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Paralamprops poorei, sp. nov. (Crustacea: Cumacea: Lampropidae), a new Australian cumacean.

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Abstract Gerken, S. 2009. *Paralamprops poorei*, sp. nov. (Crustacea: Cumacea: Lampropidae), a new Australian cumacean. *Memoirs of Museum Victoria* 66: 71–75.

Paralamprops is a small genus in the cumacean family Lampropidae. A new species, *Paralamprops poorei* sp. nov. is described from the southern Australian continental slope. *Paralamprops poorei* can be distinguished from all other *Paralamprops* by the combination of a toothed marginal carina, subequal antennular flagellae, maxillule without palp, pereopods 3 and 4 in the female with rudimentary exopods, pereopod 5 with article proportions as in pereopods 3 and 4, telson with 5 lateral setae and 3 equal terminal setae, and the male with three pairs of pleopods.

Keywords Lampropidae, Cumacea, Paralamprops, Crustacea

Introduction

The genus *Paralamprops* Sars, 1887 currently contains 19 species, with species ascribed to the genus from around the world, with records from 232–5395 m. The difficulties of collecting intact deep sea crustaceans are well known, and *Paralamprops* is particularly difficult to collect in an undamaged state, as the pereopods are generally quite long and delicate and prone to damage. Of the 19 species in the genus, 8 were erected on the basis of single specimens, although *P. semiornatus* Fage, 1929 has been redescribed from ample material by Roccatagliata (1994). Due to the incomplete descriptions of some species ascribed to *Paralamprops*, the generic diagnosis is quite variable, including presence and absence of a maxillule palp, and it is likely that the genus is not monophyletic.

Methods

Samples were collected with a WHOI epibenthic sled, fixed in formalin on board the RV Franklin and transferred to 70% ethanol at the Museum Victoria, Melbourne, Australia (NMV). All material examined belongs to the collection of the Museum Victoria. Specimens were temporarily mounted in a mixture of 10% ethanol/ 90% glycerin and drawn with a Leica MZ16 dissecting microscope with *camera lucida* or a Leica DM LS2 compound microscope with *camera lucida*. Body length is measured from the tip of the pseudorostrum to the posterior border of pleonite 6. Figures were prepared in Adobe Illustrator after the instructions in Coleman, 2003.

Lampropidae

Paralamprops Sars, 1887

Paralamprops poorei sp. nov.

Figures 1–2

Material examined. Holotype. Australia, Victoria, 76 km S of Point Hicks (38 29 20 S – 38 26 49 S, 149 19 59 E – 149 20 47 E), 1840 m, 26/10/1988, col. Poore, Gary CB, NMV J59990 (ovigerous female).

Paratypes. Australia, Victoria, 76 km S of Point Hicks (38 29 20 S – 38 26 49 S, 149 19 59 E – 149 20 47 E), 1840 m, 26/10/1988, col. Poore, Gary CB, NMV J59992 (subadult female); J59991 (subadult female dissected); J54394 (5 subadult males, 2 subadult females).

Diagnosis. Carapace with strongly toothed marginal carina, with dorsolateral swellings, otherwise without setae or spines. Antennule main flagellum and accessory flagellum subequal in length. Maxillule without palp. Pereopods 3 and 4 in the female with rudimentary exopods. Pereopod 5 shorter than basis of pereopod 4, of 6 articles, article proportions similar to pereopods 3 and 4. Male with 3 pairs of pleopods. Telson with 5 lateral setae, 3 equal terminal setae. Uropod exopod shorter than endopod.

Description. Holotype ovigerous female, body length 12 mm. Carapace surface smooth, with paired dorsolateral swellings, dorsoventrally flattened, marginal carina with distinct large teeth throughout, antennal notch absent; eyelobe less than 0.1 carapace length, no lenses present; carapace longer than thoracic segments together (fig. 1A).

Paratype subadult female (fig. 1B).

