



## Melitidae, the *Eriopisella* group\*

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### Abstract

A new species of eriopisellid amphipod, belonging to the genus *Netamelita* Barnard, 1962, is described. This is the first and only amphipod from the *Eriopisella* group reported from the Great Barrier Reef.

**Keywords:** Crustacea, Amphipoda, *Eriopisella* group, Great Barrier Reef, Australia, taxonomy, new species *Netamelita lacerta*

### Introduction

Amphipods in the *Eriopisella* group have a disjointed global distribution. They occur in the Mediterranean Sea, the Canary Islands, the Caribbean Sea, the Gulf of Mexico, the Florida keys, California, Hawaii, southern Africa, Mauritius, Madagascar and Japan (J.L. Barnard 1962; McKinney *et al.* 1978; Stock 1980; Ledoyer 1983; Karaman 1984; Thomas & Barnard 1991). However, with continued investigations their distribution may prove to be much wider. Eriopisellid amphipods can be found in the sediments of shallow coral reefs (this study), shelly gravel (Karaman, 1984) or in coral-algal muds 30–40 m deep (Thomas & Barnard 1991).

To date, the genus *Netamelita* has not been reported from outside the southern United States or the Caribbean. This paper describes a species of *Netamelita* J.L. Barnard, 1962, from the Great Barrier Reef. This is the first documented record from north-eastern Australia. *Netamelita* shows a close resemblance to *Psammomelita* Vonk, 1988. Vonk (1988) discussed these similarities concluding that they were separate genera based on four unique characters that only *Psammomelita* possesses: (1) hooks that emerge from the sterna of pleonites 1–3 on the medial sides of the pleopods; (2) a curved keel on the male maxillipeds; (3) a weaker lobe on the carpus of gnathopod 2 and (4) heavy serrations on the posterior margin of pereopods 5–7. Thomas & Barnard (1991) later revised the genus *Netamelita*, agreeing that it was different to *Psammomelita* and re-defined the diagnostic characters. They concluded that *Psammomelita* was different to *Netamelita* based on above characters, however, they omitted the fourth as some species of *Netamelita* also possess heavy serrations on pereopods 5–7.

### Materials and methods

The descriptions were generated from a DELTA database (Dallwitz 2005) to the melitid genera and species of the world. Material was hand-collected on scuba and is lodged in the Australian Museum, Sydney (AM). A set

of colour plates, a list of standard abbreviations and detailed station data is available in Lowry & Myers (2009). A CD (*Benthic Amphipoda (Crustacea: Peracarida) of the Great Barrier Reef: Interactive Keys*) is available with the book or the keys can be accessed at the crustacea.net website.

## *Netamelita* J.L. Barnard, 1962

### *Netamelita lacerta* sp. nov.

(Figs 1, 2)

**Type material.** Holotype, sex unknown, 2 mm, AM P77559, Cobia Hole, Lizard Island (14°39.154'S 145°26.851'E), coarse sediment with shell and coral, patches of reef and sand, cores, 17 m, M. Yerman, 25 February 2005 (QLD 1663). Paratype: 1 female, 1.82 mm, AM P78550, from reef crest off Coconut Beach, Lizard Island (14°41.037'S 145°28.282'E), coarse sand, sand patches between reef, core, 2.6 m, M. Yerman, 23 February 2005 (QLD 1620).

**Type locality.** Cobia Hole, Lizard Island, Queensland, Australia.

**Etymology.** From the Latin word *lacerta*, which translates to lizard. The species is named after the type locality Lizard Island.

