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**Species of the genus *Galathea* Fabricius, 1793
(Crustacea, Decapoda, Galatheidae) from the Indian and Pacific Oceans,
with descriptions of 92 new species**

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Table of contents

Abstract	5
Introduction	5
Material and methods	7
Results	13
Systematic account	13
Genus <i>Galathea</i> Fabricius, 1793	13
Key to species of the genus <i>Galathea</i> in the Indian and Pacific Oceans	13
<i>Galathea acerata</i> n. sp.	20
<i>Galathea acis</i> n. sp.	22
<i>Galathea aculeata</i> Haswell, 1882	26
<i>Galathea aegyptiaca</i> Paul'son, 1875	28
<i>Galathea aequata</i> n. sp.	31
<i>Galathea ahyongi</i> n. sp.	34
<i>Galathea albatrossae</i> Baba, 1988	37
<i>Galathea algae</i> Baba, 1969	37
<i>Galathea amamiensis</i> Miyake & Baba, 1966	38
<i>Galathea amboinensis</i> De Man, 1888	41
<i>Galathea anepipoda</i> Baba, 1990	41
<i>Galathea anoplos</i> n. sp.	41
<i>Galathea anouchkae</i> n. sp.	44
<i>Galathea argus</i> n.sp.	46
<i>Galathea atua</i> n. sp.	48
<i>Galathea australiensis</i> Stimpson, 1858	50
<i>Galathea autahi</i> n. sp.	53
<i>Galathea balssi</i> Miyake & Baba, 1964	56
<i>Galathea barbata</i> n.sp.	57
<i>Galathea barbellata</i> Macpherson, 2012	59
<i>Galathea bidens</i> Baba, 1988	59
<i>Galathea bimaculata</i> Miyake & Baba, 1966	59
<i>Galathea boisseliera</i> n.sp.	60
<i>Galathea boucheti</i> n. sp.	65
<i>Galathea bracteosa</i> n. sp.	67
<i>Galathea brevimana</i> Paul'son, 1875	70
<i>Galathea caesariata</i> n. sp.	72
<i>Galathea celiae</i> n. sp.	74
<i>Galathea cephyra</i> n. sp.	77
<i>Galathea ceti</i> n.sp.	79
<i>Galathea ciliosa</i> n. sp.	81
<i>Galathea clarki</i> n. sp.	83
<i>Galathea connudata</i> n.sp.	85
<i>Galathea consobrina</i> De Man, 1902	88
<i>Galathea continua</i> Baba & Fujita, 2008	91
<i>Galathea corallicola</i> Haswell, 1882	91
<i>Galathea coralliophilus</i> Baba & Oh, 1990	91
<i>Galathea corbariae</i> n. sp.	91
<i>Galathea crinita</i> n. sp.	94
<i>Galathea cymo</i> n. sp.	96
<i>Galathea cymothoe</i> n. sp.	99
<i>Galathea echinata</i> Macpherson, 2012	102
<i>Galathea eione</i> n. sp.	102
<i>Galathea eridani</i> n. sp.	104
<i>Galathea erythrina</i> n.sp.	107
<i>Galathea eucrante</i> n. sp.	109
<i>Galathea eulimene</i> n. sp.	111
<i>Galathea eupompe</i> n.sp.	114
<i>Galathea formosa</i> De Man, 1902	116
<i>Galathea furfurea</i> n. sp.	119
<i>Galathea galene</i> n. sp.	121
<i>Galathea ganindo</i> n. sp.	123
<i>Galathea genkai</i> Miyake & Baba, 1964	126
<i>Galathea gladiola</i> n. sp.	126
<i>Galathea gnoma</i> n. sp.	128

<i>Galathea gruis</i> n. sp.	131
<i>Galathea guttata</i> Osawa, 2004	133
<i>Galathea halia</i> n. sp.	133
<i>Galathea hispidata</i> Baba, 2005	136
<i>Galathea hispidissima</i> n. sp.	137
<i>Galathea homologa</i> n. sp.	139
<i>Galathea hydrae</i> n. sp.	140
<i>Galathea imitata</i> n. sp.	143
<i>Galathea inconspicua</i> Henderson, 1885	145
<i>Galathea inermis</i> n. sp.	150
<i>Galathea inflata</i> Potts, 1915	152
<i>Galathea kuboi</i> Miyake & Baba, 1967	152
<i>Galathea labidolepta</i> Stimpson, 1858	153
<i>Galathea latirostris</i> Dana, 1852	155
<i>Galathea lemaitrei</i> n. sp.	157
<i>Galathea lemniscata</i> n. sp.	160
<i>Galathea lepidota</i> n. sp.	162
<i>Galathea leporis</i> n. sp.	165
<i>Galathea lingadua</i> n. sp.	167
<i>Galathea longimana</i> Paul'son, 1875	170
<i>Galathea longimanoides</i> Johnson, 1970	172
<i>Galathea longiocolata</i> n. sp.	174
<i>Galathea lumaria</i> Baba, 2005	177
<i>Galathea machaera</i> n. sp.	177
<i>Galathea machordomae</i> n. sp.	179
<i>Galathea maculiabdominalis</i> Baba, 1972	182
<i>Galathea magnifica</i> Haswell, 1882	182
<i>Galathea mariae</i> n. sp.	184
<i>Galathea mauritiana</i> Bouvier, 1914	187
<i>Galathea melobosis</i> n. sp.	190
<i>Galathea micra</i> n. sp.	193
<i>Galathea minima</i> n. sp.	195
<i>Galathea minutiae</i> n.sp.	198
<i>Galathea multicristata</i> n. sp.	200
<i>Galathea multilineata</i> Balss, 1913	202
<i>Galathea nuda</i> n.sp.	202
<i>Galathea ohshimai</i> Miyake & Baba, 1967	204
<i>Galathea orientalis</i> Stimpson, 1858	206
<i>Galathea paleroi</i> n. sp.	207
<i>Galathea parvula</i> n. sp.	209
<i>Galathea pascualae</i> n. sp.	212
<i>Galathea patriciae</i> n. sp.	215
<i>Galathea paulae</i> n. sp.	217
<i>Galathea paulayi</i> n. sp.	219
<i>Galathea pauxilla</i> n. sp.	223
<i>Galathea peitho</i> n. sp.	225
<i>Galathea perone</i> n. sp.	228
<i>Galathea phalangis</i> n. sp.	230
<i>Galathea pilosa</i> De Man, 1888	232
<i>Galathea platycheles</i> Miyake, 1953	235
<i>Galathea ploto</i> n. sp.	237
<i>Galathea politula</i> n. sp.	239
<i>Galathea polydora</i> n. sp.	241
<i>Galathea polyphemus</i> n. sp.	246
<i>Galathea poupini</i> n. sp.	248
<i>Galathea providentia</i> Laurie, 1926	250
<i>Galathea psila</i> n. sp.	254
<i>Galathea pubescens</i> Stimpson, 1858.	256
<i>Galathea pubipes</i> n. sp.	257
<i>Galathea punctata</i> n. sp.	259
<i>Galathea rangi</i> n.sp.	263
<i>Galathea raventosae</i> Macpherson, 2012	265
<i>Galathea rhapsidia</i> n. sp.	266
<i>Galathea robusta</i> Baba, 1990	268

<i>Galathea rubrispina</i> n. sp.	268
<i>Galathea rubromaculata</i> Miyake & Baba, 1967.	271
<i>Galathea samadiae</i> n. sp.	271
<i>Galathea sanctae</i> Macpherson, 2012	273
<i>Galathea schnabelae</i> n. sp.	273
<i>Galathea scolopia</i> n. sp.	276
<i>Galathea senta</i> n. sp.	278
<i>Galathea sentosa</i> n. sp.	281
<i>Galathea setigera</i> n. sp.	283
<i>Galathea simulata</i> n. sp.	285
<i>Galathea sinensis</i> Dong & Li, 2010	288
<i>Galathea spinimanus</i> Borradaile, 1900	288
<i>Galathea spinosorostris</i> Dana, 1852	289
<i>Galathea squamea</i> Baba, 1979	292
<i>Galathea submagnifica</i> Laurie, 1926	293
<i>Galathea subsquamata</i> Stimpson, 1858	295
<i>Galathea tagaloo</i> n. sp.	298
<i>Galathea tagaro</i> n. sp.	300
<i>Galathea tanegashimae</i> Baba, 1969	303
<i>Galathea ternatensis</i> De Man, 1902	307
<i>Galathea tongi</i> n. sp.	310
<i>Galathea tribulosa</i> n. sp.	313
<i>Galathea villosa</i> n. sp.	315
<i>Galathea waiora</i> n. sp.	317
<i>Galathea whiteleggii</i> Grant & McCulloch, 1906	319
Acknowledgments	328
References	329

Abstract

The genus *Galathea* is one of the most speciose and unwieldy groups in the family Galatheidae. The examination of more than 9000 specimens of 144 species collected in the Indian and Pacific Oceans using morphological and molecular characters, has revealed the existence of 92 new species. The specimens examined during this study were obtained by various French expeditions supplemented by other collections from various sources, and including the type specimens of some previously described species. Most of the new species are distinguished by subtle but constant morphological differences, which are in agreement with molecular divergences of the mitochondrial markers COI and/or 16S rRNA. Here, we describe and illustrate the new species and redescribe some previously described species for which earlier accounts are not sufficiently detailed for modern standards. Furthermore we include a dichotomous identification key to all species in the genus from the Indian and Pacific Oceans.

Key words: New species, squat lobster, morphology, molecular data, Galatheidae, *Galathea*

Introduction

The squat lobster genus *Galathea* Fabricius, 1793, belongs to the family Galatheidae Samouelle, 1819 (Ahyong *et al.* 2010). Most species of the genus occur in shallow waters (<100 m), although a few have been recorded at transitional depths (>500 m) (Baba 2005; Baba *et al.* 2008; Macpherson & Baba 2011). The genus is easily differentiated from other taxa of the family by the following characters: the carapace has setiferous transverse ridges; the rostrum is dorsoventrally flattened, triangular, with four (rarely two or five) lateral teeth; the abdominal somites are unarmed; and the flexor margin of the P2–4 dactyli has a row of corneous setae (Baba *et al.* 2009; Macpherson & Baba 2011). It is one of the most speciose and unwieldy groups in the Galatheidae. Prior to this study, the genus comprised 81 species distributed across the Atlantic (15) and Indian and Western and Central Pacific Oceans (67) (Baba *et al.* 2008; Schnabel *et al.* 2011). The East Pacific is represented by a single rare species (*G. paucilineata* Benedict, 1902, from the Galápagos Islands) that needs revision and is not included in the present study.

The first known species of *Galathea* was described under the name of *Cancer strigosus* by Linnaeus (1761) on

the basis of specimens collected in Norway. Later, this species was transferred to *Galathea* by Fabricius (1793). The second species of the genus, *G. squamifera*, was described by Leach (1814) from specimens caught in southern Devon, England. Later, two more species were described from European waters, *G. nexa* Embleton, 1934, from Berwick Bay and Embelton Bay, England (Embleton 1834) and *G. intermedia* Liljeborg, 1851 from Norway (Liljeborg 1851). No species were described from other oceans until the works of Adams & White (1848), Dana (1852) and Stimpson (1858). Adams & White (1848) described *G. elegans* from the Philippines; Dana (1852) recorded new species from Hawaii (*G. spinosorostris* and *G. integrirostris*) and the Fiji Islands (*G. latirostris* and *G. vitiensis*); and Stimpson (1858) described five new species from different localities across the Western Pacific (*G. australiensis*, *G. orientalis*, *G. pubescens* and *G. subsquamata*) and Simons Bay, in the Cape of Good Hope (*G. labidolepta*).

The second half of the nineteenth century made further additions to the genus: Paul'son (1875) from the Red Sea (*G. aegyptiaca*, *G. brevimana* and *G. longimana*), Haswell (1882a, b) from Australia (*G. aculeata*, *G. corallicola* and *G. magnifica*) and De Man (1888) from Indonesia (*G. amboinensis* and *G. pilosa*). The extensive expeditions carried out during this period, such as those of the "Blake" in the Caribbean Sea and Gulf of Mexico (A. Milne-Edwards 1880), the "Travailleur" and "Talisman" in the northeast Atlantic (A. Milne-Edwards & Bouvier 1894, 1900), and the global "Challenger" Expedition (Henderson 1885, 1888) sampled in deep waters, and contributed to discovery of only a few additional species to the genus: *G. agassizii*, *G. inconspicua*, *G. pusilla*, *G. rostrata* and *G. rufipes*.

This low rate of new species discovery was maintained for the first half of the twentieth century, with Borradaile (1900), De Man (1902), and Balss (1913a, b) describing more species, mostly from the Pacific Ocean (see also Benedict (1902), Grant & McCulloch (1906) and Potts (1915)). Bouvier (1914) reported material from Mauritius, including a new species (*G. mauritiana*). Other than descriptions of *G. providentia* and *G. submagnifica* from the SW Indian Ocean by Laurie (1926), and *G. balica* by Boone (1935) from Bali (transferred to the genus *Sadayoshia* Baba, 1969), no new species were described until the works of Zariquey-Alvarez (1950) from the Mediterranean Sea, and Nunes-Ruvio (1961) from the Portuguese coasts. Our knowledge of squat lobsters increased considerably with studies from Japan and adjacent waters by Miyake (1953), Miyake & Baba (1963, 1964, 1965, 1966, 1967a–c) and Baba (1969a–c). In addition, Tirmizi (1966), in her account of the "John Murray" expedition, described *G. cymbulaerostris* and recorded the occurrence of nine species of *Galathea*, and provided with a key to the species from the Indian Ocean.

In their papers, Miyake and Baba described numerous new species of *Galathea*, adding several new records, using newly identified morphological characters. Baba (1969b) revised the genus and established several new genera for species previously assigned to *Galathea*, e.g., *Allogalathea* (for *Galathea elegans* Adams & White, 1848), *Leiogalathea* (for *Galathea imperialis* Miyake & Baba, 1967 = *G. laevirostris* Balss, 1913), and *Phylladorhynchus* (for *Galathea pusilla* Henderson, 1885, *G. serrirostris* Melin, 1939, and *G. ikedai* Miyake & Baba, 1965) (see Baba 1969b, 1971). Later, Baba (1971) created the new genus *Lauriea* for *Galathea gardineri* Laurie, 1926) and Baba & Javed (1974) transferred *Galathea humilis* Nobili, 1905 to another new genus *Corallioagalathea*. Accordingly, *G. integrirostris* Dana, 1852 was moved to *Phylladorhynchus*, and *G. agassizii* A. Milne Edwards, 1880 to *Leiogalathea*. More recently Baba & Wicksten (1997) transferred *G. californiensis* Benedict, 1902 to the new genus *Janetogalathea*.

The interest in the genus *Galathea* continued with collections made by Zariquey-Alvarez (1968) in the Mediterranean and northeast Atlantic, including the description of a new species (*G. cenarroi*) and the publication of an identification key to the species of the region. Miyake & Baba (1970) reported the material from the "Atlantide" Expedition conducted along the west coast of Africa, including three new species (*G. capillata*, *G. venusta* and *G. wolffi*) and de Saint-Laurent (1971) added new occurrences from the Eastern Atlantic. However, the most important advances in the taxonomy of the genus took place since K. Baba made significant contributions to the group (Baba 1972, 1979a, b, 1988, 1990, 2005; Baba & Fujita 2008). In addition to works by K. Baba, several interesting additions have been made by Tirmizi & Javed (1993), Osawa (2004, 2006), Baba & Fujita (2008), Dong & Li (2010), Macpherson & Cleva (2010), Osawa & Higashiji (2012) and Macpherson (2012).

The last few decades have seen a burgeoning of species added to the *Galathea* thanks, in large part, to numerous French expeditions conducted in the coastal, continental shelf and slope waters of the Indian and Pacific Oceans, from Madagascar to French Polynesia (see Richer de Forges *et al.* 2013, see also <http://musorstom.mnhn.fr/>). More recently, US-led samples in the Red Sea, Madagascar and adjacent waters, Maldives,

NW and NE Australia, Mariana Islands, Hawaii, French Polynesia and Kiribati have also yielded interesting material (G. Paulay, Florida Museum of Natural History, unpublished reports). In addition, some valuable material has been obtained by German and UK expeditions in the Red Sea (M. Türkay, Senckenberg Museum) and Chagos Islands (C. Head, Oxford Museum of Zoology), respectively. The collections made by these expeditions include more than 9000 specimens belonging to more than 140 species of the genus *Galathea*.

In this paper we redescribe some previously described species, for which published taxonomic accounts are insufficient, on the basis of type material: *G. consobrina* De Man, 1902, *G. formosa* De Man, 1902, *G. magnifica* Haswell, 1882, *G. mauritiana* Bouvier, 1914, *G. pilosa* De Man, 1902, *G. ternatensis* De Man, 1902, and *G. whiteleggii* Grant & McCulloch, 1906. We have also examined the types of some species, usually synonymized with other species, and have resurrected two of them: *Galathea aculeata* Haswell, 1882 and *G. algae* Baba, 1969. Furthermore, we examined topotypic material for some species of which the types are no longer extant: *G. aegyptiaca* Paul'son, 1875 (Red Sea), *G. australiensis* Stimpson, 1858 (Port Jackson, Australia), *G. brevimana* Paul'son, 1875 (Red Sea), *G. latirostris* Dana, 1852 (Fiji), *G. longimana* Paul'son, 1875 (Red Sea), *G. longimanoides* Johnson, 1970 (Singapore), *G. providentia* Laurie, 1926 (Providence), *G. spinosorostris* Dana, 1853 (Hawaii), *G. submagnifica* Laurie, 1926 (Providence), and *G. subsquamata* Stimpson, 1858 (Ryukyu Islands). We have designated two neotypes (for *G. spinosorostris* and *G. subsquamata*, respectively), considering that a name-bearing type is necessary to define the nominal taxon objectively (see International Code of the Zoological Nomenclature). Unfortunately, topotypic material were not available for *G. spinimanus* Borradaile, 1900 (Lifou Island), and *G. vitiensis* Dana, 1853 (Fiji), so the specific status of these taxa remains unclear. Some species (*G. mauritiana*, *G. spinosorostris*, *G. subsquamata*, *G. ternatensis*, among others) have been cited in numerous localities from the Indian and Pacific Oceans. We have found that each of these species contains a complex of different species. Therefore, their synonymies and range distributions should be revised. Unfortunately, we have only studied a small portion of these materials and a wider study is recommended in order to determine their taxonomic identity.

