

Corophiidea (Crustacea: Amphipoda) from Mauritius

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ABSTRACT. Twenty-three species of corophiidean amphipod are recorded from Mauritius of which six are new to science and five species are recorded for the first time from the island. Full descriptions and figures are provided for the six new species together with diagnoses and selected figures of other species recorded in the present work. A key to the species of the genera *Ampithoe*, *Cymadusa*, *Bemlos* and *Erichthonius* of Mauritius is also provided.

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Corophiideans are amphipods (Crustacea, Amphipoda, Corophioidea) characterized by a fleshy entire telson thickly attached at the base (J.L. Barnard & Karaman, 1991). Corophiideans of the Western Indian Ocean are not well known with the exception of the Aoridae which have been studied relatively extensively in the past thirty years in East Africa (Myers, 1975a, 1975b, 1985b; Griffiths, 1973, 1974a, 1974b), South Africa (Myers & Lyons, 1987) and Madagascar (Myers, 1972; Ledoyer, 1982, 1986).

This paper deals with the corophiideans of Mauritius. Those collected in the present study were: eleven species of Ampithoidae of which five are new to science and one was previously unrecorded from Mauritius, six species of Aoridae, one of which is new to science and two of which are recorded for the first time from Mauritius, two species of Photidae, one widespread in the Indo-Pacific, the other an unassigned species in the *Gammaropsis atlantica* complex, and three species of Ischyroceridae, two of which were previously known from the region and one of which is recorded from the Indian Ocean for the first time.

Diagnoses are provided for all species recorded in this study. Keys are provided for species of the genera *Ampithoe*, *Cymadusa*, *Bemlos* and *Erichthonius*. Full descriptions and figures are provided for new species and for species which are poorly known or for which there is some confusion with synonymy in literature [for example, *Cymadusa microphthalma* (Chevreux)]. Selected figures are provided for other species.

Materials and methods

Amphipods were collected from algae, seagrass and coral rubble from 24 sites (see Appadoo *et al.*, 2002: 767, fig.1) around the island of Mauritius and from Ile D'Ambre, a small island within the lagoon of Mauritius on the northeast coast from February 1998 to February 2000. The sites were visited at low tide and samples were collected from the intertidal and shallow subtidal zones. Algae and rubble were collected by scraping them off their substrates using a small hand trowel. Amphipods were extracted using the formalin-wash method (J.L. Barnard, 1976).

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Some of the substrates were also collected by snorkelling and diving from depths not exceeding 2–3 metres. The substrates were then transferred to a plastic bag and amphipods were subsequently extracted.

Prior to dissection the body length of amphipods was recorded by holding it straight and measuring the distance along the dorsal side of the body from the base of the first antennae to the base of the telson. A stereomicroscope with a micrometer scaled eyepiece was used to take the measurement.

Drawings were made using a Nikon compound microscope equipped with a drawing tube attachment.

Type material and additional representative material are deposited in the Australian Museum (AM). All other material is kept in the first author's collection. The terminology for cuticular extensions and setae follows that of Watling (1989).

Abbreviations used in figures. *A*, antenna (1–2); *C*, coxa; *D*, dactylus (3–7); *Ep*, epimeron; *G*, gnathopod (1–2); *L*, labium; *Md*, mandible; *Mx*, maxilla (1–2); *Mxp*, maxilliped; *P*, pereopod (3–7); *p*, palp; *T*, telson; *U*, uropods (1–3); *Ur*, urosomite. Geo-spatial co-ordinates were read from a map of scale 1:25 000.

Key to the genera of Corophiidea in Mauritius

- | | | |
|----|---|------------------------|
| 1 | Uropod 3 without rami | <i>Ritaumius</i> |
| — | Uropod 3 uniramous | 2 |
| — | Uropod 3 biramous | 3 |
| 2 | Uropod 3 ramus distally hooked | <i>Erichthonius</i> |
| — | Uropod 3 ramus without distal hooks | <i>Grandidierella</i> |
| 3 | Uropod 3 outer ramus with recurved robust setae | 4 |
| — | Uropod 3 outer ramus without recurved robust setae | 7 |
| 4 | Gnathopod 1 enlarged in male, larger than gnathopod 2 | 5 |
| — | Gnathopod 2 enlarged in male, larger than gnathopod 1 | 6 |
| — | Gnathopods 1 and 2 of similar size in both sexes | <i>Paradusa</i> |
| 5 | Outer ramus of uropod 3 broader than long, labium outer plate anterior margin un-notched | <i>Exampithoe</i> |
| — | Outer ramus of uropod 3 not broader than long, labium outer plate anterior margin notched | <i>Paragrubia</i> |
| 6 | Uropod 1 with acute disto-ventral spine | <i>Cymadusa</i> |
| — | Uropod 1 with rounded disto-ventral spine or lacking spine | <i>Ampithoe</i> |
| 7 | Urosome segment 1–3 fused | <i>Monocorophium</i> |
| — | Urosome segments free | 8 |
| 8 | Antenna 1 peduncle article 3 as long or longer than article 1 | <i>Gammaropsis</i> |
| — | Antenna 1 peduncle article 3 shorter than article 1 | 9 |
| 9 | Gnathopod 1 male propodus not longer than carpus | 10 |
| — | Gnathopod 1 male propodus much longer than carpus | 12 |
| 10 | Male gnathopod 1 carpus with posterodistal spines | <i>Microdeutopus</i> * |
| — | Male gnathopod 1 carpus without posterodistal spines | 11 |
| 11 | Male coxa 1 anteriorly acute | <i>Aora</i> |
| — | Male coxa 1 anteriorly rounded | <i>Aorcho</i> |
| 12 | Male gnathopod 1 palm with broad blunt spine; female gnathopod 1 propodus not markedly enlarged | <i>Bemlos</i> |
| — | Male gnathopod 1 without spine; female gnathopod 1 enlarged, similar to that of male | <i>Globosolembos</i> |

* *Microdeutopus tridens* Schellenberg, 1938 (recorded from Mauritius by Ledoyer, 1978) is not attributable to *Microdeutopus* Costa, 1853 (see Myers, 1988a). It is keyed out here under that genus until further phylogenetic studies are carried out.

Key to male *Ampithoe* of Mauritius

- 1 Mandible palp slender, article 3 with two apical setae only 2
 — Mandible palp robust, article 3 with slender setae on lateral margin and apex 3
- 2 Gnathopod 1 carpus medially expanded; Gnathopod 2 carpus reduced, three times as broad as long, propodus longer than carpus, distally expanded, palm transverse, weakly sinuous *Ampithoe lafkui*
 — Gnathopod 1 carpus not expanded medially; Gnathopod 2 carpus elongate, slightly less than two and half times as long as broad, propodus slender, subequal to carpus, palm oblique with a weak excavation *Ampithoe longicarpus*
- 3 Gnathopod 2 palmar margin substraight or weakly sinuous 4
 — Gnathopod 2 palmar margin excavate with thumb-like process 5
- 4 Uropod 3 peduncle subrectangular, 2× as long as broad *Ampithoe laxipodus*
 — Uropod 3 peduncle subsquare less than 1.5× as long as broad *Ampithoe mascarenensis*
- 5 Antenna 2 flagellum longer than peduncle article 5 *Ampithoe ramondi*
 — Antenna 2 flagellum shorter than peduncle article 5 *Ampithoe kava*

Family Ampithoidae

Ampithoids are corophioidean amphipods characterized by a notched outer lobe of lower lip and/or uropod 3 outer ramus with 2 recurved robust setae.

Poore & Lowry (1997) give comprehensive diagnoses of the genera of ampithoids.

Genus *Ampithoe* Leach

For a diagnosis see Poore & Lowry, 1997.

Ampithoe kava Myers

Ampithoe ramondi J.L. Barnard, 1970: 50, figs. 18–19; not *Ampithoe ramondi* Audouin, 1826: 93.

Ampithoe kava Myers, 1985a: 22, fig. 15; 1986: 288.—Lyons & Myers, 1990: 1200, figs. 3–4.—Poore & Lowry, 1997: 909, figs. 6–9.

Material examined. 3♂♂, 8♀♀, AM P60553, from *Padina* sp., La Cuvette (20°00'S 57°34.2'E), 14 May 1998; 4♂♂, 13♀♀, AM P60554, from *Sargassum* sp., Bain Boeuf (19°59'S 57°36'E), 15 May 1998; 1♂, 2♀♀, AM P60555, from *Turbinaria ornata*, Bain Boeuf, 28 August 1998; 2♂♂, 2♀♀, 4 juv., AM P60556, 1♂, 7♀♀, AM P60557, from *Sargassum binderi*, La Cuvette, 28 August 1998; 1♂, 4♀♀, 4 juv., AM P60558, from Ile D'Ambre (20°02.2'S 57°42.2'E), 12 November 1998; 2♂♂, 1♀, AM P60559, from mixture of *Sargassum* sp., *Amphiroa* sp., *Pocockiella variegata*, *Amphiroa* sp., Bain Boeuf, 16 June 1999; 1♂, 2♀♀, AM P60560, from *Padina* sp., *Hypnea cornuta* and *Ulva lactuca*, Tamarin (20°19.5'S 57°22'E), 2 August 1999.

Diagnosis. Male antenna 2 peduncular articles 4 and 5 subequal; flagellum 10-articulate and shorter than length of peduncle article 5. Gnathopod 1 palm oblique. Gnathopod 2 basis, anterodistal lobe well developed with 5 stout setae; carpus subtriangular, 0.9× as long as broad; propodus 1.4× as long as broad, posterior margin produced into a short truncated thumb-like process separated from the palm by a narrow cleft, anterior margin with numerous groups of slender setae; dactylus short, stout, inner margin toothed.

Pereopods 3–4 carpus short subquadrate, as long as broad. Pereopods 5–7 propodus with 4 robust setae on posterodistal margin. Uropod 1 peduncle, distal margin with well-developed rounded interramal spur. Telson subtriangular, distally rounded.

Female. Gnathopod 2 palmar margin weakly sinuous, posterodistal margin with 1 robust seta; dactylus fitting palm. Uropod 1 without interramal process.

Type locality. Taunovo Bay, Viti Levu, Fiji.

Distribution. Red Sea, Mauritius, Australia, Tonga, Fiji, Hawaii.

Habitat. *Ampithoe kava* lives mostly amongst brown algae, *Sargassum* sp. and *Padina* sp. and was collected at depths of less than 1 m. It occurs mostly on the north and east coast of the island.

Remarks. The material from Mauritius shows general agreement with the description given by Myers (1985a) from Fiji (the type locality) and with that of Poore & Lowry (1997) from Australia. A small difference is the number of robust setae on the anterodistal lobe of the basis in male gnathopod 2. In *A. kava* from Fiji, there are 3 robust setae in the 5 mm male as compared to 5 robust setae in the 3.8 mm male in this study.

This species resembles *Ampithoe ramondi* Audouin, but can be distinguished from it by the male gnathopod 2 having the thumb-like process on the palm separated from the palm by a narrow cleft as opposed to a round-bottomed excavation in *A. ramondi*, and by the presence in males of *A. kava* of a disto-ventral rounded spur on uropod 1 which is absent in *A. ramondi*. Other differences between the two species as highlighted by Myers (1985a) are, the shorter antenna 2 flagellum and the presence of striate robust setae in *Ampithoe kava* as opposed to non-striate robust setae on the propodus anterodistal margin in *Ampithoe ramondi*. This is the first record of the species from Mauritius.

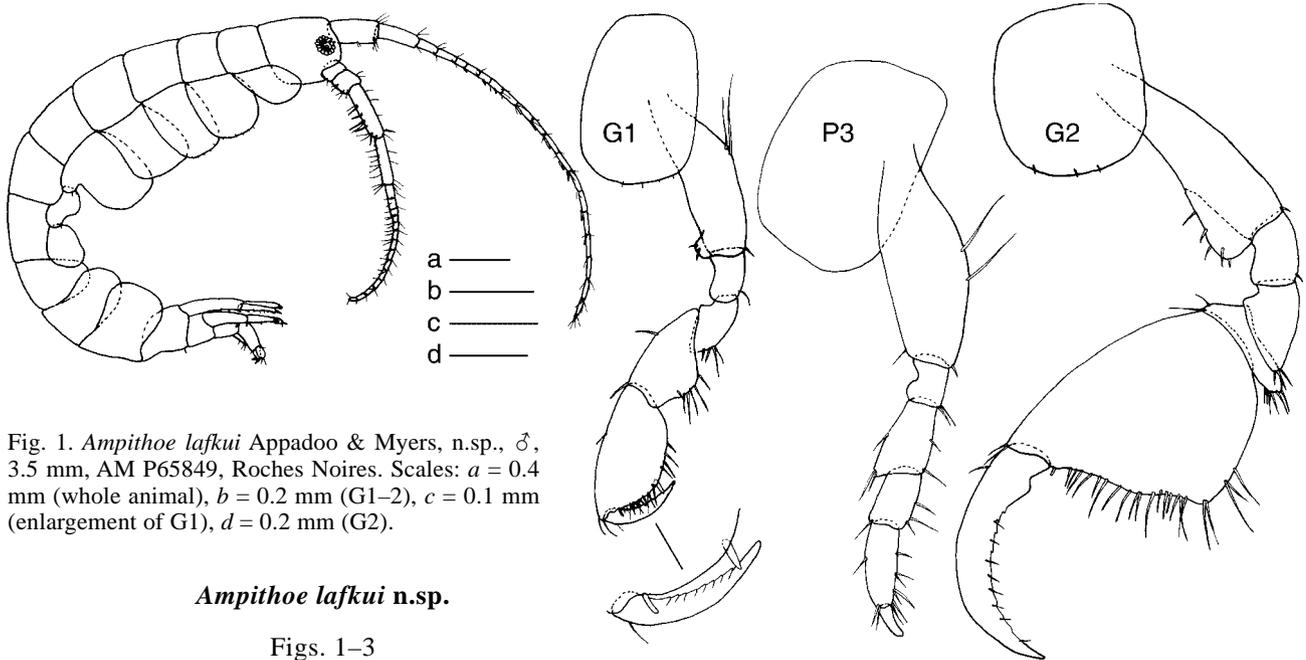


Fig. 1. *Ampithoe lafkui* Appadoo & Myers, n.sp., ♂, 3.5 mm, AM P65849, Roches Noires. Scales: *a* = 0.4 mm (whole animal), *b* = 0.2 mm (G1–2), *c* = 0.1 mm (enlargement of G1), *d* = 0.2 mm (G2).

***Ampithoe lafkui* n.sp.**

Figs. 1–3

Ampithoe kulafi.—Ledoyer, 1982: 120, fig. 39.—Appadoo & Steele, 1998: 639; not *Ampithoe kulafi* J.L. Barnard, 1965: 542, fig. 34.

Type material. HOLOTYPE ♂, 3.5 mm, AM P65839, from *Sargassum* sp., *Dictyota* sp. and *Turbinaria* sp., Roches Noires (20°6.2'S 57°44.5'E) at depths less than 1 m, C. Appadoo, 15 May 1998. PARATYPES, 1♂, 2.8 mm, AM P65841, 1♀, 2.8 mm, AM P65840, 1♂, AM P60584, 1♂, 3♀, AM P60585, same data as holotype; 1♂, AM P60586, from *Gelidiella* sp., Albion (20°13'S 57°23.7'E), 22 October 1998; 2♂♂, 2♀♀, AM P60587, from *Dictyota divaricata*, Bain Boeuf (19°59'S 57°36'E), 10 February 1999; 1♂, AM P60588, from mixture of *Padina* sp., *Hypnea cornuta* and *Ulva lactuca*, Tamarin (20°19.5'S 57°22'E), 2 August 1999.

Description. Male, 3.5 mm. Head slightly longer than deep; eyes round, with well-developed ommatidial ring (transparent in alcohol) surrounding brown (in alcohol) speckled core. Antenna 1 article 2, 0.9× article 1; article 3, 0.5× article 1; flagellum 18-articulate, with short slender setae and aesthetacs. Antenna 2 moderately setose, robust; article 5,

0.8× article 4, flagellum 14-articulate. Mandible palp slender, article 3 longer than 2 with two apical slender setae; article 2 without setae. Lower lip outer lobe narrow, deeply notched, with well-developed conical robust seta; mandibular lobe rounded. Maxilla 1 inner plate subtriangular with one short seta. Maxilla 2 inner plate narrower than outer. Maxilliped palp article 3 slightly expanded, article 4 conical and terminating in an unguis. Gnathopod 1 coxa subrectangular, 1.4× as long as broad, distal margin with minute setae; basis 3.3× as long as broad, with small anterodistal lobe; carpus 1.7× as long as broad, posterior

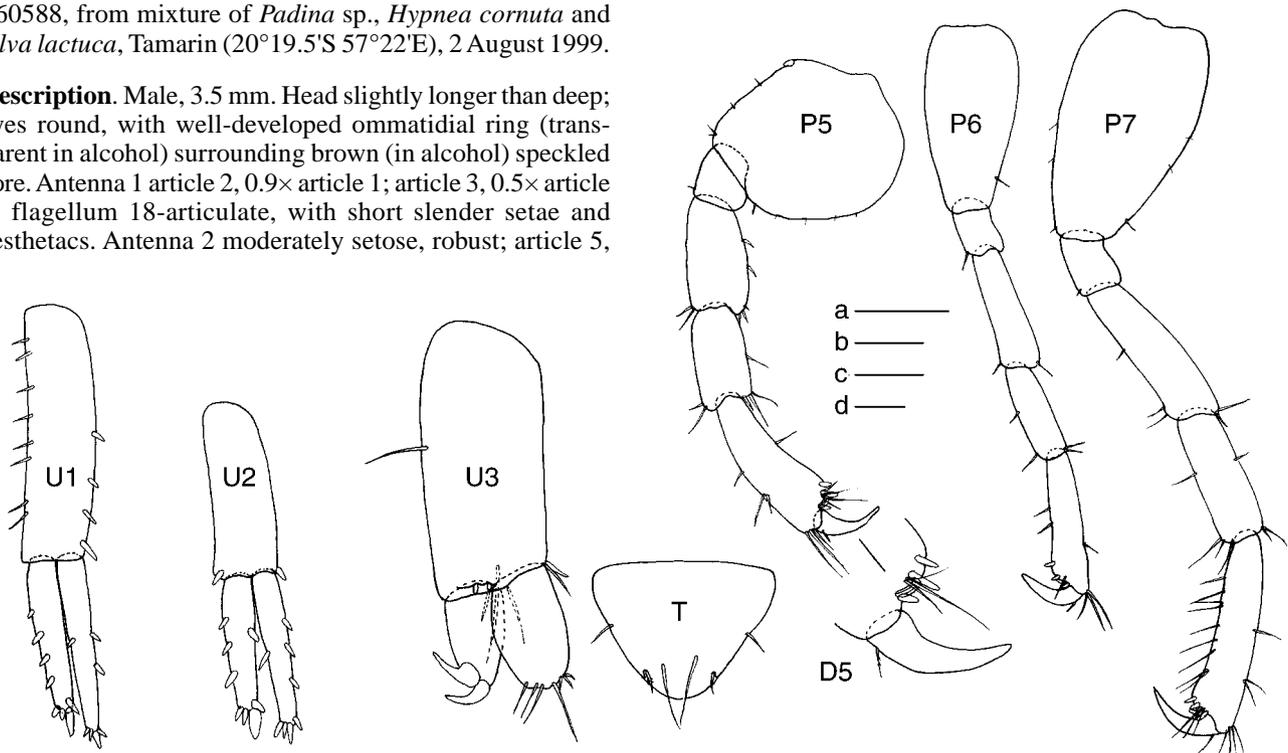


Fig. 2. *Ampithoe lafkui* Appadoo & Myers, n.sp., ♂ 3.5 mm (P5, D5, U1–2, U3, T), AM P65839, ♂, 2.8 mm (P6–7), AM P65840, Roches Noires. Scales: *a* = 0.2 mm (P5, P6–7), *b* = 0.1 mm (U1–2), *c* = 0.05 mm (U3, T), *d* = 0.05 mm (D5).

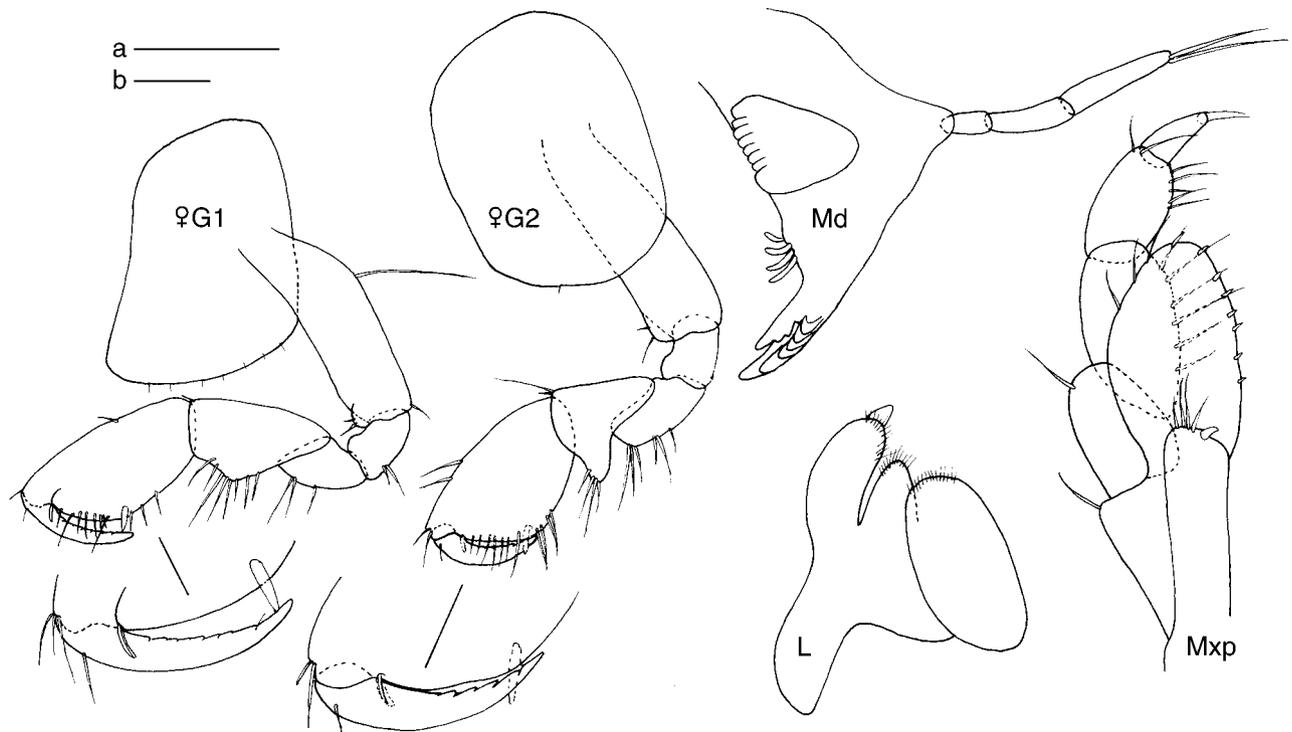


Fig. 3. *Amphithoe lafkui* Appadoo & Myers, n.sp., ♂, 3.5 mm, AM P65839, ♀, 2.8 mm, AM P65841, Roches Noires. Scales: *a* = 0.2 mm (♀G1–2), *b* = 0.05 mm (Md, L, Mxp, enlargements of ♀G1–2). Male unless stated otherwise.

margin sinuous; propodus 1.4× length of carpus, 2.2× as long as broad, palm oblique, evenly convex, with fine slender setae and 1 robust seta on posterodistal margin; dactylus inner margin toothed, overlapping palm. Gnathopod 2 coxa subrectangular, 1.2× as long as broad; basis 2.5× as long as broad, slender at base and expanded distally, anterodistal lobe weak with a few stout setae; carpus reduced, 3× as broad as long; propodus robust, 5.8× length of carpus, 1.3× as long as broad, palm sinuous; dactylus stout, falcate. Pereopods 3–4 coxa 1.5× as long as broad; basis moderately expanded, biconvex, 2.7× as long as broad, merus 1.7× as long as broad, anterior margin weakly expanded; carpus 1.8× as long as broad; propodus 2.8 as long as broad, dactylus relatively short. Pereopod 5 coxa with small posterior lobe; basis expanded, as long as broad; merus 1.8× as long as broad; carpus 1.8× as long as broad, propodus 3× as long as broad, posterodistal margin expanded with 4 robust setae, one of which is curved. Pereopods 6 and 7 (missing from described specimen; described from 2.8 mm male). Pereopod 6 basis slender, subrectangular, distally tapered, 2× as long as broad; carpus and merus slender, carpus 0.8× length of merus; propodus 1.4× length of carpus, distally expanded, with 4 robust setae on posterodistal margin. Pereopod 7 similar to pereopod 6 but basis 1.9× as long as broad, proximally expanded; merus, carpus and propodus slender. Epimera 1–3 posterodistal margin rounded. Uropod 1 peduncle 3.9× as long as broad, outer ramus 0.9× inner ramus. Uropod 2 outer ramus 0.9× inner ramus, 0.8× length of peduncle; both rami with several robust setae. Uropod 3 peduncle 2.4× as long as broad, distal margin with dorsal robust setae and a ventral group of slender setae; inner ramus subovate, with slender apical

setae; outer ramus with 2 recurved robust setae. Telson subtriangular with few slender lateral and medial setae; telsonic cusps present on broadly rounded apex.

