



Ochlesidae*

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Abstract

Ochlesis alii is redescribed. It has a pointed mid-dorsal tooth on the posterior margin of pereonite 7 and a rounded process on pleonites 1 and 2. The antenna 1 has rather short pointed posterodistal processes on peduncular articles 1–2. Antenna 2 has a pointed process on peduncular article 4.

Key words: Crustacea, Amphipoda, Ochlesidae, Great Barrier Reef, Australia, taxonomy, *Ochlesis alii*

Introduction

Ochlesidae are among the smallest amphipods, some species only measuring 1.5 mm. Because direct observation under water is difficult, the biology of these amphipods is a mystery. We do not even know what they eat with their pointed mouthparts.

Coleman & Lowry (2006) reviewed the world species of the Ochlesidae (*sensu stricto*) and described new Australian species. All Australian species hitherto recorded occur in southern, south-eastern or western Australia. Few tropical ochlesids have been described. In the Indo-Pacific region there is only *Curidia ramonae* Lowry & Myers, 2003 from Madang (Papua New Guinea) and *Ochlesis alii* (Barnard, 1970) from Hawaii. The species we found around Lizard Island and Orpheus Island matches *O. alii* in almost all details.

Materials and methods

The description was generated from a DELTA database (Dallwitz 2005). 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). Illustrations were made using the methods described in Coleman (2003, 2006). 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.

Ochlesidae Stebbing, 1910

Ochlesis Stebbing, 1910

Ochlesis alii J.L. Barnard, 1970

(Figs 1, 2, Pl. 5A, B)

Ochlesis alii J.L. Barnard, 1970: 220, figs 144–145. —J.L. Barnard, 1971: 105, fig. 53.

Material examined. 2 unsexed, AM P78872 (JDT/LIZ 14); 2 males, AM P78873 (JDT/OPH 2); 1 juvenile female, 1 male, AM P71480 (QLD 1823); male, 2.0 mm, female, 3.1 mm, AM P70899 (QLD 1687); 1 male, AM P70906 (QLD 1687); 1 female, AM P70833 (QLD 1687).

Type locality. Off Ewa Beach, Oahu, Hawaii, North Pacific Ocean (~21°19'N 158°0'W) with *Pocillopora* and bryozoans.

Description. Based on male, 2.0 mm, AM P70899.

Head. *Head* laterocephalic margin with an acute spine, lateroventral corner narrowly rounded; rostrum normal. *Antenna 1* peduncular article 1 with posterodistal spine, spine shorter than peduncular article 2; peduncular article 2 short, about 1.11 x as long as broad, with posterodistal spine, spine much longer than peduncular article 3; peduncular article 3 posterior margin not deeply telescoped into article 2. *Antenna 2* longer than peduncular article 1 of antenna 1; peduncular article 4 posterodistal spine present, spine longer than half length of article 5. *Mandible* molar reduced, triturating. *Maxilla 1* palp reduced, 1-articulate, with a short apical seta. *Maxilliped* palp absent.

Pereon. *Pereon* with sharply raised carina forming a dorsal keel. *Pereonite 1* enlarged, longer than pereonite 2. *Pereonite 7* with a small apically acute dorsodistal spine. *Gnathopod 1* coxa curved anteriorly, distally rounded; carpus not elongate, less than 2 x propodus length. *Gnathopod 2* coxa distally subacute to acute, anteroproximal margin straight; carpus distal lobe shorter or equal to half the propodus length. *Pereopod 3* coxa distally rounded, anteroproximal margin straight to weakly produced. *Pereopod 4* coxa distal margin subacute, anteroproximal margin straight to weakly produced. *Pereopod 5* coxa not anteriorly produced, anterior margin truncated, straight, posterodistal corner subquadrate. *Pereopod 6* coxa posterodistal corner subquadrate. *Pereopod 7* coxa subequal in length to coxa 6.

Pleon. *Pleonite 1* with small apically subquadrate dorsodistal carina. *Pleonite 2* with a small apically rounded dorsodistal carina. *Pleonite 3* with a shallow apically rounded mid-dorsal carina. *Epimeron 1* posteroventral corner rounded. *Epimeron 2* posteroventral corner subquadrate to rounded. *Epimeron 3* posteromedian corner acute, posteroventral margin not excavate, ventral margin broadly rounded. *Uropod 3* biramous. *Telson* medium length, 1.8 x as long as wide, apically acute.