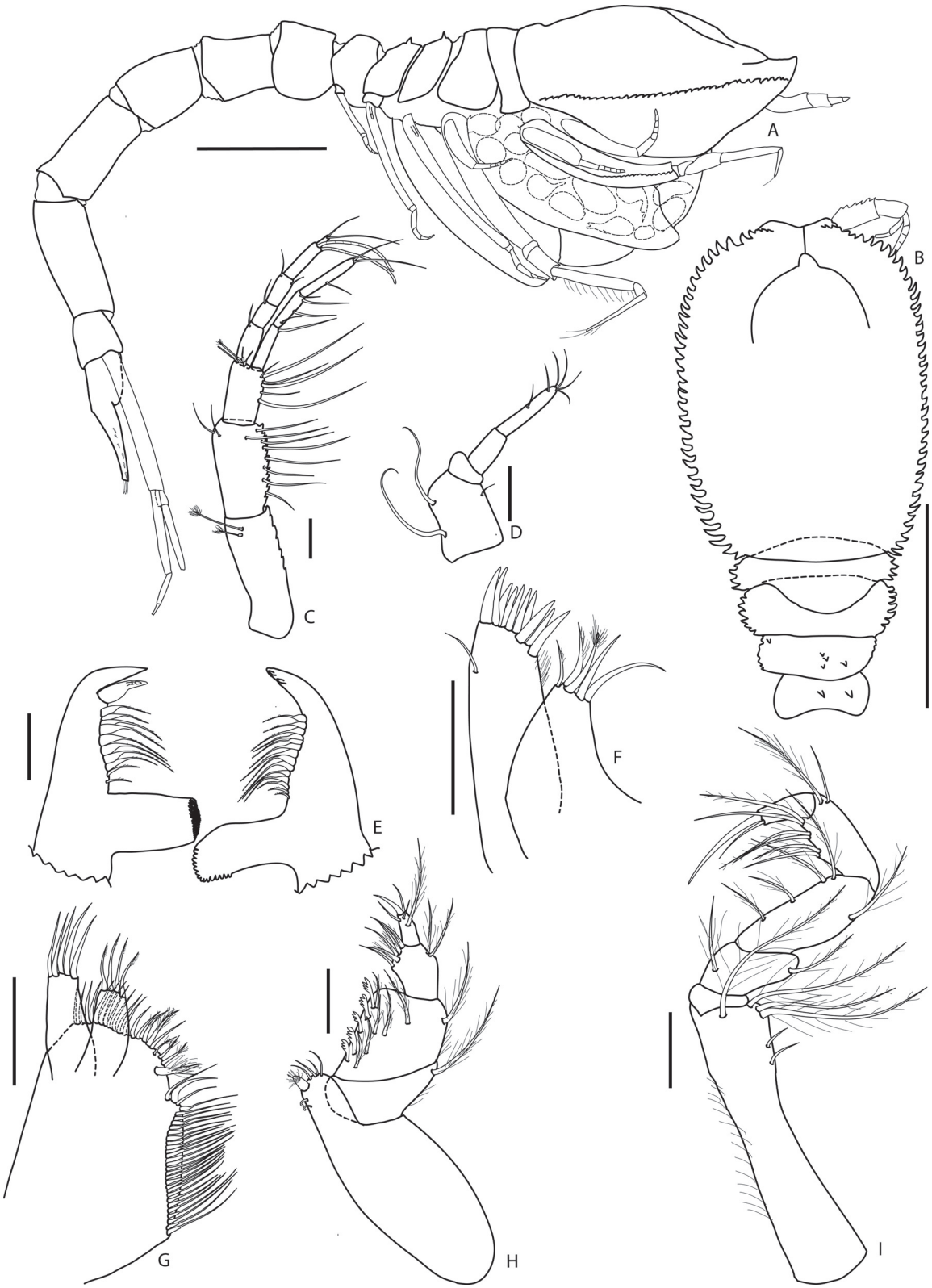

Figure 1. *Paralamprops poorei* sp. nov., female: a, side view, holotype ovigerous female J5990; b, dorsal view subadult female, paratype J59992; c-i, subadult female, paratype J59991; c, antennule; d, antenna; e, mandibles, broken; f, maxillule; g, maxilla; h, maxilliped 1; i, maxilliped 2. Scale bars for side and dorsal view 1.0 mm, all other scale bars 0.1 mm.