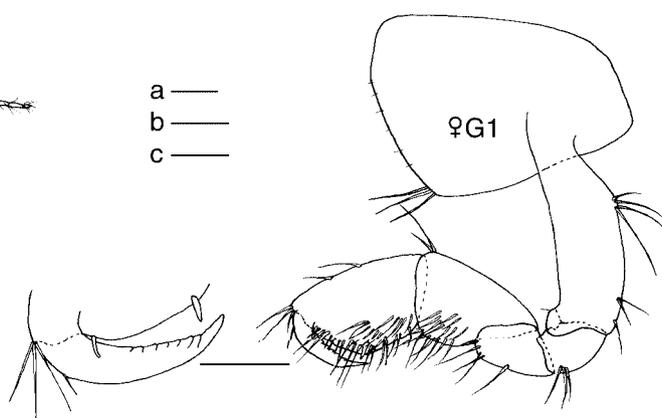
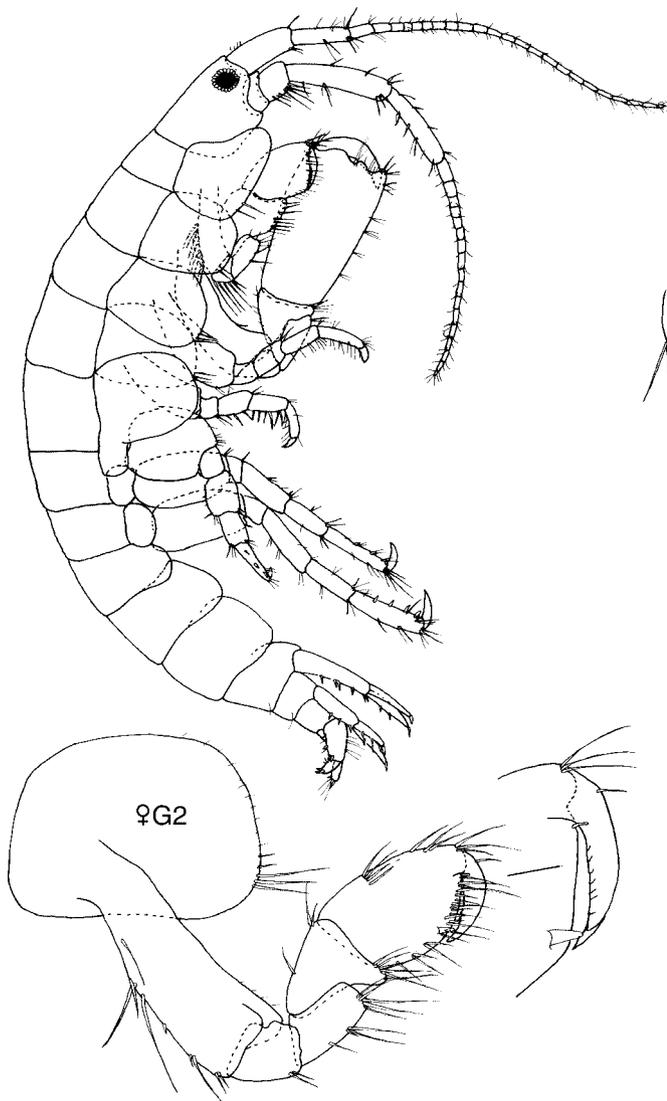
Female, 2.8 mm (ovigerous). Gnathopod 1 coxa 1.3× as long as broad; basis 3.2× as long as broad; carpus subtriangular, 1.8× as long as broad; propodus 1.4× length of carpus, palm oblique, evenly convex, with few slender setae and 1 robust seta at posterodistal margin; dactylus inner margin toothed. Gnathopod 2 coxa 1.5× as long as broad, anterodistal margin with short setae; basis 3.5× as long as broad, anterodistal lobe weak; carpus about as long as broad, posterior margin produced into a lobe; propodus 1.7× length of carpus, palm oblique with fine setae and 1 robust seta at posterodistal margin; dactylus inner margin toothed.

Distribution. Mauritius, Madagascar.

Habitat. *Amphithoe lafkui* was collected from brown and green algae at depths of less than 3 m. It was collected, in small numbers, from several sites around Mauritius and was moderately common at Ile D'Ambre where samples were taken from a mixture of algae, coral rubble and silt by diving.

Remarks. This species closely resembles *Amphithoe kulafi* J.L. Barnard (1965), but differs in the rounded (rather than acute) anterodistal margin of coxa 1, in the more slender basis of pereopods 6 and 7 and in lacking a seta on article 2 of the mandible palp. The male gnathopod 2 propodus differs subtly in shape, the palm is weakly sinuous in *A. lafkui*, whereas in *A. kulafi*, it is non-sinuous. This species is synonymous with the material described under the name *Amphithoe kulafi* by Ledoyer (1982).

Etymology. An anagram of the specific epithet *kulafi*.



Ampithoe laxipodus n.sp.

Figs. 4–6

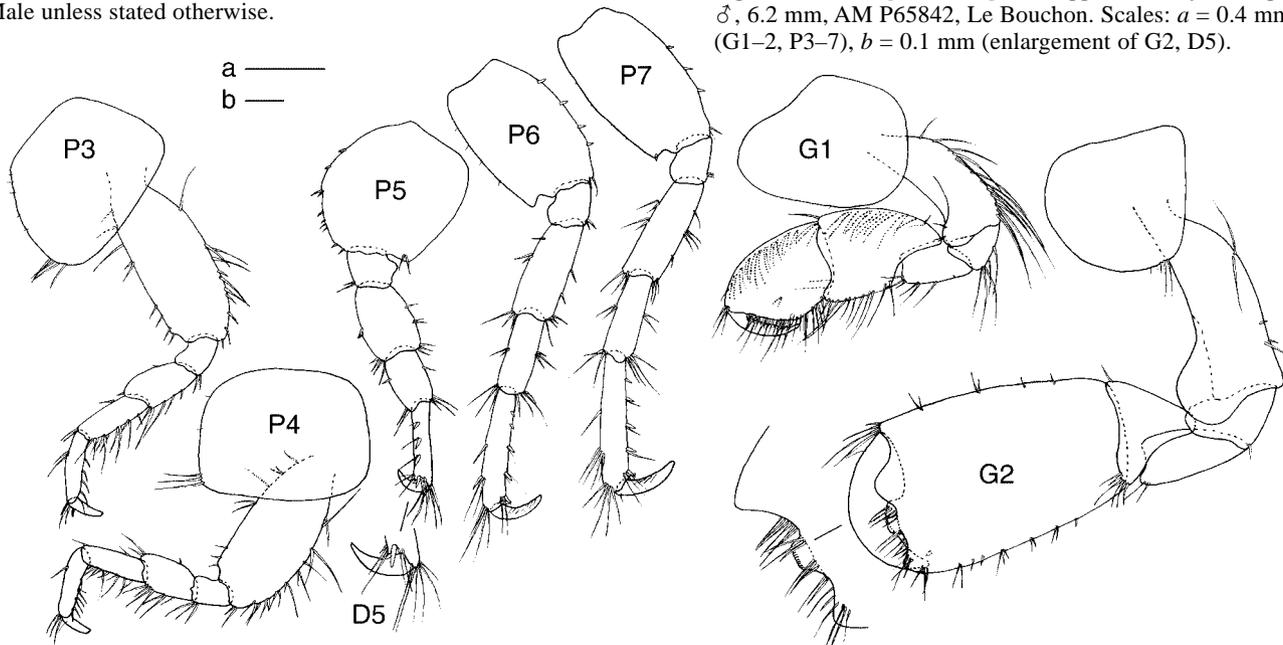
Ampithoe sp. 1 Appadoo & Steele, 1998: 639.

Type material. HOLOTYPE ♂, 6.2 mm, AM P65842, from *Ulva lactuca* and *Ulva reticulata*, Le Bouchon (20°28'S 57°40.5'E), at depth less than 1 m, C. Appadoo, 30 June 1999. PARATYPES, 1 ♀, 7.2 mm, AM P65843, 1 ♂, AM P60589, 5 ♂♂ and 7 ♀♀, AM P60590, same data as holotype; 4 ♂♂, 11 ♀♀, 22 juv., AM P60591, 1 ♂, 2 ♀♀, 2 juv., AM P60592, from *Ulva lactuca*, *Ulva reticulata* and *Enteromorpha flexuosa*, Le Bouchon, 27 October 1998.

Description. Male, 6.2 mm. Head 1.3× as long as deep, ventrodistal margin excavate; eyes large with well-developed light yellow ommatidia (in alcohol). Antenna 1 peduncle article 2, 0.8× article 1; article 3, 0.3× article 1; accessory flagellum vestigial, 1-articulate; primary flagellum 25 articulate. Antenna 2 poorly setiferous, peduncle article 5, 0.9× article 4; flagellum 16-articulate. Mandible palp well developed, article 2, 2.7× as long as broad, 1.5× article 1; article 3, 2× article 1, with a group of apical setae. Lower lip outer lobe broad, notched; mandibular lobe rounded. Maxilla 2 inner plate narrow, with

Fig. 4 (above). *Ampithoe laxipodus* Appadoo & Myers, n.sp., ♂, 6.2 mm, AM P65842, ♀, 7.2 mm, AM P65843, Le Bouchon. Scales: a = 0.4 mm (whole animal), b = 0.2 mm (♀G1–2), c = 0.1 mm (enlargements of ♀G1–2). Male unless stated otherwise.

Fig. 5 (below). *Ampithoe laxipodus* Appadoo & Myers, n.sp., ♂, 6.2 mm, AM P65842, Le Bouchon. Scales: a = 0.4 mm (G1–2, P3–7), b = 0.1 mm (enlargement of G2, D5).



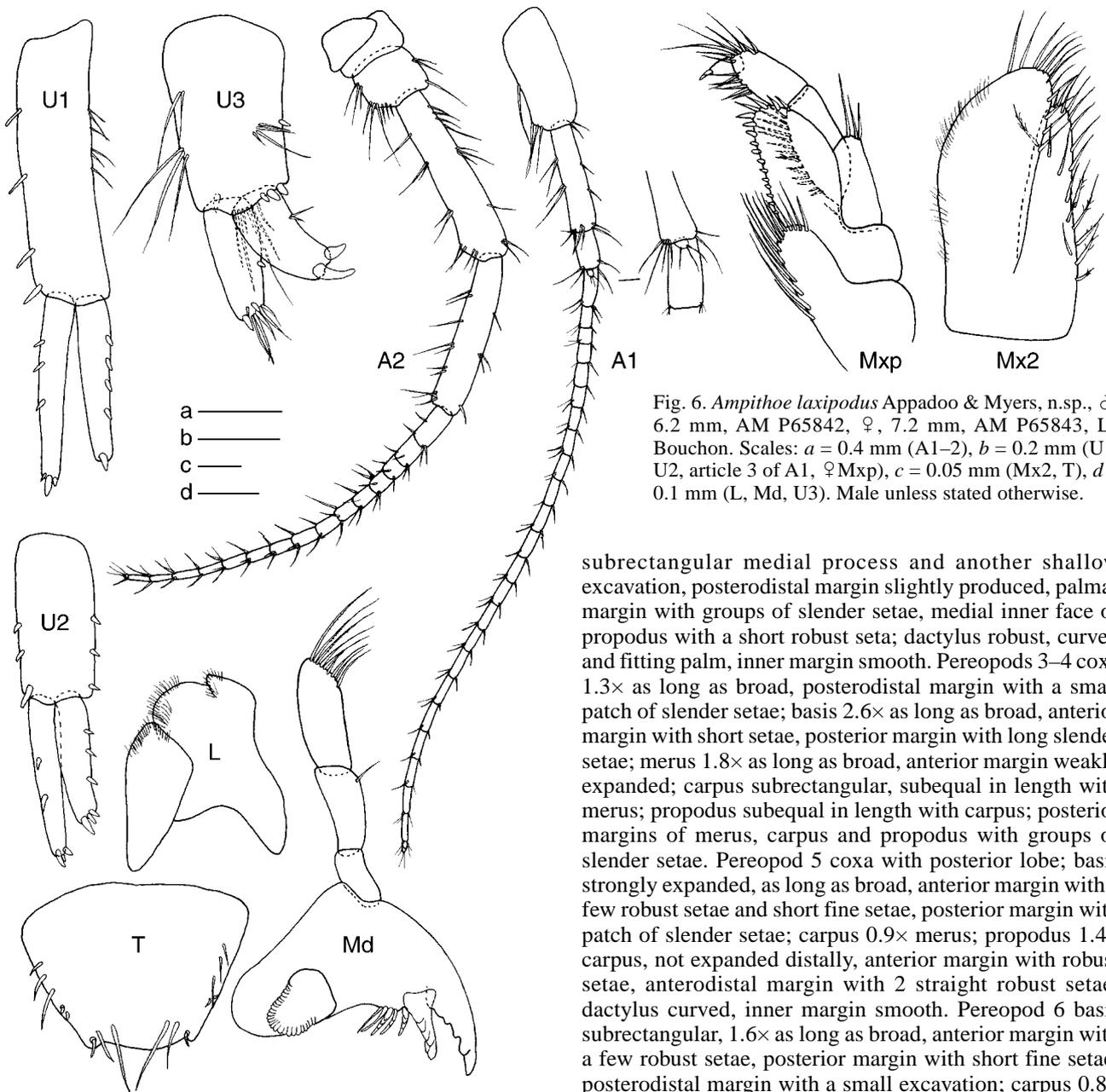


Fig. 6. *Ampithoe laxipodus* Appadoo & Myers, n.sp., ♂, 6.2 mm, AM P65842, ♀, 7.2 mm, AM P65843, Le Bouchon. Scales: *a* = 0.4 mm (A1–2), *b* = 0.2 mm (U1, U2, article 3 of A1, ♀ Mxp), *c* = 0.05 mm (Mx2, T), *d* = 0.1 mm (L, Md, U3). Male unless stated otherwise.

apical, medial and an oblique row of setae; outer plate broad, with apical slender setae and fine short hair-like setae on outer margin. Maxilliped palp 4-articulate, article 4 conical with apical nail. Gnathopod 1 coxa breadth subequal to depth, anterodistal margin produced, rounded; basis $2.7\times$ as long as broad, anterodistal lobe well developed, posterior margin with patches of long slender setae; carpus expanded, $1.3\times$ as long as broad, anterior and posterior margins with long slender setae; propodus globular, $0.9\times$ length of carpus, $1.4\times$ as long as broad with groups of long slender setae on anterior margin, palm oblique with a robust seta at posterodistal corner, palmar margin with groups of slender setae; dactylus inner margin toothed. Gnathopod 2 coxa as long as broad, posterodistal margin with a small patch of short setae; basis $3\times$ as long as broad, anterodistal lobe well developed; carpus subtriangular, $0.8\times$ as long as broad; propodus subquadrate, $3\times$ length of carpus, anterior and posterior margins with groups of short setae, palm transverse, with a shallow excavation followed by a

subrectangular medial process and another shallow excavation, posterodistal margin slightly produced, palmar margin with groups of slender setae, medial inner face of propodus with a short robust seta; dactylus robust, curved and fitting palm, inner margin smooth. Pereopods 3–4 coxa $1.3\times$ as long as broad, posterodistal margin with a small patch of slender setae; basis $2.6\times$ as long as broad, anterior margin with short setae, posterior margin with long slender setae; merus $1.8\times$ as long as broad, anterior margin weakly expanded; carpus subrectangular, subequal in length with merus; propodus subequal in length with carpus; posterior margins of merus, carpus and propodus with groups of slender setae. Pereopod 5 coxa with posterior lobe; basis strongly expanded, as long as broad, anterior margin with a few robust setae and short fine setae, posterior margin with patch of slender setae; carpus $0.9\times$ merus; propodus $1.4\times$ carpus, not expanded distally, anterior margin with robust setae, anterodistal margin with 2 straight robust setae; dactylus curved, inner margin smooth. Pereopod 6 basis subrectangular, $1.6\times$ as long as broad, anterior margin with a few robust setae, posterior margin with short fine setae, posterodistal margin with a small excavation; carpus $0.8\times$ merus; propodus slender $1.5\times$ length of carpus, anterior margin with robust setae and fine setae, posterior margin with groups of slender setae, anterodistal corner with 2 straight robust setae and a group of slender setae; dactylus curved, inner margin smooth. Pereopod 7 similar to pereopod 6 but more slender. Epimera 1–3 posterodistal corner broadly rounded. Uropod 1 peduncle lacking interrampal process with robust setae on inner margin and groups of short slender setae on outer margin; inner ramus $0.7\times$ length of peduncle and subequal with outer ramus; both rami with robust setae. Uropod 2 peduncle with robust setae; inner ramus subequal to peduncle, $1.2\times$ outer ramus; both rami with robust setae. Uropod 3 peduncle $1.9\times$ as long as broad, inner margin with 2 groups of long slender setae, distal margin with one patch of long slender setae and a few robust setae; outer ramus $0.9\times$ inner ramus, with one patch of short medial slender setae; inner ramus with 1 medial robust seta and a group of slender and robust setae at apex. Telson subtriangular, distally truncate with groups of dorsolateral and medial setae, telsonic cusps present.

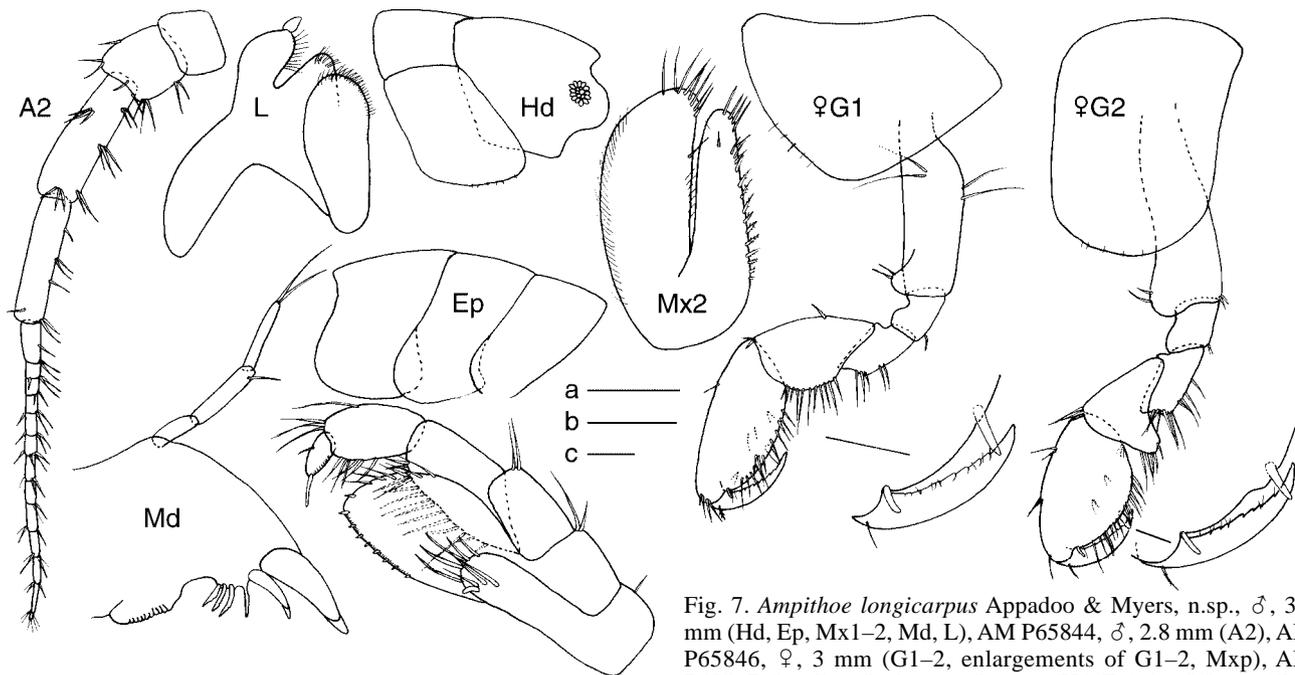


Fig. 7. *Ampithoe longicarpus* Appadoo & Myers, n.sp., ♂, 3.5 mm (Hd, Ep, Mx1–2, Md, L), AM P65844, ♂, 2.8 mm (A2), AM P65846, ♀, 3 mm (G1–2, enlargements of G1–2, Mxp), AM P65847, Souillac. Scales: a = 0.4 mm (Hd, Ep), b = 0.2 mm (G1–2, A2), c = 0.05 mm (Mx2, Md, L, Mxp, enlargements of G1–2).