The present paper reports on 141 species, including 92 new species, using morphological and molecular data (mitochondrial COI and 16S rRNA), and an identification key to the species in the Indian and Pacific Oceans. We demonstrate the diagnostic importance of numerous morphological characters, some of which have been previously used (e.g., presence or absence of epigastric and hepatic spines, presence or absence of pterygostomial facial spines, number of epipods on pereopods, relative size of Mxp3 meral spines), and other novel characters (e.g., presence or absence of interruptions in the gastric ridges, presence or absence of long plumose setae on carapace). Living coloration can also help in differentiating species. Although many species show variable coloration, some patterns (usually color spot distribution) are constant, and have diagnostic value.

As demonstrated in other studies on squat lobster taxonomy (e.g. Macpherson & Machordom 2005; Cabezas *et al.* 2011; Poore & Andreakis 2012; Macpherson & Robainas-Barcia 2013) molecular analyses are of great utility in finding cryptic or closely similar species where most are differentiated by a few subtle morphological characters. Some species have a wide geographic distribution, without clear molecular differences even between disjunct localities (e.g., *G. tanegashimae*). However, some species show molecular differences among localities that could indicate the presence of cryptic species. Taken together, our study indicates that a larger molecular study of all species, including specimens from different localities, would help significantly in clarifying relationships among species within *Galathea*.

Material and methods

Sampling and identification. We have studied material collected in numerous expeditions to the Indian and Pacific Oceans between 1976 and 2013, mostly from Madagascar, Mozambique, Red Sea, Maldives, Chagos Islands, Japan, Taiwan, Philippines, Mariana Islands, Vietnam, Indonesia, Australia, Papua-New Guinea, Solomon Islands, Vanuatu, New Caledonia, Fiji, Tonga, Wallis, Futuna, French Polynesia, Kiribati and Hawaii (see Richer de Forges *et al.* 2013, see also <http://musorstom.mnhn.fr/>). The material is deposited in the Muséum national d'Histoire naturelle, Paris (MNHN), the Florida Museum of Natural History, Gainesville (UF), the Natural History Museum, London (NHMUK), the Senckenberg Museum, Frankfurt a.M. (SMF), the Australian Museum, Sydney (AM), Museum Victoria, Melbourne (NMV), the Queensland Museum, Brisbane (QM), the Kitakyushu Museum

of Natural History, Kitakyushu (KMNH), the Zoological Laboratory, Kyushu University (ZLKU), Oceanology Institute, Russian Academy of Sciences, Moscow (OIRAS), Oxford University, Museum of Natural History (OUMNH) and the Zoological Museum, University of Copenhagen, Copenhagen (ZMUC).

The general terminology employed largely follows Baba *et al.* (2009, 2011). The discovery of numerous new species, some of them are distinguished by subtle morphological differences, indicates that some characters (e.g. presence or absence of spines, plumose setae, or number and structure of transverse ridges on the carapace surface) are very useful to differentiate species. For these reasons some additional terminology is proposed, as shown in Fig. 1, such as dorsal carapace ridges and spines. The carapace regions follow Baba *et al.* (2009, 2011). The lateral margin of the carapace is divided into three sections: anterolateral, anterior branchial, and posterior branchial margins. In squat lobsters, the boundary between anterolateral margin and anterior branchial margin is the anterior branch of the cervical groove (Baba *et al.* 2009, 2011). However, in some species of *Galathea* the cervical groove is often indistinct (e.g. *G. acis*, *G. aequata*, *G. ahyongi*). In these species, we have defined the separation between the two sections as being situated between the anterior protogastric ridge and the anterior mesogastric ridge (see also Baba *et al.* 2009, 2011). The telson is usually incompletely subdivided and, to avoid repetition, unless otherwise explicitly stated, it is omitted from each description.

The size of the carapace indicates the postorbital carapace length measured along the dorsal midline from the posterior margin of the orbit to the posterior margin of the carapace. The length of the rostrum is measured from the tip to between the lateral basal incisions, the breadth is between left and right lateral basal incisions (Fig. 1). The length of the antennular and antennal segments is measured along their lateral margins excluding distal spines; the width is measured at the midlength of each segment. The ultimate article of the antennular segment usually has a tuft of fine setae on the distodorsal margin (e.g., Fig. 5i). The length of each pereopod article is measured along its extensor margin (excluding distal spine), the breadth is measured at its widest portion. The terminology of ridges on the gastric region generally follows Baba *et al.* (2009, 2011), with additional details as shown in Fig. 1. The ridges on the posterior branchial region are always counted along the lateral margins, exclusive of the mid-transverse ridge and the posteriormost ridge anterior to the posterior margin of the carapace.

The abbreviations used include: Mxp3 = third maxilliped, P1 = first pereopod (cheliped), P2–4 = second to fourth pereopods (first to third walking legs), G1 = male first gonopod; G2 = male second gonopod; M = males, F = females, ov. = ovigerous.

Molecular analysis. Total genomic DNA was isolated from muscle tissue using the QiAamp genomic DNA and RNA kits (QIAGEN) following suppliers recommendations. Two mitochondrial markers were amplified (16S rRNA and COI). 1055 bp (aligned positions) of the mitochondrial DNA (mtDNA), including partial sequences of 16S rRNA and COI were amplified through polymerase chain reaction (PCR) using primers 16Sar-L and 16Sbr-L (Palumbi 1996) and LCO1490 and HCO2198 (Folmer *et al.* 1994). Amplification reactions were performed in a final volume of 15 μ l, the PCR mix contained 2 ml of DNA template, 0.2 mM of each primer, 0.2 mM of dNTP, 1.5mM MgCl₂, 0.5 ml of BSA (10 mg/ml) and 1.0 U of Taq DNA polymerase (Amersham). Thermal cycling conditions for both genes consisted of an initial denaturation step of 94°C for 4 min followed by 35 cycles at 94°C for 30 s, an annealing temperature of 50°C, 72°C for 1 min, and a final extension at 72°C for 10 min. Samples were sequenced using Macrogen Inc. Europe services. New sequences are available in GenBank under accession numbers BankIt1774885, KP203328–KP203567 and BankIt1778577, KP203568–KP203809.

Sequences were edited using Bioedit Sequence Alignment Editor v5.0.9 (Hall 1999), and manually aligned. Most alignments were reliable and did not required further editing. Multiple alignments were performed using Clustal W (Thompson *et al.* 1994) included in MEGA version 6 (Tamura *et al.* 2013).

The pairwise genetic divergences were estimated in terms of base differences per site. Codon positions included were 1st+2nd+3rd. All positions containing gaps and missing data were eliminated. The proportion of different nucleotide sites (p) between each pair of sequences and between species was estimated dividing the number of nucleotide differences by the total number of nucleotides compared, as implemented in MEGA version 6 (Tamura *et al.* 2013).

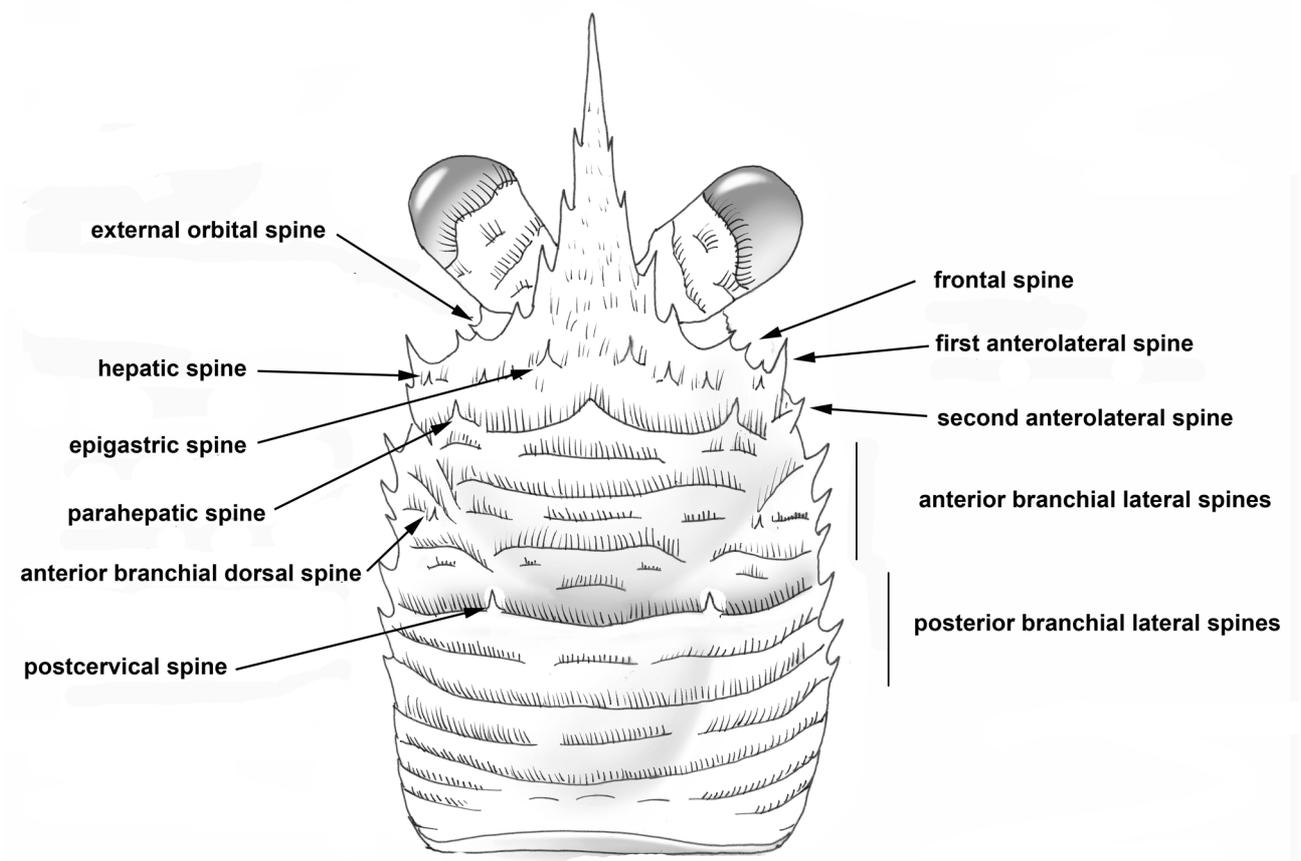
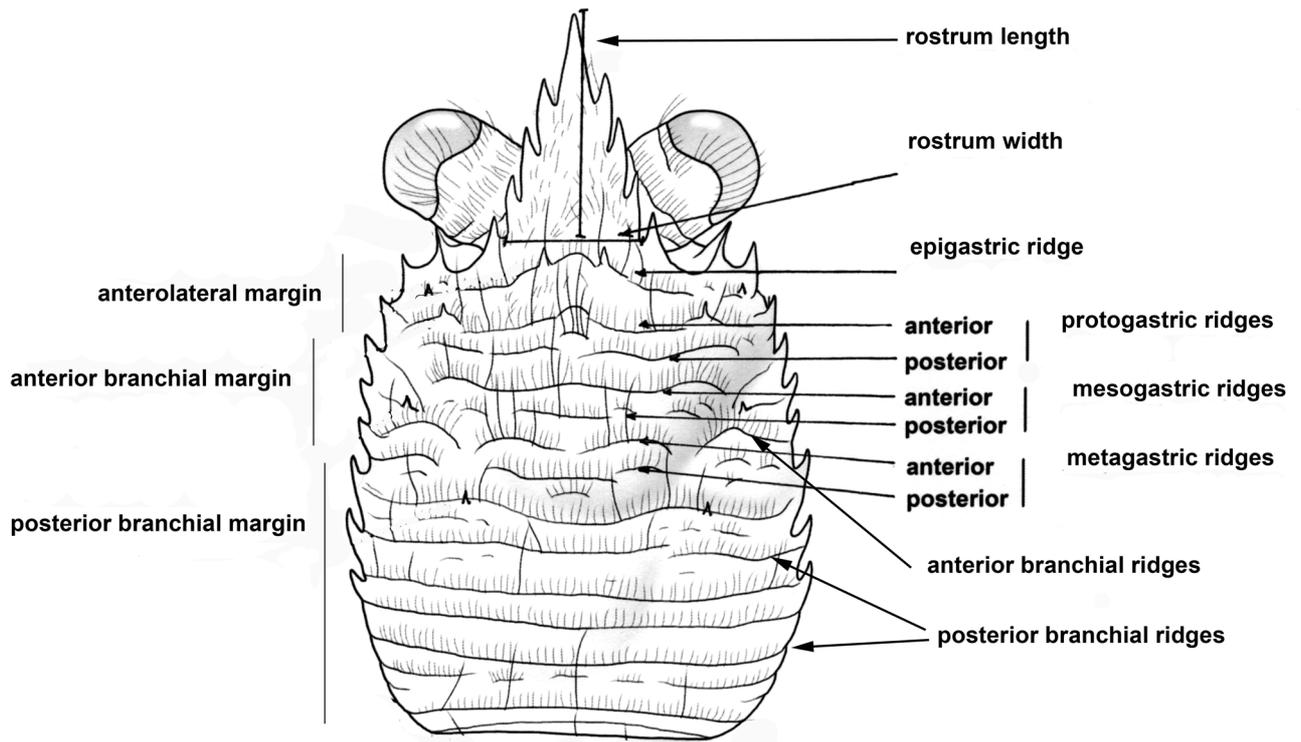


FIGURE 1. Descriptive terminology of ridges and spines on carapace.

TABLE 2. Mitochondrial uncorrected pairwise “p-distances” values among *Galathea* species (Group 2). Distance above the diagonal refer to th 16S rRNA gene and below the diagonal to the COI gene. na = no data.

Group 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1 <i>G. autahi</i>	7.7	na	10.3	7.8	7.8	9.5	7.4	12.3	8.5	13.1	9.7	7.7	4.4	7.0	6.0	6.1	10.9	9.5	9.4	9.0	na	12.8	11.9	7.4	na	8.3	
2 <i>G. boisselieri</i>	15.7	na	9.8	7.5	8.6	9.6	7.2	12.9	8.4	14.1	9.3	7.7	6.6	7.8	8.0	7.4	11.4	10.2	9.5	9.7	na	13.7	12.5	7.6	na	8.2	
3 <i>G. erinita</i>	19.1	19.6	na	na	na	na	na	na	na	na	na	7.7	na	na													
4 <i>G. caesariata</i>	na	na	na	9.5	11.5	12.0	9.6	7.4	11.7	16.0	10.1	11.3	9.4	10.7	11.2	10.6	14.1	11.5	12.8	12.1	na	15.2	14.3	10.8	na	11.3	
5 <i>G. eione</i>	16.6	15.6	19.5	na	7.8	10.0	6.7	12.8	9.0	14.5	8.5	8.7	6.8	7.7	8.4	8.0	11.3	9.9	9.8	9.8	na	13.8	12.2	8.3	na	8.6	
6 <i>G. eulineme</i>	16.6	16.8	20.1	na	18.4	10.2	8.1	13.2	9.5	14.5	11.2	9.1	6.8	8.5	7.9	7.8	8.5	9.5	10.7	9.1	na	14.2	12.1	8.5	na	9.1	
7 <i>G. gemindo</i>	16.5	17.9	20.4	na	19.4	19.6	9.7	13.4	10.0	15.4	11.5	10.3	8.6	10.1	10.3	9.8	12.7	11.4	10.0	11.1	na	12.9	12.6	10.1	na	10.7	
8 <i>G. halia</i>	17.3	17.3	20.4	na	18.0	18.7	18.8	13.1	8.6	14.0	8.7	8.4	6.4	7.7	7.8	7.4	11.2	10.0	9.5	9.6	na	13.4	12.3	8.0	na	8.4	
9 <i>G. hydrae</i>	na	na	na	na	na	na	na	na	14.5	16.5	14.1	13.6	11.5	13.4	13.5	13.2	15.6	14.0	15.2	14.1	na	16.2	16.0	13.2	na	14.0	
10 <i>G. inconspicua</i>	17.7	18.4	17.9	na	18.2	18.6	19.1	18.3	na	14.0	11.1	9.1	7.9	7.2	8.6	8.6	11.2	11.0	4.7	8.6	na	14.3	13.2	8.8	na	5.3	
11 <i>G. inflata</i>	16.4	17.4	17.7	na	16.8	18.0	19.1	17.7	na	18.1	16.0	14.7	12.9	13.7	12.9	13.3	10.6	14.8	14.2	15.5	na	18.0	16.9	14.3	na	14.7	
12 <i>G. mariae</i>	16.4	17.1	20.9	na	17.8	18.0	17.9	14.3	na	18.1	17.2	10.6	8.8	10.3	10.6	10.1	13.7	11.5	12.1	11.6	na	10.9	13.4	10.4	na	10.9	
13 <i>G. melobosis</i>	17.1	17.1	20.8	na	17.5	18.9	19.2	14.3	na	19.0	16.5	16.2	7.4	7.6	5.4	6.5	12.0	10.4	9.5	10.3	na	14.0	13.5	5.8	na	8.9	
14 <i>G. nuda</i>	16.6	16.8	19.9	na	15.3	12.8	19.2	17.8	na	17.7	16.8	17.7	17.7	6.7	6.6	5.8	10.2	9.1	8.8	8.8	na	12.4	11.2	7.1	na	7.9	
15 <i>G. pascualae</i>	16.6	17.5	19.9	na	17.2	18.9	8.8	17.5	na	17.8	16.4	16.5	17.7	15.8	5.8	6.7	11.4	10.0	8.6	8.5	na	14.2	12.8	7.2	na	6.0	
16 <i>G. perone</i>	17.5	18.2	21.3	na	19.3	19.3	18.7	18.0	na	19.3	19.4	17.5	19.4	19.0	17.2	4.1	11.0	9.5	8.9	9.3	na	13.7	13.5	5.2	na	8.1	
17 <i>G. providentia</i>	15.7	14.2	19.6	na	16.3	18.4	21.8	17.0	na	18.4	16.5	18.4	14.6	17.3	17.1	19.0	10.9	9.5	9.2	9.3	na	13.5	12.9	6.3	na	8.4	
18 <i>G. pubescens</i>	20.9	21.5	18.6	na	21.2	20.1	16.8	19.6	na	21.0	19.2	21.0	22.6	20.1	20.6	21.5	21.9	12.8	11.0	12.8	na	16.2	14.7	11.6	na	12.3	
19 <i>G. pubipes</i>	15.4	17.3	19.1	na	17.5	17.6	17.2	17.6	na	17.5	15.3	17.5	17.5	16.9	16.1	17.1	17.1	21.2	12.3	8.1	na	14.0	13.2	10.2	na	10.3	
20 <i>G. punctata</i>	16.9	16.9	17.4	na	16.6	18.9	17.3	18.1	na	13.3	17.1	13.3	18.3	17.2	16.5	17.4	17.4	21.6	16.7	11.3	na	15.0	13.9	9.2	na	9.6	
21 <i>G. rhapsodia</i>	16.5	16.7	19.2	na	18.4	16.2	16.5	17.0	na	14.9	17.5	16.2	17.7	16.8	15.7	16.9	17.3	19.5	16.7	16.5	na	14.1	13.1	9.9	na	5.6	
22 <i>G. scolopia</i>	15.9	15.5	19.7	na	16.7	18.0	16.5	17.4	na	16.1	17.4	16.1	17.4	16.8	17.2	16.0	16.4	24.6	15.9	16.1	15.2	na	na	na	na	na	
23 <i>G. tagaloa</i>	16.9	17.2	17.7	na	17.5	17.7	18.9	17.7	na	11.9	17.2	17.5	18.4	17.2	16.7	12.2	17.4	20.1	16.7	12.5	15.4	15.4	14.0	14.0	na	14.7	
24 <i>G. tanegashimae</i>	17.1	18.1	18.9	na	18.4	17.5	20.0	19.0	na	18.9	18.0	18.9	19.3	17.9	18.4	19.1	18.7	19.3	18.4	18.3	18.7	18.6	18.3	13.3	na	13.1	
25 <i>G. ternatensis</i>	17.5	17.9	18.9	na	17.8	18.7	17.7	18.5	na	18.9	13.1	18.9	16.6	17.5	17.7	19.7	16.7	19.2	18.8	18.3	18.7	17.6	18.0	17.1	na	8.5	
26 <i>G. tribulosa</i>	17.7	17.9	21.1	na	19.5	19.9	18.8	18.9	na	16.6	18.4	12.2	19.9	19.0	17.7	17.8	18.6	21.3	17.1	17.4	9.6	19.3	12.2	20.2	19.3	na	
27 <i>G. villosa</i>	17.3	17.8	16.2	na	16.8	18.4	18.8	18.1	na	9.2	17.1	9.2	18.2	17.0	17.4	19.3	17.8	20.7	17.1	10.3	16.2	15.9	9.6	17.9	17.8	17.6	

