

# BULLETIN

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***MUNNOGONIUM POLYNESENSIS* N.SP. FROM CORAL REEFS AT BORA BORA AND MOOREA,  
SOCIETY ISLANDS (ISOPODA: ASELOTA: PARAMUNNIDAE)**

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### SUMMARY

*Munnogonium polynesiensis* n.sp., the first member of Paramunnidae from French Polynesia is described, its intrageneric affinities are discussed and autecological notes are given.

### INTRODUCTION

There is no previous report on Paramunnidae from French Polynesia and indeed, the only species of this family collected by the author during a recent field-work at Moorea and Bora Bora (February-March 1988) was found to be new to science. Seven species of *Munnogonium* George & Strömberg, 1968 are known to date (Hooker, 1985: 268). The new species described below is the first one recorded from the tropical Pacific Ocean.

The research was mainly carried out at the marine biological station "Antenne Muséum" (Ecole Pratique des Hautes Etudes, E.P.H.E.) at Moorea. My thanks are due to Dr. Bernard Salvat for making it possible to use the facilities of the institute and to Dr. René Galzin for organizing the field work at Moorea. Mrs. Terry McLearly kindly revised the English text. This study was partly financed through a grant of the Hessi-

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Specimens are deposited in the Senckenberg-Museum, Frankfurt a.M., Germany (SMF), Zoölogisch Museum, Amsterdam, The Netherlands (ZMA), Zoölogisk Museum Copenhagen (ZMC), Muséum National d'Histoire Naturelle, Paris, France (MNHN) and in the collection of the Antenne Muséum, Moorea.

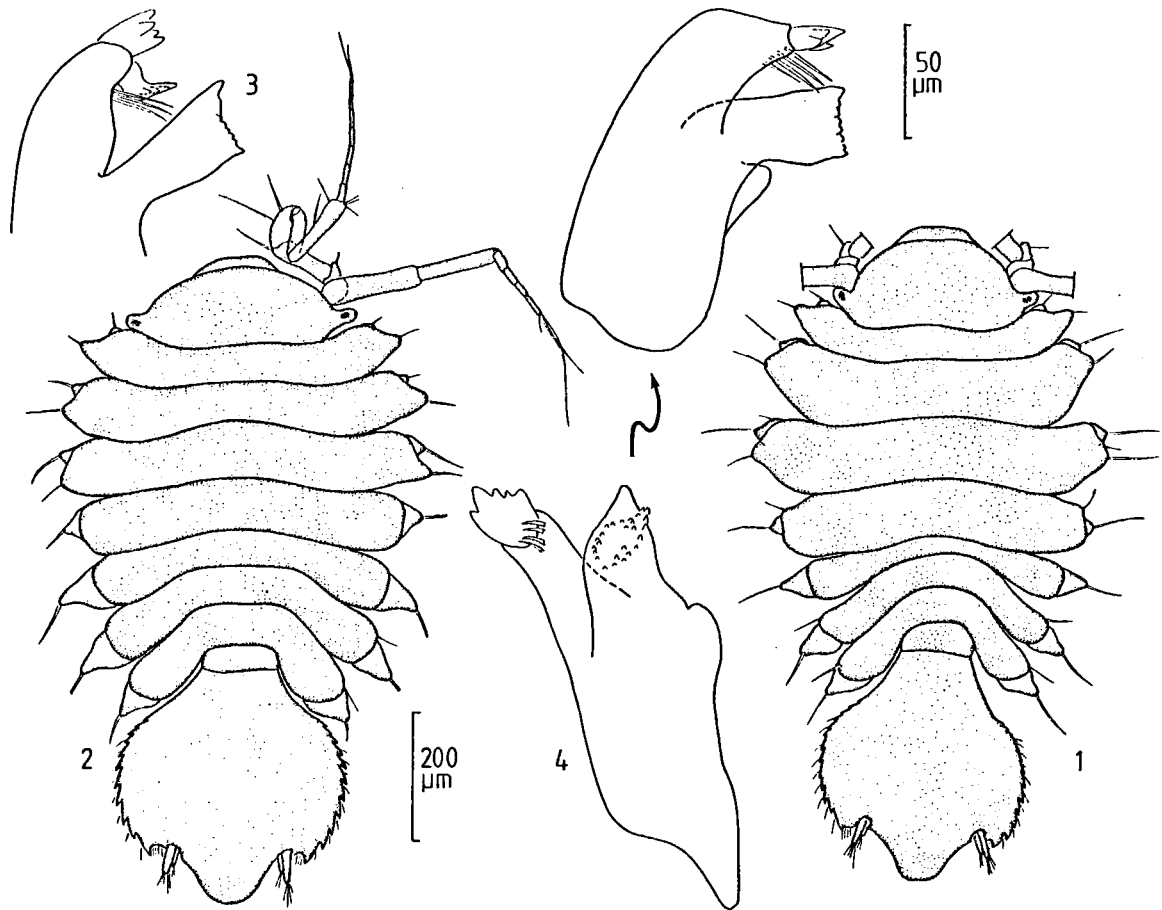
*Munnogonium* George & Strömberg, 1968

***Munnogonium polynesiensis* n.sp.**

(figs. 1-18)