Female, 7.2 mm (ovigerous). Gnathopod 1 coxa 1.3× as long as broad, anterodistal lobe produced, posterodistal margin with a small patch of slender setae; basis 3.2× as long as broad, anterodistal lobe well developed, posterior margin with few groups of slender setae; carpus 1.5× as long as broad; propodus subequal to carpus, in length and breadth, palm oblique with fine slender setae and one robust seta on posterodistal margin; dactylus inner margin toothed. Gnathopod 2 coxa 1.4× as long as broad, posterodistal margin with a small patch of slender setae; basis 3.2× as long as broad with well-developed anterodistal lobe, posterior margin with a few long slender setae; carpus subtriangular, as long as broad; propodus 1.4× as long as broad, palmar margin with groups of slender setae and 1 robust seta at posterodistal corner; dactylus inner margin toothed.

Distribution. Mauritius.

Habitat. This species was collected from one site, Le Bouchon at depths of less than half a metre. It lives amongst the green algae *Ulva lactuca* and *Ulva reticulata*.

Remarks. The presence of a vestigial accessory flagellum would align this species with the genus *Cymadusa*. However, the lack of a strong, acute, interramal process on uropod 1 removes it from that genus. Species of *Ampithoe* sometimes possess small rounded interramal processes but these are never spine-like and occur only in the male.

Ampithoe laxipodus n.sp. resembles *A. mascarenensis* n.sp. (for distinguishing features, see that species).

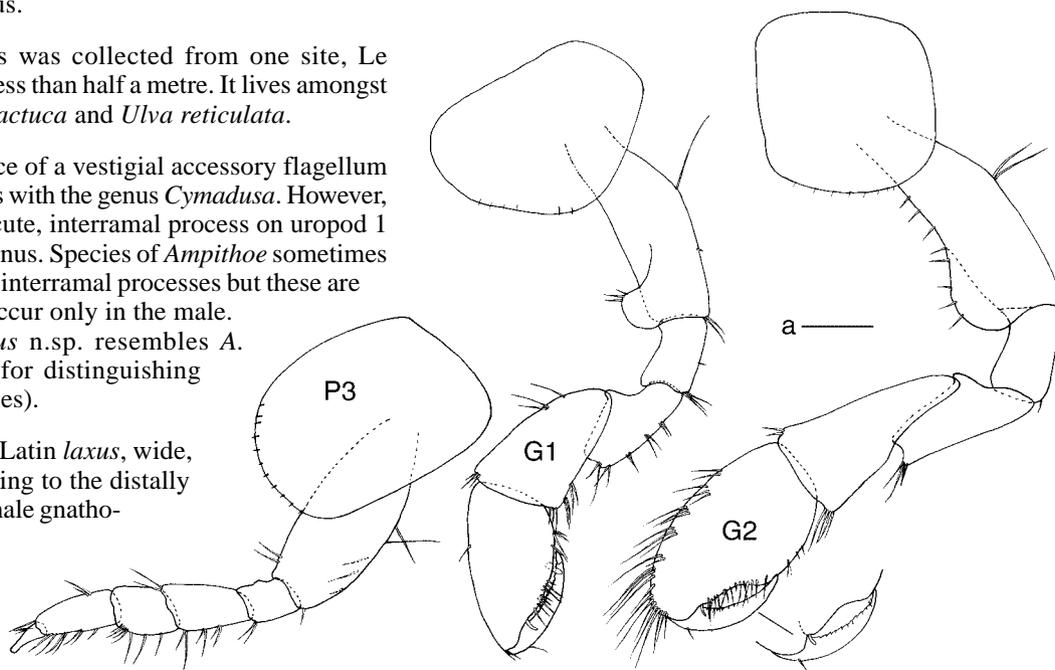
Etymology. From the Latin *laxus*, wide, and *podus*, foot, referring to the distally wide propodus of the male gnathopod 2.

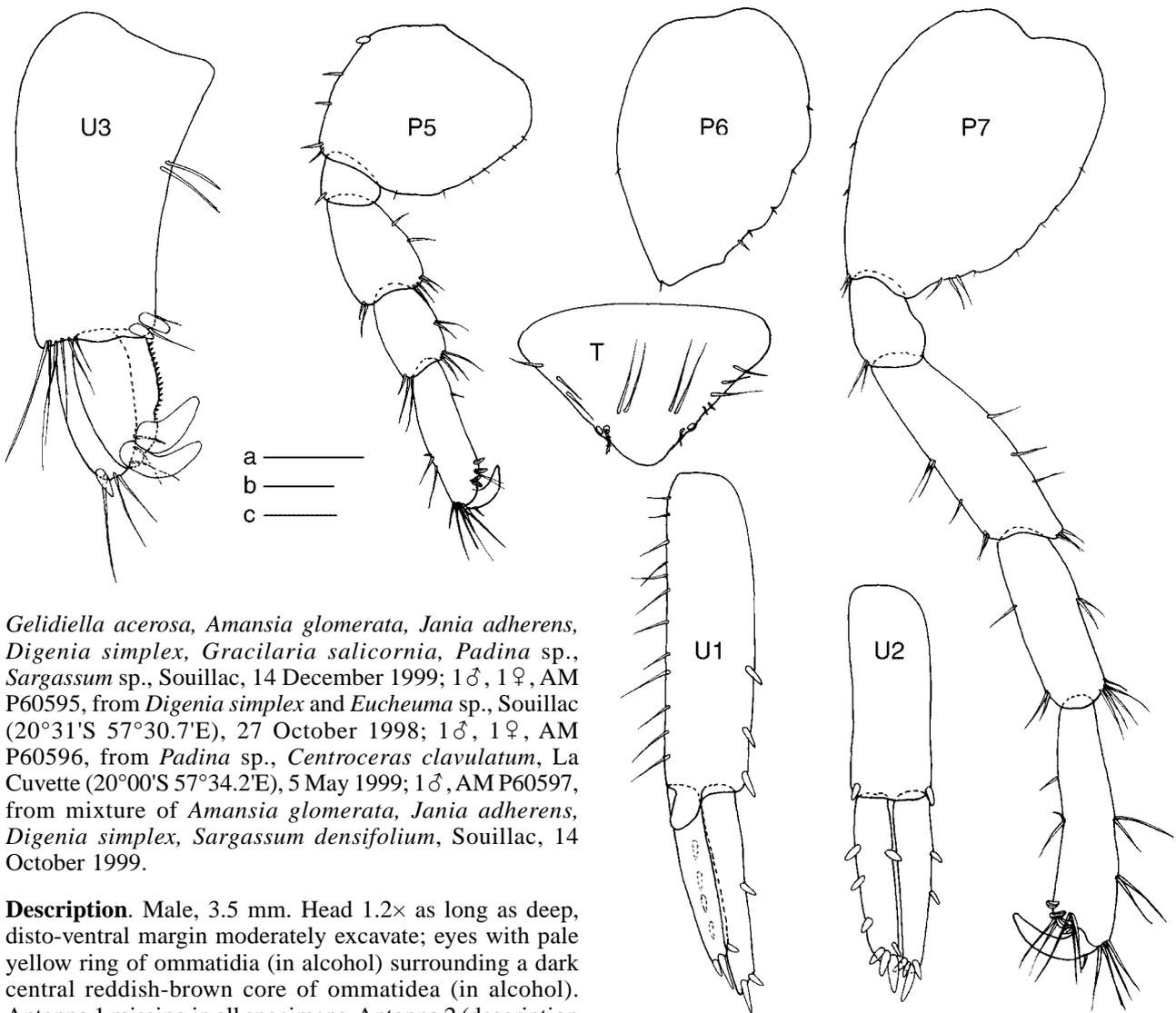
***Ampithoe longicarpus* n.sp.**

Figs. 7–9

Type material. HOLOTYPE ♂, 3.5 mm, AM P65844 from mixture of *Sargassum* sp., *Ulva reticulata* and *Gelidiella acerosa*, Souillac (20°31'S 57°30.7'E), at depth less than 1 m, C. Appadoo, 14 December 1999. PARATYPES, 1♂, 3.3 mm, AM P65845, 1♀, 3 mm, AM P65847, same data as holotype; 1♂, 2.8 mm, AM P65846, from *Amansia glomerata* and *Padina* sp., Souillac, 8 April 1999; 1♂, AM P60593, 3♂♂ and 2♀♀, AM P60594, from mixture of

Fig. 8. *Ampithoe longicarpus* Appadoo & Myers, n.sp., ♂, 3.5 mm, AM P65844, Souillac. Scale: a = 0.2 mm (G1–2, P3).





Gelidiella acerosa, *Amansia glomerata*, *Jania adherens*, *Digenia simplex*, *Gracilaria salicornia*, *Padina* sp., *Sargassum* sp., Souillac, 14 December 1999; 1♂, 1♀, AM P60595, from *Digenia simplex* and *Eucheuma* sp., Souillac (20°31'S 57°30.7'E), 27 October 1998; 1♂, 1♀, AM P60596, from *Padina* sp., *Centroceras clavulatum*, La Cuvette (20°00'S 57°34.2'E), 5 May 1999; 1♂, AM P60597, from mixture of *Amansia glomerata*, *Jania adherens*, *Digenia simplex*, *Sargassum densifolium*, Souillac, 14 October 1999.

Description. Male, 3.5 mm. Head 1.2× as long as deep, disto-ventral margin moderately excavate; eyes with pale yellow ring of ommatidia (in alcohol) surrounding a dark central reddish-brown core of ommatidea (in alcohol). Antenna 1 missing in all specimens. Antenna 2 (description from male, 2.8 mm), peduncle article 5, 0.9× article 4, flagellum longer than article 5, 13-articulate. Mandible palp slender, article 3, 0.9× article 2, with two terminal slender setae. Lower lip outer plate narrow, deeply notched, with well-developed robust seta; mandibular lobes produced and rounded distally. Maxilla 1 inner plate subovate with 1 slender sub-distal seta. Maxilla 2 inner plate much narrower than outer plate. Maxilliped (from female, 3 mm), palp 4-articulate, article 3, 1.6× as long as broad, article 4 triangular with terminal nail. Gnathopod 1 coxa 1.5× as long as broad, anterodistally produced, rounded, distal margin with minute setae; basis 2.9× as long as broad, anterodistal lobe well developed with 3 stout setae, posterior margin with few slender setae; ischium long, 1.5× as long as broad; carpus elongate, subtriangular, 1.8× as long as broad; propodus 1.1× carpus, 2× as long as broad, palm oblique and poorly defined with a robust seta on posterodistal corner; dactylus long, 0.7× length of propodus, inner margin toothed. Gnathopod 2 coxa subquadrate, as long as broad, distal margin with minute setae; basis 3× as long as broad, anterodistal lobe well developed bearing stout setae; ischium elongate, 1.7× as long as broad; merus with posterodistal process; carpus elongate, subtriangular, 2.3× as long as broad; propodus and carpus subequal in length; propodus 1.8× as long as broad, anterior margin with numerous groups

Fig. 9. *Ampithoe longicarpus* Appadoo & Myers, n.sp., ♂, 3.5 mm (U1–3, T), AM P65844, ♂, 3.3 mm (P5–7), AM P65845, Souillac. Scales: a = 0.2 mm (P5–7), b = 0.1 mm (U1–2), c = 0.05 mm (U3, T).

of long slender setae, palm sinuous with a weak excavation and with slender setae; dactylus over-reaching palm, inner margin toothed. Pereopods 3–4 coxa 1.4× as long as broad, distal margin with minute seta; basis weakly expanded, 2.4× as long as broad; merus 1.7× as long as broad; carpus subrectangular, 1.3× as long as broad; propodus 2.6× as long as broad. Pereopod 5 missing on described specimen (description from 3.3 mm male); basis strongly expanded, subequal in length and breadth; carpus 0.8× merus; propodus 1.6× carpus, slightly expanded distally with 4 striate robust setae at posterodistal corner. Pereopod 6 (from male, 3.3 mm), basis pyriform, 1.3× as long as broad, posterior margin broadly sinuous and scalloped, with a few slender setae; carpus 0.8× merus; propodus 1.3× carpus, slightly expanded distally, with 4 striate robust setae at anterodistal margin. Pereopod 7 similar to pereopod 6 but basis 1.4× as long as broad, anteriorly expanded, distally tapered. Epimera 1–3 posterodistal margin broadly rounded. Uropod 1 peduncle 3.7× as long as broad, outer margin

with evenly spaced slender setae, inner margin with a few robust setae, distal margin with a short, rounded interramal process; outer ramus 0.9× inner ramus. Uropod 2 peduncle 2.8× as long as broad, outer ramus 0.9× inner ramus, rami with numerous robust setae. Uropod 3 peduncle 2.2× as long as broad, with one group of medial and one group of distal slender setae, distal margin with robust setae; inner ramus subovate with 1 robust and several slender distal setae; outer ramus with two large recurved robust setae at apex and small conical teeth on outer margin. Telson subtriangular with dorsolateral setae and two groups of slender medial setae; telsonic cusps small.

Female, 3 mm (ovigerous). Gnathopod 1 coxa 1.3× as long as broad, anterodistal margin produced, distal margin with minute setae; basis 3.1× as long as broad, anterodistal lobe moderately well developed; carpus 1.6× as long as broad; propodus elongate, 1.3× length of carpus, 2.6× as long as broad, palm oblique, poorly defined, with robust seta at postero-distal corner; dactylus 0.6× length of propodus, inner margin toothed. Gnathopod 2 coxa 1.4× as long as broad, distal margin with short setae; basis 3.3× as long as broad, anterodistal margin with robust setae; carpus subtriangular, 1.2× as long as broad; propodus 1.5× length of carpus, 1.8× as long as broad, palmar margin weakly sinuous with robust seta at postero-distal corner; dactylus slightly overlapping palm. Uropod 1 lacking an interramal process.

Distribution. Mauritius.

Habitat. This species was collected mostly from red algae at depths of less than 1 m. It was common among algae in rock pools at Souillac, in the south coast of the island.

Remarks. This species has prehensile pereopods 5 to 7 with large striate robust setae and a slender mandibular palp. It resembles *Ampithoe kaneohe kaneohe* J.L. Barnard (1970: 44, figs. 14–16, 24 1) and *Pleonexes kaneohe navosa* from Fiji (Myers, 1985a: 36, figs. 27–28). It differs from this species by being smaller in size and having a long slender carpus on the male gnathopod 2 (2.2× as long as broad as compared to being subequal in length and breadth in material described from Hawaii and 1.4× as long as broad in material from Fiji). It also differs from the *A. kaneohe kaneohe* from Hawaii, in the shape of the propodus, which is more subquadrate with an excavation in the present species, as compared to a subovate propodus and a strongly oblique palm with poorly defined palmar margin in *A. kaneohe kaneohe*. Moreover, in *A. kaneohe kaneohe*, there are dense patches of setae on the posterior margins of propodus of male gnathopod 2. Another character of *A. longicarpus* n.sp. is the weakly scalloped posterior margin of the basis of pereopods 6 and 7, which appears smooth in *A. kaneohe kaneohe* (J.L. Barnard, 1970: 47, fig. 14).

Etymology. From the Latin *longus*, long, and *carpus*, referring to the long carpus of the male gnathopod 2.

***Ampithoe mascarenensis* n.sp.**

Figs. 10–12

Ampithoe sp. 2 (Appadoo & Steele, 1998: 639).

Type material. HOLOTYPE ♂, 5.5 mm, AM P65848, from *Centroceras clavulatum*, Souillac (20°31'S 57°30.7'E),

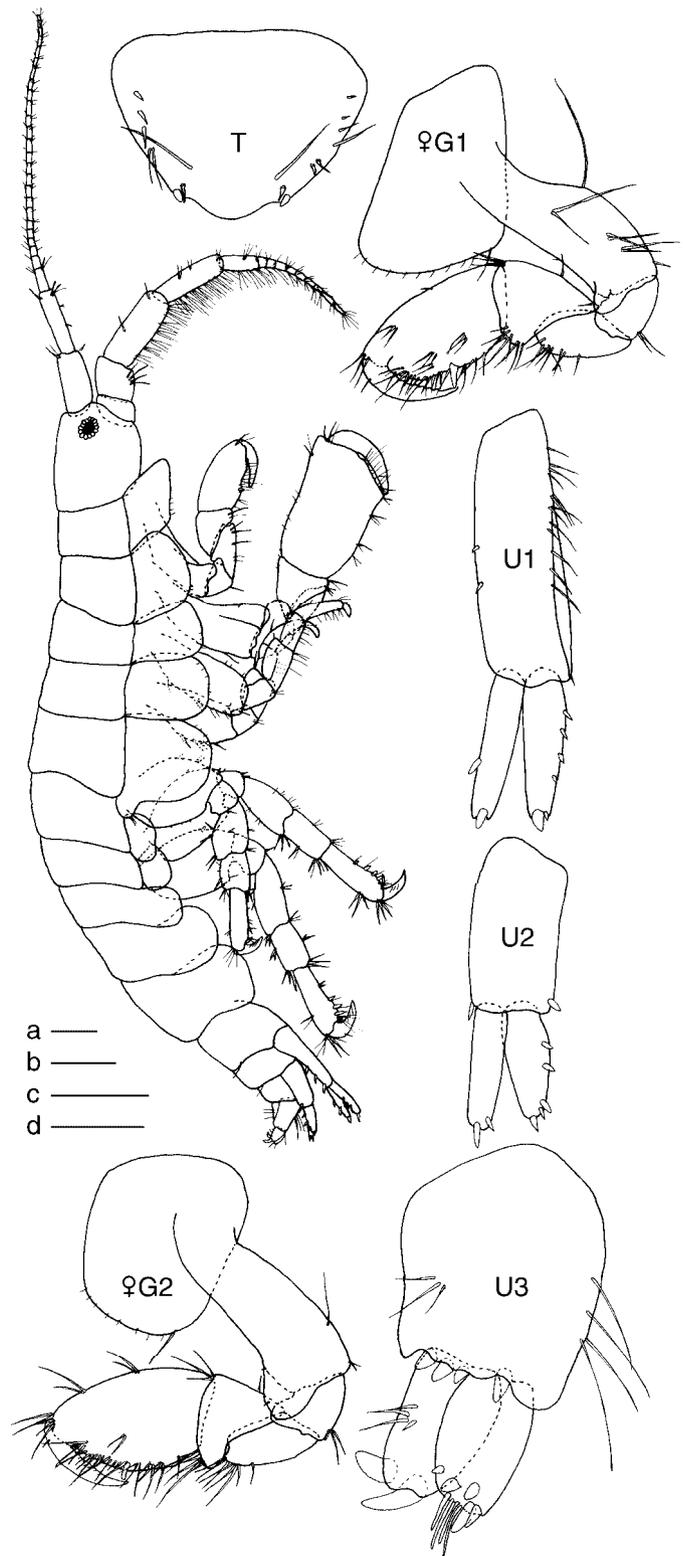


Fig. 10. *Ampithoe mascarenensis* Appadoo & Myers, n.sp., ♂, 5.2 mm, AM P65848, ♀, 4.3 mm, AM P65849, Souillac. Scales: a = 0.4 mm (whole animal), b = 0.2 mm (♀G1–2), c = 0.1 mm (U3, T), d = 0.2 mm (U1–2). Male unless stated otherwise.

depth less than 1 m, C. Appadoo, 13 August 1998. PARATYPES, 1 ♀, 4.3 mm, AM P65849, 1 ♂, AM P60598, 4 ♂♂ and 10 ♀♀, AM P60610, same data as holotype; 3 ♂♂, 12 ♀♀, 6 juv., AM P60611, from *Centroceras clavulatum*; 1 ♂, 1 juv., AM P60612, from *Digenia simplex*, Souillac (20°31'S 57°30.7'E), 13 August 1998; 1 ♂ from *Amansia*

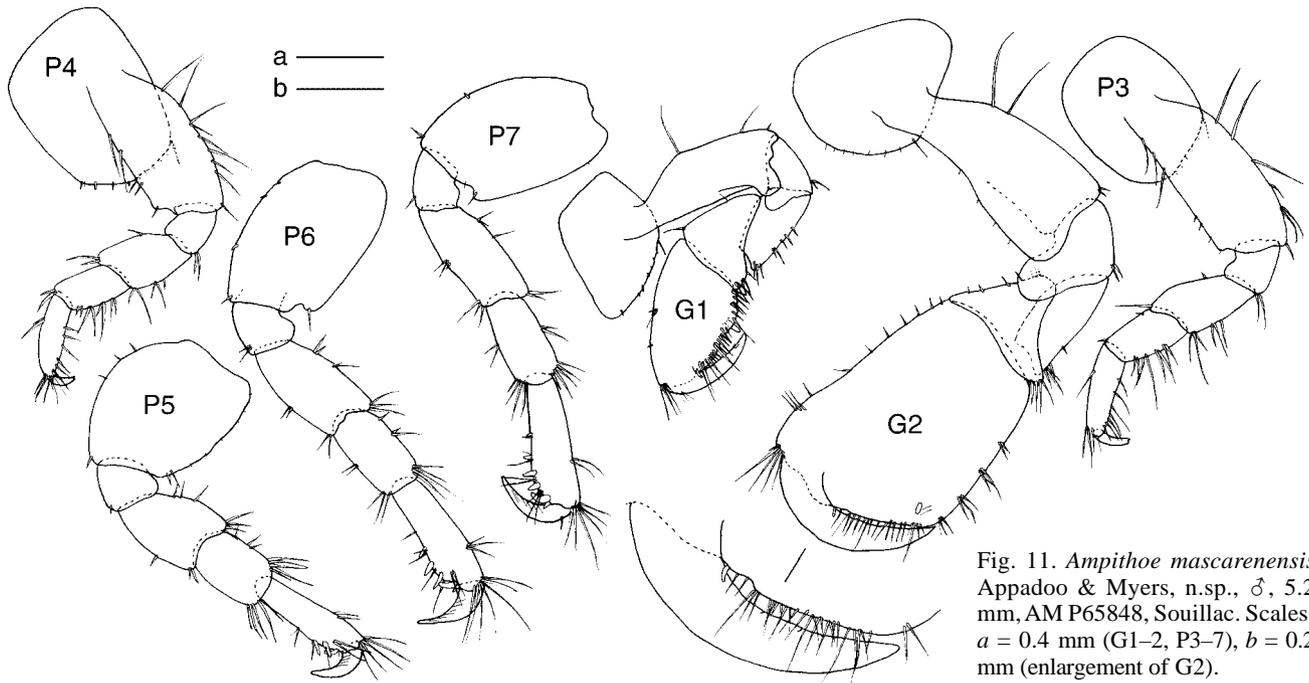
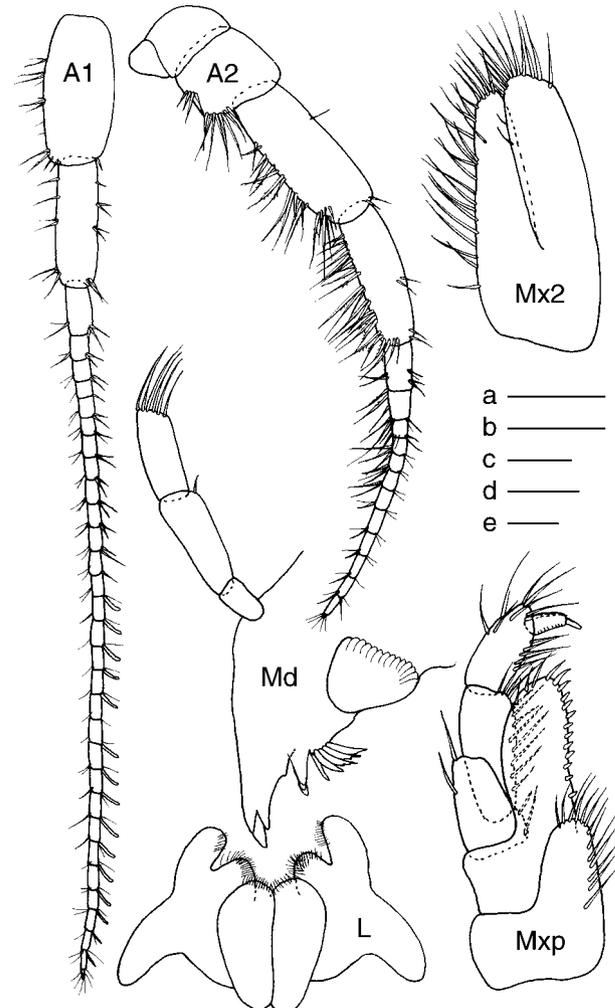


Fig. 11. *Amphithoe mascarenensis* Appadoo & Myers, n.sp., ♂, 5.2 mm, AM P65848, Souillac. Scales: a = 0.4 mm (G1–2, P3–7), b = 0.2 mm (enlargement of G2).

glomerata, AM P60613, Souillac, 4 August 1999; 3 ♂♂, 4 ♀♀, 4 juv., AM P60614, from *Digenia simplex*, *Padina* sp. and *Jania adherens*, Roches Noires (20°6.2'S 57°44.5'E), 6 August 1999; 2 ♂♂, 11 ♀♀, 2 juv., AM P60615, from *Digenia simplex*, *Padina* sp., *Jania adherens*, *Sargassum densifolium*, Roches Noires, 15 October 1999.