TABLE 3. Mitochondrial uncorrected pairwise “p-distances” values among *Galathea* species (Group 3). Distance above the diagonal refer to th 16S rRNA gene and below the diagonal to the COI gene. Na = no data.

Group 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
1 <i>G. barbellata</i>		13.1	7.7	6.2	8.3	10.5	9.3	7.6	8.9	12.5	6.5	9.0	8.5	7.7	7.6	6.8	na	8.2	9.5	na	7.0	13.1	9.6	10.6	6.8	10.9	
2 <i>G. bimaculata</i>	18.4		12.7	12.2	13.8	13.5	15.7	13.1	13.0	7.4	12.5	15.2	12.7	13.1	14.0	14.6	na	13.6	15.4	na	13.3	11.0	14.9	14.9	12.9	13.8	
3 <i>G. bracteosa</i>	16.8	17.2		6.6	7.4	10.1	10.0	7.3	9.7	12.3	5.3	9.9	9.4	6.1	8.7	9.1	na	8.4	9.9	na	7.9	12.9	9.6	7.8	7.8	9.9	
4 <i>G. cymo</i>	17.8	17.3	16.9		6.5	9.4	9.2	6.8	7.4	11.3	5.0	9.1	7.6	6.0	6.5	8.1	na	7.4	9.5	na	6.3	12.4	9.1	10.1	4.3	10.0	
5 <i>G. furfurea</i>	17.9	18.6	18.1	17.8		11.3	8.7	8.3	10.4	13.2	7.6	9.7	10.4	7.1	7.6	7.7	na	9.5	8.5	na	8.2	14.0	9.4	9.7	8.1	11.2	
6 <i>G. genkai</i>	17.4	20.0	18.7	19.4	20.3		12.7	10.5	12.0	13.7	9.3	12.7	11.9	10.5	11.2	11.7	na	11.4	13.0	na	11.3	15.2	12.3	12.8	10.2	13.3	
7 <i>G. inermis</i>	17.3	19.6	16.6	17.6	20.1	16.6		10.1	12.1	15.9	9.4	7.0	12.2	7.9	6.7	7.1	na	9.6	3.4	na	9.5	15.5	7.1	11.7	9.6	12.6	
8 <i>G. lemiscata</i>	19.5	18.6	20.0	20.6	20.4	19.9	19.6		9.3	12.1	6.8	9.5	8.9	4.5	8.2	9.1	na	8.4	9.4	na	8.0	13.3	9.6	9.8	7.6	10.2	
9 <i>G. lepidota</i>	19.9	18.7	19.0	20.2	16.1	21.7	17.4	21.8		12.0	8.1	12.0	7.6	9.3	9.4	10.9	na	10.7	12.3	na	9.2	11.4	12.2	13.2	7.1	10.7	
10 <i>G. leporis</i>	21.2	18.0	20.3	18.7	19.6	21.7	20.6	22.2	13.2		12.1	14.9	12.1	12.1	13.4	14.2	na	13.4	14.8	na	13.1	8.7	14.5	14.9	12.3	13.4	
11 <i>G. machaera</i>	15.2	19.3	18.3	18.9	19.4	14.9	16.9	19.7	21.9	22.4		9.8	7.3	5.8	7.4	8.6	na	8.1	9.7	na	8.1	12.8	9.6	9.6	6.3	9.0	
12 <i>G. paulae</i>	15.7	18.2	17.4	18.7	18.7	18.4	17.4	18.8	19.5	18.8	17.7		11.6	8.8	8.0	8.8	na	8.0	6.4	na	8.4	15.2	8.2	11.5	9.5	12.8	
13 <i>G. peitho</i>	20.5	18.1	19.7	19.3	17.7	21.6	20.0	21.4	10.8	7.2	21.7	19.0		8.8	9.3	10.9	na	9.8	12.3	na	9.0	12.7	11.8	12.8	7.5	10.6	
14 <i>G. ploto</i>	18.7	18.8	14.2	18.9	18.4	19.4	18.2	20.8	19.5	20.9	19.9	18.4	20.2		7.4	8.3	na	8.2	8.0	na	7.4	13.5	8.4	8.3	7.3	8.9	
15 <i>G. polydora</i>	16.9	17.0	15.9	14.5	18.1	18.7	18.0	18.9	19.2	19.3	17.8	17.1	19.1	17.9		7.1	na	8.8	7.1	na	7.3	14.1	8.4	11.3	7.0	11.3	
16 <i>G. profunda</i>	14.5	18.5	17.1	16.9	18.6	16.3	16.9	19.2	20.3	20.1	15.9	13.0	19.8	18.1	16.9		na	9.5	7.6	na	8.1	14.5	9.0	11.5	8.8	12.1	
17 <i>G. psila</i>	15.9	17.8	15.1	17.6	17.6	18.8	15.7	20.1	18.6	18.0	17.8	15.6	18.3	15.2	16.5	16.4		na									
18 <i>G. robusta</i>	17.2	18.7	17.3	18.4	17.8	18.1	16.4	18.9	19.7	20.1	17.9	15.7	19.9	18.2	16.9	16.6	15.2		9.7	na	8.0	14.1	9.0	9.7	8.0	11.3	
19 <i>G. sanctae</i>	16.1	18.3	17.3	18.2	17.9	17.7	18.3	19.6	18.6	19.2	16.3	12.5	18.6	18.2	17.2	10.8	16.1	16.2		na	9.0	15.4	5.8	11.8	9.6	12.7	
20 <i>G. sentosa</i>	17.8	19.3	18.3	19.5	19.3	19.2	16.7	18.5	20.4	20.2	19.2	14.1	20.0	19.1	18.1	16.0	16.4	8.5	14.9		na	na	na	na	na	na	
21 <i>G. sinensis</i>	na																										
22 <i>G. spinosirostris</i>	17.7	18.4	18.4	18.3	18.4	17.6	19.2	19.7	19.2	18.3	18.8	18.0	18.5	18.4	18.1	16.8	17.6	18.1	17.4	19.0	na	na	12.9	8.7	9.1	6.6	10.5
23 <i>G. squamea</i>	16.9	18.3	17.8	18.0	18.0	17.8	18.5	19.3	19.3	19.6	15.9	12.4	19.0	18.5	17.6	10.2	16.6	17.2	6.3	15.5	na	17.3	na	15.1	15.2	13.0	13.2
24 <i>G. submagnifica</i>	16.4	18.4	18.2	16.2	12.9	20.0	21.5	19.1	20.7	20.1	18.0	19.2	20.4	18.5	17.8	18.0	20.1	19.1	17.9	20.0	na	18.2	18.0	10.8	11.1	9.7	12.4
25 <i>G. subsquamata</i>	17.1	17.9	18.3	20.0	18.6	19.4	18.7	19.7	20.0	20.6	19.1	18.2	20.1	18.0	18.3	17.8	17.6	17.4	17.7	17.0	na	18.5	17.7	18.5	10.8	11.2	
26 <i>G. tongi</i>	19.3	18.5	18.6	18.9	18.9	20.9	19.4	19.5	18.6	18.2	20.0	19.2	18.3	18.8	18.9	19.8	15.8	18.3	19.8	18.3	na	19.2	19.9	19.1	18.3	10.5	

Results

Most species can be identified on the basis of subtle and constant morphological differences, which correspond to clear differences in nucleotide sequences from the markers 16S rRNA and COI. The divergences between each pair of taxa ranged from 7.2% to 24.6% for the COI and 1.8% to 18.5% for the 16S rRNA (Tabs. 1–3). Owing to the large number of sequenced species and, in order to facilitate species-pair comparisons, we have separated them into three groups according to their main morphological characters (see also the key to species). No genetic divergences lower than 10% (COI) were observed between species-pairs belonging to different groups.

Material from some species could not be molecularly analysed, because material was preserved in formalin. In total we sequenced 83 species of the 144 species treated in this study.

As COI divergences of more than 10% are unexceptionally considered as indicating different species in decapod crustaceans (e.g., Cabezas *et al.* 2009, 2012; Yang *et al.* 2012), the genetic results clearly show that sequenced species can be considered as different species. However, some species pairs show values between 6% and 9% (e.g., *G. squamea* vs. *G. sanctae*), although they can be easily distinguished morphologically and all of them have been considered as different species. In a few species, e.g., *G. aegyptiaca* and *G. providentia* (for details, see accounts of respective species), specimens from different localities show some degree of genetic divergences (<5%), although we couldn't observe any morphological difference. Therefore, their taxonomic status could not be assessed with confidence and we do not take any formal decision until more specimens can be analyzed.

Systematic account

Genus *Galathea* Fabricius, 1793

Galathea Fabricius, 1793: 47 (gender: feminine).—Stimpson, 1858: 76.—Haswell, 1882b: 161.—Henderson, 1888: 117.—A. Milne Edwards & Bouvier, 1894: 249.—A. Milne Edwards & Bouvier, 1897: 13.—Stebbing, 1910: 362.—Doflein & Balss, 1913: 139.—Schmitt, 1921: 163.—Laurie, 1926: 123.—Makarov, 1938: 79 (1962: 81).—Barnard, 1950: 482.—Zariquiey Álvarez, 1968: 271.—Baba, 1969b: 9.—Tirmizi & Javed, 1993: 41.—Ingle & Christiansen, 2004: 151.—Poore, 2004: 231.—Baba, 2005: 74.—Baba *et al.*, 2008: 64 (compilation); 2009: 105.—Macpherson & Baba, 2011: 53.

Type species: *Cancer strigosus* Linnaeus, 1761.

Diagnosis. (from Baba *et al.* 2009 and Macpherson & Baba 2011) Carapace dorsally with setiferous transverse ridges (obsolescent in a few species), laterally with row of spines. Cardiac region poorly defined. Rostrum dorsoventrally flattened, triangular, with 4 (rarely 2 or 5) lateral teeth. Abdominal somites unarmed. Telson subdivision usually incomplete. Ocular peduncles usually short, cornea somewhat dilated and well-pigmented. Orbit delimited ventrally by a denticulate crest. Antennular article 1 with 2 or 3 distal spines (distodorsal and distolateral usually present, distomesial often reduced or absent). Article 1 of antennal peduncle usually with well-developed distomesial spine; article 2 with distomesial and distolateral spines. Mxp3 ischium subtriangular in cross-section, merus armed with 1–3 spines on flexor margin. P1 spinose and setose. P2–4 with row of spines on extensor margin of meri and carpi; flexor margin of dactylus with row of distinct teeth each bearing stiff corneous seta, ultimate tooth usually prominent. G1 rarely absent; G2 present.

Key to species of the genus *Galathea* in the Indian and Pacific Oceans

1. Transverse ridges on carapace dorsal surface mostly obsolescent 2
- Transverse ridges on carapace dorsal surface distinct 4
2. Mxp3 merus with flexor distal spine subequal to proximal spine. *G. kuboii* Miyake & Baba, 1967
- Mxp3 merus with flexor distal spine smaller than proximal spine. 3
3. Epipod present on P1. Rostrum elongate, more than 1.5 times longer than broad. Gastric region with some scale-like ridges *G. nuda* n. sp.
- Epipod absent on P1. Rostrum short, 1.5 times longer than broad or less so. Gastric region smooth, without scale-like ridges *G. setigera* n. sp.
4. Anterolateral spine of carapace prominent, reaching tip of basal lateral tooth of rostrum. Posterior branchial margin with 6

	spines	<i>G. vitiensis</i> Dana, 1853
-	Anterolateral spine of carapace never reaching tip of basal lateral tooth of rostrum. Posterior branchial margin with at most 5 spines	5
5.	Pterygostomian flap with at least 1 spine on upper margin near linea anomurica	6
-	Pterygostomian flap unarmed on upper margin (rarely with row of denticles)	11
6.	Pterygostomian flap with row of spines on upper margin Mxp3 merus more than twice ischium length	<i>G. labidolepta</i> Stimpson, 1858
-	Pterygostomian flap with 1 or 2 spines on upper margin. Mxp3 merus as long as or slightly shorter than ischium length.	7
7.	Anterior mesogastric ridge interrupted	<i>G. ahyongi</i> n. sp.
-	Anterior mesogastric ridge uninterrupted	8
8.	Mxp3 merus with strong median spine on flexor margin, exceeding distal margin of merus. Distal part of P1 palm without black spot.	<i>G. senta</i> n. sp.
-	Mxp3 merus with weak median spine on flexor margin, at most reaching distal margin of merus. Distal part of P1 palm with black spot.	9
9.	P2 propodus 4 times longer than broad.	<i>G. mauritiana</i> Bouvier, 1914
-	P2 propodus 3.0–3.5 times longer than broad.	10
10.	P2-3 propodi each with 5–6 movable spines along flexor margin	<i>G. aequata</i> n. sp.
-	P2-3 propodi each with 4 movable spines along flexor margin	<i>G. acis</i> n. sp.
11.	Uninterrupted mesogastric ridge between anteriormost branchial marginal spines	12
-	Interrupted or scale like mesogastric ridge(s) between anteriormost branchial marginal spines	25
12.	Carapace with 2 epigastric spines	13
-	Carapace without epigastric spines	21
13.	Stiff plumose stiff setae present on carapace and rostrum	14
-	No stiff plumose setae on carapace and rostrum	18
14.	P2–3 propodi elongate, 5 times longer than broad	<i>G. simulata</i> n. sp.
-	P2–3 propodi short, equal to or less than 4 times longer than broad	15
15.	Gastric region with short posterior median protogastric ridge and short posterior median mesogastric ridge.	<i>G. aegyptiaca</i> Paul'son, 1875
-	Gastric region without short posterior median protogastric ridge and short posterior median mesogastric ridge (sometimes one these ridges can be present).	16
16.	P2–3 meri 2.5 times longer than broad	<i>G. imitata</i> n. sp.
-	P2–3 meri equal to or more than 3 times longer than broad	17
17.	Ultimate article of antennular peduncle elongate, 2.5 times longer than broad. Rostrum as long as broad	<i>G. corbariae</i> n. sp.
-	Ultimate article of antennular peduncle short, at most twice longer than broad. Rostrum longer than broad	<i>G. homologa</i> n. sp.
18.	Epipods at least on P1–2	19
-	Epipods only on P1	20
19.	Pterygostomian flap with facial spine on anterior part. Epipods on P1–3	<i>G. paulayi</i> n. sp.
-	Pterygostomian flap unarmed on surface. Epipods on P1–2.	<i>G. guttata</i> Osawa, 2004
20.	Mxp3 merus with flexor distal spine smaller than proximal spine. P2-4 propodi less than 5 times longer than broad	<i>G. boucheti</i> n. sp.
-	Mxp3 merus with flexor distal spine subequal to proximal spine. P2-4 propodi more than 5 times longer than broad.	<i>G. amamiensis</i> Miyake & Baba, 1966
21.	Scale-like stria present behind anterior protogastric ridge of carapace. External limit of orbit ending in small spine	<i>G. continua</i> Baba & Fujita, 2008
-	No scale-like stria present behind anterior protogastric ridge of carapace. External limit of orbit ending in strong spine	22
22.	Anterior branchial margin with 3 spines	<i>G. platycheles</i> Miyake, 1953
-	Anterior branchial margin with 2 spines	23
23.	Carapace with 1 hepatic spine on each side	<i>G. celiae</i> n. sp.
-	Carapace without hepatic spines	24
24.	Rostrum with lateral teeth shallowly incised	<i>G. latirostris</i> Dana, 1852
-	Rostrum with lateral teeth deeply incised.	<i>G. spinimanus</i> Borradaile, 1900
25.	Rostrum with 2 lateral teeth	26
-	Rostrum with more than 3 lateral teeth	28
26.	Rostrum with lateral teeth shallowly incised and located distally. Subdivision of telson complete	<i>G. bidens</i> Baba, 1988
-	Rostrum with lateral teeth spiniform and strong, located proximally. Subdivision of telson incomplete	27
27.	Carapace dorsally with 2 epigastric, 4 protogastric, and 2 postcervical spines only. Abdominal somites 2–4 with 2 transverse ridges. P2–4 spineless on lateral surface of meri, carpi and propodi	<i>G. quinquespinosa</i> (Balss, 1913)
-	Carapace dorsally with numerous spines other than 2 epigastric, 4 protogastric and 2 postcervical spines. Abdominal segments 2–4 with 2 transverse ridges each followed by additional stria. P2–4 with spines on lateral surface of meri, carpi and propodi	<i>G. lumaria</i> Baba, 2005
28.	Rostrum with 3 lateral teeth	<i>G. patae</i> Osawa, 2006
-	Rostrum with 4 or 5 lateral teeth	29
29.	Rostrum with 5 lateral teeth	30