**Description.** Based on holotype, sex unknown, 2 mm, AM P77559.

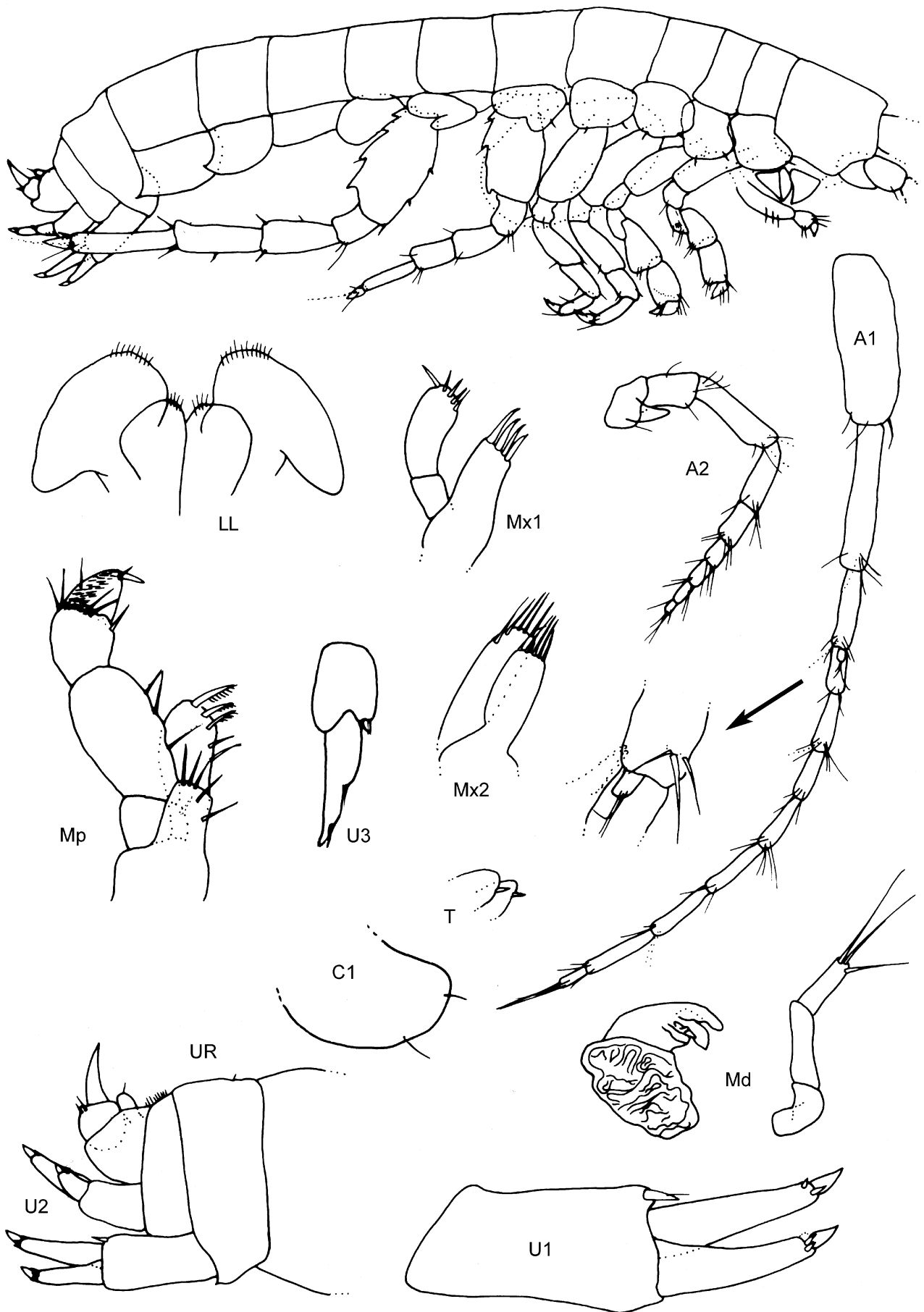
**Head.** Head eyes absent. Anteroventral corner rounded; lateral cephalic lobe absent. *Antenna 1* peduncular article 1 longer than article 2, without robust setae along posterior margin; flagella with 8 articles, accessory flagellum minute, with 1 article. *Antenna 2* peduncular article 2 cone gland not reaching to end of peduncular article 3; article 4 longer than article 5. *Mandible palp* article 1 about as long as broad or about twice as long as broad, inner margin article 1 not produced distally; article 2 slightly longer than or subequal to article 3. *Mandible molar* enlarged and dominating. *Maxilla 1* inner plate not visible. *Maxilla 2* inner plate without marginal setal row and without an oblique setal row on the inner face.