Fig. 12. *Amphithoe mascarenensis* Appadoo & Myers, n.sp., ♂, 5.2 mm, AM P65848, Souillac. Scales: a = 0.4 mm (A1–2), b = 0.2 mm (L), c = 0.1 mm (Md, Mxp), d = 0.1 mm (Mx2).

Description. Male, 5.2 mm. Head 1.2× as long as deep, disto-ventral margin weakly recessed; eyes of medium size with well-developed ommatidial ring surrounding a dark central core (reddish brown in alcohol). Antenna 1, 1.3× as long as antenna 2, peduncle articles 1 and 2 subequal; article 3, 0.4× article 1; primary flagellum 29-articulate and bearing aesthetacs. Antenna 2 robust, peduncle articles 4 and 5 posterior margins with groups of plumose setae, peduncle article 4, 2.4× as long as broad; article 5, 3.7× as long as broad, 0.9× length of article 4; flagellum 13-articulate, moderately setose. Mandible palp well developed, article 3, 0.7× article 1, with apical setae. Lower lip outer lobe strongly notched, mandibular lobes rounded. Maxilla 1 inner plate small, subtriangular. Maxilla 2 inner plate narrow, with setae at apex and on inner margin; outer plate broad with apico-medial setae. Maxilliped palp article 4 subquadrate with terminal nail. Gnathopod 1 coxa 0.8× as broad as deep, anterodistal margin weakly produced, rounded, distal margin with few very short setae; basis 3× as long as broad, anterodistal lobe well developed; carpus subtriangular, as long as broad; propodus 1.7× as long as broad, palm weakly sinuous with a large medial posterodistal robust seta; dactylus robust, inner margin toothed. Gnathopod 2 robust, coxa 1.2× as broad as deep, distal margin with a few short setae; basis 2.2× as long as broad with well-developed anterodistal lobe; carpus subtriangular, 0.7× as long as broad; propodus 1.3× as long as broad, slightly expanded at the anterodistal margin, anterior margin with short setae, posterior margin with few groups of setae, inner face with one robust seta palm with a small excavation close to base of dactylus, palm sub-straight; dactylus robust reaching end of palm. Pereopods 3 and 4 similar; coxa subrectangular, 1.3× as long as broad, distal margin with very short setae;



basis slightly expanded, 2× as long as broad; merus 1.5× as long as broad; carpus and merus subequal; propodus 1.2× as long as broad; Pereopod 5 coxa as broad as deep, with small posterior lobe; basis expanded, about as broad as long, carpus subquadrate, subequal to merus; propodus 3.8× as long as broad, slightly expanded distally with 3 distal robust setae. Pereopods 6–7 similar, coxa broader than deep; basis slightly expanded, 1.4× as long as broad, posterior margin with a small excavation at the posterodistal corner; carpus subquadrate, 0.9× as long as merus; propodus 3.3× as long as broad, distally expanded, posterior distal margin with robust setae. Epimera 1–3 posterodistal margin rounded. Uropod 1 peduncle without interramal process, inner margin with robust setae, outer margin with fine slender setae; rami subequal and 0.6× length of peduncle. Uropod 2 rami subequal, 0.7× length of peduncle. Uropod 3 peduncle short, 1.2× as long as broad with few long slender seta on inner margin, with robust setae at the distal margin; outer ramus with a group of medial slender setae and 2 apical recurved robust setae; inner ramus 0.6× peduncle with apical slender and 5 robust setae. Telson subtriangular, distally rounded, telsonic cusps well developed, a few slender setae on medial face and lateral margins.

Female, 4.3 mm (ovigerous). Gnathopod 1 coxa 1.3× as long as broad, anterodistal margin weakly produced; basis 2.4× as long as broad, anterodistal lobe moderately developed; carpus subtriangular, 1.4× as long as broad; propodus 1.7× as long as broad, posterodistal margin with one robust seta, palm oblique; dactylus inner margin toothed. Gnathopod 2 coxa 1.4× as long as broad; basis 2.9× as long as broad, with well-developed anterodistal lobe; carpus 0.9× as long as broad; propodus 1.6× as long as broad, palm oblique with one robust seta at posterodistal corner; dactylus fitting palm, inner margin toothed.

Type locality. Souillac, Mauritius.

Distribution. Mauritius.

Habitat. This species was collected mostly amongst red algae at depths of less than 1 m. It occurred on sites that are exposed to heavy wave action (Souillac, Gris-Gris and Roches Noires).

Remarks. The presence of dense plumose setae on the peduncle of antennae 2 makes this species superficially similar to *Plumithoe hirsuta* (Ledoyer, 1978) and *Plumithoe plumicornis* (Ledoyer, 1979). It differs from both these species, however, by the absence of a peduncular process on uropod 1. *Ampithoe mascarenensis* n.sp. resembles *Ampithoe laxipodus* n.sp., by the subrectangular propodus in the male gnathopod 2 and the shape of the basis of pereopods 6 and 7. The two species differ in the antenna 2: *A. mascarenensis* has a densely setose antenna 2 as

compared to a moderately setiferous one in *A. laxipodus*. The males of the two species also differ in the male gnathopod 1, in *A. laxipodus* the basis has groups of long setae and the propodus is globular as compared to a poorly setiferous basis and a slender propodus in *A. mascarenensis*. The male gnathopod 2 of the two species differ; *A. laxipodus* has a small medial subrectangular process on the palm, a feature not present in *A. mascarenensis*.

Etymology. Named after the Mascarene islands: Mauritius, Reunion and Rodrigues.

Ampithoe ramondi Audouin

Ampithoe ramondi Audouin, 1826: 93.—Krapp-Schickel, 1978: 1, figs. 1–2; 1982: 98, figs. 66–67.

Ampithoe ramondi.—J.L. Barnard, 1965: 25, figs. 15–16.—Myers, 1985a: 27, fig. 17.—Ledoyer, 1978: 221, fig. 9.—Appadoo & Steele, 1998: 639.

Material examined. 1 ♂, AC, from *Turbinaria ornata*, Ile D'Ambre (20°02.2'S 57°42.2'E), 12 November 1998; 1 ♂, AC, from *Padina* sp. and *Halimeda* sp., Grand Baie (20°0.5'S 57°34'E), 5 May 1999.

Diagnosis. Eyes large. Gnathopod 1 propodus subrectangular, 1.2× length of carpus, 2× as long as broad, palm short, posterodistal margin with 1 robust seta. Gnathopod 2 carpus subtriangular, as long as broad, anterior margin with a few robust setae; propodus 1.8× length of carpus, 1.5× as long as broad, anterior margin with groups of slender setae, posterior margin produced into a short thumb-like process, separated from the oblique palm by a wide round-bottomed excavation; dactylus relatively short and opposable to “thumb”, inner margin strongly toothed. Uropod 3 peduncle 1.8× as long as broad. Telson subtriangular, apically convex telsonic cusps small.

Female not known.

Type locality. Egypt.

Distribution. As pointed out by Myers (1985a), the distribution of this species is not clear due to confusion with other species, but it is said to be cosmopolitan in tropical and warm temperate waters.

Habitat. This species was collected at depths of less than 1 m from brown algae. It was collected from two sites where there was suspended material in seawater (Grand Baie and Ile D'Ambre).

Remarks. The material from Mauritius most closely fits the description given by Myers (1985a) from Fiji and that of Ledoyer (1982) from Madagascar.

Key to male *Cymadusa* of Mauritius

- 1 Gnathopod 2 larger than gnathopod 1 in both sexes 2
 — Gnathopod 1 and 2 similar in size and form in both sexes *Cymadusa mauritiensis*
- 2 Coxa 1–4 distal margin with one group of setae or without setae 3
 — Coxa 1–4 distal margin lined with dense slender setae, reaching up to half length of coxa *Cymadusa filosa*
- 3 Gnathopod 1 carpus elongate, slightly less than three times as long as broad, palm with a deep triangular excavation. Gnathopod 2 propodus with a deep round-bottomed excavation; dactylus short, robust with a serrated rounded lobe at tip *Cymadusa cavimana*
 — Gnathopod 1 carpus not elongate, palm without excavation. Gnathopod 2 palm with small subrectangular process and straight margin; dactylus medially expanded, distally tapered *Cymadusa microphthalmia*

Cymadusa brevidactyla is described and illustrated from Mauritius by Ledoyer (1978). It is not assignable to any of the species described herein from Mauritius, nor is it referable to *C. brevidactyla* (Chevreux, 1907: 417; 1908: 517, figs. 30–32). The very slender propodus of the male gnathopod 1, the setation of male gnathopod 2 (long setae on the coxae and on the anterior margin of the propodus), the shape of the palm and the long dactylus are all very different from those of *C. brevidactyla* (Chevreux).

Genus *Cymadusa* Savigny

For a diagnosis see Poore & Lowry, 1997.

Cymadusa cavimana (Sivaprakasam) n.comb.

Ampithoe cavimana Sivaprakasam 1970b: 65, fig. 1.—Ledoyer 1982: 116, fig. 37.—Appadoo & Steele, 1998: 639.

Material examined. 1 ♂, 5 ♀♀, 2 juv., AM P60625, 7 ♂♂, 10 ♀♀, 16 juv., AM P60626, from *Turbinaria ornata*, *Pocockiella variegata*, Balaclava (20°3.7'S 57°30.7'E), 10 September 1998; 3 ♂♂, 5 ♀♀, 12 juv., AM P60627, from *Halodule uninervis*, *Dictyota divaricata*, coral rubble, Albion (20°13'S 57°23.7'E), 22 October 1998; 2 ♂♂, 2 ♀♀, 14 juv., AM P60628, from *Padina* sp., *Dictyota divaricata*, *Gelidium* sp., Klondike (20°15.7'S 57°22'E), 9 November 1998; 4 ♂♂, 12 ♀♀, 4 juv., AM P60629, from *Amansia glomerata*, *Padina* sp. and *Sargassum* sp., Souillac, 8 April 1999; 1 ♂, 2 ♀♀, AM P60630, from *Padina* sp., *Ulva lactuca*, *Amphiroa* sp., Tamarin (20°19.5'S 57°22'E), 2 August 1999; 4 ♂♂, 6 ♀♀, 5 juv., AM P60631, from *Digenia simplex* and *Padina* sp., Roches Noires (20°6.2'S 57°44.5'E), 15 October 1999.

Diagnosis. Eyes medium in size with well-developed ommatidia. Antenna 1 accessory flagellum absent. Antenna 2 poorly setiferous, article 5, 0.8× article 4. Gnathopod 1 coxa 1.4× as broad as deep, anterodistal margin strongly produced and rounded; carpus elongate, 2.8× as long as broad weakly setiferous; propodus 0.75× length of carpus, palm oblique, with a deep, triangular excavation, posterodistal corner with 1 robust seta; dactylus overlapping palm, inner margin toothed. Gnathopod 2 coxa 1.5× as long as broad with a patch of slender setae at posterodistal corner; carpus subtriangular, as long as broad; propodus 1.7× as long as broad, palmar margin with a deep round-bottomed excavation, palmar margin with a few short slender setae; dactylus short, robust, inner margin with a rounded serrated lobe terminating in a tooth-like process. Epimera 2–3 with a small tooth at posterodistal corner. Uropod 1 peduncle distal margin with a well-developed acute interramal process. Uropod 3 peduncle with robust setae on distal margin. Telson subtriangular, distally truncate.

Female, Gnathopod 1 coxa 1.2× as long as broad, anterodistal margin moderately produced; carpus 1.9× as

long as broad; propodus palm oblique. Gnathopod 2 propodus palm oblique evenly rounded; dactylus slightly overlapping palm.

Type locality. Gulf of Mannar, India.

Distribution. Madagascar, Mauritius, India.

Habitat. This species was collected at depths of less than 1 m. It occurred mostly on brown algae such as *Padina* sp. and *Pocockiella variegata*, together with coral rubble. It was abundant at sites such as Flic-en-Flac, Balaclava, Roches Noires, La Prairie, sites where coral rubble and brown algae are abundant.

Remarks. This species is here transferred from the genus *Ampithoe* Leach to the genus *Cymadusa* Savigny on the basis of the presence of a large acute distoventral interramal process on uropod 1 (see Poore & Lowry, 1997) and its large size.

Cymadusa cavimana from Mauritius agrees well with the description given by Sivaprakasam (1970b). This species is often confused with *Cymadusa brevidactyla*, but differs from that species in having an excavation in the male gnathopod 1 palm (smoothly convex in *C. brevidactyla*) and in lacking an accessory flagellum. The presence of only one patch of slender setae at the posterodistal margin of coxae 1–4 help to distinguish this species from *C. filosa* which has setae all along the distal margin of these coxae. The short dactylus on the male gnathopod 2 distinguishes males of this species from *Cymadusa microphthalmia* (Chevreux).

Cymadusa filosa Savigny

Cymadusa filosa Savigny, 1816.—Krapp-Schickel, 1982: 106, figs. 71–72.—Ledoyer, 1982 (form of seagrasses): 135, fig. 45H.—Appadoo & Steele, 1998: 639.

Material examined. 14 ♂♂, 12 ♀♀, 7 juv., AM P60632, from *Padina* sp., La Cuvette (20°00'S 57°34.2'E), 14 May 1998; 8 ♂♂, 11 ♀♀, 6 juv., AM P60633, from *Enteromorpha* sp., *Sargassum* sp., *Hypnea*

sp., Tamarin (20°19.5'S 57°22'E), 11 October 1999; 8♂♂, 24♀♀, AM P60634, from *Padina* sp. Bain Boeuf, 13 December 1999; 7♂♂, 18♀♀, AM P60635, from *Halodule uninervis* and *Hypnea* sp., Flic-en-Flac (20°16.5'S 57°21.7'E), 27 January 2000.

Diagnosis. Antenna 1 accessory flagellum 2-articulate, article 2 small. Gnathopod 1 coxa distal margin lined along its whole length with slender plumose setae, 0.3× length of coxa; basis slender, 3.8× as long as broad, anterodistal lobe weakly developed, anterior margin with dense plumose setae; carpus elongate, 2.8× as long as broad; propodus, palm oblique. Gnathopod 2 coxa subquadrate, 1.3× as long as broad, distal margin lined with slender plumose setae 0.5× the length of coxa; basis 2.8× as long as broad, anterior margin with dense groups of long slender plumose setae; carpus subtriangular, subequal in length and breadth, anterior margin with dense groups of long slender plumose setae; propodus 1.6× as long as broad, anterior margin with dense groups of plumose setae; palm weakly excavate; dactylus robust, strongly curved and shorter than palm. Coxae 3–4 distal margin lined with long slender plumose setae. Epimera 1–3 produced into a small posterodistal tooth. Telson distally rounded, telsonic cusps present.

Female, antenna 2 similar to that of male but with groups of fine slender setae instead of dense plumose seta. Gnathopod 1 anterior margin of basis with few slender setae; carpus elongate, 1.8× as long as broad. Gnathopod 2, anterior margin of basis, carpus and propodus with few slender setae; propodus palmar margin weakly excavate.

Type locality. Egypt.

Distribution. Mediterranean, Madagascar, Mauritius.

Habitat. This is a very common and abundant species in the intertidal and shallow-subtidal zone and was collected from several sites at depths less than 1 m. It lives mostly amongst brown and green algae.

Remarks. Material from Mauritius agrees with the description given by Krapp-Schickel (1982) of material from the Mediterranean. It also closely resembles the *C. filosa* described by Ledoyer (1982) from seagrasses in Madagascar. Males and females of this species are distinguished from other species of *Cymadusa* from Mauritius by the presence of slender plumose setae along the entire distal margin of coxae 1–4.

Cymadusa microphthalma (Chevreux)

Grubia microphthalma Chevreux, 1901: 422, figs. 46–49.
Cymadusa microphthalma.—Appadoo & Steele, 1998: 639.

Material examined. 3♂♂, 3♀♀, 2 juv., AM P60636, from *Digenia simplex*, *Dictyota divaricata* and *Gracilaria salicornia*, Roches Noires (20°6.2'S 57°44.5'E), 9 April 1999; 6♂♂, 12♀♀, 16 juv., AM P60637, from *Digenia simplex*, *Padina* sp. and *Jania adherens*, Roches Noires, 6 August 1999; 1♂, 3♀♀, 3 juv., AM P60638, from *Sargassum* sp., *Amansia glomerata* and *Digenia simplex*, Souillac (20°31'S 57°30.7'E), 14 October 1999; 1♂, 6♀♀, 8 juv., AM P60639, from *Padina* sp. and *Digenia simplex*, Roches Noires, 24 January 2000.

Diagnosis. Antenna 1 accessory flagellum 2-articulate, article 2 rudimentary. Coxae 1–4 distal margin with very short setae. Gnathopod 1 propodus palm oblique. Gnathopod 2 carpus subtriangular; propodus 2.5× length of carpus, palm with a small excavation near base of dactylus

followed by a subrectangular process and a straight margin, palm with short slender setae; dactylus robust, medially expanded. Telson distally truncate.

A full description is given for this species as there is some confusion about synonymies of the species in literature, see remarks.

Description. Male, 9 mm. Head about as long as deep, distoventral margin excavate; eyes large with well-developed pale yellow ommatidia (in alcohol). Antenna 1 peduncle article 2, subequal with article 1; article 3, 0.25× article 1; accessory flagellum 2-articulate, article 2 rudimentary; primary flagellum 41-articulate. Antenna 2 poorly setiferous, peduncle article 5, 0.9× article 4; flagellum 23-articulate. Mandible palp well developed, article 3, 2.1× article 1, with apico-medial setae. Lower lip outer lobe broad, moderately notched, without robust setae; mandibular lobe rounded. Maxilla 1 inner plate subovate with few medial slender setae. Maxilla 2 inner plate narrow. Maxilliped palp article 3 slightly expanded distally; article 4 slender, conical and terminating in a nail. Gnathopod 1 coxa subovate, about as long as broad, anterodistally moderately expanded, distal margin with very short setae; basis 2.5× as long as broad, anterodistal lobe weak; carpus elongate, 1.8× as long as broad; propodus subequal to carpus, 1.8× as long as broad, palm oblique with 1 robust seta at posterodistal margin; dactylus fitting palm. inner margin toothed. Gnathopod 2 coxa subrectangular, 1.3× as long as broad, distal margin with minute setae; basis with small rounded anterodistal lobe, 2.3× as long as broad; carpus subtriangular, 0.8× as long as broad; propodus 2.5× length of carpus, palm with a small excavation near base of dactylus followed by a subrectangular process and a straight margin, palm with short slender setae; dactylus robust, medially expanded, inner margin teeth poorly defined. Pereopods 3–4, coxa subrectangular, 1.4× as long as broad, posterodistal margin with 1 group of slender setae; basis weakly expanded, 2.8× as long as broad; merus 1.8× as long as broad, anterior margin weakly expanded; carpus elongate, 2.3× as long as broad, 0.8× length of merus; propodus subequal to carpus, with groups of slender setae on posterior margin. Pereopod 5 coxa with moderate posterior lobe; basis expanded, length subequal with breadth; carpus 0.9× merus; propodus 1.4× carpus, posterior margin with slender and straight robust setae. Pereopod 6 basis subrectangular 1.5× as long as broad, anterior and posterior margins with a few robust setae; merus elongate, 2.4× as long as broad; carpus 2.6× as long as broad, 0.9× length of merus; propodus slender, 5× as long as broad, 1.4× length of carpus, posterior margin with groups of slender setae, anterior margin with slender setae and straight robust setae. Pereopod 7 similar to pereopod 6 but basis 1.6× as long as broad. Epimera 1–3 posterodistal margin rounded. Uropod 1 peduncle 2.8× as long as broad, outer margin with short fine setae, inner margin lined with robust setae, distal margin produced into an acute interramal process; outer ramus 0.8× inner ramus, both rami with numerous robust setae. Uropod 2 peduncle 2.8× as long as broad, distal margin with a small triangular interramal process; outer ramus 0.9× inner ramus, both rami with numerous robust setae. Uropod 3 peduncle 1.8× as long as broad, distal margin with robust setae; inner ramus with slender and robust setae at apex, outer ramus with a group of medial slender setae and 1 robust seta, two recurved apical

robust setae. Telson distally truncate, with two groups of medial long slender setae.