-	Rostrum with 4 lateral teeth	37
30.	Epipods absent on P1–3	<i>G. tropis</i> Baba, 2005
-	Epipods present only on P1	31
31.	Two or more epigastric spines	32
-	Epigastric spines absent	36
32.	Distoflexor angle of P2–4 meri with 2 spines	33
-	Distoflexor angle of P2–4 meri with 1 spine	34
33.	Hepatic region with 2 or 3 spines. Carapace with numerous scale-like ridges on gastric region. Mxp3 merus with flexor distal spine smaller than proximal spine	<i>G. multicristata</i> n. sp.
-	Hepatic region unarmed. Carapace with few scale-like ridges on gastric region. Mxp3 merus with flexor distal spine subequal to proximal spine	<i>G. ciliosa</i> n. sp.
34.	Posterior branchial region with 6–8 transverse ridges	<i>G. inermis</i> n. sp.
-	Posterior branchial region with 4–5 transverse ridges	35
35.	Rostrum less than 1.5 times longer than broad. P2 merus less than 5 times longer than broad	<i>G. sanctae</i> Macpherson, 2012
-	Rostrum more than 1.5 times longer than broad. P2 merus more than 5 times longer than broad	<i>G. paulae</i> n. sp.
36.	Posterior branchial region behind mid-transverse ridge with 5–6 ridges. Gastric region with 4 or 5 uninterrupted or interrupted transverse ridges	<i>G. sinensis</i> Dong & Li, 2010
-	Posterior branchial region behind mid-transverse ridge with 8–9 ridges. Gastric region with 9 or 10 uninterrupted or interrupted ridges	<i>G. multilineata</i> Balss, 1913
37.	Rostrum truncate	38
-	Rostrum not truncate, triangular	39
38.	Ground color of body red	<i>G. pilosa</i> De Man, 1888
-	Ground color of body blue	<i>G. polyphemus</i> n. sp.
39.	Gastric ridges scale-like	40
-	Gastric ridges not scale-like	64
40.	Ocular peduncles elongate, more than 2.5 times longer than broad	<i>G. longiocularata</i> n. sp.
-	Ocular peduncles short, clearly less than twice longer than broad	41
41.	Branchial region of carapace with at least 1 dorsal spine	42
-	Branchial region of carapace without dorsal spines	52
42.	Epigastric spines absent. Rostrum twice longer than wide or more than so	43
-	Epigastric spines present. Rostrum less than twice longer than wide	45
43.	Rostrum twice longer than wide	<i>G. genkai</i> Miyake & Baba, 1964
-	Rostrum more than 2.5 times longer than broad	44
44.	P2 more than twice carapace length. P2 merus more than 6 times longer than broad	<i>G. gladiola</i> n. sp.
-	P2 less than twice carapace length. P2 merus less than 6 times longer than broad	<i>G. machaera</i> n. sp.
45.	P2–4 meri each with 2 spines at distoflexor angle (1 spine sometimes absent in small specimens)	<i>G. lepidota</i> n. sp.
-	P2–4 meri each with 1 spine at distoflexor angle	46
46.	Carapace with 1 postcervical spine on each side	47
-	Carapace without postcervical spines	48
47.	Anterior branchial region unarmed. Epipods only on P1	<i>G. cymo</i> n. sp.
-	Anterior branchial region with spines. Epipods on P1–3	<i>G. subsquamata</i> Stimpson, 1858
48.	Epipod only on P1	49
-	Epipods on P1–3	50
49.	P1 fingers clearly longer than palm	<i>G. acerata</i> n. sp.
-	P1 fingers clearly shorter than palm	<i>G. longimana</i> Paulson, 1875
50.	Carapace lateral margin without spine between anterolateral spine and anteriormost spine of branchial margin	<i>G. polydora</i> n. sp.
-	Carapace lateral margin with spine between anterolateral spine and anteriormost spine of branchial margin	51
51.	Carapace as long as broad. Ridges on posterior half of carapace behind mid-transverse ridge usually laterally scale-like. Rostrum less than 1.5 times longer than broad. P2–4 propodi more than 4 times longer than broad	<i>G. peitho</i> n. sp.
-	Carapace longer than broad. Ridges on posterior half of carapace usually laterally uninterrupted and never scale-like. Rostrum more than 1.5 times longer than broad. P2–4 propodi 4 times longer than broad	<i>G. aculeata</i> Haswell, 1882
52.	Epipods absent on P1–3	<i>G. squamea</i> Baba, 1979
-	Epipods at least on P1	53
53.	Epipods on P1–2	<i>G. poupini</i> n. sp.
-	Epipods only on P1	54
54.	Carapace without uninterrupted ridges between mid-transverse ridge and posterior ridge just anterior to posterior margin	55
-	Carapace with at least 2 uninterrupted ridges (except close to lateral margins) between mid-transverse ridge and posterior ridge just anterior to posterior margin	57
55.	Carapace with 2 epigastric spines	<i>G. submagnifica</i> Laurie, 1926
-	Carapace with 4 epigastric spines	56
56.	Carapace without parahepatic spines	<i>G. waiora</i> n. sp.
-	Carapace with 1 parahepatic spine on each side	<i>G. furfurea</i> n. sp.
57.	P2–3 meri each with 2 spines at distoflexor angle	<i>G. magnifica</i> Haswell, 1882

-	P2–3 meri each with 1 spine at distoflexor angle	58
58.	P1 fingers not spooned	59
-	P1 fingers spooned	60
59.	Body color brown, sometimes with middle longitudinal whitish broad stripe, from base of rostrum until abdominal somite 5. P1–4 brown.	<i>G. lemniscata</i> n. sp.
-	Body color white, with numerous large red spots. P1–4 with white and red bands	<i>G. chura</i> Osawa & Higashiji, 2012
60.	Pterygostomial facial spine present	<i>G. bracteosa</i> n. sp.
-	Pterygostomial facial spine absent	61
61.	Epigastric spines present	62
-	Epigastric spines absent	63
62.	Carapace with hepatic spines. Carapace lateral margin with spine between anterolateral spine and anteriormost spine of branchial margin.	<i>G. ploto</i> n. sp.
-	Carapace without hepatic spines. Carapace lateral margin without spine between anterolateral spine and anteriormost spine of branchial margin	<i>G. schnabelae</i> n. sp.
63.	Extensor margin of Mxp3 merus unarmed. Gastric region with all transverse ridges scale-like or concentric arcs.	<i>G. bimaculata</i> Miyake & Baba, 1966
-	Extensor margin of Mxp3 merus with distal spine. Protogastric ridge not scale-like but medially interrupted.	<i>G. psila</i> n. sp.
64.	Carapace lateral margin without spine between anterolateral spine and anteriormost spine of branchial margin	65
-	Carapace lateral margin with small but distinct spine between anterolateral spine and anteriormost spine of branchial margin	85
65.	Carapace with median mesogastric spine	<i>G. babai</i> Dong & Li, 2010
-	Carapace without median mesogastric spine	66
66.	Carapace with parahepatic spine	67
-	Carapace without parahepatic spine	70
67.	Posterior branchial regions with 6–8 ridges. Flexor margin of Mxp3 merus with long spine	<i>G. balssi</i> Miyake & Baba, 1964
-	Posterior branchial regions with 5 ridges. Flexor margin of Mxp3 merus with short spine.	68
68.	Anterior protogastric ridge uninterrupted	<i>G. lingadua</i> n. sp.
-	Anterior protogastric ridge interrupted, usually with median scale-like ridge.	69
69.	Rostrum twice longer than broad. Flexor margin of Mxp3 merus with 3 spines	<i>G. galene</i> n. sp.
-	Rostrum less than twice longer than broad. Flexor margin of Mxp3 merus with 2 spines.	<i>G. raventosae</i> Macpherson, 2012
70.	Epipods present at least on P1	71
-	Epipods absent on P1–3	76
71.	Epipods present on P1–3	72
-	Epipods present only on P1,	73
72.	Carapace with 2 spines on anterior branchial margin. Gastric region with some scale-like ridges. Proximal spine on flexor margin of Mxp3 merus much longer than distal spine	<i>G. rubrispina</i> n. sp.
-	Carapace with 3 spines on anterior branchial margin. Gastric region without scale-like ridges. Spines on flexor margin of Mxp3 merus subequal or slightly unequal	<i>G. minima</i> n. sp.
73.	Pterygostomial flap with facial spine on anterior part. External limit of orbit with strong spine	<i>G. ohshimai</i> Miyake & Baba, 1967
-	Pterygostomial flap unarmed on surface. External limit of orbit rounded or with small spine	74
74.	Carapace with 2 epigastric spines	<i>G. machordomae</i> n. sp.
-	Carapace without epigastric spines.	75
75.	Rostrum longer than broad. Anterior protogastric ridge uninterrupted and reaching or nearly reaching carapace lateral margins	<i>G. maculiabdominalis</i> Baba, 1972
-	Rostrum broader than long. Anterior protogastric ridge interrupted and clearly not reaching carapace lateral margins	<i>G. formosa</i> De Man, 1902
76.	Distomesial spine of antennular basal article small	<i>G. yamashitai</i> Miyake & Baba, 1967
-	Distomesial spine of antennular basal article large	77
77.	Carapace with 2 epigastric spines	78
-	Carapace without epigastric spines	81
78.	Carapace without scale-like stria behind anterior protogastric ridge. Mxp3 merus with large flexor distal spine.	<i>G. keijii</i> Tirmizi & Javed, 1993
-	Carapace with scale-like stria behind anterior protogastric ridge. Mxp3 merus with small flexor distal spine.	79
79.	Carapace with numerous long iridescent setae. Posterior protogastric ridge divided into some scale-like ridges; median scale-like ridge with some long iridescent setae.	<i>G. paleroi</i> n. sp.
-	Carapace without or with a few long iridescent setae. Posterior protogastric ridge with median scale-like ridge only, with or without 2 long setae.	80
80.	P1 fingers longer than or as long as palm. Distomesial spine of antennal article 1 exceeding antennal article 3	<i>G. gruis</i> n. sp.
-	P1 fingers shorter than palm. Distomesial spine of antennal article 1 reaching end of antennal article 3	<i>G. anepipoda</i> Baba, 1990
81.	Carapace distinctly longer than broad	<i>G. omanensis</i> Tirmizi & Javed, 1993
-	Carapace slightly broader than long or nearly as long as broad	82
82.	No scale-like ridge behind midpoint of anterior protogastric ridge. Rostrum 1.2 times as long as broad	

		<i>G. rubromaculata</i> Miyake & Baba, 1967	
-	Scale-like ridge behind midpoint of anterior protogastric ridge. Rostrum 1.8–2.0 times as long as broad	83	
83.	Spines on flexor margin of Mxp3 merus subequal		<i>G. bengala</i> Tirmizi & Javed, 1993
-	Proximal spine on flexor margin of Mxp3 merus much longer than distal spine	84	
84.	Anterior protogastric ridge medially interrupted. Rostral lateral teeth shallowly incised		<i>G. connudata</i> n. sp.
-	Anterior protogastric ridge medially uninterrupted. Rostral lateral teeth deeply incised		<i>G. anoplos</i> n. sp.
85.	Carapace with cardiac spines	86	
-	Carapace without cardiac spines	91	
86.	Antennular basal article with 2 well-developed terminal spines, distomesial spine minute or obsolescent	87	
-	Antennular basal article with 3 well-developed terminal spines	90	
87.	Carapace unarmed on protogastric region		<i>G. samadiae</i> n. sp.
-	Carapace with 1 or 2 spines on protogastric region	88	
88.	Carapace with 1 median spine on protogastric ridge; 1 parahepatic spine on each side		<i>G. echinata</i> Macpherson, 2012
-	Carapace with 2 small median spines on protogastric ridge; 2 or 3 parahepatic spines on each side	89	
89.	Mesogastric and metagastric regions each with 2 spines		<i>G. robusta</i> Baba, 1990
-	Mesogastric and metagastric regions unarmed		<i>G. sentosa</i> n. sp.
90.	Carapace with with 1 strong median spine on protogastric ridge		<i>G. profunda</i> Macpherson, 2012
-	Carapace with 2 small median spines on protogastric ridge		<i>G. barbellata</i> Macpherson, 2012
91.	Antennular basal article with 2 well-developed terminal spines, distomesial spine minute or obsolescent	92	
-	Antennular basal article with 3 well-developed terminal spines, distomesial spine always distinct, though sometimes clearly smaller than others	112	
92.	Sternite 4 clearly broader than sternite 5		<i>G. hispidissima</i> n. sp.
-	Sternite 4 narrower than sternite 5	93	
93.	Rostrum extremely narrow, 2.5–3.5 times longer than broad	94	
-	Rostrum relatively broad, 2.0 times longer than broad or less than so	99	
94.	Carapace with pair of epigastric spines only		<i>G. ganindo</i> n. sp.
-	Carapace with 4 or more epigastric spines	95	
95.	Hepatic spine absent		<i>G. perone</i> n. sp.
-	Hepatic spine present	96	
96.	Abdominal somites 2–3 with 2 uninterrupted ridges		<i>G. rhapsidia</i> n. sp.
-	Abdominal somites 2–3 with 4 uninterrupted or interrupted ridges	97	
97.	Anterior protogastric ridge interrupted or scale-like		<i>G. scolopia</i> n. sp.
-	Anterior protogastric ridge uninterrupted	98	
98.	Rostrum with distalmost lateral teeth minute, clearly smaller than distal second teeth		<i>G. tribulosa</i> n. sp.
-	Rostrum with distalmost lateral teeth well-developed, slightly smaller than distal second teeth		<i>G. inconspicua</i> Henderson, 1885
99.	Carapace with 2 epigastric spines only	100	
-	Carapace with 4 or more epigastric spines and often with spinules on hepatic and branchial regions	106	
100.	Pterygostomial flap with facial spine on anterior part	101	
-	Pterygostomial flap unarmed on surface	102	
101.	Epipods on P1–3		<i>G. clarki</i> n. sp.
-	Epipods on P1 and rarely on P2		<i>G. cymothoe</i> n. sp.
102.	Epipods absent on P1–3		<i>G. eucrante</i> n. sp.
-	Epipods present at least on P1	103	
103.	Carapace with 1 parahepatic spine on each side		<i>G. barbata</i> n. sp.
-	Carapace without parahepatic spines	104	
104.	Mxp3 merus with flexor distal flexor spine smaller than proximal spine. Rostrum triangular		<i>G. hispida</i> Baba, 2005
-	Mxp3 merus with flexor distal spine subequal to proximal spine. Rostrum nearly truncate	105	
105.	Rostrum 2.0 times longer than broad; lateral margins convex; lateral spines small and shallowly incised		<i>G. phalangis</i> n. sp.
-	Rostrum 1.5–1.7 times longer than broad; lateral margins straight; lateral spines sharp and deeply incised		<i>G. punctata</i> n. sp.
106.	Rostral lateral teeth shallowly incised. P1 fingers distally ending in incurved teeth to cross each other when closed	107	
-	Rostral lateral teeth deeply incised. P1 fingers distally spooned	108	
107.	Anterior metagastric ridge continued laterally on anterior branchial ridges		<i>G. albatrossae</i> Baba, 1988
-	Anterior metagastric ridge not continued laterally on anterior branchial ridges		<i>G. pauxilla</i> n. sp.
108.	P2 propodus more than 8 times longer than broad		<i>G. caesariata</i> n. sp.
-	P2 propodus less than 8 times longer than broad	109	
109.	Distomesial spine of antennular basal article very small but distinct	110	
-	Distomesial spine of antennular basal article obsolescent. Rostrum lanceolate	111	
110.	Rostrum twice longer than wide. Carapace without anterior branchial (rarely 1 or 2 minute spines) and postcervical spines		<i>G. tagaloa</i> n. sp.
-	Rostrum clearly less than twice longer than wide. Carapace with numerous anterior branchial and postcervical spines		<i>G. pubescens</i> Stimpson, 1858
111.	Dorsal surface of carapace with numerous long thick iridescent setae. P2 merus 5–6 times as long as broad		<i>G. villosa</i> n. sp.
-	Dorsal surface of carapace with few long thick non-iridescent setae. P2 merus 3–4 times as long as broad		<i>G. crinita</i> n. sp.