Holotype.- ♀ (SMF 17684), Moorea, exposed fringing reef near Afareaitu; slope, 1-2 m, dead corals, 26 march 1988.

Paratypes.- 2 ♂♂, 3 ♀♀ (1♂, 1♀ Antenne Museum; 1♂, 1♀ ZMA; 1♀ ZMC), Bora Bora, fringing reef near Vaitape; crest near slope, dead corals covered with sponges



Figs. 1-4. *Munnogonium polynesiensis* n.sp. (1, ♀ holotype; 2-3, ♂ paratype), 1, ♀ dorsal view; 2, ♂, dorsal view; 3, left mandible; 4, right mandible.

and algae, 27 February - 6 March 1988. 1 ♂, 2 ♀♀, 2 immature adults (SMF 17685), together with holotype. 1 ♂, 1 ♀, 2 immature adults (MNHN), Moorea, about 2.6 km west of airport near Maharepa, crest of barrier reef; dead corals, 0.5 m, March 1988. 2♂♂, 4♀♀, (ZMA ls. 105.386) Moorea, reef flat of Temae barrier reef north-east of airport; dead corals, 2 m, 31 March 1988. 2♂♂, 3♀♀ (SMF 17686), Tiahura fringing reef, channel slope; dead corals, 1-2 m, 22-23 March 1988.

#### DIAGNOSIS

♂♀. From the two other species of *Munnogonium* with serrate margin of pleotelson, *M. polynesiensis* n.sp. can be easily distinguished by the more or less triangular coxal plates visible at all pereonites in dorsal view.

#### DESCRIPTION

♂♀. Total length about 1.0 mm (frontal margin of

rostrum to tip of pleotelson), maximum width about 0.6 mm (across pereonite 3).

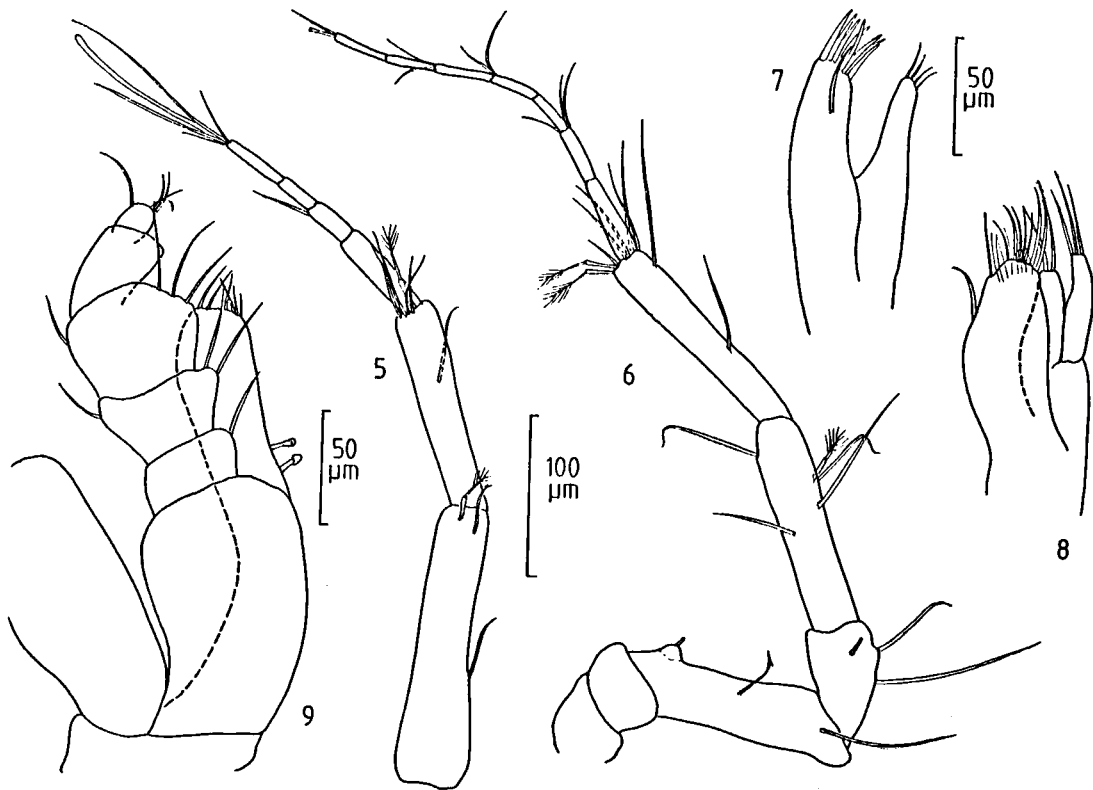
Colour whitish, without any pigment patches.