Female, 10.3 mm (ovigerous). Gnathopod 1 coxa 1.3× as long as broad, anterodistal margin strongly produced, rounded, posterodistal margin with one group of slender setae, setae 0.3× length of coxa; basis 2.7× as long as broad, anterodistal lobe weak; carpus elongate, 1.6× as long as broad; propodus 1.2× length of carpus, 2× as long as broad, palm oblique with groups of slender setae and 1 robust seta at posterodistal margin; dactylus inner margin toothed. Gnathopod 2 coxa 1.5× as long as broad, posterodistal margin with 1 group of slender setae, setae 0.2× length of coxa; basis 2.6× as long as broad, anterodistal lobe weak; carpus cup-shaped, 0.9× as long as broad; propodus 1.7× length of carpus, palm oblique, weakly excavate with groups of slender setae, posterodistal corner with 1 robust seta; dactylus inner margin toothed.

Variation. Young males (5–6 mm): in gnathopod 2 the distal margin of the coxa has a group of slender setae, the propodus palm is barely excavate with fine slender setae and 1 robust seta on the inner face and the inner margin of the dactylus is strongly toothed. Young males (7.8 mm): the posterodistal corner of the coxa has fewer setae, the propodus lacks robust setae on the inner face, the palm is weakly crenate and the dactylus is strongly toothed.

Type locality. Seychelles.

Distribution. Seychelles, Mauritius.

Habitat. This species lives mostly amongst the brown algae, *Sargassum* sp. and *Padina* sp., and red algae. It was collected at depths of less than 1 m from several sites on the north, east and south coasts. It was common at Roches Noires on the east coast and Bain Boeuf on the north coast.

Remarks. This species resembles the species described by Ledoyer (1982) from Madagascar under the name *Cymadusa filosa* form "B". It differs from that species, however, in the male gnathopod 2 propodus palm, which is sinuous in present material but evenly convex in Ledoyer's species and in the dactylus, which is medially expanded and short, fitting the palm, in the present material, but elongate, slender and strongly overlapping the palm in Ledoyer's species. A comparison of the present material with *Grubia microphthalmalma* Chevreux (1901) is hampered by the fact that only a female was available to that author for the original description. Since the present material agrees well with the description of *G. microphthalmalma*, in all except secondary sexual male characters and since the type locality for this species is the Seychelles it seems reasonable, at least for the moment, to assign the present material to *Cymadusa microphthalmalma* (Chevreux).

It is doubtful whether the species described under the name *Cymadusa microphthalmalma* by Sivaprakasam (1970a: 573, fig. 12) belongs in this species.

Cymadusa microphthalmalma is distinguished from all other *Cymadusa* from Mauritius except *C. cavimana*, by having only one patch of setae on the distal margin of coxae 1–4. It can be distinguished from *C. cavimana* by the shape of the propodus of the hyperadult male gnathopod 2, which has a small process and by the length of the dactylus which reaches the end of the palmar margin.

Genus *Exampithoe* K.H. Barnard

For a diagnosis see Poore & Lowry, 1997.

Exampithoe (Melanesius) latibasis n.sp.

Figs. 13–15

Perampithoe falsa.—Appadoo & Steele, 1998: 639; non K.H. Barnard, 1932.

Type material. HOLOTYPE ♂, 3.3 mm, AM P65850, from *Padina gymnospora* and coral rubble, La Prairie (20°29'S 57°20.5'E), at depth less than 1 m, C. Appadoo, 14 October 1999. PARATYPES, 1 ♀, 3.3 mm, AM P64452, same data as holotype; 1 ♂, 3.3 mm, AM P64453, from *Sargassum* sp., Roches Noires (20°6.2'S 57°44.5'E), 20 January 1999; 1 ♂, AM P60640, 3 ♂♂ and 2 ♀♀, AM P60641, from *Sargassum* sp., *Gelidiella acerosa* and *Ulva reticulata*, Souillac (20°31'S 57°30.7'E), 14 December 1999; 2 ♂♂, AM P60642, from *Amansia glomerata* and *Padina* sp.; 1 ♂, 9 ♀♀, 1 juv., AM P60643, from *Sargassum* sp., Souillac (20°31'S 57°30.7'E), 8 April 1999; 3 ♂♂, 6 ♀♀, AM P60644, from *Sargassum* sp., La Cuvette (20°00'S 57°34.2'E), 12 October 1999; 1 ♀, AM P60645, from *Sargassum densifolium*, *Amansia glomerata*, *Jania adherens*, Souillac, 14 October 1999.

Description. Male, 3.3 mm. Head longer than deep, distoventral corner excavate; eyes small, round, pink (in alcohol). Antenna 1 article 2, 0.7× article 1; article 3, 0.25× article 1; accessory flagellum absent; primary flagellum 32-articulate and bearing aesthetascs. Antenna 2 peduncle article 5, 0.9× article 4, flagellum poorly setiferous and 21-articulate. Mandible palp absent. Lower lip outer lobe wide, mandibular lobe rounded. Maxilla 1 inner plate small and triangular, with one seta. Maxilla 2 inner and outer plates narrow with long slender terminal setae. Maxilliped palp article 2 broad, unguis minutely serrate; article 4 small. Gnathopod 1 slightly larger than gnathopod 2; coxa 1.2× as long as broad, anterodistal margin rounded, unproduced; basis 2.5× as long as broad, anterodistal lobe well developed, with one seta; carpus 1.5× as long as broad; propodus 2.1× as long as broad, palm small and transverse with one robust seta at base, followed by an excavation and a large robust seta; dactylus strongly overlapping palm, 1.6× the length of palm, inner margin smooth with few short fine setae. Gnathopod 2 coxa subquadrate, posterodistal margin with a few slender setae; basis 3× as long as broad, anterodistal lobe moderately developed; carpus slender, 2.2× as long as broad; propodus subrectangular, 2.5× as long as broad, palm transverse with one robust seta at its base; dactylus strongly overlapping palm, inner margin smooth. Pereopods 3–4 coxa subquadrate, with few slender setae on posterodistal margin; basis strongly expanded, 2× as long as broad; merus 1.5× as long as broad, anterior margin strongly expanded; carpus 1.7× as long as broad; propodus 1.2× as long as carpus. Pereopod 5 basis weakly expanded, 1.7× as long as broad; carpus 0.8× merus, subrectangular, 1.7× as long as broad; propodus slightly expanded distally, 4× as long as broad, with three robust setae on palm, one of which is curved. Pereopods 6–7, basis weakly expanded, 1.7× as long as broad; carpus subrectangular, 0.8× merus, 2.3× as long as broad; propodus slightly expanded distally, 3.5× as long as broad, with three

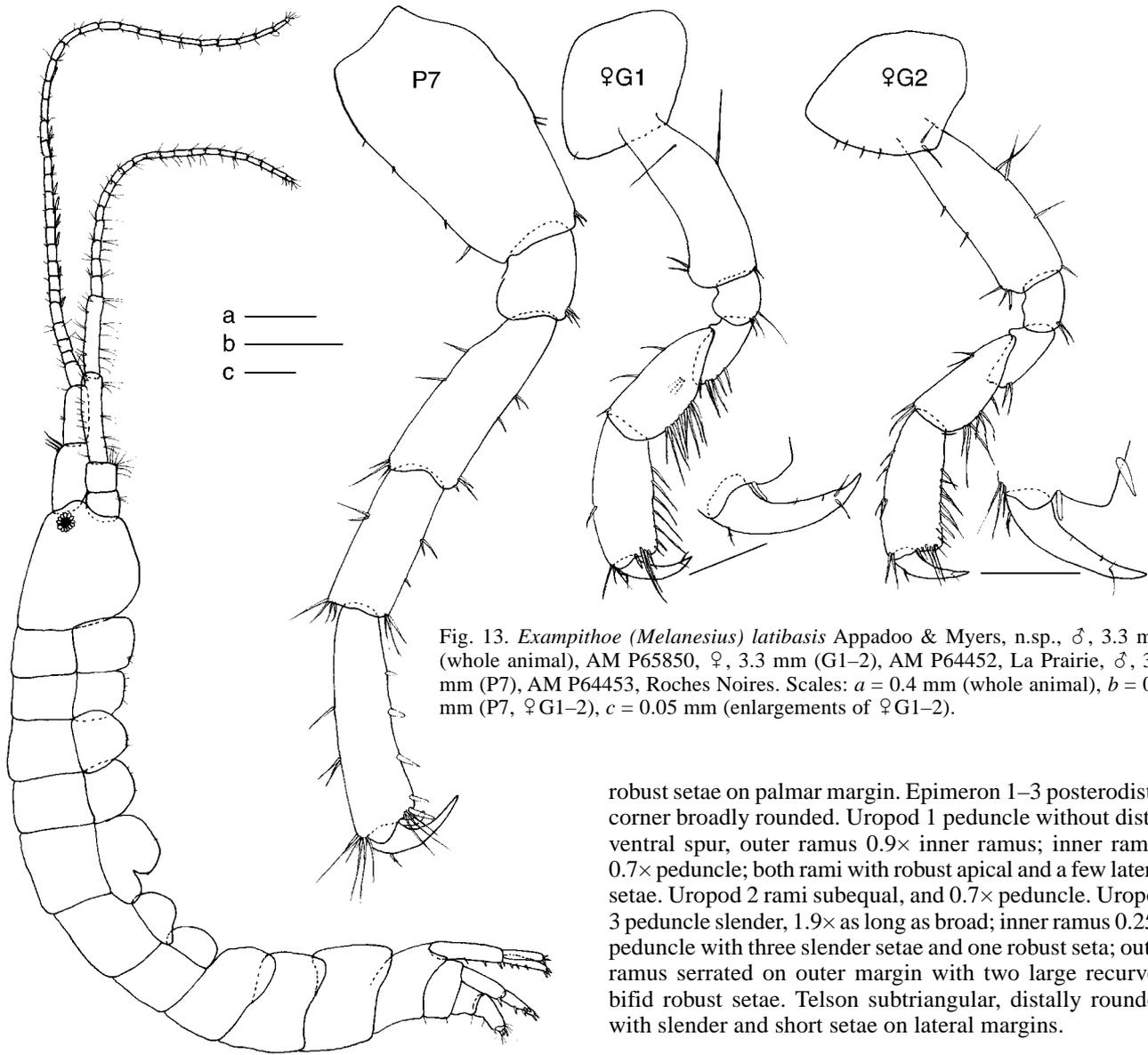
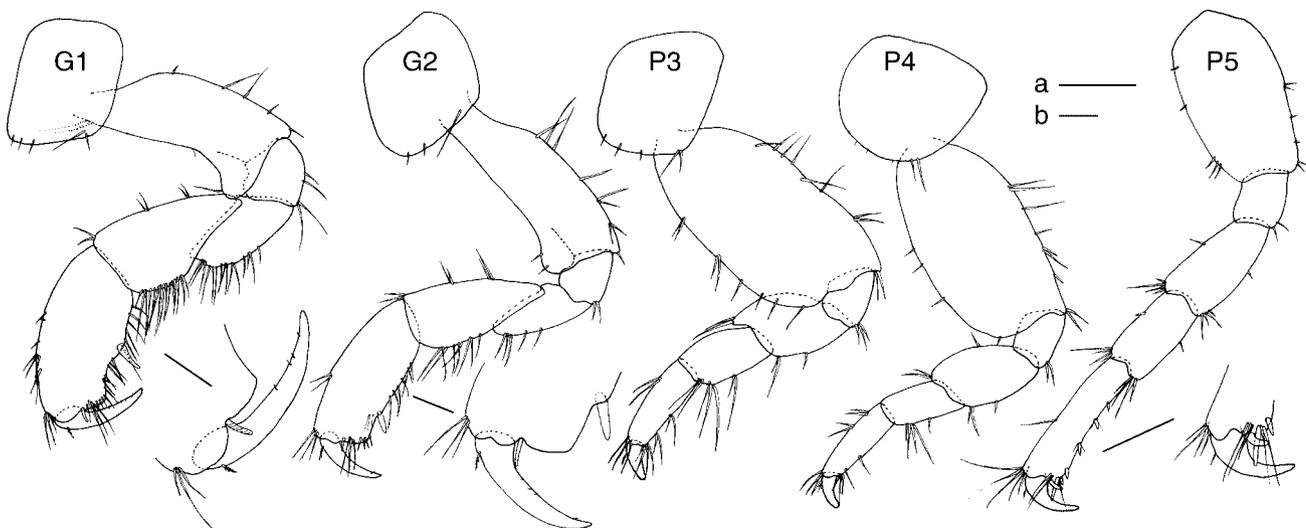


Fig. 13. *Exampithoe (Melanesius) latibasis* Appadoo & Myers, n.sp., ♂, 3.3 mm (whole animal), AM P65850, ♀, 3.3 mm (G1–2), AM P64452, La Prairie, ♂, 3.3 mm (P7), AM P64453, Roches Noires. Scales: *a* = 0.4 mm (whole animal), *b* = 0.2 mm (P7, ♀G1–2), *c* = 0.05 mm (enlargements of ♀G1–2).

robust setae on palmar margin. Epimeron 1–3 posterodistal corner broadly rounded. Uropod 1 peduncle without distoventral spur, outer ramus 0.9× inner ramus; inner ramus 0.7× peduncle; both rami with robust apical and a few lateral setae. Uropod 2 rami subequal, and 0.7× peduncle. Uropod 3 peduncle slender, 1.9× as long as broad; inner ramus 0.25× peduncle with three slender setae and one robust seta; outer ramus serrated on outer margin with two large recurved bifid robust setae. Telson subtriangular, distally rounded with slender and short setae on lateral margins.

Fig. 14. *Exampithoe (Melanesius) latibasis* Appadoo & Myers, n.sp., ♂ (G1–2, P3–4), 3.3 mm, AM P65850, La Prairie, ♂, 3.3 mm (P5, D5), AM P64453, Roches Noires. Scales: *a* = 0.2 mm (G1–2, P3–4; P5), *b* = 0.05 mm (enlargements of G1–2, D5).



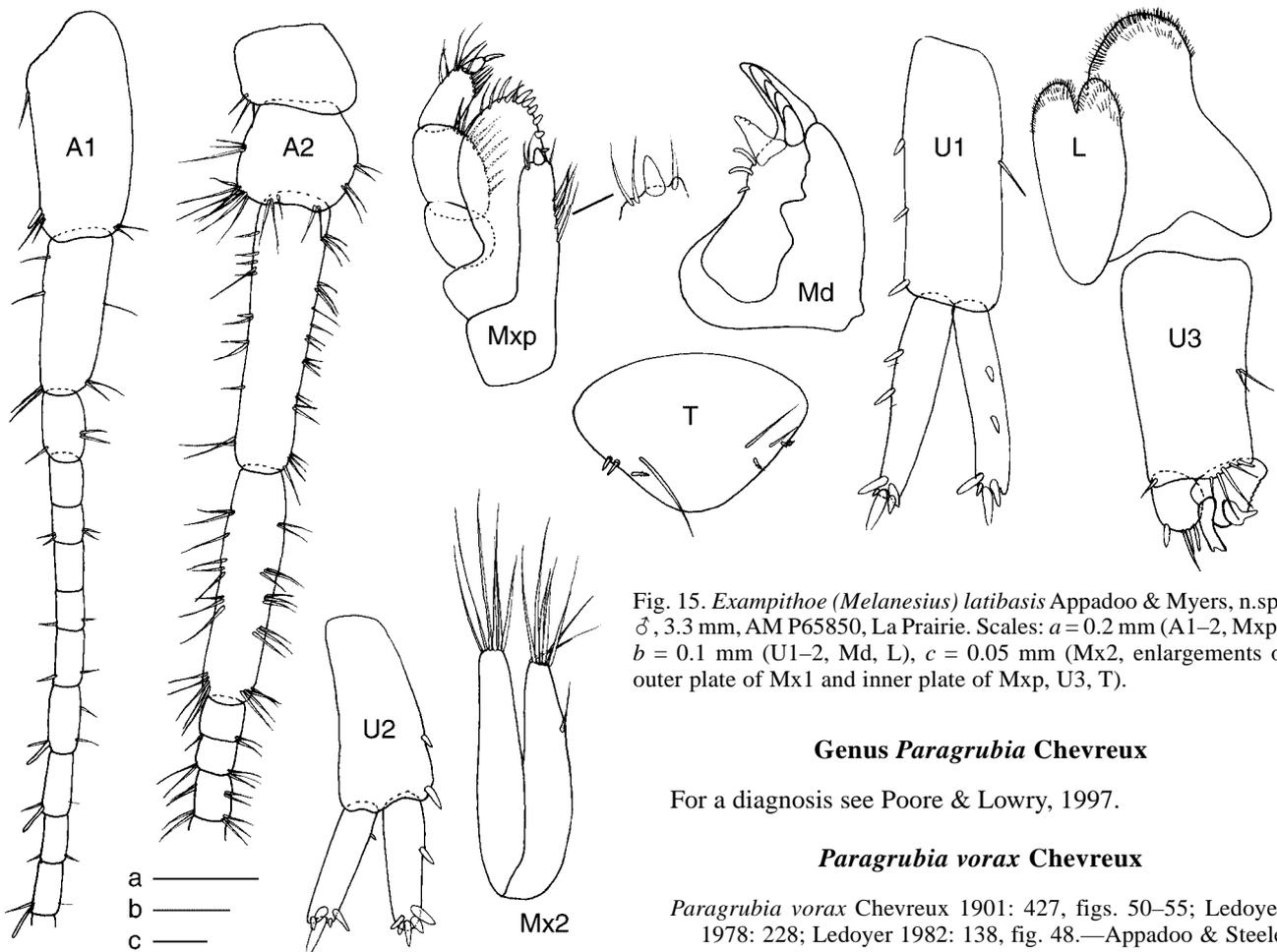


Fig. 15. *Exampithoe (Melanesius) latibasis* Appadoo & Myers, n.sp., ♂, 3.3 mm, AM P65850, La Prairie. Scales: *a* = 0.2 mm (A1–2, Mxp), *b* = 0.1 mm (U1–2, Md, L), *c* = 0.05 mm (Mx2, enlargements of outer plate of Mx1 and inner plate of Mxp, U3, T).

Genus *Paragrubia* Chevreux

For a diagnosis see Poore & Lowry, 1997.

Paragrubia vorax Chevreux

Paragrubia vorax Chevreux 1901: 427, figs. 50–55; Ledoyer, 1978: 228; Ledoyer 1982: 138, fig. 48.—Appadoo & Steele, 1998: 639.

Material examined. 1♂, 1♀, 1 juv., AM P60646, from *Digenia simplex*, Albion (20°13'S 57°23.7'E), 22 October 1998; 2♂♂, 5♀♀, 4 juv., AM P60647, from *Pocockiella variegata*, *Padina* sp. and coral rubble, Flic-en-Flac (20°16.5'S 57°21.7'E), 5 April 1999; 3♂♂, 4♀♀, 4 juv., AM P60648, from *Turbinaria ornata* and *Pocockiella variegata*, Flic-en-Flac, 27 January 2000.

Diagnosis. Antenna 1 accessory flagellum 6-articulate. Coxae 1–4 with one patch of setae on distal margin. Gnathopod 1 larger and more robust than gnathopod 2; propodus 1.3× as long as broad, palmar margin with a deep excavation. Gnathopod 2, propodus 1.9× as long as broad, palm oblique. Uropod 1 with large acute disto-ventral spur. Uropod 3 outer ramus with one straight and one weakly curved seta at distal end. Telson distally truncate, with well-developed patches of slender setae.

Type locality. Seychelles.

Distribution. Madagascar, Mauritius, Seychelles.

Habitat. This species lives mostly amongst red and brown algae and was collected at depths of less than 1 m. It was collected mostly from sites on the west and northwest coasts such as Flic-en-Flac, Albion, and Balaclava.

Remarks. The fact that *Paragrubia vorax* is readily distinguished from other amphipods by the strongly enlarged gnathopod 1 in males has led to the species being recorded from many parts of the Indo-Pacific. It is probable that more than one species exists in the *Paragrubia vorax*

Female: 3.3 mm (ovigerous). Gnathopod 1 similar in size to gnathopod 2; coxa subquadrate; basis 3× as long as broad, with weakly developed anterodistal lobe; carpus 2.4× as long as wide; propodus subrectangular, 2.3× as long as wide, palmar margin small and transverse, dactylus strongly overlapping palm. Gnathopod 2 coxa subquadrate; basis 3× as long as broad; carpus 2.4× as long as broad; propodus subrectangular, 2.5× as long as broad, palm small; dactylus overlapping palm, 1.6× its length, inner margin smooth.

Distribution. Mauritius.

Habitat. This species lives mostly amongst the brown alga *Sargassum* sp. It was collected at depths of less than 1 m from four sites, Souillac, La Prairie, La Cuvette and Roches Noires.

Remarks. *Exampithoe (Melanesius) latibasis* n.sp. differs from *E. (M.) cooki* Ledoyer (1984) in having the male gnathopod 1 with a slender propodus with a short palm, followed by an excavation on the posterodistal margin. In *E. cooki*, the propodus is subovate and the posterodistal margin almost straight. The shape of the male gnathopod 1 propodus also distinguishes it from *E. (M.) kutti* Poore & Lowry (1997), where the palmar margin is convex in both males and females.

Etymology. From the Latin *latus* meaning wide and referring to the expanded flattened bases of pereopods 3–4.