112.	Carapace without epigastric spines	113
-	Carapace with epigastric spines	125
113.	Epipods absent on P1–3	114
-	Epipods present at least on P1	115
114.	Anterior metagastric ridge usually extending laterally to anterior branchial ridges. Antennal article 1 with weak distomesial spine not reaching distal margin of article 2	<i>G. politula</i> n. sp.
-	Anterior metagastric ridge not extending laterally to anterior branchial ridges. Antennal article 1 with strong distomesial spine reaching distal margin of article 3	<i>G. lenis</i> Baba, 1969
115.	Epipods present only on P1	116
-	Epipods present on P1–3	121
116.	Carapace without hepatic spine	<i>G. eione</i> n. sp.
-	Carapace with hepatic spine	117
117.	Anterior metagastric ridge extending laterally to anterior branchial ridges	118
-	Anterior metagastric ridge not extending laterally to anterior branchial ridges	119
118.	Abdominal somites 2–3 each with 4 transverse ridges	<i>G. ternatensis</i> De Man, 1902
-	Abdominal somites 2–3 each with 2 transverse ridges	<i>G. melobosis</i> n. sp.
119.	P2 merus more than 4 times longer than broad. P2 propodus 5 or more times longer than broad	<i>G. patriciae</i> n. sp.
-	P2 merus less than 4 times longer than broad. P2 propodus less than 5 times longer than broad	120
120.	Carapace with 2 uninterrupted ridges behind mid-transverse ridge. Anterior protogastric ridge usually medially uninterrupted	<i>G. boisseliera</i> n. sp.
-	Carapace with at most 1 uninterrupted ridge behind mid-transverse ridge of carapace (rarely more than one). Anterior protogastric ridge usually medially interrupted	<i>G. providentia</i> Laurie, 1926
121.	Carapace without hepatic spine	<i>G. boninensis</i> Miyake & Baba, 1965
-	Carapace with hepatic spinule(s)	122
122.	Anterior branchial margin with 3 spines	123
-	Anterior branchial margin with 2 spines	124
123.	Carapace with scale-like median ridge behind anterior protogastric ridge; anterior branchial region with scale-like ridges only; male with G1 and 2	<i>G. amboinensis</i> De Man, 1888
-	Carapace without scale-like median ridge behind anterior protogastric ridge; anterior branchial region with transverse ridges; male with G2 only	<i>G. inflata</i> Potts, 1915
124.	P1 palm more than 3 times longer than broad. Crista dentata of Mxp3 ischium with 14–20 teeth	<i>G. leptochair</i> Baba & Fujita, 2008
-	P1 palm twice longer than broad. Crista dentate of Mxp3 ischium with 8 teeth	<i>G. rangi</i> n. sp.
125.	Carapace always with 4 or more epigastric spines	126
-	Carapace with 2 epigastric spines only (but see <i>G. spinosorostris</i>)	129
126.	Epipods absent on P1–3	<i>G. micra</i> n. sp.
-	Epipods present at least on P1	127
127.	Epipods present on P1–3. P2–4 meri each with 2 spines at distoflexor angle	<i>G. hydrae</i> n. sp.
-	Epipods present on P1. P2–4 meri each with 1 spine at distoflexor angle	128
128.	Rostrum dorsally flatish. Carapace with numerous scale-like ridges on gastric and anterior branchial regions. Posterior branchial region with 10 ridges, mostly interrupted. P1 carpus short, 2.4 times as long as broad	<i>G. pubipes</i> n. sp.
-	Rostrum slightly concave. Carapace with a few scale-like ridges on gastric and anterior branchial regions. Posterior branchial region with 6 ridges, some of them uninterrupted. P1 carpus elongate, 3.3–3.6 times as long as broad	<i>G. pascualae</i> n. sp.
129.	Rostrum as long as broad; lateral margins strongly convex (subparallel between basal first and second incisions)	<i>G. cymbulaerostris</i> Tirmizi, 1966
-	Rostrum at least 1.2 times longer than broad; lateral margins straight or slightly convex (breadth smaller between basal second incisions than between basal incisions)	130
130.	Epipods absent on P1–3	131
-	Epipods present at least on P1	138
131.	P1 fingers not spooned distally, distally ending in incurved spines to cross each other when closed	<i>G. longimanoides</i> Johnson, 1970
-	P1 fingers distally spooned	132
132.	Lateral rostral teeth shallowly incised. P2 merus more than 5 times longer than broad	<i>G. minutiae</i> n. sp.
-	Lateral rostral teeth deeply incised. P2 merus less than 5 times longer than broad	133
133.	Flexor margin of Mxp3 merus with proximal spine clearly longer than distal spine	<i>G. ceti</i> n. sp.
-	Flexor margin of Mxp3 merus with subequal spines	134
134.	Mesogastric or/and metagastric ridges medially interrupted	<i>G. anouchkae</i> n. sp.
-	Mesogastric and metagastric ridges medially uninterrupted	135
135.	Anterior protogastric ridge strongly convex medially	<i>G. erythrina</i> n. sp.
-	Anterior protogastric ridge transverse	136
136.	Carapace without scale-like median ridge behind protogastric ridge	<i>G. argus</i> n. sp.
-	Carapace with scale-like median ridge behind protogastric ridge	137
137.	P2–4 propodi 3.5–4.0 times longer than broad. Base color light brown	<i>G. consobrina</i> De Man, 1902

-	P2–4 propodi 4.5–4.8 times longer than broad. Base color green	<i>G. tagaro</i> n. sp.	
138.	Epipods present at least on P1–2		139
-	Epipods present only on P1		140
139.	Epipods present on P1–3. Pterygostomial flap with facial spine on anterior part	<i>G. australiensis</i> Stimpson, 185	
-	Epipods present on P1–2. Pterygostomial flap unarmed on surface	<i>G. parvula</i> n. sp.	
140.	Pterygostomial flap with facial spine on anterior part		141
-	Pterygostomial flap unarmed on surface		144
141.	Carapace with scattered feathered setae and scale-like median stria behind protogastric ridge.		
-	Carapace without both scattered feathered setae and scale-like median stria behind protogastric ridge.	<i>G. coralliophilus</i> Baba & Oh, 1990	142
142.	Carapace with 1 parahepatic spine on each side	<i>G. eupompe</i> n. sp.	
-	Carapace without parahepatic spine		143
143.	Second abdominal somite with 2 transverse ridges. Distomesial spine of antennal article 1 reaching end of peduncle.	<i>G. orientalis</i> Stimpson, 1858	
-	Second abdominal somite with 4 transverse ridges. Distomesial spine of antennal article 1 slightly exceeding article 2.	<i>G. corallicola</i> Haswell, 1882	
144.	Carapace without hepatic and parahepatic spines.		145
-	Carapace with hepatic and/or parahepatic spines.		150
145.	Mxp3 merus with flexor distal spine clearly smaller than proximal spine	<i>G. tanegashimae</i> Baba, 1969	
-	Mxp3 merus with flexor distal spine subequal to or slightly larger than proximal spine		146
146.	P2–4 meri each with 2 spines at distoflexor angle	<i>G. brevimana</i> Paul'son, 1875	
-	P2–4 meri each with 1 spine at distoflexor angle		147
147.	Carapace with 4 uninterrupted ridges between mid-transverse ridge and posterior margin. Mxp3 merus with 3 spines on flexor margin.	<i>G. whiteleggi</i> Grant & McCulloch, 1906	
-	Carapace with 2 or 3 uninterrupted ridges between mid-transverse ridge and posterior margin. Mxp3 merus with 2 spines on flexor margin.		148
148.	Rostral lateral teeth shallowly incised.	<i>G. mariae</i> n. sp.	
-	Rostral lateral teeth deeply incised		149
149.	Anterior branchial margin with 3 spines. Extensor margin of Mxp3 merus with 2 or 3 spines. P2–4 propodi less than 4 times longer than broad.	<i>G. eridani</i> n.sp.	
-	Anterior branchial margin with 2 spines. Extensor margin of Mxp3 merus with unarmed or with distal spine only. P2–4 propodi more than 4 times longer than broad	<i>G. atua</i> n.sp.	
150.	Carapace with both hepatic and parahepatic spines on each side		151
-	Carapace with either 1 hepatic or 1 parahepatic spine on each side		156
151.	Anterior protogastric ridge medially interrupted with median scale-ridge.		152
-	Anterior protogastric ridge uninterrupted (rarely interrupted in <i>G. eulimene</i>)		153
152.	P2 merus 4 times longer than broad. P2 more than twice carapace length.	<i>G. leporis</i> n. sp.	
-	P2 merus 3 times longer than broad. P2 twice carapace length or less than so	<i>G. tongi</i> n. sp.	
153.	P1 movable finger with row of strong spines on mesial margin. Posterior median margin of abdominal somite 6 usually convex	<i>G. spinosorostris</i> Dana, 1852	
-	P1 movable finger unarmed or with small proximal spines on mesial margin. Posterior median margin of abdominal somite 6 straight		154
154.	P1 palm without row of small spine on dorsal surface.	<i>G. cephyra</i> n. sp.	
-	P1 palm with row of small spines on dorsal surface.		155
155.	P2–4 propodi 3–4 times longer than broad	<i>G. algae</i> Baba, 1969	
-	P2–4 propodi 5 times longer than broad	<i>G. eulimene</i> n. sp.	
156.	Mxp3 merus with flexor distal spine subequal to or slightly larger than proximal spine		157
-	Mxp3 merus with flexor distal spine clearly smaller than proximal spine		158
157.	Rostral lateral teeth shallowly incised. Carapace with 1 hepatic spine on each side; parahepatic spine absent.	<i>G. denticulata</i> Macpherson & Cleva, 2010	
-	Rostral lateral teeth deeply incised. Carapace without hepatic spine, but with 1 parahepatic spine on each side	<i>G. gnoma</i> n.sp.	
158.	Carapace with 1 hepatic spine, but without parahepatic spine. Distomesial spine of antennal article 1 not exceeding end of antennal article 3	<i>G. halia</i> n. sp.	
-	Carapace without hepatic spine, but with parahepatic spine. Distomesial spine of antennal article 1 reaching or overreaching end of antennal article 3.		159
159.	Epipods present on P1 and P2.	<i>G. lemaitrei</i> n. sp.	
-	Epipods present only on P1.	<i>G. autahi</i> n. sp.	

***Galathea acerata* n. sp.**

(Fig. 2)

Material examined. *Holotype*: Australia. Western Australia, 19°57'S, 117°42'E, 46 m, 2 June 1983: 1 M 2.6 mm (NMV J13344).

Paratype: Australia. Western Australia, 19°57'S, 117°42'E, 46 m, 2 June 1983: 1 F 2.0 mm (NMV J6778).

Etymology. From the Latin *aceratus*, mingled with chaff, in reference to the squamate aspect of the gastric region.

Description. *Carapace*: As long as broad; cervical groove, laterally bifurcated; ridges on gastric and anterior branchial regions scale-like or concentric arcs, with dense short setae and some scattered long simple setae; 2 epigastric spines present; 1 parahepatic and 1 hepatic spine on each side, 2 protogastric spines; anterior branchial region with 1 spine on each side. Mid-transverse ridge laterally interrupted, preceded by shallow cervical groove. Posterior branchial region with 4 transverse ridges, of which two extending to midline. Lateral margins slightly convex in posterior half, with 8 spines in total 2 spines in front of and 6 spines behind anterior cervical groove; first anterolateral, second small, located at midlength between anterolateral spine and anteriormost spine of branchial margin; 3 spines on anterior branchial margin, and 3 spines on posterior branchial margin; additional spine ventral to between first and second lateral spine. External limit of orbit ending in small spine; infraorbital margin with 1 spine. Rostrum triangular, 1.6 times as long as broad, 0.7 of carapace length and 0.4 of carapace breadth, nearly horizontal in lateral view; distance between distalmost lateral incisions 0.25 of distance between proximalmost lateral incisions; dorsal surface with scattered short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, with sparse short setae, anterior margin bluntly angular.

Sternum: Plastron about as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 transverse ridges on tergite, anterior ridge more distinctly elevated than posterior ridge; somites 5 and 6 with short scales on each tergite, posteromedian margin of somite 6 slightly produced. Male with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 of rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger; distomesial spine smaller and more slender than distolateral. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 with distomesial spine exceeding distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine longer than distomesial and exceeding midlength of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor margin with small but distinct distal spine; crista dentata with 25 or 26 denticles. Merus subequal in length to ischium; flexor margin with 2 well-developed, subequal spines, proximal one located at midlength, distal one at terminal end; extensor margin unarmed or with 2 small spines. Carpus unarmed.

P1: 2.7 times carapace length, with sparse long setae. Merus as long as carapace, 1.7 times as long as carpus, with spines arranged in irregular rows, mesial and distal spines prominent. Carpus 0.9 length of palm, 1.7 times as long as broad; dorsal surface with small spines arranged in irregular longitudinal rows extending onto palm; mesial margin with 3 well-developed spines, distal second largest. Palm 1.8 times longer than broad; spines arranged in irregular rows, dorsolateral row of spines continued onto whole lateral margin of fixed finger. Fingers 1.4 length of palm, each finger bearing 2 rows of teeth, distally spooned; movable finger with spines along mesial margin.

P3–4 (P2 missing): Moderately slender, with long sparse plumose setae. P3 twice carapace length. Meri successively shorter posteriorly (P4 merus 0.8 length of P3 merus); P3 merus 3.1 times longer than broad, 1.3 times longer than P3 propodus; P4 merus 2.7 times as long as broad, 1.2 length of P4 propodus; extensor margins each with row of 10 proximally diminishing spines in P3, 1 in P4; lateral surface with 3 spines in P4; flexor margins distally ending in 1 spine followed proximally by 1 spine and several tubercles or short transverse ridges or low protuberances. Carpi each with 4 spines on extensor margin in P3, unarmed in P4; lateral surfaces each with 4 spines sub-parallel to extensor margin in P3, unarmed in P4; flexor distal margin with distal spine. Propodi 3.7–4.1 times as long as broad; extensor margins unarmed; flexor margins each with 4 or 5 slender movable spines. Dactyli distally ending in well-curved strong spine, 0.6–0.7 length of propodi; flexor margins each with 4 proximally diminishing teeth with corneous spinule or robust setae.

Epipods only on P1.

Remarks. *Galathea acerata* n. sp. from the Western Australia is closest to *G. longimana* Paul'son, 1875, from the Red Sea. The two species can be distinguished by the following characters:

- The P1 fingers are clearly longer than the palm in *G. acerata*, whereas they are shorter than the palm in *G. longimana*.
- The P2–4 are more slender in *G. longimana* than in *G. acerata*. For example, the propodi are ca. 4.0 times longer than broad in *G. acerata*, whereas ca. 5.0 in *G. longimana*.

No molecular data are available from the two species.

Distribution. Australia, Western Australia, 46 m.

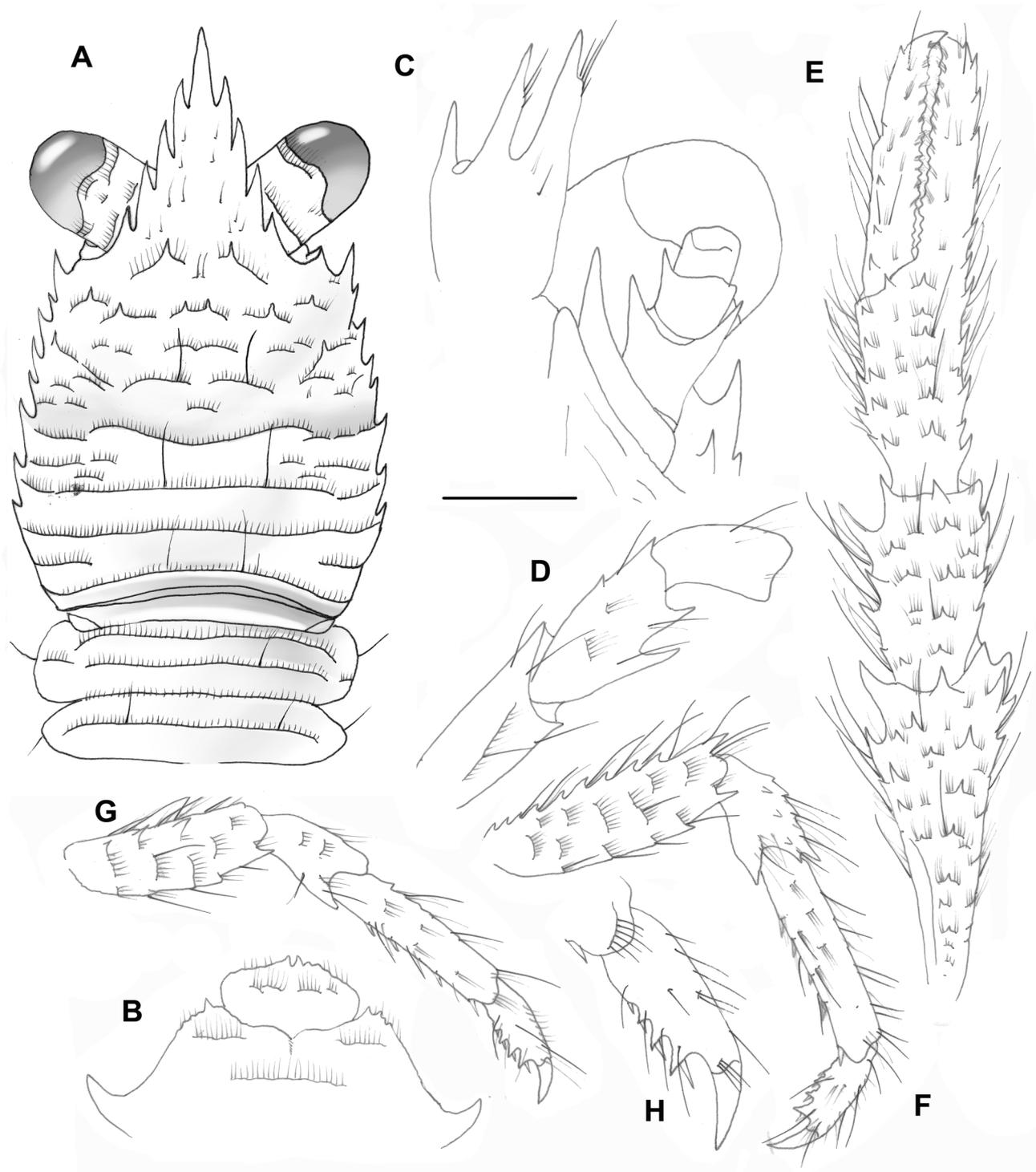


FIGURE 2. *Galathea acerata* n. sp., holotype, male, 2.6 mm, Western Australia (J13344). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P4, lateral view; H, right P4 dactylus, lateral view. Scale: A, E–G = 1 mm; B–D, H = 0.5 mm.