**Pereon.** *Gnathopod 1* coxa anteroventral corner produced, rounded; anterior margin concave or produced; posteroventral corner notch absent; carpus subequal in length to propodus; propodus small, linear; palm straight, defined by posterodistal corner, without posterodistal robust setae. *Gnathopod 2* coxa posteroventral corner notch absent; carpus length 1.7 x breadth; propodus without distolateral crown. *Pereopod 5* dactylus unguis anterior margin without accessory spines. *Pereopods 5–7* basis posterior margin straight and castelloserrate; dactylus unguis anterior margin without accessory spines.

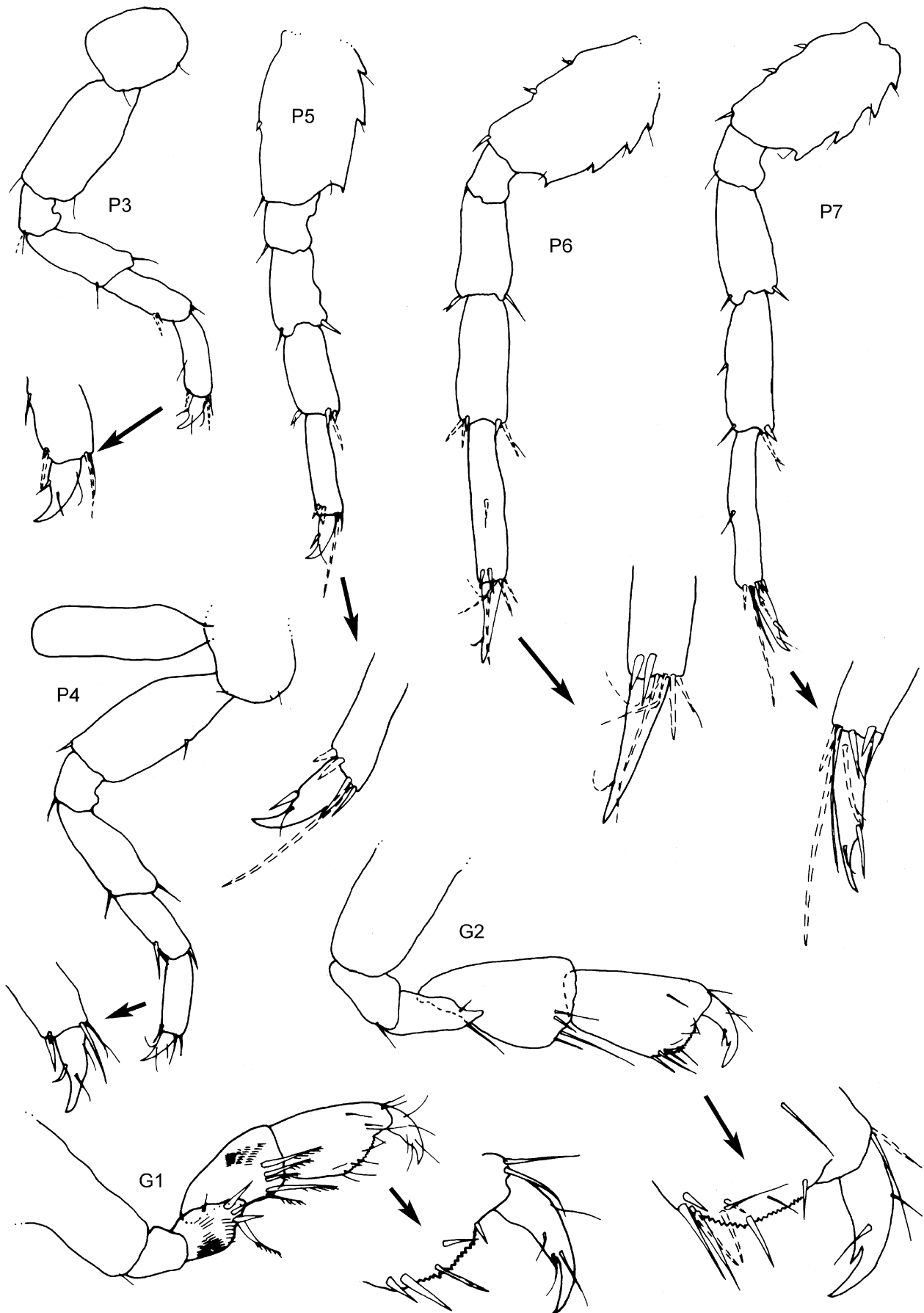
**Pleon.** *Pleonites 1–3* without dorsal setae. *Epimeron 1* posteroventral corner broadly rounded. *Epimeron 2* posteroventral corner acute. *Epimeron 3* posteroventral corner with small acute spine, and posteroventral margin smooth. *Urosomite 1* without spines or gape. *Urosomite 2* without small dorsolateral robust setae. *Urosomite 3* without dorsal setae. *Uropod 1* peduncle with basofacial robust seta, longer than rami. *Uropod 2* slender, apically acute. *Uropod 3* outer ramus long (up to 5 x breadth), about 2 x length of peduncle or much longer than peduncle, distally acute or sub-acute, 1-articulate; inner ramus scale-like, much shorter than the outer ramus. *Telson* deeply cleft, with 2 short apical robust setae on each lobe, without dorsal robust setae.