Cephalon 2.5-3 times wider than long, frontal margin broadly rounded with rostrum about 6 times wider than long, blunt; darkly pigmented eyes on short, slightly anterolaterally directed projections.

Pereonites subequal in length; margins smooth with lateral corners of pereonite 1-3 irregularly-triangular, others irregularly rounded; lateral margins of pereonite 1-7 partly with short, simple seta.

Pleon with one somite free; pleotelson about as long as wide, laterally with 11 (♀) or 13 (♂) teeth, increasing in length distally; pleotelson posteriorly rounded, with several simple setae arising near ventral margin.

Antenna 1, peduncle of 2 segments with first seg-



Figs. 5-9. *Munnogonium polynesiensis* n.sp., ♂ paratype: 5, antenna 1; 6, antenna 2; 7, maxilla 1; 8, maxilla 2; 9, maxilliped.

ment longest and widest; flagellum of 4 segments, first longest, fourth distally with aesthetasc and 4 simple setae of variable length. Antenna 2 peduncle of 6 segments; third, fifth and sixth segment elongate, other short, wider than long (first, second) or slightly longer than wide (fourth); scale with indistinct suture line in basal half of third segment; flagellum of 7 segments subequal in length, bearing some short simple setae of variable length

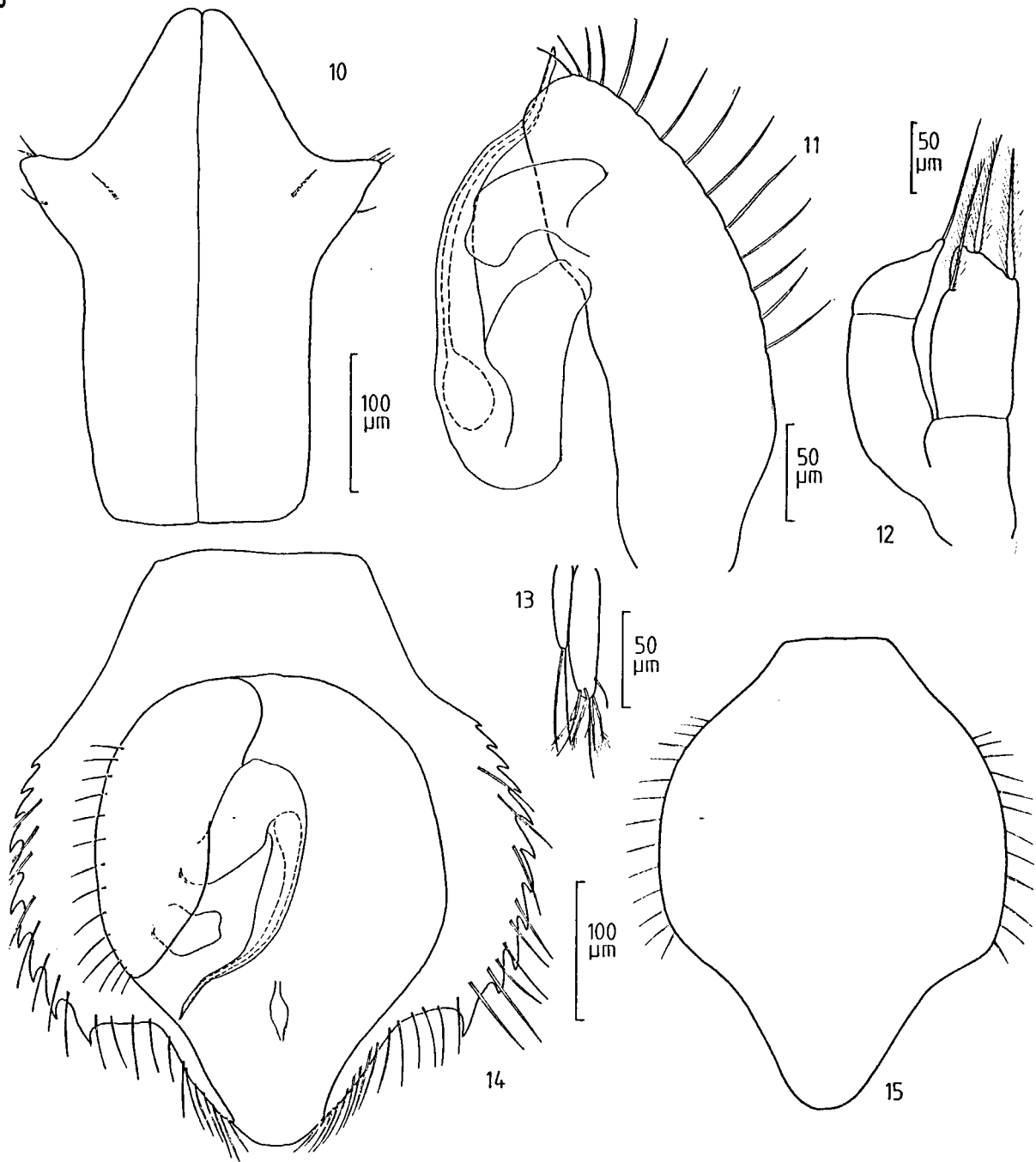
Mandibles with strong, truncate molar process; palp reduced to glabrous scale; left mandible with 4-toothed incisor, lacinia mobilis distally with 4 teeth; 3 simple setae basally of lacinia mobilis; incisor of right mandible 5-toothed, spine row of 4 simple setae. Inner ramus of first maxilla with 4 short, simple setae; 8 terminal spines on outer ramus, moreover 1 elongate spine subterminally. Maxilla 2 with outer ramus broad, bearing 9 elongate setae and several very fine hairs; inner lobe of outer ramus with 2, outer lobe with