Figure 2. *Paralamprops poorei* sp. nov., subadult female, paratype J59992: a, maxilliped 3; b, pereopod 1; c, pereopod 2; d, pereopod 3; e, pereopod 4;f, pereopod 5; g, telson and uropods. All scale bars 0.1 mm.

Antennule extending past pseudorostral lobes; peduncle article 1 longest, with 2 complex pedunculate setae; article 2 0.8 length of article 1, with simple setae, margin serrate; article 3 0.6 length of article 2, with 6 simple and 4 complex pedunculate setae; main flagellum of 5 articles, each article with 1 simple seta, subterminal article with 2 aesthetascs; accessory flagellum of 3 articles, subequal to main flagellum, with simple setae (fig. 1C)

Antenna of 4 articles; article 1 with 2 simple setae; article 2 shortest, unarmed; article 3 unarmed; article 4 with 6 small simple setae (fig. 1D).

Mandibles navicular (broken in fig.), with row of 10–13 setae, left mandible with lacinia mobilis (fig. 1E).

Maxillule of 2 endites; outer endite with row of stout setae distally; inner endite with 2 simple and 3 microserrate setae distally; palp absent (fig. 1F).

Maxilla of 3 endites; broad endite distal margin with simple and pappose setae, medial margin with row of setae; medial narrow endite with 4 microserrate setae; lateral narrow endite with 5 simple setae; both narrow endites extend past setae on distal margin.

Maxilliped 1 basis produced distally as blunt lobe, medial margin with 2 hook setae, distal margin with 1 stout pappose and 4 simple setae; ischium absent; merus with 1 pappose seta; carpus with 5 comblike setae medially, field of pappose setae, and 1 pappose seta laterally; propodus with simple and pappose setae medially, with 2 plumose setae laterally; dactylus with 1 long plumose seta and 4 simple setae (fig. 1H).

Maxilliped 2 basis as long as next 4 articles together, with 4 plumose seta distally and 2 simple setae laterally; ischium present, unarmed; merus with 1 plumose seta medially and 1 plumose seta laterally; carpus with 4 plumose setae medially and 1 plumose seta laterally; propodus with 3 plumose and 3 simple setae medially, 1 plumose and 1 simple setae laterally; dactylus with 2 simple setae terminally (fig. 1I).

Maxilliped 3 basis as long as all other articles together, not expanded distally, with plumose setae medially and laterally; ischium present, unarmed; merus with 2 plumose setae laterally and 1 medial plumose seta; carpus with 4 plumose setae medially, 2 plumose setae laterally; propodus with 4 simple and 4 pappose setae medially, 1 simple and 3 pappose setae laterally; dactylus with 3 simple setae terminally; exopod as long as basis, basal article margin serrate (fig. 2A).

Pereopod 1 basis as long as next 4 articles together, medial and lateral margins serrate distally, with plumose setae medially and laterally; ischium with 1 plumose seta; merus margin serrate, with 4 plumose setae; carpus with 6 simple setae; propodus with 8 simple setae; dactylus with 5 short simple setae and 2 long setae terminally; exopod as long as basis, basal article with 4 pappose setae (fig. 2B).

Pereopod 2 basis as long as next 4 articles together, lateral margin serrate, with 5 simple setae; ischium with 1 simple seta; merus with 1 simple and 1 stout microserrate setae; carpus 0.6 basis length, with 9 stout microserrate setae medially, 1 simple seta laterally; propodus with 1 simple seta; dactylus broken, with simple setae; exopod 0.8 basis length, basal article with 1 simple seta (fig. 2C).

Pereopod 3 basis longer than all other articles together, with 1 plumose and 1 simple setae; ischium with 1 simple seta; merus unarmed; carpus with 2 annulate setae; propodus with 1 annulate seta; dactylus with 3 simple setae terminally; exopod rudimentary, of 2 articles, with 3 simple setae terminally (fig. 2D).