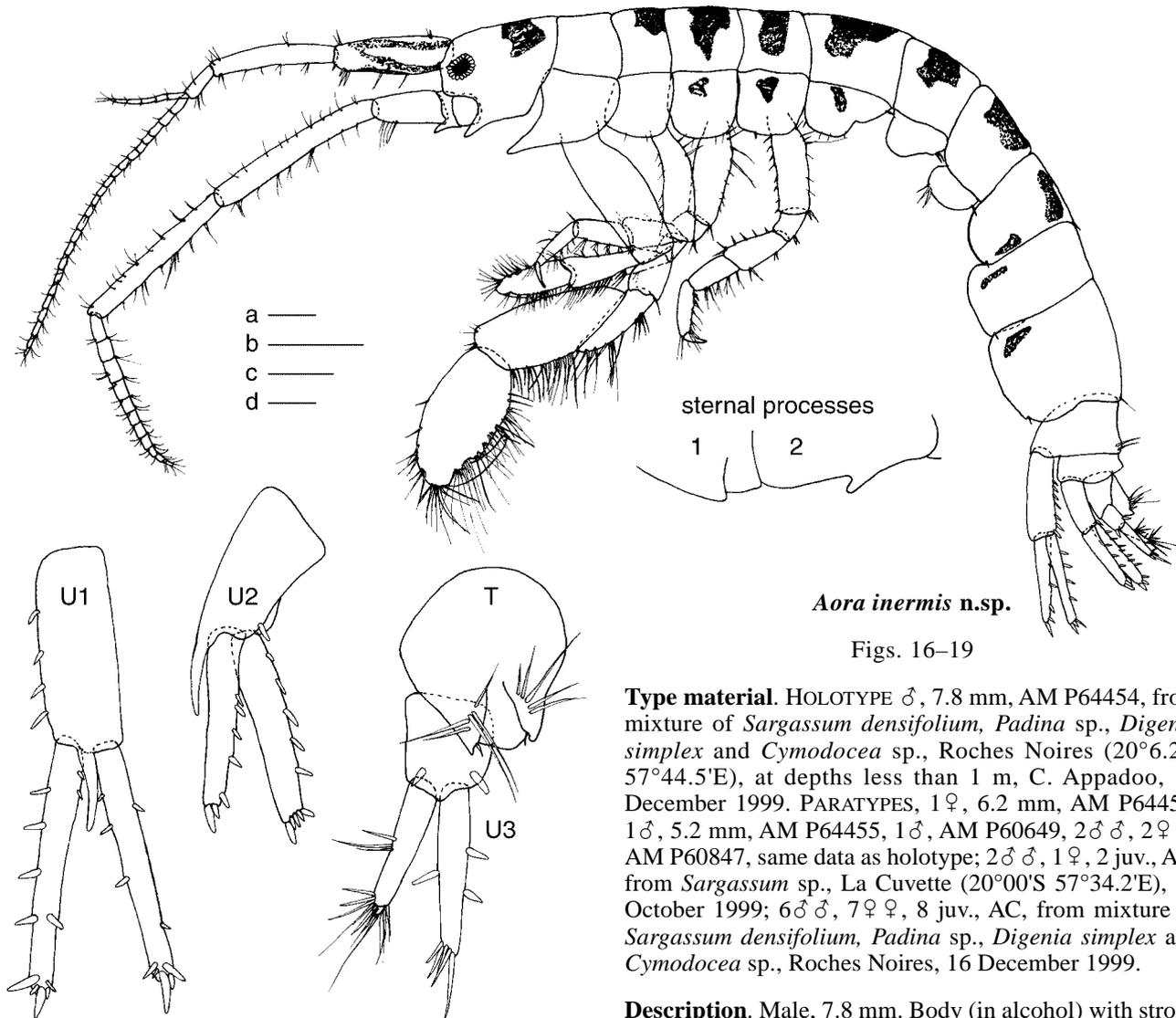


Fig. 16. *Aora inermis* Appadoo & Myers, n.sp., ♂, 7.8 mm, AM P64454, Roches Noires. Scales: *a* = 0.4 mm (whole animal), *b* = 0.4 mm (sternal processes), *c* = 0.2 mm (U1–2), *d* = 0.1 mm (U3, T).

complex. The material from Mauritius agrees with the description given by Chevreux (1901) from Seychelles (type locality) and also with that of Ledoyer (1982) in having a strongly excavate palm on the male gnathopod 1 propodus. Material described by J.L. Barnard (1970) from Hawaii and by Myers (1985a) from Fiji has a weakly excavate palm on the male gnathopod 1 and should probably be raised to the status of a new species.

Family Aoridae

Corophioidean amphipods with fleshy telson and glandular pereopods 3–5. Male gnathopod 1 larger than gnathopod 2. Uropod 3 much shorter than uropods 1–2 and rami with simple terminal spines.

Genus *Aora* Kroyer

For a diagnosis see Myers, 1988a.

Aora inermis n.sp.

Figs. 16–19

Type material. HOLOTYPE ♂, 7.8 mm, AM P64454, from mixture of *Sargassum densifolium*, *Padina* sp., *Digenia simplex* and *Cymodocea* sp., Roches Noires (20°6.2'S 57°44.5'E), at depths less than 1 m, C. Appadoo, 16 December 1999. PARATYPES, 1 ♀, 6.2 mm, AM P64456, 1 ♂, 5.2 mm, AM P64455, 1 ♂, AM P60649, 2 ♂ ♂, 2 ♀ ♀, AM P60847, same data as holotype; 2 ♂ ♂, 1 ♀, 2 juv., AC, from *Sargassum* sp., La Cuvette (20°00'S 57°34.2'E), 12 October 1999; 6 ♂ ♂, 7 ♀ ♀, 8 juv., AC, from mixture of *Sargassum densifolium*, *Padina* sp., *Digenia simplex* and *Cymodocea* sp., Roches Noires, 16 December 1999.

Description. Male, 7.8 mm. Body (in alcohol) with strong patches of brown pigment on dorsum of head, pereon segments 2 to 7 and smaller patches of pigment on coxae 3–5 and pleonites 1–3. The dorsal surface of urosomite 1 bears a pair of slender setae. Sternal plate 1 has a transverse fold and sternal plate 2 has a well-developed forward facing process. Head anteroventral margin strongly produced; eyes subovate, with well-developed ring of ommatidia surrounding a dark core. Mandible palp articles in the ratios 7:11:20; article 2 distal end weakly expanded, with setae on inner margin; article 3 posterior margin straight, and setiferous, marginal setae of two distinct lengths. Labium outer plate distal margin with 8 to 12 robust setae. Maxilla 1 palp article 2 with 8 distal robust setae. Antenna 1 peduncle article 1 with a few robust setae on ventral margin; article 1 subequal to 2; article 3, 0.3× article 1; accessory flagellum 6-articulate, terminal article rudimentary; primary flagellum weakly setiferous and with 23-articulate, aesthetacs present on articles 18 to 22. Antenna 2 robust and elongate, flagellum 11-articulate with small groups of setae. Male gnathopod 1 coxa strongly produced anterodistally, posteroproximal margin rounded; basis slender, anterior and posterior margin weakly convex; merus slender, 4× as long as broad and tapering distally; carpus elongate, 2.5× as long as broad, ventral margin with strong groups of setae; propodus subequal to length of carpus, anterior margin with

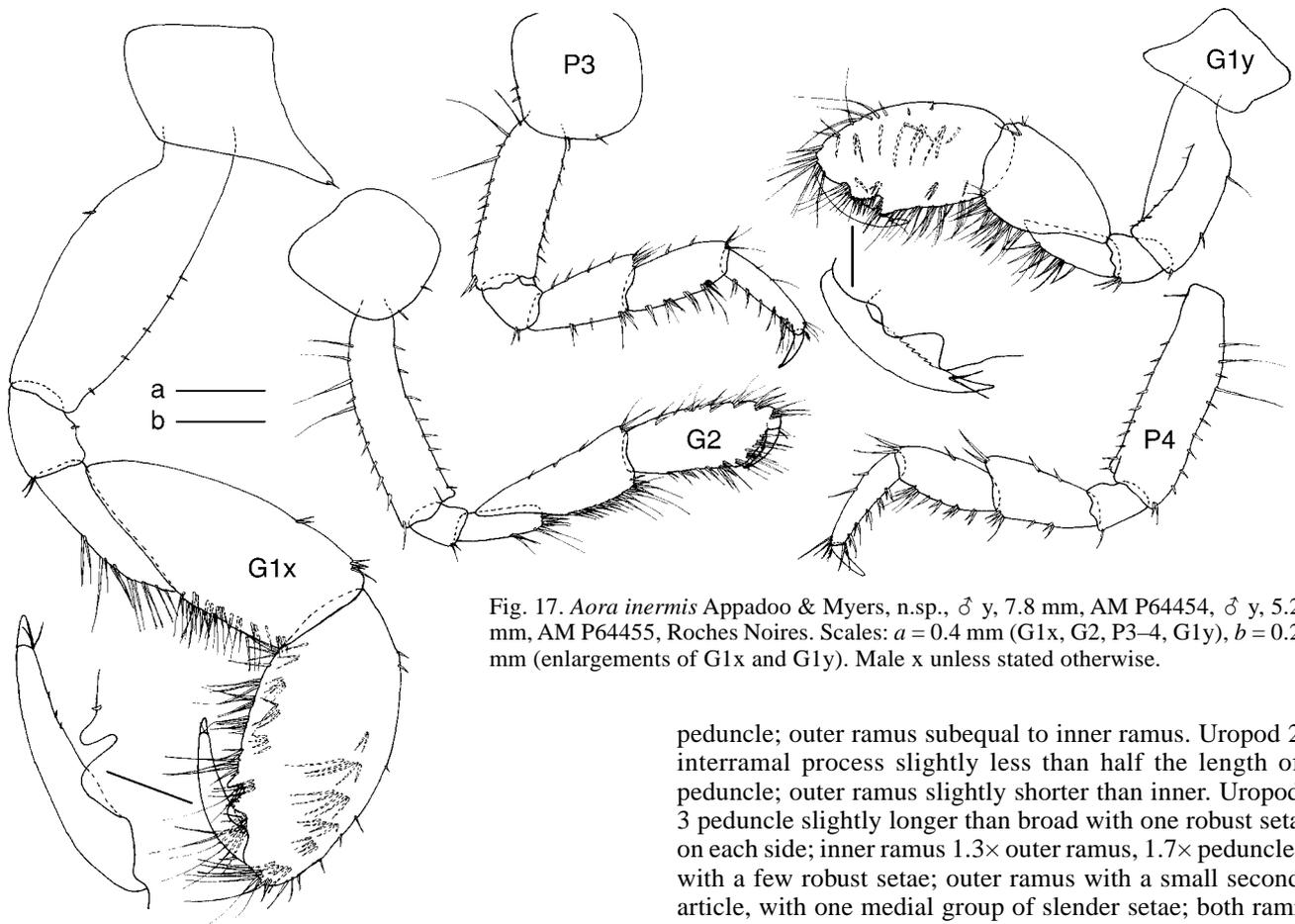


Fig. 17. *Aora inermis* Appadoo & Myers, n.sp., ♂ y, 7.8 mm, AM P64454, ♂ y, 5.2 mm, AM P64455, Roches Noires. Scales: $a = 0.4$ mm (G1x, G2, P3–4, G1y), $b = 0.2$ mm (enlargements of G1x and G1y). Male x unless stated otherwise.

groups of setae, posterior margin with strong groups of setae about two-third its length, palm slightly convex close to base of dactylus followed by a deep subquadrate excavation, with a defining tooth with round tip, palmar margin with dense groups of setae; dactylus elongate, greatly overlapping the short palm, inner margin with teeth small or obsolete. Gnathopod 2 coxa subquadrate, distal margin convex; basis slender nearly $4\times$ as long as broad, anterior and posterior margins with short setae at regular intervals, postero-proximal margin with a few long setae; carpus elongate, over $3\times$ as long as broad, posterior margin with dense short setae, anterior margin with a few setae; propodus slender, $2.5\times$ as long as broad and slightly shorter than carpus, propodus anterior and posterior margin with groups of setae; dactylus fitting palm, inner margin with teeth. Pereopods 3–4 coxa subquadrate basis anterior margin and posterior margins with short setae, posteroproximal margin with a long slender setae; dactylus $0.4\times$ propodus. Pereopods 5–7 missing. Pereopods 5 and 6 are described from smaller male of 5.2 mm: Pereopod 5 basis 1.6 times as long as broad, anterior margin with robust setae, anterodistal end with a group of slender setae, posterior margin with short setae, posterodistal end sinuous with one deep and one shallow excavation; merus distal end expanded and produced into rounded lobes; propodus slender, distal end with robust setae, dactylus $0.25\times$ length of propodus. Pereopod 6 basis subquadrate, anterior margin with robust setae, posterior margin with short setae; propodus $1.8\times$ carpus; dactylus $0.4\times$ propodus. Epimera 1–3 posterodistal margins notched, with a short seta at notch. Uropod 1 peduncle and rami with robust setae. Uropod 1 interramal process $0.4\times$ length of

peduncle; outer ramus subequal to inner ramus. Uropod 2 interramal process slightly less than half the length of peduncle; outer ramus slightly shorter than inner. Uropod 3 peduncle slightly longer than broad with one robust seta on each side; inner ramus $1.3\times$ outer ramus, $1.7\times$ peduncle, with a few robust setae; outer ramus with a small second article, with one medial group of slender setae; both rami with well-developed terminal setae. Telson fleshy, entire, with 5 long slender setae on each side and a short seta on posterodistal margin.

Female, 6.2 mm, ovigerous. Antenna 1 slender; article 2, $1.2\times$ article 1; article 3, $0.3\times$ article 1; peduncular articles moderately setiferous; accessory flagellum long, 9 articulate, terminal article small; primary flagellum 24-articulate. Antenna 2 moderately setose, article 5, 1.1 times article 4; flagellum 8-articulate with a few robust setae. Gnathopod 1 coxa subquadrate, anteroventral margin rounded; basis robust, twice as long as broad; merus subquadrate, ventral margin with strong groups of setae; carpus $1.4\times$ as long as broad; propodus $1.8\times$ carpus, ventral margins with strong groups of setae, palmar margin straight anteriorly followed by a shallow semi-elliptical excavation and a poorly defined blunt tooth; dactylus slightly longer than palm, inner margin toothed. Female gnathopod 2 basis similar to that of male but less elongate; propodus subequal to carpus. Pereopod 5 basis anterior margin straight, anterior margin with robust setae, posterior margin with short setae. Pereopod 6 similar to that of male except merus, carpus and propodus with very long slender setae.

Variation. In younger males, one can observe the different degree of elongation of the anteroventral margin of coxa 1. In these males, the carpus of the gnathopod 1 is not very long and the propodus is about $1.4\times$ the length of carpus (e.g., in male of 5.2 mm). The excavation in the palmar margins of gnathopod 1 is shallower, the dactylus only slightly overlaps the palm and the inner margin is strongly toothed. The posterior margin of the basis of pereopod 5 shows intermediate stages of excavation.

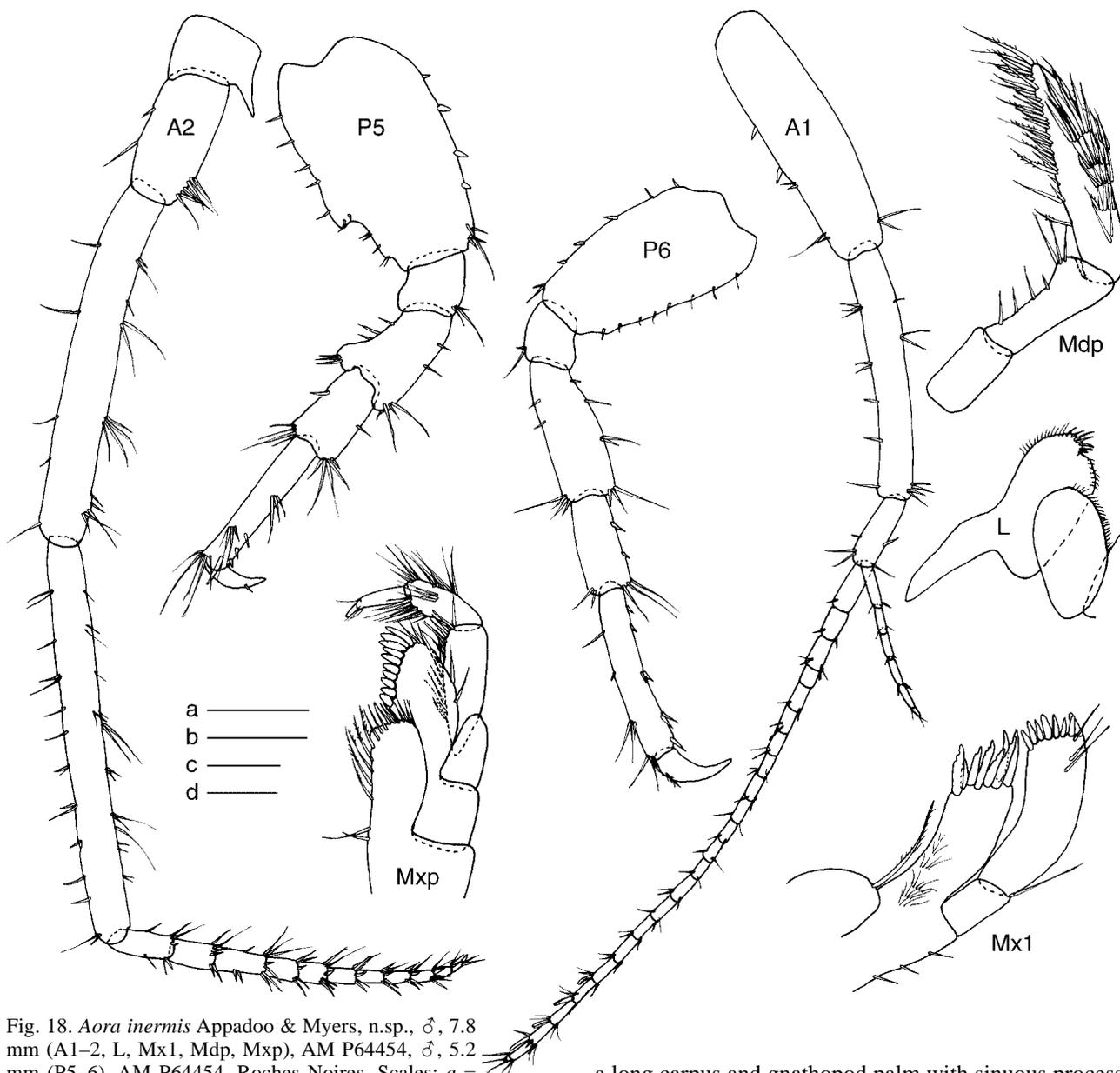


Fig. 18. *Aora inermis* Appadoo & Myers, n.sp., ♂, 7.8 mm (A1–2, L, Mx1, Mdp, Mxp), AM P64454, ♂, 5.2 mm (P5–6), AM P64454, Roches Noires. Scales: *a* = 0.4 mm (A1–2, P6), *b* = 0.2 mm (L, Mdp, Mxp), *c* = 0.1 mm (Mx1), *d* = 0.2 mm (P5).

Distribution. Mauritius.

Habitat. *Aora inermis* was collected at depths of less than 1 m from a sheltered site on the north coast and a wave-exposed site on the east coast of the island. This species lived mostly among *Sargassum* sp.

Remarks. *Aora inermis* n.sp. superficially resembles *Aora gracilis* (Bate, 1857) as figured and described by Myers (1982: 113, fig. 74), in having an excavation on the posterodistal margin of one of the pereopods of the male. However, in the present species, the excavation is on pereopod 5 whereas in *Aora gracilis* it is on pereopod 6. Another striking difference between the two species is the very long merus in the male gnathopod 1 of *Aora gracilis* compared to the short merus in *Aora inermis*.

Aora inermis resembles ?*Aorcho curvipalma* of Ledoyer (1978) described from a single male (size 5 mm) by having

a long carpus and gnathopod palm with sinuous processes in the male gnathopod 1. However, there is no long robust seta on the palmar margin in either large or younger males of *A. inermis* as illustrated for *Aorcho curvipalma* Ledoyer (1978: fig. 22, in part). Other differences include the convex male gnathopod 2 palmar margin (palm excavate in *A. curvipalma*), more robust basis in pereopod 5 and pereopod 6, the presence of a well-developed interramal process in uropod 1 (absent in *A. curvipalma*), the presence of dense groups of setae on the telson in *Aora inermis* (few setae in *Aorcho curvipalma*).

In lacking a produced, distally free merus on male gnathopod 1, this species differs from all other described species of *Aora*. However, it agrees with the diagnosis of *Aora* in all other respects and the diagnosis of *Aora* should be modified to accommodate this new species. *Aora inermis* differs from described species of *Bemlos* in its acute coxa 1.

Etymology. The species is named from the Latin *inermis* meaning unarmed as the male gnathopod 1 merus is not strongly produced.

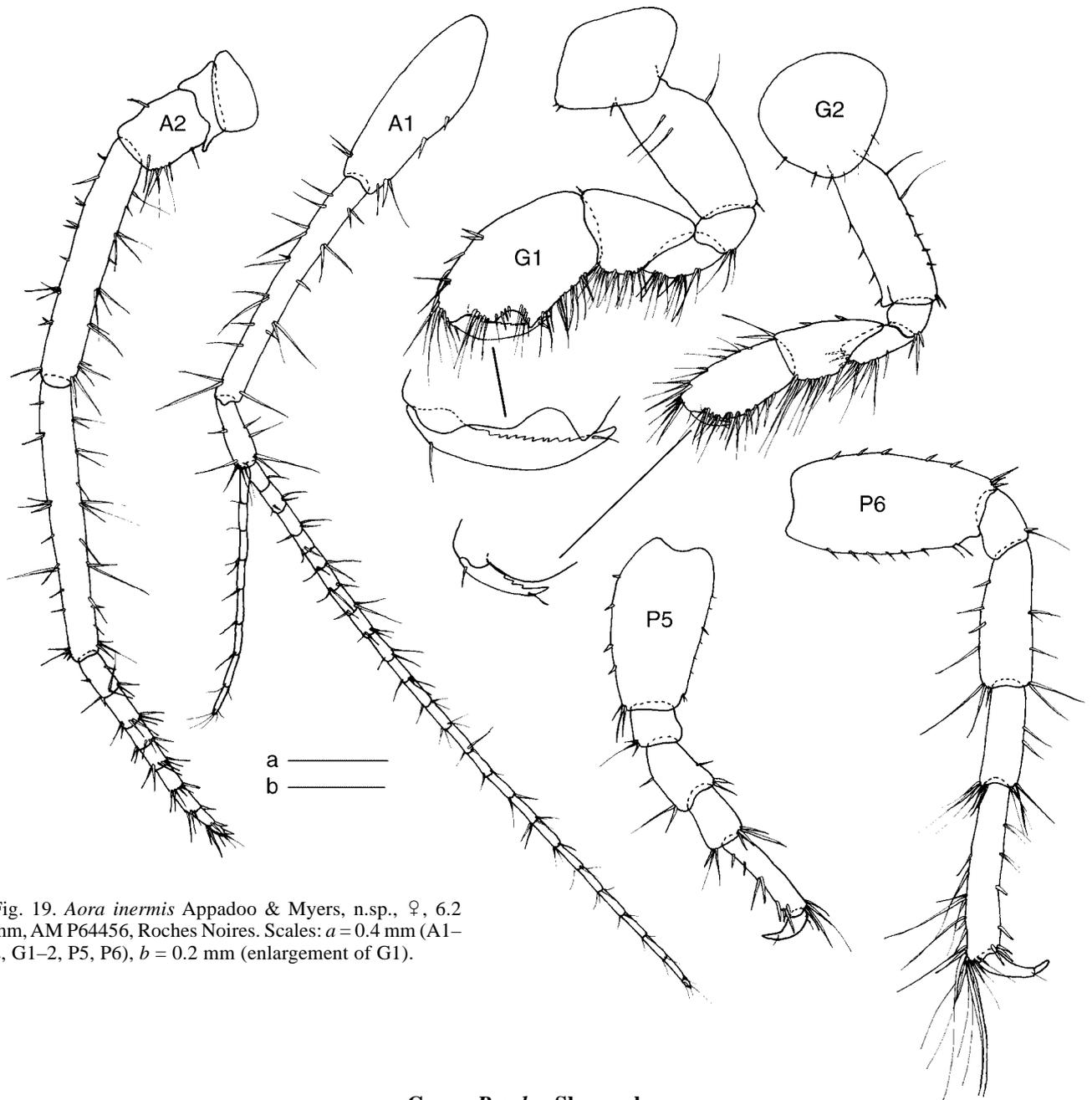


Fig. 19. *Aora inermis* Appadoo & Myers, n.sp., ♀, 6.2 mm, AM P64456, Roches Noires. Scales: *a* = 0.4 mm (A1–2, G1–2, P5, P6), *b* = 0.2 mm (enlargement of G1).