***Galathea acis* n. sp.**

(Figs 3, 115A)

Galathea affinis.—Baba, 1979b: 646 (Gorong Island, subtidal).

Possible references:

Galathea affinis Ortmann, 1892: 252, pl. 11, figs 9a, i (Fiji Islands).—Borradaile, 1898: 463 (Rotuma, Funatufa).—Borradaile, 1900: 421 (Lifu, Loyalty Islands).—De Man, 1902: 711 (Ternate).—Miyake & Baba, 1966: 57, figs 1, 2 (Ishigaki-jima, Okinawa-jima, Amami-oshima, intertidal).—Baba, 1977a: 247 (Timor, Biak I. and Hollandia, New Guinea).—Baba, 1982b: 59 (Palau Islands and Yap Island, subtidal).—Kawamoto & Okuno, 2003: 94, unnumbered fig. (Kume-jima, Okinawa, 10 m).—Dong & Li, 2010: 13, fig. 8 (South China Sea, intertidal to 50 m).

? *Galathea affinis*.—Gordon, 1935: 4, figs 1, 3c (Banda Neira [=Banda Naira]).

Material examined. *Holotype*: Vanuatu. SANTO, Stn DB1, 15°33.1'S, 167°17.8'E, 15–25 m, 10 September 2006: 1 M 3.7 mm (MNHN-IU-2013-15899).

Paratypes: Japan. Ryukyu Islands. Iriomote Island, Uehara, 24.4212°N, 123.8026°E, 0–1 m, 10 July 2010: 1 ov. F 3.1 mm (UF26919), 1 M 3.0 mm (UF26920).—Okinawa Island, Miyagi Beach, Sunabe, Chatan, 26.3288°N, 127.7441°E, 3–10 m, 20 July 2010: 1 M 3.0 mm (UF35244).—Okinawa Island, Inanse, Urasoe, 26.2517°N, 127.6722°E, 0–1 m, 15 May 2011: 1 M 3.1 mm (UF28654), 1 ov. F 2.2 mm (UF28661), 1 M 4.1 mm (UF28662).

Mariana Islands. Guam Island, Haputo, 13.577°N, 144.826°E, 6–30 m, 16 June 2010: 1 ov. F 3.3 mm (UF26599). Saipan Island, 15.2°N, 145.7°E, 1 M 4.3 mm (UF37899).—Apra harbour, Sasa Bay, 3.5–5 m, 9 July 1997: 1 juv. 1.2 mm (UF316).—Double reef, 5 m, 7 May 1999: 1 M 4.1 mm (UF469).—Pago Bay, 4–8 m, 14 August 2000: 1 M 4.3 mm (UF393).—Double reef, 8 May 2002: 1 ov. F 3.7 mm (UF5659).—Asan Point, 0.5–1.5 m, 3 July 2002: 1 F 2.9 mm (UF2833).—Gun beach, 13.5167°N, 144.8°E, 5–15 m, 18 June 2003: 1 M 4.1 mm (UF4111).—Tumon Bay, 1–2 m, June–July 2003: 1 M 3.5 mm (UF4043).—Piti, 0–2 m, 13.4267°N, 144.7961°E, 18 March 2008: 1 F 2.0 mm (UF13377), 1 M 2.8 mm (UF13830).—Tanguisson, 7–25 m: 1 M 3.2 mm (UF7394).

Indonesia. Gorong Island. 27 January 1975: 1 M 1.8 mm (MNHN-Ga1142).

Samoa, American Samoa, Ofu Island. National Park, February–April 2007: 1 ov. F 3.1 mm (UF9541), 1 F 1.9 mm (UF14725).

Papua New Guinea. PAPUA NIUGINI, Stn PM25, 05°01.1'S, 145°47.9'E, 0 m, 15 November 2012: 1 ov. F 3.6 mm (MNHN-IU-2013-655).—Stn PD36, 05°01.2'S, 145°47.9'E, 5–10 m, 19 November 2012: 1 M 2.0 mm (MNHN-IU-2013-15931).

Australia. Queensland. Lizard Island, Young reef, 15–18 m, 18 February 2009: 1 ov. F 3.5 mm (UF17132).—Lizard Island, Day Reef, 2–3 m, 22 February 2009: 1 ov. F 3.5 mm (UF17848).—14.7452°S, 145.5066°E, 1–2 m, 24 February 2009: 1 ov. F 3.0 mm (UF17464).

Australia. Christmas Islands, near Indian Ocean lodge, 2 December 1999: 1 ov. F 3.1 mm (UF5642).

Vanuatu. SANTO, Stn DB1, 15°33.1'S, 167°17.8'E, 15–25 m, 10 September 2006: 5 M 1.8–3.6 mm, 3 ov. F 2.9–3.0 mm (MNHN-IU-2013-9743).—Stn DB8, 15°34.6'S, 167°13.8'E, 12 m, 12 September 2006: 1 ov. F 3.0 mm (MNHN-IU-2013-9747), 5 M 2.4–3.0 mm, 5 ov. F 2.6–3.1 mm, 2 F 2.0–2.4 mm (MNHN-IU-2013-15901), 1 M 3.0 mm (MNHN-IU-2013-9746).—Stn DB25, 15°37.7'S, 167°11.3'E, 10 m, 16 September 2006: 2 M 2.2–3.0 mm, 1 ov. F 2.8 mm (MNHN-IU-2013-15902).—Stn ED16, 15°35.3'S, 167°07.4'E, 5–7 m, 17 September 2006: 2 M 1.6–2.3 mm, 2 ov. F 3.0–3.1 mm (MNHN-IU-2013-9748).—Stn DB33, 15°34.7'S, 167°13.8'E, 14–25 m, 18 September 2006: 5 M 1.8–3.6 mm, 5 ov. F 2.3–3.4 mm (MNHN-IU-2013-15903).—Stn DB40, 15°29.8'S, 167°15.1'E, 5 m, 19 September 2006: 2 M 2.4–2.6 mm, 2 ov. F 2.3–2.4 mm (MNHN-IU-2013-9752).—Stn DB46, 15°28.8'S, 167°15.2'E, 2–3 m, 20 September 2006: 5 M 3.3–3.5 mm, 15 ov. F 2.3–3.2 mm (MNHN-IU-2013-15898).—Stn EP22, 15°37.3–37.4'S, 167°05.8–06.0'E, 78–91 m, 21 September 2006: 1 F 1.8 mm (MNHN-IU-2013-9751).—Stn DB53, 15°28.8'S, 167°15.2'E, 5 m, 22 September 2006: 8 M 2.0–3.8 mm, 9 ov. F 2.2–2.8 mm, 2 F 1.9–2.0 mm (MNHN-IU-2013-15896), 1 ov. F 2.5 mm (MNHN-IU-2013-9741).—Stn DB65, 15°25.8'S, 167°13.0'E, 13 m, 26 September 2006: 8 M 2.3–4.0 mm, 6 ov. F 2.0–2.9 mm (MNHN-IU-2013-15906).—Stn DB67, 15°22.9'S, 167°13.1'E, 7 m, 26 September 2006: 10 M 2.0–3.6 mm, 8 ov. F 2.2–3.3 mm (MNHN-IU-2013-15894).—Stn DB75, 15°22.9'S, 167°11.9'E, 20 m, 28 September 2006: 10 M 2.0–3.6 mm, 11 ov. F 2.8–3.3 mm (MNHN-IU-2013-15895).—Stn LD8, 15°22.3'S, 167°11.3'E, 2–4 m, 28 September 2006: 1 M 2.1 mm (MNHN-IU-2013-9744).—Stn FB40, 15°22.9'S, 167°11.7'E, 9 m, 29 September 2006: 1 M 3.7 mm, 4 ov. F 2.2–4.2 mm, 1 F 2.0 mm (MNHN-IU-2013-15904).—Stn LD12, 15°36.6'S, 167°11.3'E, 2–4 m, 30 September 2006: 3 M 3.0–3.9

mm, 3 ov. F 2.8–3.4 mm (MNHN-IU-2013-15912).—Stn DB83, 15°43.4'S, 167°15.0'E, 6 m, 3 October 2006: 7 M 2.0–4.0 mm, 7 ov. F 2.7–3.4 mm, 2 F 2.0–2.1 mm (MNHN-IU-2013-15907).—Stn LD14, 15°36.6'S, 167°10.5'E, 3–7 m, 3 October 2006: 1 M 3.0 mm, 3 ov. F 2.4–3.3 mm, 1 F 2.2 mm (MNHN-IU-2013-15900).—Stn DB86, 15°38.5'S, 167°15.1'E, 13 m, 4 October 2006: 9 M 2.0–3.9 mm, 5 ov. F 2.2–3.3 mm, 1 F 3.0 mm (MNHN-IU-2013-15909).—Stn FB52, 15°42.7'S, 167°15.1'E, 7 m, 5 October 2006: 7 M 2.4–2.8 mm, 4 ov. F 2.4–3.0 mm, 1 F 2.2 mm (MNHN-IU-2013-15905).—Stn FS51, 15°42.7'S, 167°15.1'E, 2–3 m, 5 October 2006: 3 M 1.6–3.2 mm, 1 ov. F 3.0 mm (MNHN-IU-2013-9753).—Stn ZB16, 15°32.4'S, 167°12.1'E, 5 m, 7 October 2006: 2 M 1.6–2.7 mm, 1 ov. F 2.1 mm (MNHN-IU-2013-9749).—Stn ZB20, 15°36.1'S, 167°05.4'E, 15–20 m, 10 October 2006: 2 ov. F 2.6–2.7 mm (MNHN-IU-2013-9750).—Stn FB68, 15°35.4'S, 166°59.7'E, 11 m, 11 October 2006: 1 ov. F 2.3 mm (MNHN-IU-2013-9754).—Stn FB80, 15°33.1'S, 167°09.6'E, 2 m, 14 October 2006: 10 M 1.5–3.2 mm, 5 ov. F 2.0–2.9 mm (MNHN-IU-2013-15908).—Stn FB92, 15°33.6'S, 167°16.6'E, 2–4 m, 14 October 2006: 3 M 1.5–3.7 mm, 1 ov. F 3.1 mm (MNHN-IU-2013-15893), 8 M 2.4–3.3 mm, 7 ov. F 2.0–3.4 mm (MNHN-IU-2013-15910), 1 M 2.5 mm (MNHN-IU-2013-13987).—Stn FS96, 15°33.1'S, 167°09.6'E, 35 m, 14 October 2006: 2 M 2.2–2.4 mm, 1 ov. F 2.4 mm (MNHN-IU-2013-15911).—Stn VM69, 15°33.4'S, 167°16.7'E, 0–1 m, 18 October 2006: 1 M 3.5 mm (MNHN-IU-2013-9745).—Stn ZB36, 15°34.3'S, 167°12.4'E, intertidal, 19 October 2006: 5 M 2.5–3.4 mm, 7 ov. F 2.7–3.8 mm (MNHN-IU-2013-15897).

New Caledonia. Loyalty Islands. LIFOU, Stn 1463, 20°55.05'S, 167°03.35'E, 20–30 m, 10 November 2000: 1 M 3.0 mm (MNHN-IU-2013-9757).—Stn 1475, 20°55.8'S, 167°19.0'E, subtidal, 11 November 2000: 2 M 2.3–3.0 mm, 1 ov. F 3.6 mm, 1 F 2.5 mm (MNHN-IU-2013-15914).—Stn 1426, 20°45.9'S, 167°06.2'E, 4–7 m, 20 November 2000: 2 F 1.3–1.4 mm (MNHN-IU-2013-15917).—Stn 1418, 20°46.9 'S, 167°07.9 'E, 1–5 m, 21 November 2000: 3 M 2.3–3.3 mm (MNHN-IU-2013-9745).—Stn 1432, 20°53.5'S, 167°02.7'E, 12–32 m, 21 November 2000: 1 F 3.3 mm (MNHN-IU-2013-9756).—Stn 1453, 20°54.6'S, 167°02.1'E, 21–30 m, 22 November 2000: 1 M 2.3 mm (MNHN-IU-2013-15916).—Stn 1411, 20°47.6'S, 167°10.35'E, 48 m, 23 November 2000: 1 M 3.0 mm (MNHN-IU-2013-15915).—Stn 1410, 20°56.7'S, 167°03.1'E, 2–4 m, 25 November 2000: 1 M 3.0 mm, 1 ov. F 3.5 mm (MNHN-IU-2013-15919).—Stn 1455, 20°56.8'S, 167°02.7'E, 15–20 m, 25 November 2000: 1 M 3.7 mm (MNHN-IU-2013-9742).—Stn 1421, 20°52.4'S, 167°08.5'E, 4 m, 26 November 2000: 19 M 2.0–4.1 mm, 11 ov. F 2.4–3.4 mm, 12 F 2.0–4.3 mm (MNHN-IU-2013-15913).—Stn 1457, 20°46.8'S, 167°02.75'E, 5–10 m, 27 November 2000: 1 M 2.4 mm (MNHN-IU-2013-15918).—MUSORSTOM 6, Stn DW431, 20°22.25'S, 166°10.00'E, 21 m, 18 February 1989: 1 M 3.0 mm, 4 ov. F 3.0–3.2 mm (MNHN-IU-2013-15930).—Stn DW434, 20°21.21'S, 166°08.64'E, 23 m, 18 February 1989: 1 M 2.2 mm (MNHN-IU-2013-15925).

Lagon North. Stn 483, 19°01'S, 163°32'E, 33 m, 2 March 1985: 2 M 2.8–3.5 mm, 3 ov. F 2.0–3.1 mm (MNHN-IU-2013-15922).—Stn DW1120, 19°36.5'S, 163°45.3'E, 47 m, October 1989: 1 M 2.7 mm, 1 F 2.4 mm (MNHN-IU-2013-15926).

Lagon, Ounia, intertidal, 14 October 1978: 1 ov. F 3.7 mm (MNHN-IU-2013-15920).—Laragnere Reef, Stn 1371, 12–16 m: 1 M 3.8 mm (MNHN-IU-2013-15927).—Plouveal. Stn DW1223, 20°28.0'S, 166°28.0'E, 19 m, 12 September 1992: 1 M 3.4 mm, 1 ov. F 3.5 mm (MNHN-IU-2013-15923).—Stn DW1231, 23 m: 1 M 2.4 mm, 1 ov. F 2.9 mm (MNHN-IU-2013-15929), 1 M 3.6 mm (MNHN-IU-2013-15928).—Isle of Pines, August 1993: 1 M 3.7 mm (MNHN-IU-2013-15921).—Touho, 20°47'S, 165°13'E, intertidal, 7 September 1993: 3 M 2.6–2.8 mm, 4 ov. F 2.8–3.0 mm (MNHN-IU-2013-15928).

Etymology. *Acis* was the lover of the sea-nymph *Galathea*. The name is considered as a substantive in apposition.

Description. *Carapace:* As long as broad; dorsal surface nearly horizontal from anterior to posterior; posterior cervical groove distinct, but anterior cervical groove indistinct. Ridges with dense short setae, and a few scattered long and thick setae. Gastric region with some transverse ridges: 1 epigastric ridge with 2 submedian spines, medially interrupted; 1 protogastric ridge uninterrupted and extending laterally to second anterolateral spine, laterally interrupted in some specimens; 1 mesogastric ridge uninterrupted extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, not extending laterally to anterior branchial ridges, posterior ridge short, sometimes absent. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges, 1 or 2 of them uninterrupted. Lateral margins medially convex, with 8 spines: 2 spines in front of and 6 spines behind indistinct anterior cervical groove (defined here by the mesogastric ridge); first anterolateral, well-developed, at level of lateral limit of orbit; second minute, 1 spine ventral to between first and second; 3 spines on anterior branchial margin, and 3 spines on posterior branchial margin, last spine small. External limit of orbit

unarmed or with small spine, with well-developed frontal spine between external limit of orbit and first anterolateral spine, infra-orbital margin with strong spine. Rostrum broadly triangular, 1.3–1.4 times as long as broad, 0.5–0.6 length of carapace and 0.3–0.4 of carapace width, distance between distalmost lateral incisions 0.3 of distance between proximalmost lateral incisions, dorsal surface slightly concave medially; lateral margin with 4 deeply incised teeth.

Pterygostomian flap rugose, with 1 distinct spine on upper margin near linea anomurica, anterior margin ending in well-developed spine; no facial spine.

Sternum: Slightly longer than broad, lateral limits divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somites 5 and 6 each with 2 ridges, medially interrupted, posteromedian margin of somite 6 distinct. Males with G1 and G2.

Eyes: Ocular peduncle 1.2–1.3 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger; distomesial smaller than others. Ultimate article with a few short setae not in tuft on distodorsal margin.