Female (sexually dimorphic characters). Based on female, 3.1 mm, AM P70899. *Antenna 1* peduncular article 2 long, about 1.25 x as long as broad. *Gnathopod 2* coxa distally rounded, anteroproximal margin produced. *Pereopod 3* coxa distally obliquely truncated, anteroproximal margin strongly produced. *Pereopod 4* coxa distal margin rounded or subacute, anteroproximal margin strongly produced. *Pereopod 5* coxa anteriorly produced, tapering, distally subacute, posterodistal corner broadly rounded. *Pereopod 6* coxa posterodistal corner broadly rounded. *Epimeron 1* posteroventral corner subquadrate.

Habitat. Shallow reef flat and in channel between outer barrier reefs, amongst rubble and mixed coralline algae and epiphytes.

Remarks. The examined material from Lizard Island and Orpheus Island is very similar to *Ochlesis alii* J.L. Barnard, 1970, described from Hawaii. Even the coloured patches on the dorsal keel, the bands on the appendages and the coloured tips of antenna 1 and 2, illustrated by J.L. Barnard (1970, 1971), can be found on the Australian material. There are only a few differences in this material compared with J.L. Barnard's (1970) description: the angle of the laterocephalic process is smaller and thus more acute; the processes on the peduncular articles 1 and 2 of antenna 1 and of peduncular article 4 of antenna 2 are longer and the telson is narrower.

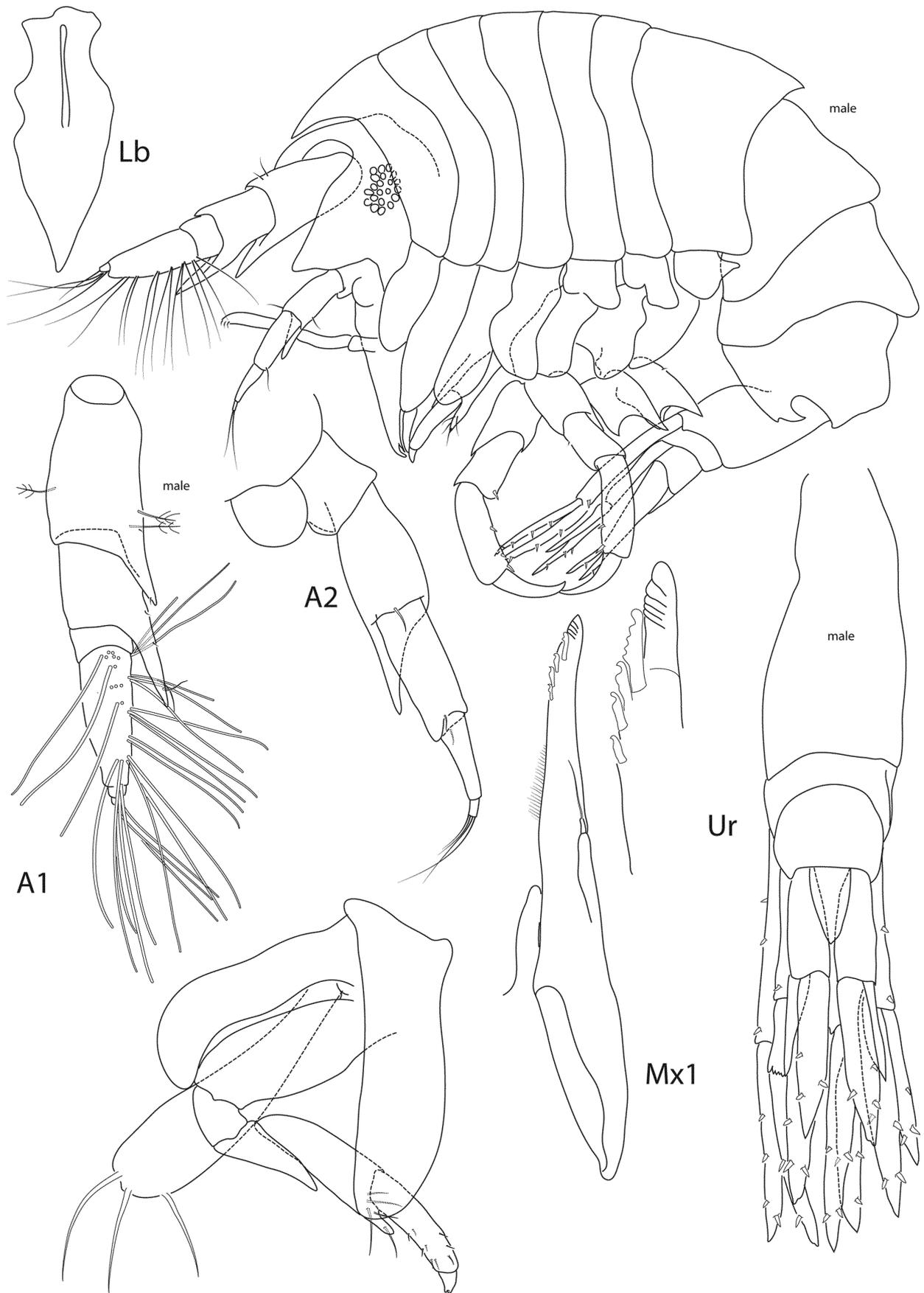


FIGURE 1. *Ochlesis alii* Barnard, 1970, male, 2 mm (male parts are marked); female, 3.1 mm, AM P70899, Bird Islet, Lizard Island, Great Barrier Reef.

