



## Megaluropidae\*

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### Abstract

This is the first record of the family Megaluropidae in Australian waters. *Gibberosus udarus* **sp. nov.** is described here from Lizard Island, Great Barrier Reef.

**Key words:** Crustacea, Amphipoda, Megaluropidae, Great Barrier Reef, Australia, taxonomy, new species, *Gibberosus udarus*

### Introduction

Megaluropids are sediment-dwelling amphipods that recline in an inverted position, with their legs and antennae projecting from the sediment surface (Barnard *et al.* 1988). Previously, megaluropids were known from eastern and western Africa (Schellenberg 1925; Ledoyer 1968, 1975), the eastern Pacific (J.L. Barnard 1969; Thomas & Barnard 1986; Ortiz & Lalana, 2002) and the Caribbean Sea (McKinney 1980; Thomas & Barnard 1986). This new species extends the distribution of the Megaluropidae to Australia. *Gibberosus udarus* **sp. nov.** is the sixth species described in the genus. *Gibberosus* is now recorded from the Caribbean, *G. myersi* (McKinney, 1980); California, *G. falciformis* (J.L. Barnard, 1969), *G. devaneyi* Thomas & Barnard, 1986); Pacific Panama *G. coibaensis* Ortiz & Lalana, 2002; Nigeria, *G. longimerus* (Schellenberg, 1925) and the Great Barrier Reef, Australia, *G. udarus* **sp. nov.**

### Materials and methods

The descriptions were generated from a DELTA database (Dallwitz 2005) of the megaluropid genera and species of the world. Material was hand-collected on scuba and snorkel. All material is lodged in the Australian Museum, Sydney (AM) and the Gulf Coast Research Laboratory Museum (GCRL), Ocean Springs Mississippi, U.S.A. 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.

## Megaluropidae Hoek, 1889

### *Gibberosus* Thomas & Barnard, 1986

#### *Gibberosus udarus* sp. nov.

(Figs 1, 2)

**Type material.** Holotype, female, 2.6 mm, 4 slides, AM P75499, reef crest off Coconut Beach, Lizard Island (14°41.037'S 145°28.282'E), coarse sand, sand patches between reef, 2.6 m, M. Yerman, 23 February 2005 (QLD 1619). Paratypes: 2 females, AM P71003, same station data.

**Additional material examined.** 2 females, AM P70983 (QLD 1619); 1 unsexed, AM P71000 (QLD 1662); 1 female, AM P75501 (QLD 1960); 2 females, AM P75500 (QLD 1999); 7 females, GCRL (SEL/LIZ 2-8).

**Type locality.** Coconut Beach, Lizard Island, Queensland, Australia (14°41.037'S 145°28.282'E).

**Etymology.** From the indigenous northern Queensland Mabuiag dialect 'Udar' = paddle, referring to the shape of the uropod 3 in the Megaluropidae.

**Description.** Based on holotype female, 2.6 mm, AM P75499.

**Head.** Head rostrum short; lateral cephalic lobe acute. *Antennae* 1–2 peduncle with robust setae. *Antenna* 1 peduncle article 1 shorter than article 2; flagellum with 14 articles; accessory flagellum 2-articulate. *Antenna* 2 peduncle article 4 subequal to article 5; flagellum with 9 articles. *Upper lip* anteriorly notched. *Lower lip* mandibular lobes with extensions directed axially. *Maxilla* 1 inner plate foliose, with dense row of medial setae, apicolateral extension with 2 robust setae. *Maxilla* 2 inner plate broader than outer plate, with many setae in facial row. *Mandible* accessory setal row with 8 setae; mandibular palp article 3 half the length of article 2; article 2 with 9 medial setae; article 3 with row of medial robust setae.

**Pereon.** *Gnathopod* 1 coxa ventral margin convex, minutely serrate; carpus about as long as broad; propodus proximally expanded, distally narrow. *Gnathopod* 2 coxa ventral margin convex, minutely serrate; merus subequal to carpus, strongly produced along posterior margin of carpus; carpus subequal to propodus, distally expanded; propodus twice as long as broad. *Pereopod* 3 coxa distally subacute, minutely serrate; carpus with hooded setae. *Pereopod* 4 coxa distally tapering, ventral margin subacute, minutely serrate; carpus with hooded setae. *Pereopod* 5 coxa anterodorsal lobe present.

**Pleon.** *Pleonites* 1–3 dorsally serrate. *Epimera* 1–3 margin minutely serrate. *Epimeron* 3 anteroventral corner with small acute spine. *Urosomites* 1–2 dorsally serrate. *Uropod* 1 peduncle with distoventral spine. *Uropod* 3 peduncle with robust setae; rami twice as long as broad, heavily setose, margin lined with many short robust setae. *Telson* with few dorsal robust setae, with mostly apical robust setae and with short dorsal robust setae.