Antenna: Article 1 with depressed distomesial process not reaching distal margin of article 2. Article 2 with subequal distal spines, reaching midlength of article 3. Article 3 with distinct distomesial spine. Article 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor margin unarmed; crista dentata with 23–26 denticles. Merus shorter than ischium, with strong proximal spine on flexor margin, located at midlength, and not reaching distal margin of merus, sometimes 1 small additional spine; extensor margin with distal spine. Carpus spineless.

P1: 2.3–2.5 times carapace length, moderately stout, subcylindrical, with numerous short setae and some long setae on dorsal surface and along lateral and mesial margins of all articles. Merus 0.8–0.9 length of carapace, 1.4–1.5 times as long as carpus, with rows of spines, mesial and distal spines particularly strong. Carpus slightly shorter than palm, 1.7–1.9 times longer than broad, lateral and mesial margins subparallel, dorsal surface with small spines; mesial surface with row of 3 or 4 prominent spines; and row of small spines along lateral margin. Palm 1.4–1.8 times longer than broad; spines in irregular longitudinal rows on dorsal, mesial and lateral surfaces; lateral row continued onto whole lateral margin of fixed finger. Fingers as long as palm, each finger distally with 2 rows of teeth, spooned; movable finger with row of dorsomesial spines.

P2–4: Relatively slender, somewhat compressed, moderately setose, sparsely with long setae on all articles. P2 1.7 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.6–0.7 carapace length, 2.9–3.2 times as long as broad, 1.6 times longer than P2 propodus; P3 merus 3 2.7 times as long as broad, 1.4 times length of P3 propodus; P4 merus 2.8 times as long as broad, 1.2 times length of P4 propodus; extensor margins each with row of 7–9 proximally diminishing spines in P2–3, 0–2 distal spines in P4; lateral surface unarmed in P2–3, 1–3 spines in P4; 1 or 2 well-developed spines on flexor distal margin, sometimes obsolescent in P4; flexormesial margin with terminal spine in P2 only. Carpi each with 4 or 5 spines on extensor margin in P2–3, 0–1 minute spine in P4; lateral surface with row of 2–4 acute granules or spines paralleling extensor row in P2–3, obsolescent in P4. Propodi 3.0–3.5 times as long as broad in P2–4; extensor margins each with 2 or 3 proximal spines in P2–3, unarmed in P4; flexor margins each with 4 slender movable spines in P2–4; lateral surface unarmed. Dactyli 0.6–0.8 length of propodi, ending in incurved, strong, sharp spine; flexor margins each with prominent triangular terminal tooth preceded by 4 low teeth.

Epipods absent on pereopods.

Coloration: Ground color of carapace, abdominal somites 2–4 and pereopods reddish, with darker transverse ridges; some whitish patches scattered on surfaces of carapace and abdomen. Distal part of P1 palm and proximal portion of P1 fingers whitish; one distinct black spot on distal part of P1 palm. P2–4 with reddish and whitish transverse bands. One specimen collected in Papua New Guinea showed a ground color of carapace and abdomen whitish, with numerous dark spots.

Remarks. *Galathea acis* belongs to the group of species characterized by the pterygostomian flap with one or two spines on the upper margin near the linea anomurica, and an uninterrupted mesogastric ridge between the anteriormost branchial marginal spines. The new species resembles *G. mauritiana* Bouvier, 1914 and related species, e.g., *G. aequata* n. sp., *G. ahyongi* n. sp., *G. senta* n. sp. (see also Remarks for *G. mauritiana*). The closest relative of *G. acis* is *G. aequata* n. sp. from French Polynesia, and these two species are easily distinguished by the number of movable spinules along the flexor margin of the propodi P2–3: 5 or 6 in *G. aequata* and 4 in *G. acis*. No other constant morphological differences were observed.

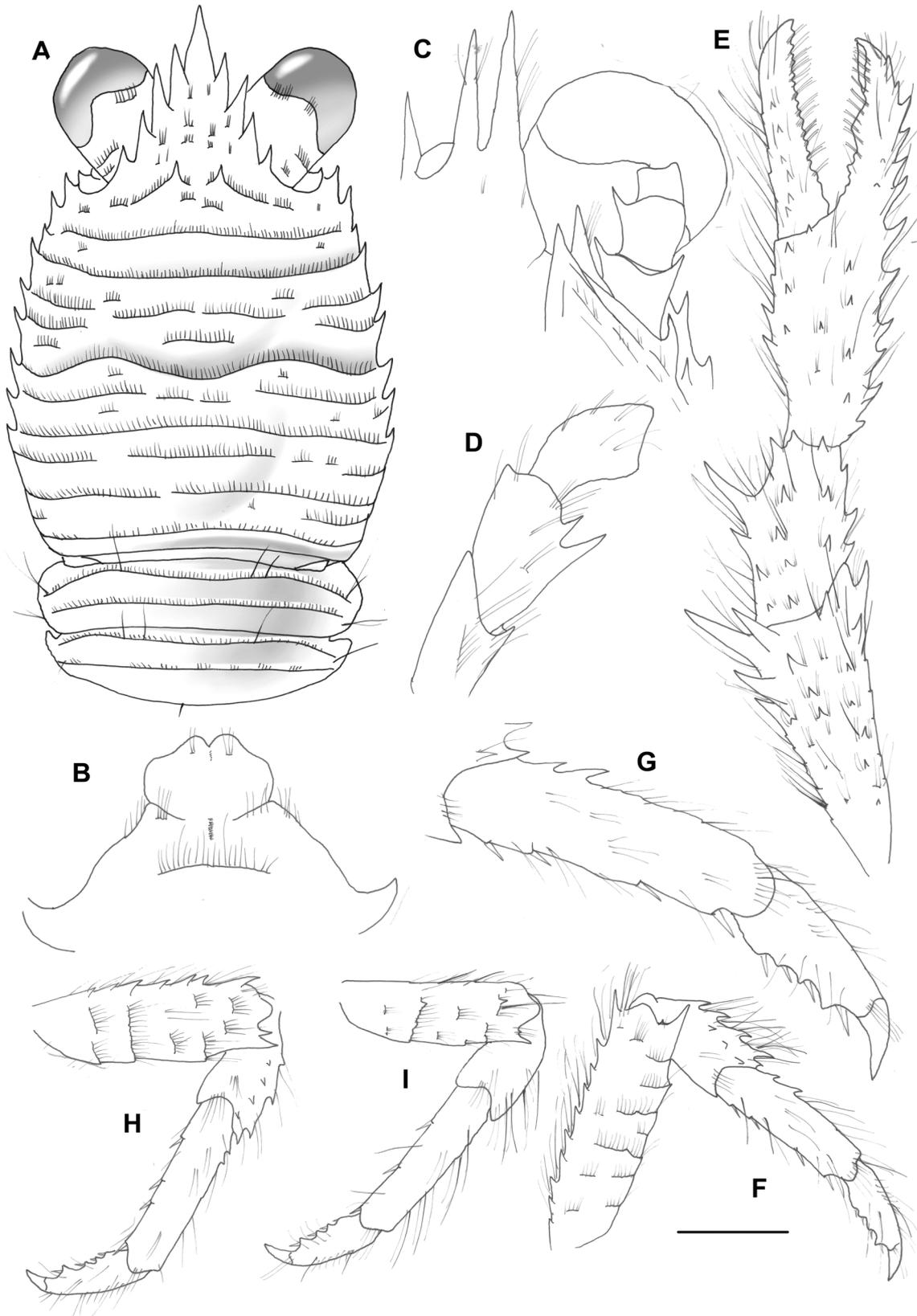


FIGURE 3. *Galathea acis* n. sp., holotype, male, 3.7 mm, Vanuatu (MNHN-IU-2013-15899). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P2 propodus and dactylus, lateral view; H, right P3, lateral view; I, right P4, lateral view. Scale: A, E, F, H, I = 1 mm; B–D, G = 0.5 mm.

The genetic divergence between the two species is 16.0% (COI) (no data of 16S rRNA is available).

The new species has probably been cited (as *G. mauritiana* or *G. affinis*, see below) in the western Pacific. Unfortunately, only the material from Gorong Islands (Baba 1979b) has been re-examined, and agrees quite well with the present material. Other occurrences from the distribution area of *G. acis* are dubious and need re-examination.

Distribution. The existence of new cryptic species, closely related to *G. mauritiana* Bouvier, 1914, suggests that previous records should be considered with caution. *Galathea acis* is known with certainty from Japan (Ryukyu Islands), Mariana Islands (Guam), Papua New Guinea, Samoa, Australia, Christmas Islands, Queensland, Vanuatu, and New Caledonia, 0–91 m.

***Galathea aculeata* Haswell, 1882**

(Fig. 4)

Galathea aculeata Haswell, 1882a: 761 (Holborn Island and Port Molle, Queensland, 36 m.—Haswell, 1882b: 162.—Grant & McCulloch, 1906: 48, pl. 4, figs 4, 4a (Holborn Island and Port Molle, Queensland).

Dubious identifications

Galathea aculeata Henderson, 1888: 120 (off Manila and off Nukalofa, Tongatabu, 33 m).—Whitelegge, 1900: 190 (no record).—Tirmizi, 1966: 178, figs 3, 4A (Red Sea, 29–55 m).—McNeill, 1968: 33 (Great Barrier Reef, Lizard Island, 16–37 m).—Lewinsohn, 1969: 111 (no record).—Johnson, 1970: 4, fig. 1a (Shoal west of Pulau Pawai, Singapore, 9 m).—Haig, 1973: 280 (off Double Island Point, Queensland, 31 m).—Haig, 1974: 447 (Western Australia).—Poupin, 1996: 19 (compilation of French Polynesia records).

Material examined. Type material (syntypes). Australia. Queensland, Port Molle, 20.33°S, 148.85°E, 36 m, Coll. W.A. Haswell: 1 F 4.3 mm (AM P267), 1 F 3.6 mm, dry specimen (AM G5657). Queensland, Holborn Island, Port Denison, 1 specimen, 1 dry specimen (glued to glass), 4.5 mm (AM P41003).

Description. *Carapace:* Slightly longer than broad; cervical groove laterally bifurcated; ridges on gastric and anterior branchial regions scale-like or in concentric arcs; epigastric region with 2 submedian spines; 1 hepatic and 1 parahepatic spines, and 1 anterior branchial spines on each side. Mid-transverse ridge laterally interrupted, preceded by cervical groove, followed by 4 ridges, 2 of them uninterrupted. Lateral margins slightly convex medially, with 8 spines: 2 spines in front of and 6 spines behind anterior cervical groove; first anterolateral, second small, located at midlength between first spine and anterior cervical groove; 3 spines on anterior branchial margin, and 3 spines on posterior branchial margin, last smaller than others; additional spine ventral to between first and second lateral spine. External limit of orbit with small spine; infraorbital margin with 1 spine. Rostrum moderately elongate, triangular, 1.7 times as long as broad, 0.6 carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface with short setiferous ridges; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap unarmed.

Sternum: Plastron about as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 each with 2 transverse ridges on tergite, with or without additional interrupted ridges between, anterior ridge more distinctly elevated than posterior ridge; tergite of somite 4 with anterior ridge only; somites 5 and 6 without ridges, posteromedian margin of somite 6 nearly transverse. No males examined.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed spines, distodorsal larger; distomesial spine somewhat smaller and more slender than distolateral. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 with distomesial spine exceeding distal margin of article 2. Article 2 with 2 well-developed distal spines. Articles 3 and 4 unarmed.

Mxp3: lacking or not observable in syntypes examined.

PI: 3.0 times carapace length, with sparse long plumose setae. Merus 1.0 times length of carapace, 1.9 times as long as carpus. Carpus 0.9 length of palm, 2.1 times as long as broad. Palm 2.1 times as long as broad, lateral and mesial margins slightly divergent; spines arranged in irregular rows, dorsolateral row of spines continued onto whole lateral margin of fixed finger. Fingers 1.1 times palm length; mesial margin of movable finger with 4 small proximal spines; each finger distally with 2 rows of teeth, spooned.

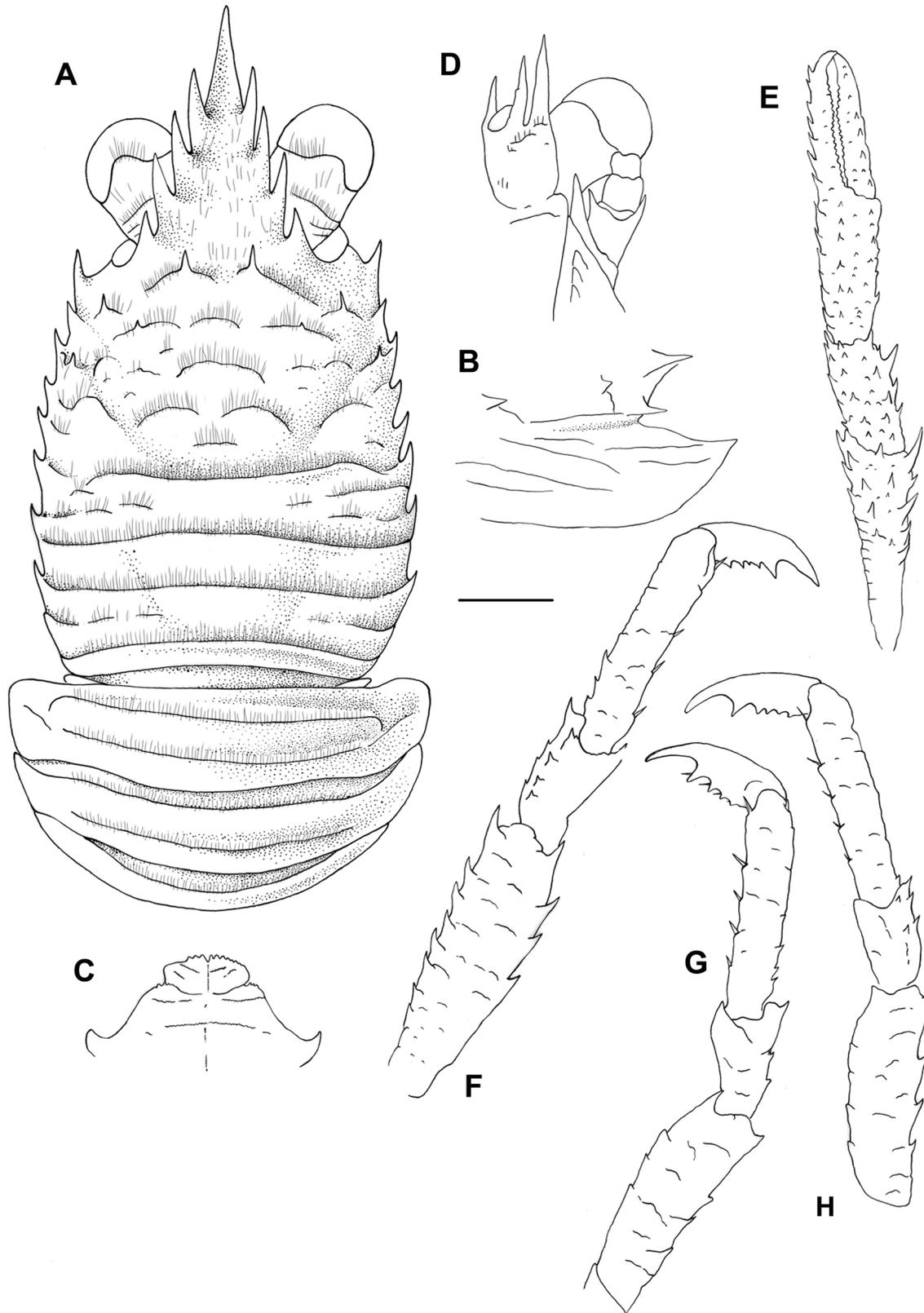


FIGURE 4. *Galathea aculeata* Haswell, 1882, syntype, female 4.3 mm, Australia, Queensland (AM-P267). A, carapace and abdomen, dorsal view; B, anterior pterygostomial area, lateral view; C, thoracic sternites 3 and 4; D, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view (setae on appendages not figured). Scale: A, F–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

P2–4: Moderately slender, with long sparse plumose setae. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.7 carapace length, 2.9 times as long as broad, 1.2 times longer than P2 propodus; P3 merus 2.9 times longer than broad, equally broad as P4 merus, 1.1 times longer than P3 propodus; P4 merus 2.9 times as long as broad, 1.0 length of P4 propodus. Propodi subequal in length, each about 4 times as long as broad; extensor margins each with 3–4 spines on proximal half in P2 and P3, with 1 proximal spine in P4; flexor margins each with 6 or 7 slender movable spines. Dactyli subequal in length, 0.7 length of propodi; flexor margins each with 5 proximally diminishing teeth bearing minute robust setae.

Epipods on P1–3.

Color. Unknown.

Remarks. *Galathea aculeata* had been synonymized with *G. subsquamata* Stimpson, 1858 (cf. Baba *et al.* 2008). Both species belong to a group of species characterized by scale-like ridges on the gastric region, and the branchial region with dorsal spines. However, they are easily differentiable by the presence or absence of postcervical spines on the carapace (see Remarks of *G. subsquamata*). The existence of some new species belonging to this group also suggests that numerous records identified as *G. aculeata* or *G. subsquamata* need revision and probably belong to the closely related species (e.g., *G. acerata* n. sp., *G. polydora* n. sp.). *Galathea aculeata* most closely resembles *G. peitho* n. sp. from Japan to Australia (see Remarks of this species).

No molecular data is available from *G. aculeata*.

Distribution. Australia, Queensland, Holborn Island and Port Molle, 36 m. Other literature records under the name *G. aculeata* need revision, as noted above.

***Galathea aegyptiaca* Paul'son, 1875**

(Figs 5, 115B, C)

Galathea australiensis.—Balss, 1913b: 2 (Red Sea).—Laurie, 1926: 123 (Amirante, Saya De Malha Bank, Cargados Carazos, 37–146 m).—Barnard, 1958: 4 (Delagoa Bay).