3 elongate simple setae terminally. Maxillipedal exopodite just reaching distal half of second palp segment; palp of 5 segments with segment 3 largest; endite with some simple setae on distal and two coupling hooks on inner margin.

Pereopod 1 prehensile, subchelate; dactyl biunguiculate, carpus and merus short, wider than long, ischium and basis elongate, merus dorsodistal with very strong spine. Pereopods 2-7 ambulatory; pereopod 2, claw of dactylus elongate, distally bidentate; strong spines on ventral and dorsal margins of carpus, merus, ischium and basis; pereopod 7 long and slender with dactylus-claw simple.

Uropodal endopod two-thirds the length of exopod, bearing two simple setae terminally; exopod with 4 simple and feathered sensory setae, respectively.

♂-pleopods: Pleopod 1 sagittate, lateral projection with 2-3 short simple setae near its tip, 1 simple seta anterolaterally and 1 simple seta at base of projec-



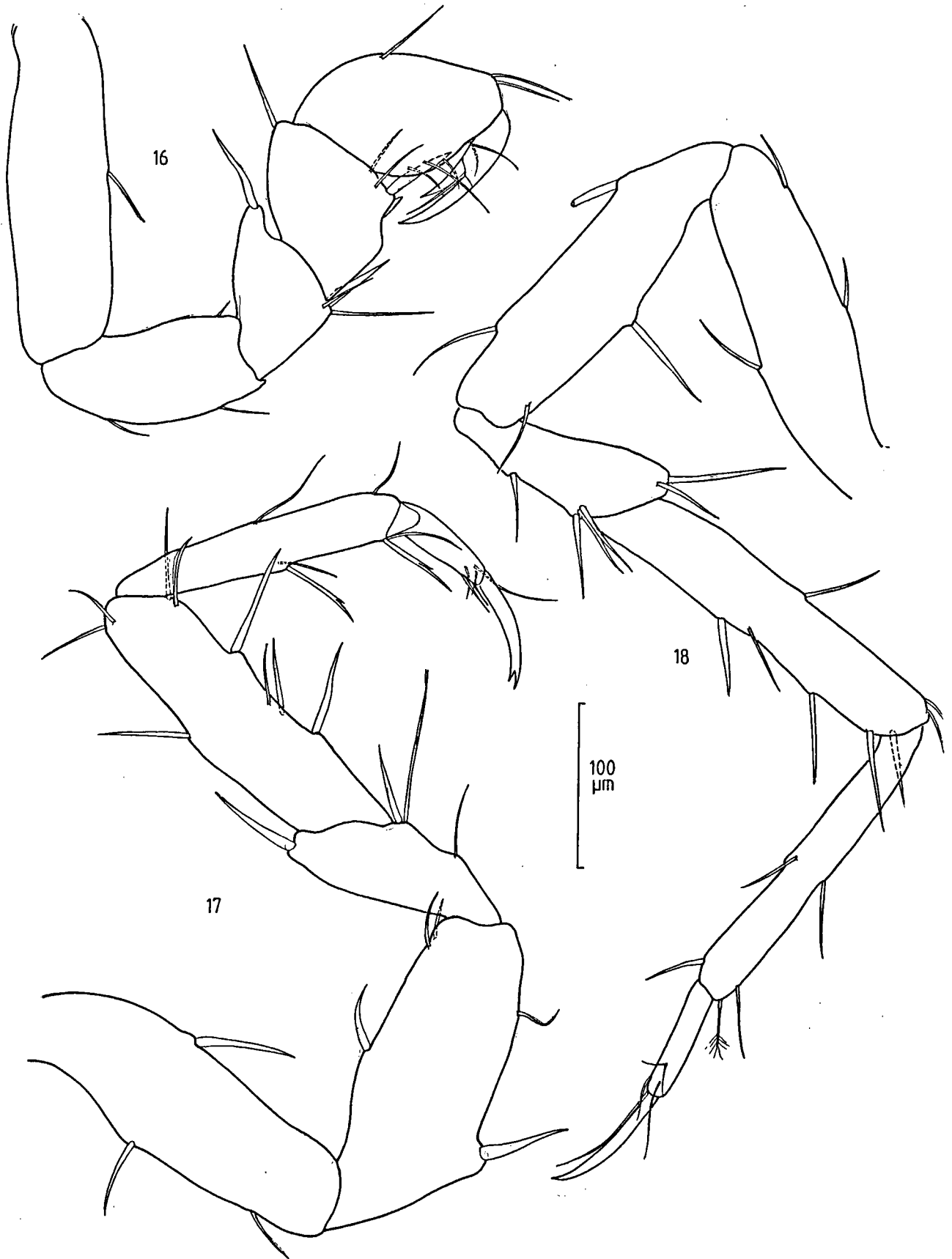
Figs. 10-15. *Munnogonium polynesiensis* n.sp. (10-14, ♂ paratype, 15, ♀ holotype): 10, pleopod 1; 11, pleopod 2; 12, pleopod 3, 13, uropods; 14, pleotelson in ventral view with second pleopod; 15, operculum.

tion; pleopod 2 with several elongate simple setae at convex ectal margin; endopod distally narrowed; pleopod 3 with elongate, simple seta on 2 - jointed, apically narrowed exopod and 3 feathered setae apically on endopod.

♀-operculum distally narrowed with rounded apex; broad lateral margins with 12-14 simple setae.