Genus *Bemlos* Shoemaker

For a diagnosis see Myers, 1988a.

Key to male *Bemlos* of Mauritius

- 1 Gnathopod 1 basis slender, four times as long as broad, propodus elongate, two and half times as long as broad, anterior margin substraight *Bemlos teleporus*
- Gnathopod 1 basis robust, one and half times as long as broad, propodus not elongate, anterior margin convex 3
- 2 Gnathopod 1 basis posterior margin densely setose; carpus posterior margin strongly produced into an acute tooth; propodus posterior margin weakly concave *Bemlos pseudopunctatus*
- Gnathopod 1 basis posterior margin with few or without setae; carpus posterior margin without tooth; propodus posterior margin straight *Bemlos quadrimanus*

***Bemlos quadrimanus* (Sivaprakasam)**

Lembos quadrimanus Sivaprakasam, 1970c: 81, fig. 1.

Lembos waipio?—Ledoyer, 1972: 200, pl. 21A, 22, 24 = *Lembos quadrimanus Mozambicus*.

Lembos quadrimanus mozambicus Myers, 1975a: 359, fig. 33–39.

Bemlos quadrimanus.—Myers, 1988a: 188; 1988b: 282, fig. 14.
Bemlos waipio.—Appadoo & Steele, 1998: 640 = *Bemlos quadrimanus*.

Material examined. 8 ♂♂, 7 ♀♀, AM P60848, from *Turbinaria ornata* and *Pocockiella variegata*, Bain Boeuf (19°59'S 57°36'E), 28 August 1998. 1 ♂, 9 ♀♀, AM P60849, from *Sargassum* sp., *Padina* sp. and *Caulerpa sertularioides*, Bain Boeuf, 6 April 1999. 1 ♂, AM P60850, from *Sargassum* sp., La Cuvette (20°00'S 57°34.2'E), 12 October 1999.

Diagnosis. Body with mottled brown pigmentation on head, pereon segments 2–6 and epimeron 1. Coxae and pereon segments 3–5 with well-developed acute sternal processes. Gnathopod 1 coxa 2.3× as broad as long; carpus 1.9× as broad as long, anterior margin with few setae; propodus globular, broad, 1.5× as long as broad, anterior margin with few groups of slender setae; distal end of palmar margin with a tooth-like process; dactylus robust, medially expanded, 1.8× length of palm. Gnathopod 2 carpus and propodus with few groups of setae on anterior margin.

Female gnathopod 1 not greatly enlarged; propodus 1.3× length of carpus, 1.8× as long as broad, palmar margin oblique and smooth with one robust seta at posterodistal corner.

Type locality. Appa Island, Gulf of Mannar.

Distribution. East Africa, Madagascar, Mauritius, India, Western Australia.

Habitat. *Bemlos quadrimanus* was collected from depths of less than 1 m from sites in the north coast of Mauritius and at Ile D'Ambre. It is mostly associated with the brown algae *Sargassum* sp. and the brown alga, which encrusts on corals, *Pocockiella variegata*. It was particularly very common at Bain Boeuf, a site on the north coast where the seawater has a high amount of detritus or suspended matter.

Remarks. The current material agrees with the description given by Myers (1975a: 359, fig. 33–39). One of the small difference being the lack of setae on epimera 1 and 2 as shown by Myers (1975a: 363, fig. 35).

Bemlos quadrimanus is distinguished from *Bemlos teleporus*, by the globular shape of the male gnathopod 1 propodus in *B. quadrimanus* compared to that of *B. teleporus*. One of the easily used distinguishing features of *Bemlos quadrimanus* is the mottled brown pigmentation on the body. The chromatophores are found on the head, coxae, pleon 3 to 5 and epimeron 1 sometimes extending onto epimeron 2. In *B. teleporus*, the chromatophores are present in a speckles rather than large blotches on the head, pleon 2–7 and epimeron 1 and 2. It differs from *B. pseudopunctatus* by the lack of a carpal tooth or teeth on the male gnathopod 1.

***Bemlos teleporus* (K.H. Barnard)**

Lembos teleporus K.H. Barnard, 1955: 94, fig. 47.—Ledoyer, 1967: 133, fig. 16–17; 1969: 183; 1973: 52, 91; 1982: 291, fig. 108.—Griffiths, 1973: 280; 1974a: 180.

Lembos podoceroides.—Griffiths, 1973: 278—synonymized by Griffiths, 1976: 97.

Lembos teleporus.—Ledoyer, 1982: 291, fig. 108.

Bemlos teleporus.—Myers, 1988a: 188.

Material examined. 1 ♂, AM P60851, from *Turbinaria ornata* and *Pocockiella variegata* from Bain Boeuf (19°59'S 57°36'E), 28 August 1998; 1 ♂, 2 ♀♀, AM P60852, from *Padina* sp., Bain Boeuf, 13 December 1999.

Diagnosis. Body (in alcohol) with speckles of brown pigment on head, pleon 2–7 and epimera 1–2. Pereon segment 3 with a well-developed sternal process. Gnathopod 1 coxa subquadrangular; carpus 1.2× as long as broad; propodus narrow proximally, expanded distally, palmar margin with a rounded protuberance close to base of dactylus followed by a shallow semi-elliptical excavation and a weak protuberance at the distal end; dactylus robust, overlapping palm, inner margin weakly crenulate. Gnathopod 2 carpus elongate, 2.4× as long as broad; propodus subrectangular, slightly shorter than carpus; dactylus fitting palm. Epimera 1 and 2 ventral margin rounded; epimeron 3 posterodistal margin with a small notch into which a small seta is inserted. Uropod 3 rami slender, outer ramus 0.8× inner ramus, outer ramus with long; rami with robust setae and terminal setae less than length of rami. Telson with two slender setae on each side.

Female, gnathopod 1 propodus 1.6× carpus and 2× as long as broad, palmar margin with a small protuberance close to base of dactylus followed by a shallow semi-circular excavation and a weakly developed protuberance at distal end. Pereopod 7 long and slender.

Variation. In younger males less than 4.1 mm, a robust seta is present on the posterodistal margin of the palm of gnathopod 1; the dactylus of the male gnathopod 1 slightly overlaps the palm and the dactylus inner margin with well-developed teeth. In larger males, the robust seta disappears and the inner margin of the dactylus becomes smooth.

Type locality. South Africa.

Distribution. South Africa, Mozambique?, Madagascar, Mauritius.

Habitat. *Bemlos teleporus*, was collected from depths less than 1 m. It occurs in habitats similar to that of *B. quadrimanus*.

Remarks. This species is recorded for the first time from Mauritius. The material closely agrees with the description of *Bemlos teleporus* given by Ledoyer (1982: 291, fig. 108). The variation in the male gnathopod 1 in small and large specimen is consistent with the observations made by Ledoyer (1982). For differences between this species and *B. quadrimanus*, see remarks under that species.

Genus *Globosolembos* Myers

For a diagnosis see Myers, 1988a.

Globosolembos excavatus (Myers)

Lembos excavatus Myers, 1975b: 32, figs. 76–82.—Ledoyer, 1982: 218, figs. 104–105 (in part).

Lembos processifer.—Ledoyer, 1984: 35 (in part), fig. 16 (“forme 2”) (not *L. processifer* Pirlot, 1938: 330, figs. 147–149).

Lembos (Globosolembos) excavatus Myers, 1985b: 363, fig. 234. *Globosolembos excavatus*.—Myers, 1986: 285, figs. 11–12.—Myers, 1988b: 329.

Material examined. 1♂ from coral rubble, AM P60853, *Enteromorpha flexuosa* and *Pocockiella variegata*, Flic-en-Flac (20°16.5'S 57°21.7'E), 9 November 1998; 1♂, 7♀, 12 juv., AM P60854, from mixture of *Sargassum* sp., *Amphiroa* sp., *Pocockiella variegata* and *Cymodocea* sp., Bain Boeuf (19°59'S 57°36'E), 16 June 1999. 1♂, AM P60855, from mixture of *Sargassum* sp., *Ulva lactuca*, *Acanthophora spicifera*, Souillac (20°31'S 57°30.7'E), 14 October 1999.

Diagnosis. Sternal processes on sternal plates 2–4. Gnathopod 1 carpus triangular, as long as broad; propodus globular, anterior margin with few slender setae, 1.7× as long as broad, posterior margin with a deep sinuous excavation; palm reduced, crenulate; dactylus 1.6× length of palm. Gnathopod 2 carpus slender, longer than propodus; propodus palm oblique; anterior margins of carpus and propodus densely setose.

Female gnathopod 1 carpus as long as broad; propodus globular, 1.4 as long as broad, anterior margin poorly setiferous; palm oblique, weakly sinuous.

Type locality. Watamu Bay, Kenya.

Distribution. East Africa, Madagascar, northeastern Australia, New Caledonia, Tonga.

Habitat. *Globosolembos excavatus* is common among the brown algae especially *Padina* sp. and *Pocockiella variegata* together with coral rubble substrata. It was collected at depths less than 2 m from several sites around the island and appears to have a wider distribution than *B. teleporus* or *B. quadrimanus*.

Remarks. This is the first record of *Globosolembos excavatus* from Mauritius.

The present material agrees with the description given by Myers (1975b: 32, fig. 76–82). The material examined has mottled brown pigmentation on the pleon and coxae 1 to 4, and a few patches of pigment on pleon 6 and 7. *Globosolembos excavatus* females can be distinguished from those of *B. quadrimanus* females by the more globose nature of the female gnathopod 1. In specimens where pigmentation is preserved, a quick character that can be used to distinguish these two females, is the chromatophores on the head, which are absent in *G. excavatus*. The two species *G. excavatus* and *G. indicus* in the current material could be distinguished using the same features mentioned by Ledoyer p.284 (1982). These include the poorly setiferous anterior margins of the propodus of the gnathopod 1 in males and females, the presence of sternal processes on sternal plates 2–4, and the more reduced carpus in the males gnathopod 1 in *G. excavatus* compared to *G. indicus*.

Globosolembos indicus (Ledoyer)

Lembos indicus Ledoyer, 1967: 133, fig. 18; 1972: 195, pl. 17A, 19, 24; Ledoyer, 1978: 253–1979: 42; Ledoyer, 1982: 284, fig. 105 (in part).

Lembos leapakaki.—Sivaprakasam, 1970c: 87, fig. 3.

Not *Lembos leapakaki* J.L. Barnard 1970: 79, figs. 39–40.

Lembos (Globosolembos) indicus.—Myers, 1985b: 348–353, figs. 224–227.

Globosolembos indicus.—Appadoo & Steele, 1998: 640.

Material examined. 1♂, AC, from *Sargassum* sp., *Ulva reticulata*, La Cuvette (20°00'S 57°34.2'E), 5 May 1999; 3♀, 1 juv., AC, from *Padina* sp. and *Halimeda* sp., Grand Baie (20°0.5'S 57°34'E), 5 May 1999.

Diagnosis. Gnathopod 1 carpus 1.3× as long as broad; propodus elongate, 1.9× as long as broad, anterior margin with dense groups of setae; palmar margin short, weakly crenulate; dactylus 1.6× length of palm. Gnathopod 2 carpus longer than propodus; palm oblique; anterior and posterior margin of carpus and propodus densely setose.

Female gnathopod 1 carpus cup-shaped, as long as broad; propodus 1.4× as long as broad, anterior margin with dense groups of setae; palm oblique.

Type locality. Tuléar, Madagascar.

Distribution. Madagascar, Mauritius, India.

Habitat. *Globosolembos indicus* was rarer among the substrates collected in the present study compared to *G. excavatus*. It was collected at depths of less than 0.5 m from two sites in the north coast among green and brown algae.

Remarks. The current material agrees with the descriptions of Ledoyer (1967: 133, fig. 18), Ledoyer (1982: 284, fig. 105) and Myers (1985b: 348–353, figs. 224–227). This species closely resembles *G. excavatus* and the pattern of chromatophores on the body segment is very similar. It is distinguished from the latter by the more setose anterior margin of the gnathopods 1 propodus in males and females, the lack of sternal processes on sternal plates 2–4, and the less reduced carpus in the male gnathopod 1.

Genus *Grandidierella* Coutiere

For a diagnosis see Myers, 1988a.

Grandidierella bonnieroides Stephensen

Grandidierella bonnieroides Stephensen, 1948: 12, fig. 3.—

Myers, 1970: 141, fig. 1–2.—1972: 790.—Asari & Myers, 1982: 252, figs. 9–10.—Ledoyer, 1982: 245, fig. 89.

Grandidierella bonnieri.—Appadoo & Steele, 1998: 640.

Material examined. 7♂, 12♀, AM P60856, from *Acanthophora spicifera*, Anse la Raie (19°59.5'S 57°37.5'E), 15 May 1998. 7♂, 8♀, AM P60857, from *Ulva lactuca* and *Ulva reticulata*, Le Bouchon (20°28'S 57°40.5'E), 27 October 1998.

Diagnosis. Sternal process present on pereon segment 1. Coxal plates discontinuous, broader than deep. Antenna 2 robust, articles 4 and 5 subequal, flagellum 5-articulate. Gnathopod 1 carpus slender, subquadrate, 1.7× as long as broad, with parallel anterior and posterior margins, posterior

margin with few setae, inner face of carpus with a small process, distal margin with a medial finger-like process followed by a strong process on the posterodistal margin; propodus subquadrate, 2.5× as long as broad, anterior and posterior margins appear parallel; dactylus robust, inner margin crenulate with robust setae. Gnathopod 2 carpus, subovate, 2× as long as broad; propodus subrectangular, 0.6× length of carpus. Uropod 3 uniramous, ramus slightly over twice as long as peduncle, slender, 5× as long as broad with setae on margins and on distal end. Telson with two medial and one distal setae on each side.

Female, gnathopod 1 carpus 2.3× as long as broad, propodus medially expanded, slightly shorter than carpus, palm oblique.

Variation. In younger males (e.g., 2.8 mm) the sternal process is not developed. The gnathopod 1 carpus anterior margin is more convex and appears globular, distal finger-like process poorly developed; the propodus is 2× as long as broad, inner margin is more convex with strong groups of setae; dactylus is slender and inner margin is toothed with short setae.

Type locality. Salinja Paloe Lechi, Bonaire.

Habitat. *Grandidierella bonnieroides* was collected from depths less than 1 m on the north, east and south coasts of the island. It lives mostly amongst the green alga, *Ulva* sp. and red algae. It was very abundant at one site on the southeast coast, Le Bouchon, a site characterized by clay-like suspended matter in seawater and extensive green algae.

Distribution. Madagascar, Mauritius, India, Bonaire, Caribbean, Gulf of Mexico.

Remarks. The present material agrees with the description given by Asari & Myers (1982: 252, fig. 9–10). One small difference being the uropod 3 peduncle, which is broader in the material described by Asari & Myers (1982). The present material also agrees with the description given by Ledoyer (1982: 245, fig. 89) where the uropod 3 peduncle is slender. Two sternal processes are illustrated by Ledoyer (1982: 246, fig. 89), but only one is observed in the current material. Myers (1970: 138–139, fig. 2) points out that there may be considerable variation in the relative development of sternal processes on pereon segments 1 and 2 when he reviewed material of *G. bonnieroides* from the Caribbean and Gulf of Mexico.

Family Corophiidae

Head rostrum short; interantennal lobe prominent. Antenna 2 peduncle well developed, flagellum short. Lower lip outer lobes entire. Mandible palp weak, 1, 2 or 3 segmented. Coxae small, coxa 4 posterior margin excavate. Gnathopod 2 larger than gnathopod 1. Body depressed. Uropod 3 uniramous. Telson fleshy.

Genus *Monocorophium* Bousfield & Hoover, 1997

For diagnosis see Bousfield & Hoover, 1997.

Monocorophium acherusicum Costa

Corophium acherusicum A. Costa, 1851; 24 (*Audouinia acherusica* nom. nud.); Della Valle, 1893: 364, pl. 1, fig. 11; pl. 8, fig. 17, 18, 20–41; Chevreux & Fage, 1925: 368, fig. 376; Crawford, 1937: 617; Gurjanova, 1951: 977, fig. 680.—Myers, 1982: 186, fig. 124.—Appadoo & Steele, 1998: 640. *Monocorophium acherusicum* Bousfield & Hoover, 1997: 117, fig. 30.

Material examined. 11 ♂♂, 30 ♀♀, AC, from *Acanthophora spicifera*, Anse la Raie (19°59.5'S 57°37.5'E), 15 May 1998.

Type locality. Lago del Fusaro (Napoli).

Distribution. Cosmopolitan (see Myers, 1982: 186).

Habitat. *Monocorophium acherusicum* was collected from only one site in the north coast of the island among the red alga, *Acanthophora spicifera*. The site is a sheltered site, with very little wave-action and the seawater has large amounts of suspended sand.

Remarks. *Monocorophium acherusicum*, is a species of very wide distribution. It is recognized by the small triangular rostrum, coalesced urosome segments, male antenna 2 article 4 with large terminal distal tooth and two small medial teeth. Females are recognized by the antenna 2 with article 4 with some paired robust setae and article 5 with 2 or more robust setae.

Family Photidae

Antennae slender, subequal. Coxae deep, coxa 4 posterior margin not excavate. Mandible palp slender, article 2 longest, article 3 with apical setae. Gnathopod 2 larger than gnathopod 1. Uropods 1–2 biramous. Uropod 3 biramous, outer ramus with simple robust setae.

Genus *Gammaropsis* Liljeborg

Body laterally compressed. Ocular lobes short to moderate, pointed. Antenna 1 accessory flagellum multi-articulate. Mandible palp, article 3 clavate, slightly shorter than article 2. Coxae strongly overlapping, coxa 4 not lobed. Gnathopods 2 greatly larger than 1, merus enlarged, fused distally along posterior margin of carpus. Uropod 1 peduncle with ventrodistal process. Uropod 3 biramous, rami pointed distally, elongate, outer ramus with vestigial article 2. Telson entire, short, ovate, as broad as long with 2 apical cusps.

This complex genus appears to be well represented in Mauritius (Ledoyer, 1978). A great deal of study is required to understand the many taxa in this genus. For the moment, a list of the taxa under the names in which they have been recorded from Mauritius includes:

- Gammaropsis abbotti* (J.L. Barnard).—Ledoyer, 1978: 238.
Gammaropsis afra Stebbing.—Ledoyer, 1978: 239, fig. 16.
Gammaropsis atlantica Stebbing.—Ledoyer, 1978: 241, fig. 17(I); Appadoo & Steele, 1998: 640.
Gammaropsis grandimana Ledoyer, 1978: 243, fig. 18(II).
Gammaropsis holmesi Stebbing.—Ledoyer, 1978: 245, fig. 17(II).
Gammaropsis mauritiensis Ledoyer, 1978: 246, fig. 18(I).
Gammaropsis photisimilis Ruffo.—Ledoyer, 1978: 248, fig. 19.
Gammaropsis pokipoki J.L. Barnard.—Ledoyer, 1978: 248, fig. 20.

Gammaropsis sp. (*G. atlantica* complex)

Fig. 20

Material examined. 2 ♀♀, AC, from mixture of *Centroceras clavulatum*, *Hypnea cornuta*, *Gracilaria millardetii*, green filamentous alga, Tamarin (20°19.5'S 57°22'E), 11 October 1999.

Habitat. This species was collected at depths less than 1 m from one site on the west-coast of the island. The site is moderately exposed to wave action and has some freshwater influence as it is located close to a river mouth.

Remarks. Only females of this species were recorded in the study and no attempt is made to provide a full description. The material collected is placed in the “atlantica” group because of the lageniform eye shape, the shape of the female gnathopod 2, pereopod 5, telson and uropod 3. The material appears to be similar to that described by Ledoyer (1982: 216, fig. 75) as form A of *Gammaropsis atlantica*.