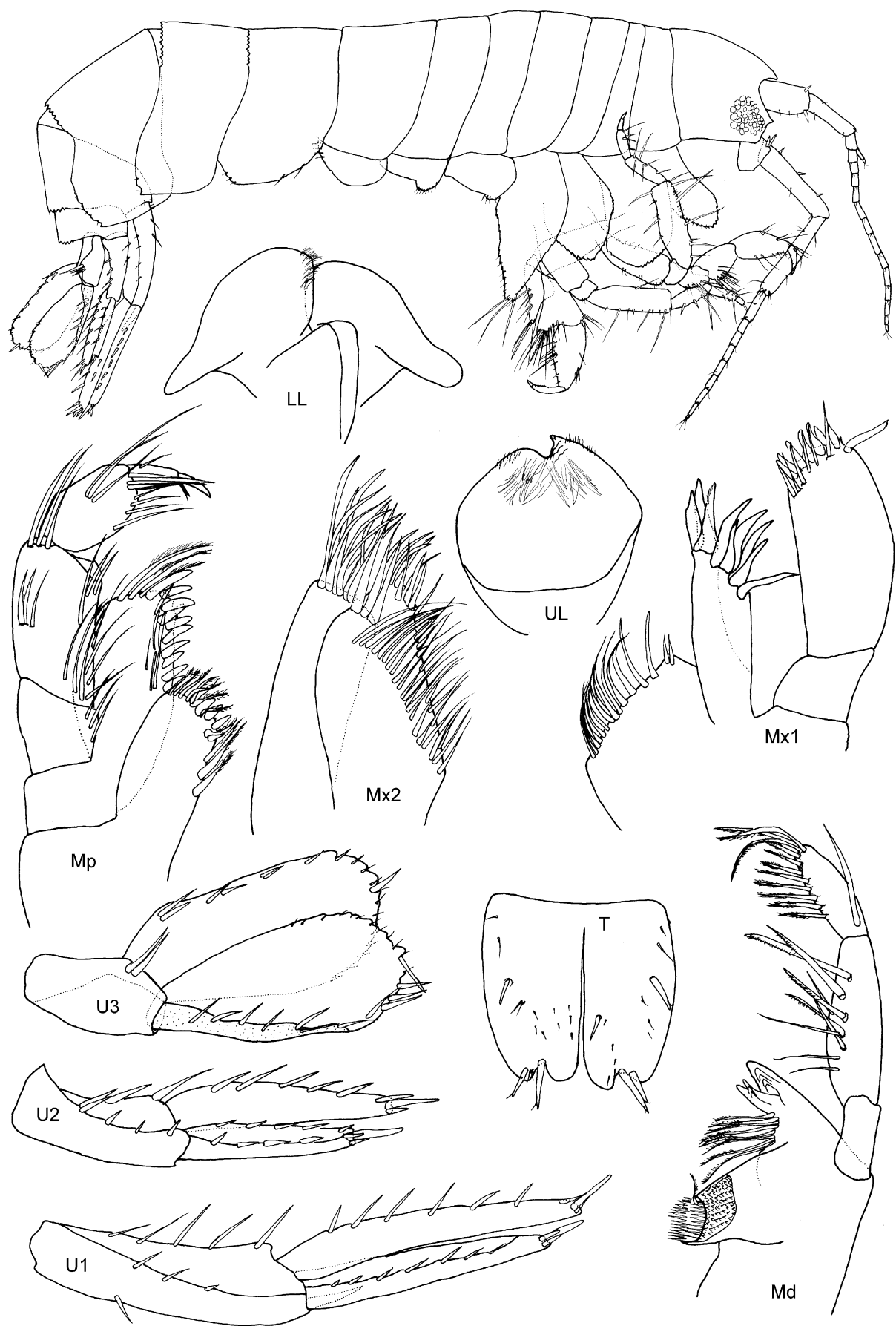
**Male** (sexually dimorphic characters). Unknown.

