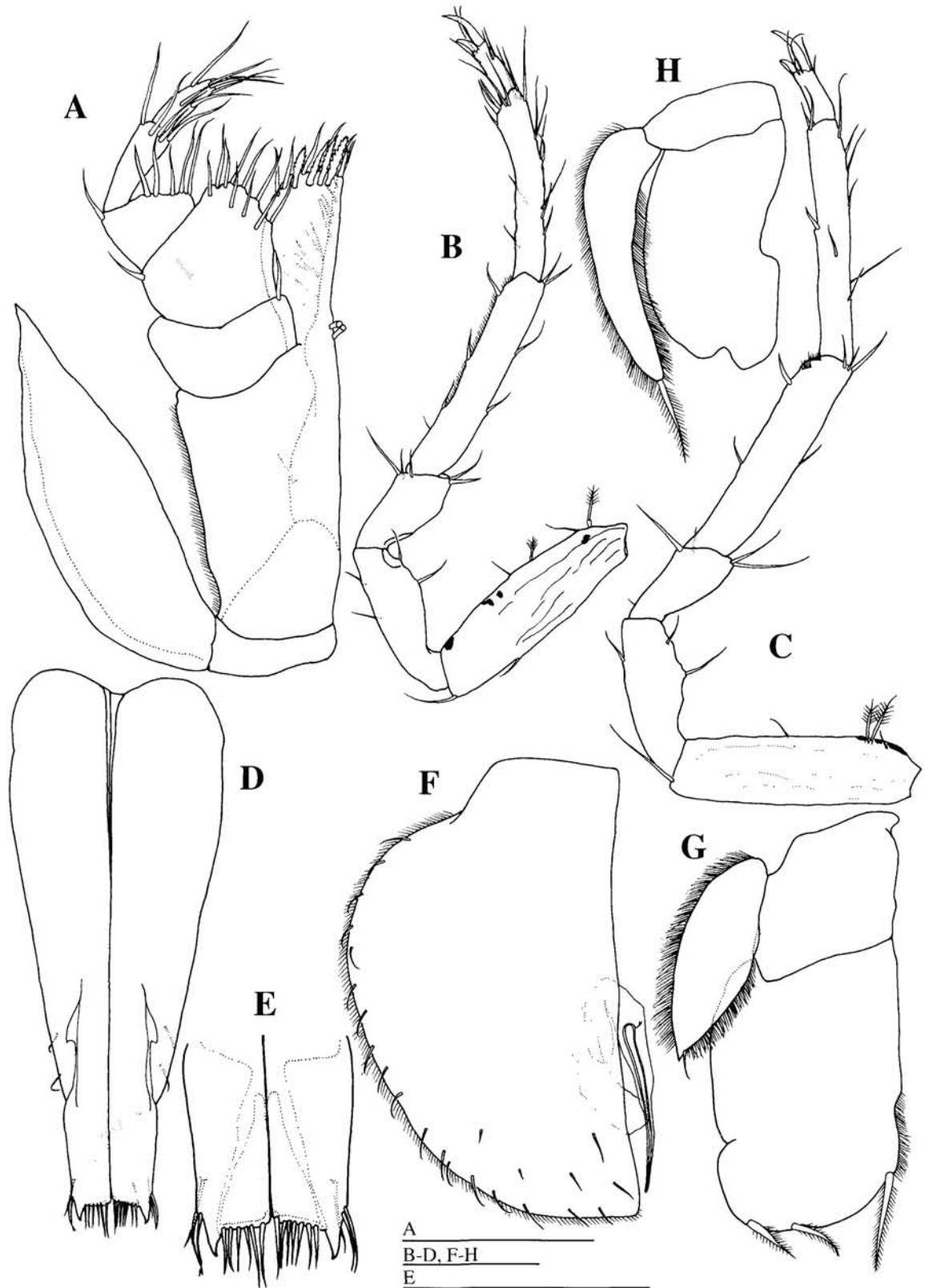


Fig. 2. *Microjanira pacifica* sp. nov. A-H, holotype male (KMNH IvR 500,209): A, right maxilliped, ventral; B, left pereopod 1, lateral; C, right pereopod 2, medial; D, pleopod 1, dorsal; E, tip of pleopod 1, dorsal; F, right pleopod 2, ventral; G, right pleopod 3, ventral; H, left pleopod 4, ventral. Scales = 100 μ m.