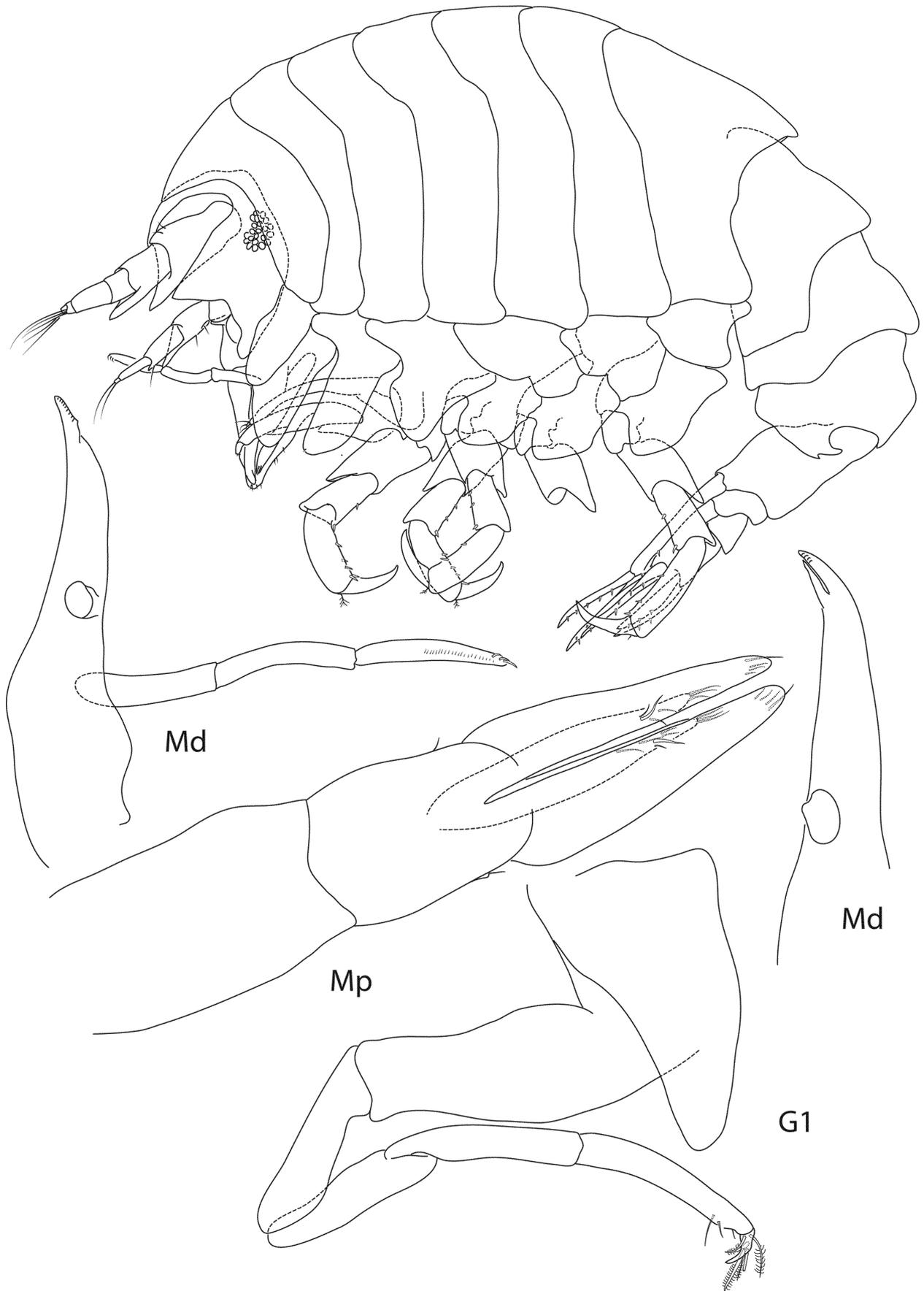


FIGURE 2. *Ochlesis alii* Barnard, 1970, female, 3.1 mm, AM P70899, Bird Islet, Lizard Island, Great Barrier Reef.

Distribution. *Australia.* Queensland: Lizard Island, Orpheus Island (current study). *USA.* Hawaii: Oahu (J.L. Barnard 1970).

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