**Habitat.** Coarse shelly sand with coral rubble. Probably interstitial.

**Remarks.** Currently there are four species in the genus *Netamelita*: *N. brocha* Thomas & Barnard, 1991; *N. barnardi* McKinney, Kalke & Holland, 1978; *N. cortada* J.L. Barnard, 1962; and *N. tabaci* Thomas & Barnard, 1991. Along with the new species, other *Netamelita* species have a small linear gnathopod 1 with an acute palm, and long carpus on gnathopod 2. *Netamelita lacerta* differs from all other species based on a unique set of characteristics: eyes absent, 8-articulate antenna 1 flagellum and gnathopod 1 carpus length 1.7 x breadth. It is most similar to *N. brocha* and *N. tabaci*. The new species differs from *N. brocha* and *N. tabaci* as follows: eyes absent (*N. brocha* and *N. tabaci* have poorly developed eyes with ommatidia separated); article 1 of the mandibular palp twice as long as broad (about as long as broad in *N. brocha*); article 2 longer than article 3 (subequal in length to article 3 in *N. brocha*); marginal setal row on the inner plate of maxilla 2 absent (present in *N. brocha*); anteroventral corner of coxa 1 rounded (acute or subacute in *N. brocha*); and 1



**FIGURE 1.** *Netamelita lacerta* **sp. nov.**, holotype, sex unknown, 2 mm, AM P77559; paratype, female, 1.82 mm (whole animal), AM P78550, Cobia Hole and Coconut Beach, Lizard Island, Great Barrier Reef.



**FIGURE 2.** *Netamelita lacerta* **sp. nov.**, holotype, sex unknown, 2 mm., AM P77559, Coconut Beach, Lizard Island, Great Barrier Reef.

to 2 setae on the anterior margin of the dactyli of gnathopod 2 (no setae on *N. brocha*); posterior margin on the basis of pereopod 7 straight (convex in *N. tabaci*); epimeron 1 posteroventral corner broadly rounded (*N. tabaci* has a small acute or subacute spine); posteroventral corner of epimeron 3 with a small acute spine (strongly produced acute spine in *N. tabaci*); telson with short apical robust setae (long apical setae in *N. brocha* and *N. tabaci*).

**Distribution.** *Australia.* Queensland: Lizard Island (current study).

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