#### Remarks

*M. polynesiensis* n.sp. is well distinguished from the three other species of the genus with serrate pleotelson, *Munnogonium maltinii* (Schiecke & Fresi, 1972) from the Mediterranean, *Munnogonium subtilis* (Kensley, 1976) from Amsterdam Island, southern Indian Ocean and *Munnogonium wilsoni* (Hooker, 1985) from



Figs. 16-18. *Munnogonium polynesiensis* n.sp., ♂ paratype: 16, pereopod 1; 17, pereopod 2; 18, pereopod 7.

Florida by the irregular-triangular coxal plates visible at all pereonites in dorsal view. Shallow, rounded coxal plates are dorsally visible at pereonites 5-7 in *M. maltinii* and *M. subtilis* (Fresi & Schiecke, 1972: 33, fig. 2; Kensley, 1976: 309, fig. 22 A-I), in pereonites 2-7 in *M. wilsoni* (Hooker, 1985: 226, fig. 7). The new species seems to be more closely related to *M. wilsoni* in having the shape of the eye stalks, antennae and pereopods more similar to this species than to *M. maltinii* and *M. subtilis*.

*M. polynesiensis* n.sp. was exclusively found associated with dead corals in more or less exposed localities, i.e. the fringing reef near Vaitape, Bora Bora opposite to the Teavanui pass; the fringing reef near Afareaitu, Moorea, situated very near the Tupapaurau pass and the crest of the barrier reef surrounding Moorea.

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### Etymology

The specific name is a noun in apposition taken from the geographic area of the type locality.

### Distribution

Bora Bora and Moorea, Society Islands.

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