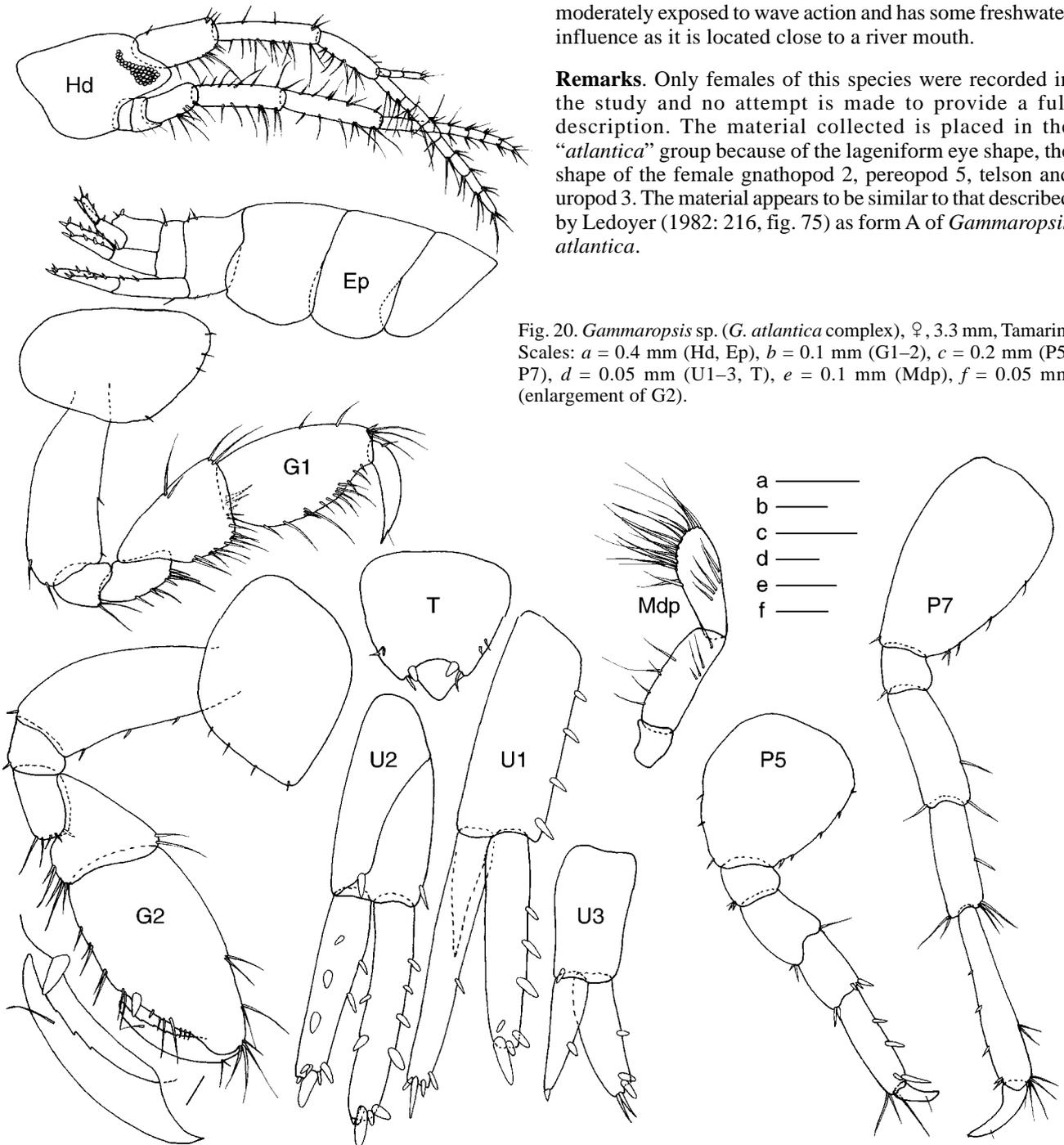


Fig. 20. *Gammaropsis* sp. (*G. atlantica* complex), ♀, 3.3 mm, Tamarin. Scales: a = 0.4 mm (Hd, Ep), b = 0.1 mm (G1-2), c = 0.2 mm (P5, P7), d = 0.05 mm (U1-3, T), e = 0.1 mm (Mdp), f = 0.05 mm (enlargement of G2).

***Gammaropsis digitata* (Schellenberg)**

Eurystheus digitatus Schellenberg, 1938: 84.—J.L. Barnard, 1965: 535, fig. 30.—Sivaprakasam, 1970a: 570, fig. 10.
Gammaropsis digitata J.L. Barnard, 1970: 178, fig. 114.—Ledoyer, 1972: 239, pl. 54B.—Ledoyer, 1982: 227, fig. 82.—Myers, 1985a: 80, fig. 61–62.
Jassa sp. 1 Appadoo & Steele, 1998: 640.

Material examined. 18♂♂, 21♀♀, 18 juv., AM P60858, from *Amansia glomerata*, *Padina* and *Sargassum*, Souillac (20°31'S 57°30.7'E), 8 April 1999; 49♂♂, 13♀♀, 7 juv., AM P60859, from *Sargassum* sp. and *Ulva reticulata*, La Cuvette (20°00'S 57°34.2'E), 5 May 1999; 13♂♂, 21♀♀, 5 juv., AM P60860, from *Sargassum densifolium*, *Amansia glomerata* and *Digenia simplex*, Souillac, 4 August 1999; 14♂♂, 22♀♀, 12 juv., AM P60861, from mixture of *Sargassum densifolium*, *Padina* sp., *Digenia simplex* and *Cymodocea* sp., Roches Noires (20°6.2'S 57°44.5'E), 16 December 1999.

Diagnosis. Eyes oval. Male gnathopod 1, propodus 2.3× as long as broad, palm oblique defined by a weak protrusion bearing a robust seta. Gnathopod 2, carpus triangular, 1.2× as long as broad; propodus 2× as long as broad, posterior margin with a long slender proximal tooth and a short, stout, irregular distal protrusion forming a short, transverse palm; dactylus robust, 2.8× length of palm.

Female gnathopod 1, propodus with smoothly convex palm. Gnathopod 2 propodus slender, palm oblique.

Type locality. Nui, Tarawa.

Habitat. *Gammaropsis digitata* is very common in the north, east and south coasts of Mauritius and was collected at depths of less than 1 m. Three sites where it was very common are Souillac, Roches Noires and La Cuvette. This species lives amongst the red algae especially *Amansia glomerata* and *Digenia simplex*, algae which are very common at the wave-exposed sites such as Souillac and Roches Noires.

Distribution. Madagascar, Mauritius, India, Tarawa, Kiribati, Micronesia, Hawaii, Fiji.

Remarks. The material from Mauritius agrees with the description given by Myers (1985a: 80, fig. 61–62). This species is easily distinguished from *Gammaropsis* species in

the *G. atlantica* complex by the ovoid shape of the eyes, which have a purple-coloured core (in alcohol preserved material) surrounded by a lighter coloured ring of ommatidia.

The distinctive shape of the hyperadult male gnathopod 2 with a long proximal tooth on the posterior margin of the propodus helps to distinguish this species from all other *Gammaropsis* species from Mauritius. In younger males, the tooth is less well-developed and originates midway on the ventral margin of the propodus as compared to the proximal end in large adults. The gnathopod 2 of younger males superficially resembles that of *Gammaropsis photisimilis* Ruffo (1969), which also has a medial tooth on the posterior margin of the propodus. However, young males of *G. digitata* have a very narrow cleft between the sharp tooth and the palm as compared to a round-bottomed excavation separating the more blunt tooth from the palm in *G. photisimilis*.

Ledoyer (1978) recorded 7 species of *Gammaropsis* and only *Gammaropsis* sp. (*G. atlantica* complex) has been recorded again in this study. One of the reasons for this difference in species is probably due to the habitats sampled and also the depth of sampling; Ledoyer (1978) collected samples from depths up to 25 m and his substrates were mostly coral rubble.

Family Ischyroceridae

Body slightly depressed. Coxae shallow, contiguous; coxa 4 not excavate. Antenna 2 longer than 1. Gnathopod 2 larger than gnathopod 1; carpus short. Pereopods 3–4 basis expanded. Uropods 1–2 inner ramus longer than outer; interramal process present. Uropod 3 peduncle robust, rami very short, outer ramus curved with teeth-like processes near apex.

Genus *Ericthonius* Milne Edwards

Coxae small, weakly contiguous. Gnathopod 2 enlarged, merus extended along posterior margin of carpus, with process on posterodistal margin, dactylus long. Uropods 1–2 biramous, rami slightly unequal, shorter than peduncle, peduncle without interramal process. Uropod 3 small, uniramous, ramus short, apically curved with teeth-like processes. Telson short, entire, reduced, broader than long.

Key to male *Ericthonius* of Mauritius

- 1 Gnathopod 1 basis without knob-like process on posterior margin; coxa 2 broader than deep 2
- Gnathopod 1 basis with knob-like process on posterior margin; coxa 2 deeper than broad *Ericthonius brasiliensis*
- 2 Pereopod 5 basis with weakly-developed lobe on posterodistal margin 3
- Pereopod 5 basis with strongly produced lobe, reaching up to end of ischium on posterodistal margin *Ericthonius pugnax*
- 3 Gnathopod 2 basis uniformly broad, carpus posterior margin bearing robust setae, propodus subequal to carpus, enlarged and axe-shaped *Ericthonius latimanus*
- Gnathopod 2 basis bottle-shaped; carpus posterior margin without robust setae, propodus shorter than carpus, posterior margin weakly sinuous *Ericthonius punctatus*

Erichthonius brasiliensis (Dana)

Pyctilus brasiliensis Dana, 1852b: 976, fig. 5a–h.
Erichthonius brasiliensis Bousfield, 1973: 175, pl. 59, fig. 2.—
 Myers, 1982: 200, figs. 136–137.—Myers & McGrath 1984:
 382, fig. 1–2.—Appadoo & Steele 1998: 640.
 Not *Erichthonius brasiliensis* Ledoyer 1986: 624, fig. 237A.

Material examined. 1 ♂, AM P60862, from mixture of *Sargassum* sp., *Amphiroa* sp., *Pocockiella variegata* and *Cymodocea* sp., Bain Boeuf, 16 June 1999; 1 ♂, AC, from *Acanthophora spicifera*, Anse la Raie (19°59.5'S 57°37.5'E), 15 May 1998. 1 ♂, 1 ♀, AC, from *Sargassum binderi*, Bain Boeuf (19°59'S 57°36'E), 16 June 1998.

Diagnosis. Body (in alcohol) with brown speckled pigmentation on head, coxae, pleon and urosome. Pereon segment 1 with a forward produced sternal process. Gnathopod 1 basis 2× as long as broad, posterior margin with a distinct knob-like process. Gnathopod 2 coxa deep, ventral margin rounded, with stridulations and a small group of setae; carpus 1.8× as long as broad anterior and posterior margins parallel, posterodistal margin with two teeth, the outer one longer, separated by a V-shaped incision. Pereopod 3–4 basis 1.5× as long as broad, widest medially.

Female gnathopod 1 basis slender; propodus palm oblique. Gnathopod 2 coxa deep; carpus posterior margin produced into a lobe with two robust setae and long slender setae; propodus tapered distally, slightly more than twice length of carpus, palm oblique with two robust setae.

Variation. In some males, the eyes are smaller and do not completely fill the eye-lobe.

Type locality. Rio de Janeiro

Habitat. *Erichthonius brasiliensis* was collected at depths of less than 1 m mostly from the north coasts. It was collected amongst brown algae and was more common at Bain Boeuf, a site with very little wave-action and large amounts of suspended sand.

Distribution. Venezuela, Brazil, West Indies, New England and the Mediterranean Sea, Mauritius.

Remarks. The material recorded from Mauritius agrees very well with the description given by Myers & McGrath (1984) of material from the type locality. Among a few differences are the large eye in the current material, pereopods 3 and 4 being widest medially and the weak setation of the propodus of the male gnathopod 2. The deep coxa 2 and the knob-like process on the basis of the gnathopod 1 in males are distinctive features of this species (Myers & McGrath, 1984). These two characters can also be used to distinguish the males of this species from the other species of the genus, *E. latimanus*, *E. pugnax* and *E. punctatus*, reported from the island.

Erichthonius pugnax Dana

Erichthonius [sic] *pugnax* Dana, 1852a: 213.
Erichthonius pugnax.—Stebbing, 1906: 672.—Pirlot, 1938: 352.—
 Nagata, 1960: 179, pl. 17.—Nagata, 1965: 320, fig. 40.—
 Ledoyer, 1969: 179, fig. 1.—Ledoyer, 1986: 628, fig. 239.—
 Myers, 1995: 80, figs. 40–42.

Erichthonius [sic] *macrodactylus* Dana, 1852a: 218.
Pyctilus pugnax Dana, 1852b: 975, pl. 67, fig. 4a–d.
Pyctilus macrodactylus Dana, 1852b: 974, pl. 67, fig. 3a–c.

Material examined. 1 ♂, AC, from *Sargassum* sp., La Cuvette (20°00'S 57°34.2'E), 14 May 1998.

Diagnosis. Alcohol preserved specimen cream-coloured. A flap-like sternal process is present on pereon segment 1. Gnathopod 1 basis slender, 2.5× as long as broad, posterior margin smooth. Gnathopod 2 coxa shallow, sub-triangular, 1.8× as broad as long, with stridulating ridges on the ventral margin; carpus anterior margin slightly convex with two distal teeth, the outer one longer, distal margin slightly deflected; propodus 0.8× carpus, posterior margin sinuous with slender setae; dactylus large, with a few setae on anterior margin and a group of apical setae. Pereopod 3–4 basis distally expanded. Pereopod 5 basis posterodistal margin produced into a lobe reaching to end of ischium, and bearing a few setae.

Type locality. Sulu Sea

Distribution. Indo-west Pacific

Habitat. This species was rare in the substrata sampled in this study and was collected at depths of less than 1 m at La Cuvette, in the north coast.

Remarks. This is the first record of the species from Mauritius. *Erichthonius pugnax* males are easily distinguished by the shape of the basis of the pereopod 5, which is strongly produced into a lobe on the posterodistal margin. The shape of the gnathopod 2 in the current material agrees with the description of Ledoyer 1986 (631, fig. 239) and Myers 1995 (78, fig. 40). No additional material is available here to show variation of the gnathopod 2 in much larger specimens as observed by Myers (1995).

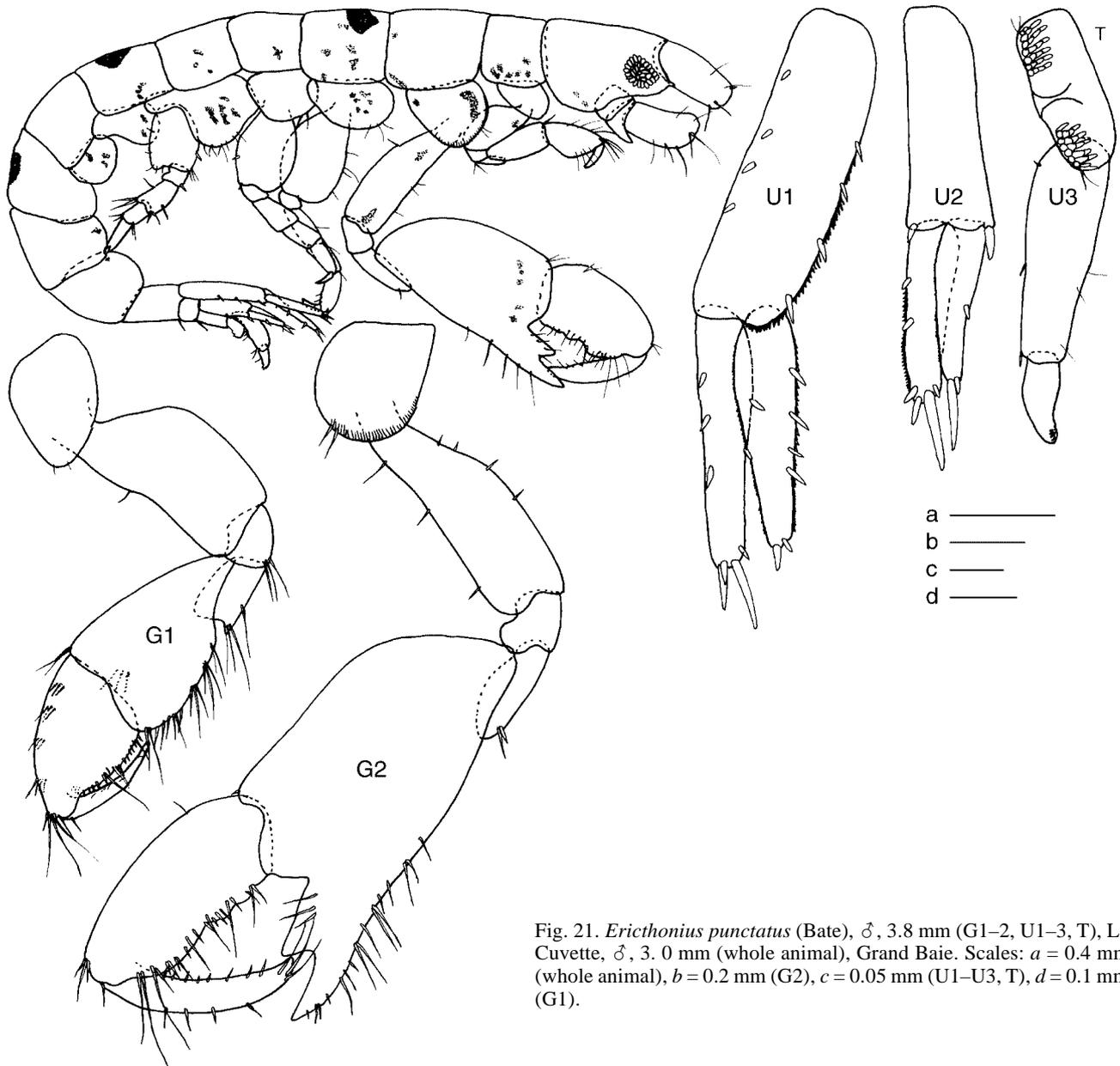


Fig. 21. *Ericthonius punctatus* (Bate), ♂, 3.8 mm (G1-2, U1-3, T), La Cuvette, ♂, 3.0 mm (whole animal), Grand Baie. Scales: *a* = 0.4 mm (whole animal), *b* = 0.2 mm (G2), *c* = 0.05 mm (U1-3, T), *d* = 0.1 mm (G1).

Ericthonius punctatus (Bate)

Figs. 21–22

Podocerus punctatus Bate, 1857: 148.*Dercothoe punctatus* Bate, 1862: 260.—Bate & Westwood, 1863: 461 (with un-numbered figure).*Ericthonius punctatus*.—Myers 1982: 202, fig. 138.—Myers & McGrath, 1984: 285, figs. 3–4.*Ericthonius abditus* Sars 1894: 602, pl. 215.*Erichthonius brasiliensis*.—Chevreux & Fage, 1925: 353, fig. 360.*Ericthonius brasiliensis*.—Schellenberg 1942: 212, fig. 173.—

Gurjanova 1951: 948, fig. 659.—Lincoln, 1979: 560, figs. 268a–f, 269a–e.—Ledoyer, 1986: 624, fig. 237A.

Material examined. 2 ♂♂, AM P60863, from *Padina* sp. La Cuvette (20°00'S 57°34.2'E), 14 May 1998; 3 ♂♂, 1 ♀, AM P60864, from *Hypnea* sp., *Amphiroa* sp., *Caulerpa sertularioides*, Tamarin (20°19.5'S 57°22'E), 18 June 1999.

Diagnosis. Body (in alcohol) with mottled-brown pigment concentrated on head, pereon and coxae. Pereon segment 1 with flap-like sternal process. Gnathopod 2 coxa moderately deep, with parallel lateral margins, ventral margin round and with stridulating ridges; basis lageniform, 3.2× as long as broad; carpus anterior margin strongly convex proximally, carpal processes on posterior margin deflected, with two-teeth separated from each other by a semi-elliptical depression; propodus 0.8× length of carpus, inner margin weakly sinuous; dactylus stout with short setae on inner and outer margins and long terminal setae. Pereopod 3–4 basis widest distally, anterior margin evenly convex.

Female gnathopod 1 coxa subround. Gnathopod 2, coxa moderately deep; carpus posterior margin produced into a lobe bearing robust setae and slender setae; propodus tapered at distal end, 2× length of carpus, palmar margin oblique with two stout robust proximal setae.

Type locality. Oxwich Bay, Glamorgan, Wales

Distribution. Norway to tropical West Africa, including the British Isles, Madagascar, Mauritius.

Habitat. *Ericthonius punctatus* was collected at depths of less than 1 m from sites in the west, north and east coasts of the island. It was more common in the north coasts at sites such as Grand Baie, la Cuvette and Bain Boeuf. It lives mostly amongst the brown algae, *Sargassum* sp.

Remarks. This is the first record of the species from The Indian Ocean. It can be distinguished from *E. brasiliensis* by the pattern of pigmentation on the body surface and the lack of the knob-like process on the basis of the male gnathopod 1. It can be distinguished from *E. pugnax*, by the shape of the coxa 2 of the male, which is much more shallow in *E. pugnax*, the shape of the basis of the pereopod 5 and the strongly divergent teeth of the male gnathopod 2 carpus.

Because this species seems an unlikely occurrence in the tropical Indian Ocean, figures are provided here for comparative purposes. The possibility of introduction cannot be ruled out.

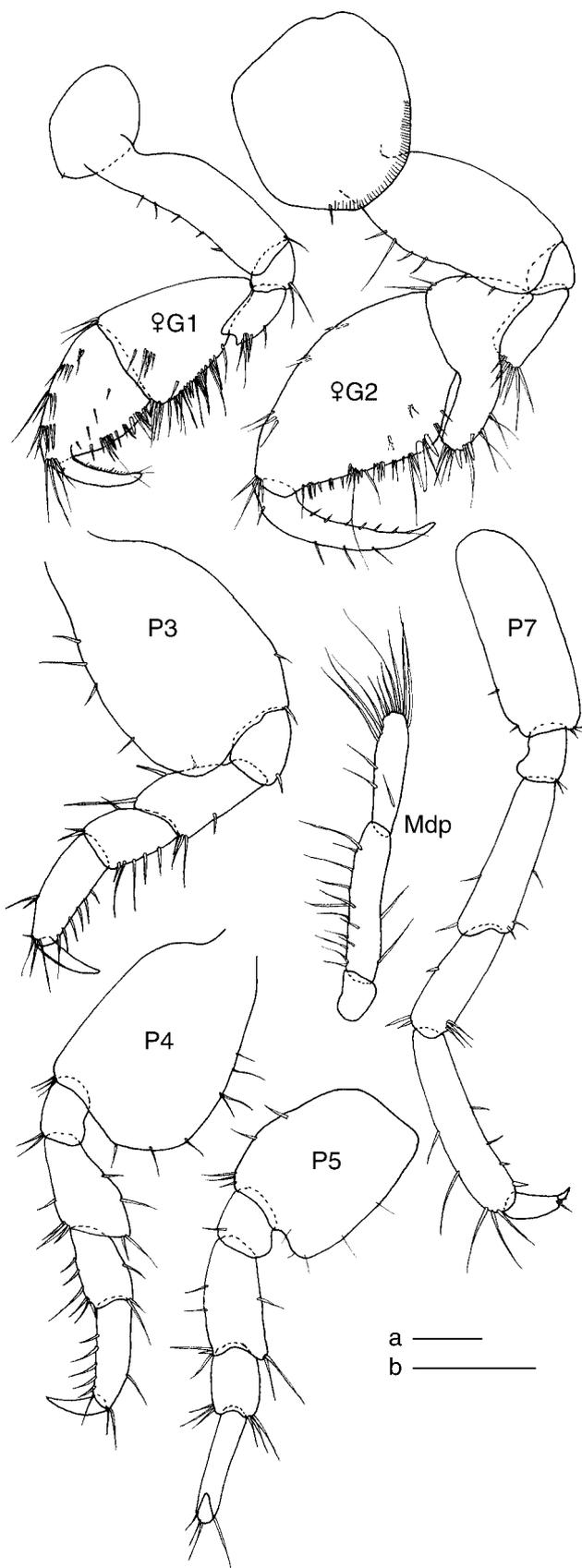


Fig. 22. *Ericthonius punctatus* (Bate), ♂, 3.8 mm, La Cuvette, ♀, 3.3 mm, Grand Baie. Scales: a = 0.1 mm (Mdp), b = 0.2 mm (P3–4, P5–7, ♀G1–2). Male unless stated otherwise.

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