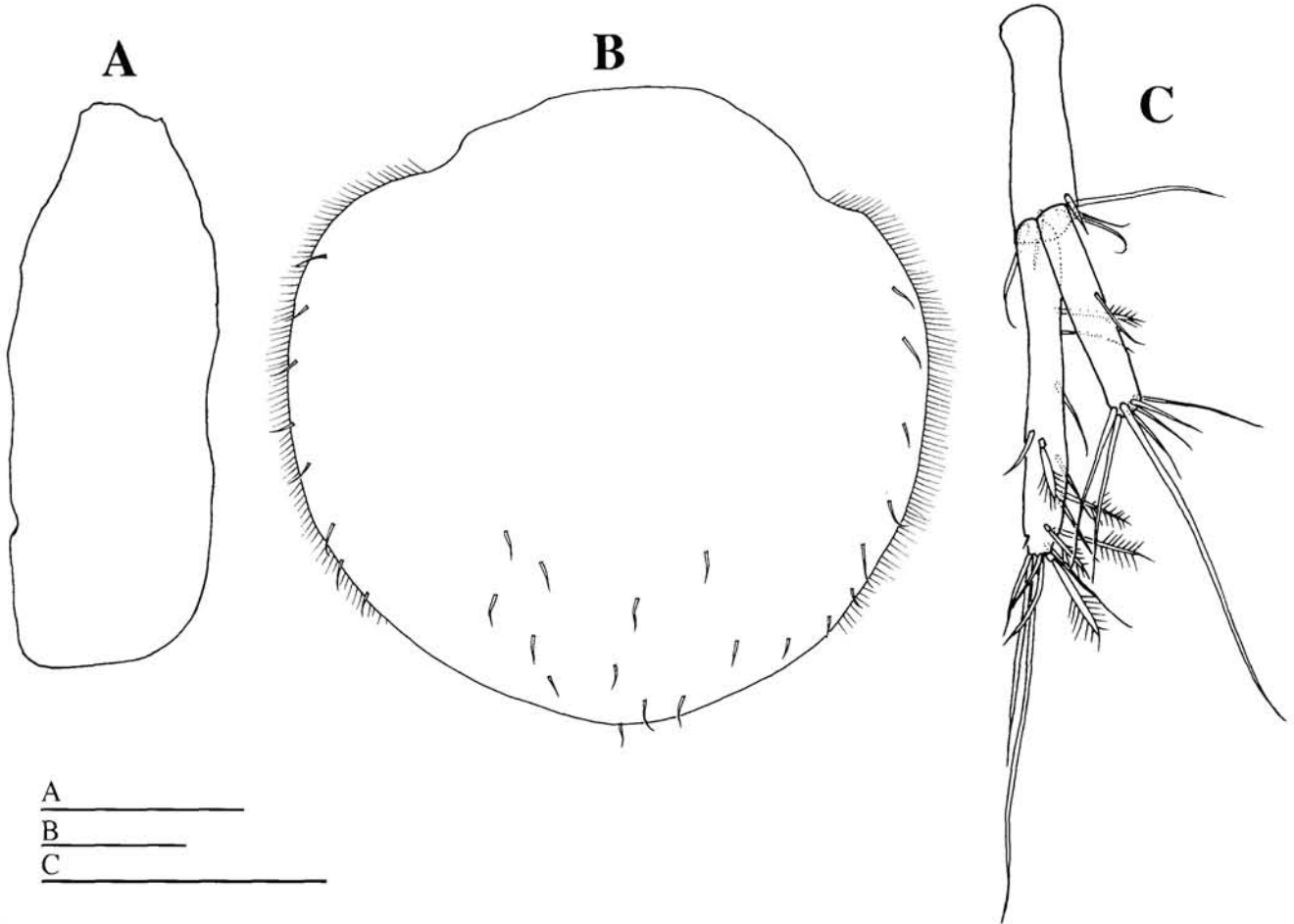


Fig. 3. *Microjanira pacifica* sp. nov. A, C, holotype male (KMNH IvR 500,209); B, paratype female (KMNH IvR 500,214): A, right pleopod 5, dorsal; B, operculum, ventral; C, left uropod, ventral. Scales = 100 μ m.

pleotelson ovate, distal margin rounded, margin lacking denticles or notch near uropods; antennula short; article 1 of antennule enlarged, length near width; mandible molar process distally tapering, truncate; incisor process and body of mandible slender; palp large, near length of mandibular body, distal article strongly curved and setose; pereopod 1 leg-like, with thin, straight sided; pereopods 2-7 dactylus with only 2 distal claws; male pleopod 1 distally truncate; proximal article of endopod of male pleopod 2 near maximum width of stylet; uropod thin, shorter than length of pleotelson; protopod slender, nearly as long as exopod; exopod shorter than endopod (see WILSON & WÄGELE, 1994).

The rostrum of cephalon having some denticles on frontal margin links the new species to *Microjanira dentifrons* recorded from the Bay of Naples. However, the former is different from the latter in the following characters (those of *M. dentifrons* in parentheses): pleopod 1 projecting distolaterally (without projections), protopod of male pleopod 2 expanded distolaterally (moderately narrow), appendix masculina of male pleopod 2 slender (robust) and exopod of pleopod 3 shorter than half of

second article of endopod (longer than half of second article).

Microjanira pacifica sp. nov. is distinguished from *M. biunguicula* from the Gulf of Mexico by the following characters (those of *M. biunguicula* in parentheses): body widest at pleotelson (widest at pereonite 4), frontal margin of rostrum nearly straight (slightly concave), rostrum with denticles on frontal margin (without denticles), eyes absent (present), posterior margin of cephalon nearly straight (convex), pereonites 5-7 extended laterally (directed posteriorly), pleotelson wider than long (as wide as long), pleopod 1 projecting distolaterally (without projections), protopod of pleopod 2 distally broad (distally narrow), appendix masculina of male pleopod 2 slender (robust) and exopod of pleopod 3 shorter than half of second article of endopod (longer than half of second article).

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