**Habitat.** Sandy bottoms.

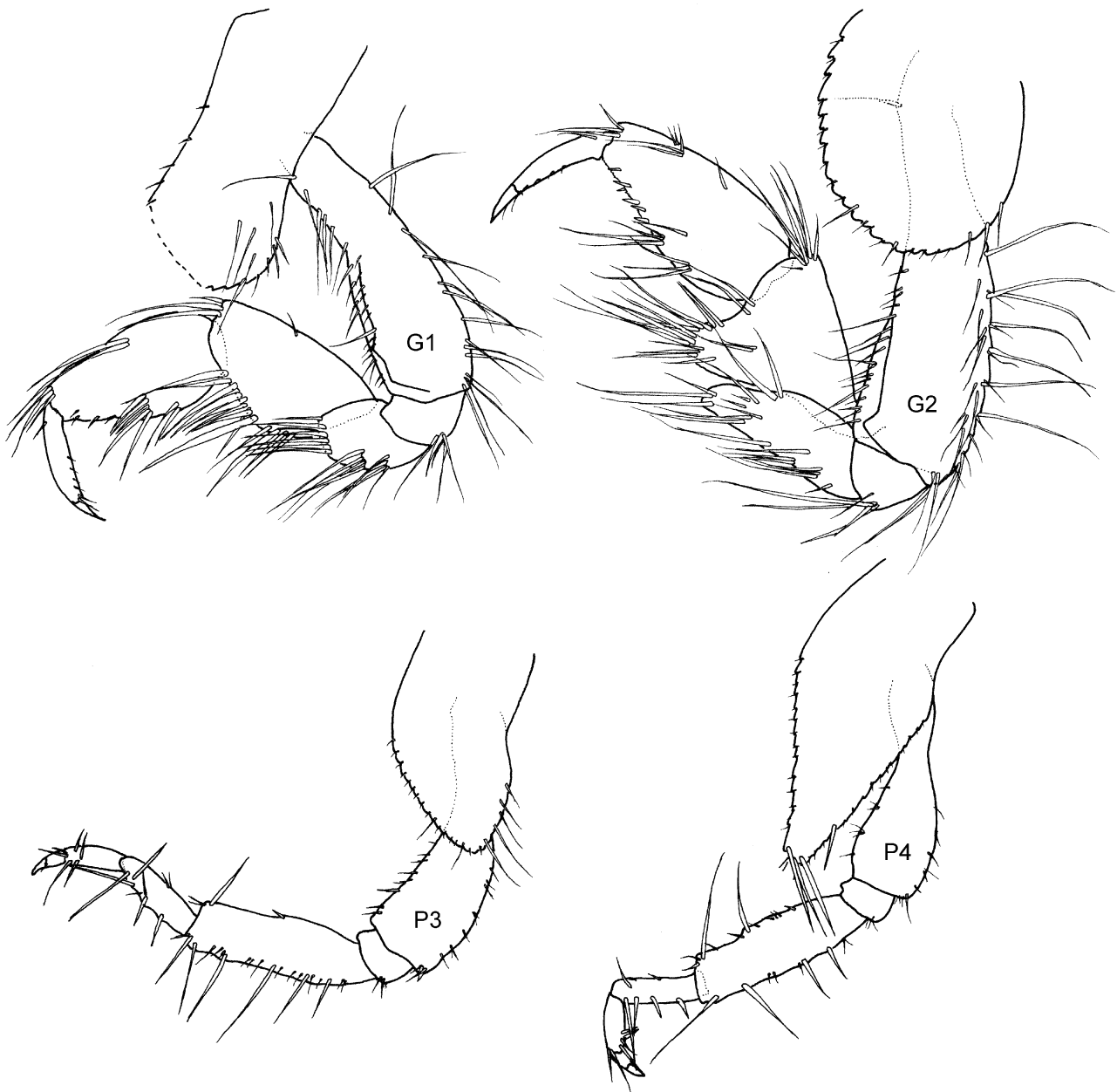
**Remarks.** *Gibberosus udarus* sp. nov. is placed in the genus because it has an acute lateral cephalic lobe, a 2-articulate accessory flagellum and a distoventral spine on the uropod 1 peduncle. The produced distal lobe on the merus on gnathopod 2, a characteristic of the genus *Gibberosus*, is present on *G. udarus* sp. nov. and is similar to that of *G. devaneyi*, but less produced than the remaining species in the genus, *G. coibaensis*, *G. falciformis*, *G. longimerus* and *G. myersi*.

In *Gibberosus udarus* sp. nov. and *G. myersi*, pleonites 1–2 are serrate, while in *G. coibaensis*, *G. falciformis*, *G. devaneyi* and *G. longimerus* these margins are smooth. Epimeron 3 is weakly dentate in *G. udarus* sp. nov. and *G. falciformis*, serrate in *G. myersi* and *G. longimerus* and smooth in *G. devaneyi*.

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



**FIGURE 1.** *Gibberosus udarus* sp. nov., holotype, female 2.6 mm, AM P75499, Coconut Beach, Lizard Island, Great Barrier Reef.



**FIGURE 2.** *Gibberosus udarus* sp. nov., holotype, female 2.6 mm, AM P75499, Coconut Beach, Lizard Island, Great Barrier Reef.

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