Pereopod 4 basis longer than all other articles together, margin serrate, with 1 simple and 1 plumose setae; ischium with 1 simple seta; merus unarmed; carpus with 2 annulate setae; propodus with 1 annulate seta; dactylus with 3 simple setae terminally; exopod rudimentary, of 2 articles, with 2 simple setae terminally (fig. 2E).

Pereopod 5 entire shorter than basis of pereopod 4; basis as long as next 4 articles together, with 2 pedunculate, 1 plumose and 1 simple setae; ischium unarmed; merus unarmed; carpus with 1 simple and 2 annulate setae; propodus with 1 annulate seta; dactylus with 1 simple seta terminally (fig. 2F).

Telson 2.2 length of pleonite 6; lateral margins serrate anteriorly, with 5 microserrate setae; 3 microserrate setae terminally (fig. 2G).

Uropod peduncles 2.8 length of pleonite 6, longer than telson, with 10–11 medial microserrate setae with subterminal setule. Uropod endopod of 3 articles, subequal to uropod peduncle; article 1 longest, with 7 medial microserrate setae with single subterminal setule, 2 lateral simple setae; article 2 with 1 microserrate seta with single subterminal setule; article 3 with 1 microserrate seta with single subterminal setule, terminal seta broken. Uropod exopod of 2 articles, shorter than endopod; article 1 0.2 length of article 2, unarmed; article 2 with 2 simple setae, terminal seta broken (fig. 2G).

Subadult males (not figured) with 3 pairs of pleopods and otherwise similar to females.

Etymology. The species is named *poorei* in honor of Gary C. B. Poore on the occasion of his retirement from the Museum of Victoria as a tribute to all his many contributions to both carcinology and carcinologists.

Distribution. Victoria, continental slope, 1840 m.

Remarks. There are 8 other species of *Paralamprops* with a toothed marginal carina, *P. aspera* Zimmer 1907, *P. carpusserratus* Mühlenhardt-Siegel, 2005, P. *corollifera* Gamô, 1990, *P. girardi* Reyss, 1978, *P. margidens* Day, 1978, *P. semiornatus* Fage, 1929, *P. serratocostata* Sars, 1887, and *P. tuberculata* Roccatagliata, 1994. *Paralamprops aspera* and *P. serratocostata* are easily separable from *P. poorei* by the presence of additional toothed carinae on the carapace; in *P. poorei*, the only carina is the marginal carina. *Paralamprops carpusserratus* can be distinguished from the new species by the nearly circular carapace, the unequal antennular flagellae, the serrated carpus of pereopod 2, the reduced pereopod 5 and the 2 lateral setae on the telson; in *P. poorei* the carapace is longer than wide, the antennular flagellae are subequal, the carpus of pereopod 2 is not serrated, pereopod 5 has the same article proportions as pereopods 3 and 4, and 5 lateral setae are present on the telson. *Paralamprops girardi* can be distinguished from the new species by the equal rami of the uropod and the presence of 4 stout setae on the carpus of pereopod 2; in *P. poorei* the uropod exopod is shorter than the endopod and there are 9 stout setae on the carpus of pereopod 2. *Paralamprops*

margidens can be distinguished from *P. poorei* by the presence of a toothed dorsal crest on the carapace, 4 lateral setae on the telson and 3 setae medially on the uropod peduncle; in *P. poorei* there is no toothed dorsal crest, 5 lateral setae on the telson, and 10–11 medial setae on the uropod peduncle. *Paralamprops semiornatus* can be distinguished from *P. poorei* by the toothed dorsal crest on the carapace and the presence of a maxillule palp with 2 setae; in *P. poorei*, there is no toothed dorsal crest on the carapace, and the maxillule is without a palp. *Paralamprops tuberculata* can be distinguished from *P. poorei* by the expanded, "winglike" article 1 present in the antennules (Roccatagliata, 1994); in *P. poorei* the first article of the antennule is not expanded.

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