Galathea aegyptiaca Paul'son, 1875: 94, pl. 12, figs 1, 1a–b (Red Sea).—Nobili, 1906: 126, fig. 8, pl. 7, fig. 3 (Red Sea).—Lewinsohn, 1969: 98, fig. 18 (Red Sea, 0–3 m).—Garth *et al.*, 1987: 252 (list).—Baba, 1990: 952 (Madagascar, intertidal to 50 m).—Tirmizi & Javed, 1993: 61, fig. 27 (N Madagascar and Mozambique Channel, 1.5–62 m).—Baba *et al.*, 2008: 64 (in part, compilation).—Macpherson & Cleva, 2010: 58, color figs 3A, B (Mayotte and Madagascar, 0–25 m).—Poore *et al.*, 2011: 332, pl. 10B (color photo, Madagascar).—Poupin, 2013: 12, fig. 6a–b (color) (Mayotte, 3–30 m).

Dubious identifications:

Galathea aegyptiaca.—Haig, 1974: 447 (Western Australia).—Baba, 1977a: 244 (near Timor, Obi, Talaud and Holandia Bay, New Guinea, 0–10 m).—Baba, 1979b: 645 (Marsegu Island and Gorong Island, subtidal).—Baba, 1982b: 59 (Palau Islands and Yap Island, subtidal).—Kamezaki *et al.*, 1988: 95, with color fig. (Okinawa).—Wu *et al.*, 1998: 88, figs. 8, 12E (Taiwan).—Davie, 2002: 60 (no record).—Baba *et al.*, 2008: 64 (in part, compilation); 2009: 107, figs. 86–87 (Taiwan).—Dong & Li, 2010: 2 (South China Sea, intertidal to 50 m).

Material examined. Red Sea. Gulf of Aqaba. 5 m, 12 July 1995: 1 M 2.8 mm (SMF).—Stn AQ127, 5 m, 22 July 1995: 2 M 2.9–3.4 mm (SMF).—Stn AQ129, 5 m, 22 July 1995: 2 F 2.7–4.0 mm (SMF). Sudan, Al Bahr al Ahmar. Stn SAN166, 5 m, 21 September 1992: 1 F 2.4 mm (SMF).—Stn SAN173, 5 m, 21 September 1992: 1 M 2.2 mm (SMF).—Stn SAN138, 1 m, 29 September 1992: 3 ov. F 4.0–4.6 mm, 1 F 2.7 mm (SMF).—Stn SAN168, 5 m, 29 September 1992: 1 M 2.8 mm, 1 ov. F 3.9 mm (SMF).—Red Sea. No locality: 4 M 4.4–4.8 mm, 6 ov. F 4.8–5.2 mm (SMF 4577). Djibouti, Moucha Island, Maskali Bank, 11.6992°N, 43.1432°E, 7–17 m, 27 September 2012: 2 M 2.0–3.0 mm (UF33346).—Djibouti, NE Gulf of Tadjoura, E of Obock, 11.9737°N, 43.3358°E, 4–6 m, 28 September 2012: 1 M 3.0 mm (UF32802), 1 F 3.0 mm (UF32797), 1 M 2.0 mm, 2 ov. F 3.2–3.4 mm (UF33072).—Djibouti, NE Gulf of Tadjoura, E of Obock, 11.976°N, 43.365°E, 8–13 m, 29 September 2012: 1 M 3.4 mm (UF32828). Saudi Arabia, 22.2646°N, 39.0263°E, 1–20 m, 8 October 2012: 1 ov. F 2.9 mm (UF32997).—22.2741°N, 39.0512°E, 2–20 m, 10 October 2012: 1 M 3.7 mm (UF32999); 1 M 4.0 mm, 1 F 2.2 mm (UF33063).—18.2206°N, 41°32'44"E, 5–15 m, 6 March 2013: 1 M 2.5 mm (UF36154), 1 ov. F 3.4 mm (UF36675).—18.0731°N, 40.8859°E, 7–9 m, 8 March 2013: 1 M 4.1 mm (UF36010), 1 M 2.8 mm (UF36822).—22.4268°N, 38.9963°E, no depth, 18 March 2013: 1 F 4.2 mm (UF37107).—27°47'65"N, 35°07'48"E, 3–5 m, 23 June 2013: 1 ov. F 3.6 mm (SMF).—Abulat, No date: 1 M 4.1 mm (MNHN-Ga751, MNHN-IU-2013-9694).—Ras Al-Ubayd. 26.7361°N, 36.0443°E, 4 m, 26 September 2013: 1 M 2.1 mm, 1 ov. F

2.9 mm (UF36403).—Jaz'air, 27.6384°N, 35.3062°E, 10 m, 27 September 2013: 1 M 2.3 mm (UF36438).—Gulf of Aqaba, 28.4039°N, 34.7407°E, 7–8 m, 29 September 2013: 1 M 2.8 mm, 1 F 2.4 mm (UF38067).—Gulf of Aqaba, 28.3991°N, 34.7373°E, 2 m, 30 September 2013: 1 M 3.2 mm (UF38132).

Mayotte Island. BENTHEDI, Stn 16R, 12°45.2'S; 45°16.7'E, 3–8 m, 22 March 1977: 2 ov. F 2.7–2.8 mm; 2 F 1.9–2.0 mm (MNHN-IU-2013-8009).

Madagascar. ATIMO VATAE, Stn TS2, 25°01.3'S, 47°00.5'E, 18 m, 29 April 2010: 3 F 1.6–3.0 mm (MNHN-IU-2013-8016).—Stn TB1, 24°59.8'S, 47°05.7'E, 22 m, 30 April 2010: 1 F 2.9 mm (MNHN-IU-2013-8013).—Stn TB2, 25°01.3'S, 47° 00.5'E, 18 m, 01 May 2010: 3 M 2.6–3.4 mm, 1 ov. F 4.4 mm, 4 F 2.2–4.8 mm (MNHN-IU-2013-8010, MNHN-IU-2010-2739).—Stn TB3, 25°01.3'S, 47° 00.5'E, 18 m, 01 May 2010: 1 M 4.1 mm, 3 ov. F 3.0–3.6 mm, 1 F 2.6 mm (MNHN-IU-2013-8011).—Stn TB5, 25°02.2'S, 47°00.4'E, 23 m, 07 May 2010: 1 ov. F 3.1 mm (MNHN-IU-2010-2742).—Stn TB9, 25°02.3'S, 46°59.6'E, 6–7 m, 10 May 2010: 1 ov. F 3.9 mm (MNHN-IU-2010-2744).—Stn TA1, 25°09.5'S, 46°45.3'E, 7–14 m, 12 May 2010: 1 M 4.8 mm (MNHN-IU-2013-8019).—Stn DW3606, 25°48.4'S, 44°51.1'E, 44–46 m, 13 May 2010: 1 ov. F 2.8 mm, 1 F 2.7 mm (MNHN-IU-2010-2740).—Stn TB12, 25°01.5'S, 47°00.0'E, 4–5 m, 14 May 2010: 1 ov. F 2.7 mm, 1 F 2.0 mm (MNHN-IU-2013-8012).—Stn TB13, 25°01.5'S, 47°00.0'E, 2–4 m, 15 May 2010: 1 ov. F 4.0 mm (MNHN-IU-2013-8015).—Stn BS1, 25°28.2'S, 44°56.4'E, 12–14 m, 25 May 2010: 1 M 4.4 mm (MNHN-IU-2013-8014).—Stn BB4, 25°26.9'S, 44°55.9'E, 14–18 m, 30 May 2010: 1 ov. F 4.2 mm (MNHN-IU-2013-8018).—Stn BS4, 25°26.9'S, 44°55.9'E, 14–18 m, 30 May 2010: 1 M 4.2 mm (MNHN-IU-2013-8017).

Chagos Islands. Great Chagos Bank, Brothers Island. Stn CH0594, 8–12 m, February 2012: 1 M 2.6 mm (OUMNH).

Description. *Carapace:* As long as broad; cervical groove distinct, but anterior cervical groove indistinct; transverse ridges on dorsal surface with numerous non-plumose setae, and some thick long iridescent and plumose setae, in particular forming median tuft between epigastric spines and on median convexity of anterior protogastric ridge. Seven ridges on gastric region: 1 epigastric ridge with 2 submedian spines, medially interrupted; 2 protogastric ridges, anterior ridge strongly convex medially, uninterrupted, with 1 parahepatic spine on each side, posterior ridge short, scale-like and placed medially; 2 mesogastric ridges, anterior ridge uninterrupted, extending laterally to anteriormost branchial marginal spine, posterior ridge scale-like; 2 metogastric ridges uninterrupted and sometimes fused with anterior branchial ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 transverse ridges, 3 or 4 ridges uninterrupted. Lateral margins medially convex, with 7 spines: 2 spines in front of, and 5 spines behind, indistinct anterior cervical groove; first spine at anterolateral angle well-developed, at same level of lateral limit of orbit; second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, accompanying another spine ventral to between first and second; 2 spines on anterior branchial margin, last small, and 3 spines on posterior branchial margin, last small. External limit of orbit ending in small spine; infra-orbital margin with a strong spine. Rostrum broadly triangular, as long as or slightly longer than broad, length 0.5 of, breadth 0.4 of carapace, distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions, dorsal surface nearly horizontal in lateral view, with some thick long plumose setae; lateral margin with 4 sharp teeth.

Pterygostomian flap rugose, anterior margin ending in well-developed spine; no facial spine.

Sternum: 0.8 times as long as broad, lateral limits divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite, with or without short scales between those transverse ridges; somite 5 and 6 each with 2 ridges, some of them medially interrupted; posteriomedian margin of somite 6 distinct. Males with G1 and G2.

Eyes: Ocular peduncles 1.1 times longer than broad, maximum corneal diameter 0.5 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger. Ultimate article twice longer than broad, with tuft of fine setae on distodorsal margin.

Antenna: Article 1 hardly visible from dorsal view, with depressed distomesial process slightly exceeding distal margin of peduncle. Article 2 with distomesial spine smaller than distolateral, exceeding midlength of article 3. Article 3 with small, distinct distolateral spine. Article 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor margin unarmed; crista dentata with 20 or 21 denticles. Merus shorter than ischium, with 2 strong spines of subequal size on flexor margin, proximal one located at midlength, distal one at terminal end; extensor margin with distal spine. Carpus spineless.

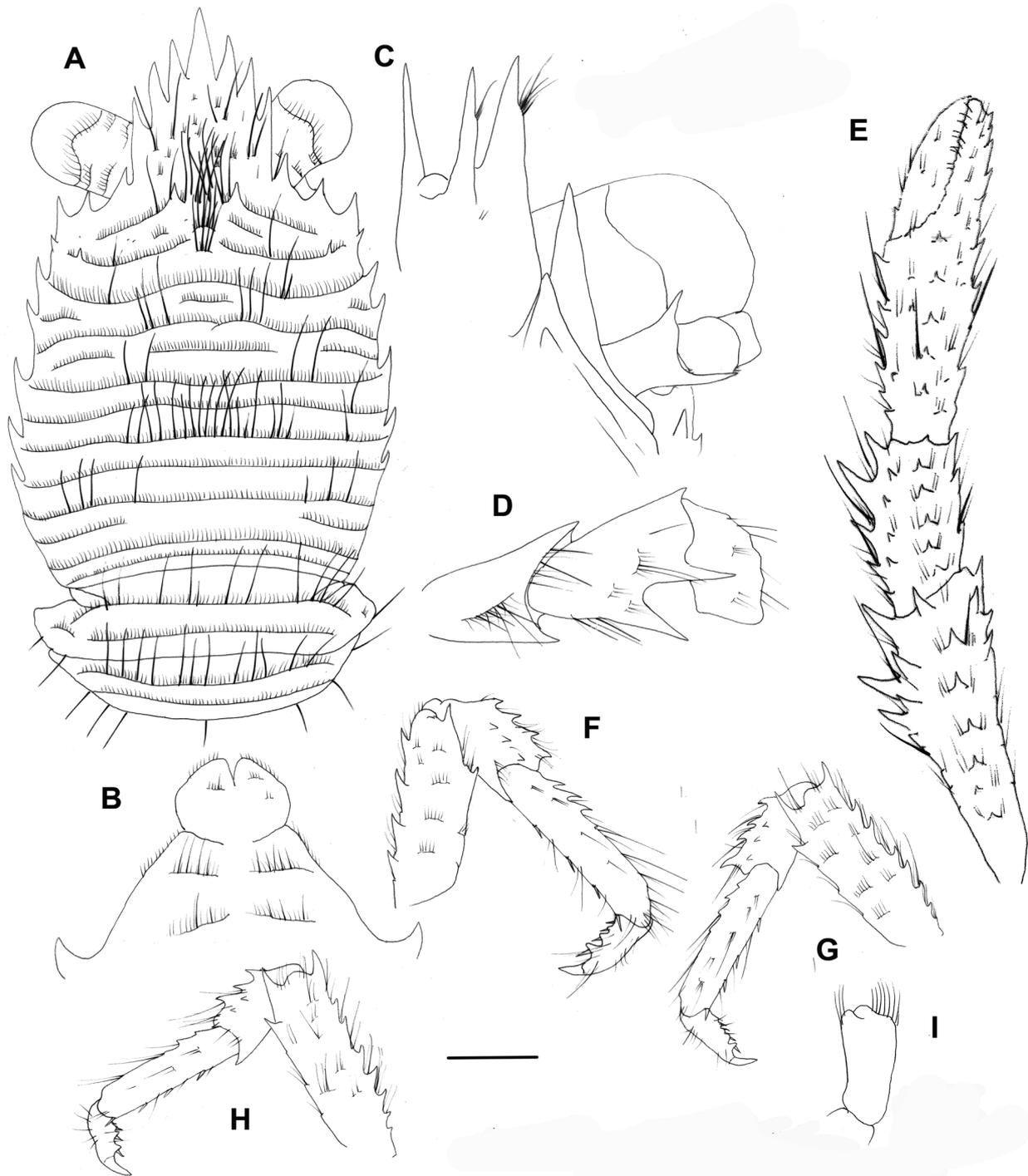


FIGURE 5. *Galathea aegyptiaca* Paul'son, 1875, male 4.1 mm, Red Sea (UF36010). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view; I, ultimate article of antennular peduncle. Scale: A, E–H = 1 mm; B–D, I = 0.5 mm.

P1: 2.0–4.0 times carapace length, relatively slender, subcylindrical, with numerous short setae and some scattered long plumose setae on dorsal surface and along lateral and mesial margins of all articles. Merus as long as or slightly shorter than carapace, 1.3–1.7 times as long as carpus, with rows of spines, mesial and distal spines strong. Carpus 0.8 length of palm, 1.9–2.2 times longer than broad, lateral and mesial margins subparallel, dorsal surface with small spines in 2 longitudinal rows; mesial surface with row of well-developed spines; and row of small spines along lateral margin. Palm 2.3 times longer than broad, lateral and mesial margins subparallel; spines

arranged in irregular longitudinal rows on dorsal, mesial and lateral surfaces; lateral row continued onto whole lateral margin of fixed finger. Fingers 0.6–0.8 as long as palm, each finger distally with 2 rows of teeth, spooned; mesial margin of movable finger unarmed.

P2–4: Moderately setose, sparsely with long setae on all articles. P2 1.6–1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.9 length of P3 merus), equally broad on P2–4; P2 merus 0.5–0.7 carapace length, 3.2–3.5 times as long as broad, 1.5 times longer than P2 propodus; P3 merus 3.4 times as long as broad, 1.3 times length of P3 propodus; P4 merus 2.8 times as long as broad, 1.1 length of P4 propodus; extensor margins with row of 6–9 proximally diminishing spines on P2–3, unarmed on P4; lateral surface unarmed on P2–3, row of 4 proximally diminishing spines on P4; flexor margins each with strong terminal spine. Carpi each with 4 spines on extensor margin; lateral surface each with row of 2 or 3 small spines paralleling extensor row; flexor distal margins each with spine. Propodi subequal in length for one another in P3 and P4, slightly shorter in P2, equally broad in P2–4, and 3.5–4.0 times as long as broad; extensor margins each with 2 or 3 proximal spines in P2–4; flexor margins each with 4 slender movable spines in P2 or 3, 3 in P4; 2 proximal spines on lateral surface on P2 or 3, unarmed on P4. Dactyli subequal in length, 0.7 length of propodi, ending in incurved, strong, sharp spine; flexor margins each with prominent triangular subterminal tooth preceded by 4 or 5 low teeth, each tooth bearing robust setae.

Epipods present on P1, absent on P2–3.

Color. Base color reddish or greenish, with darker ridges on the carapace dorsal surface and abdomen, and darker stripes on pereopods; rostrum reddish or greenish; plumose setae on carapace reddish or whitish; some spines on carapace margins and pereopods with basis blue and distal point red; basis of P1 fingers bluish; distal part of P2–4 meri each with orange spot.

Remarks. *Galathea aegyptiaca* was described from two males collected in the Red Sea. Unfortunately the types were lost. The species is characterized by the uninterrupted mesogastric ridge between the left and right anteriormost branchial marginal spines and the presence of plumose stiff setae on the carapace and rostrum. However, the molecular data has revealed the existence of some closely similar species differentiated by subtle morphological characters: *G. corbariae* **n. sp.** from Japan to Vanuatu, *G. homologa* **n. sp.** from Vanuatu, *G. imitata* **n. sp.** from Western Australia and *G. simulata* **n. sp.** from New Caledonia.

Galathea aegyptiaca seems restricted to the western Indian Ocean, therefore, previous records from all localities in the western Pacific should belong to other species (see synonymy). The genetic divergences among *G. aegyptiaca* and the other related species are quite large (13.1–16.6% COI, 4.8–7.8% 16S rRNA, see Tab. 1). The specimens from Madagascar and Mayotte Islands show a divergence higher than 5% (COI) with those from the Red Sea (type locality) that could indicate the existence of two cryptic species. However, no morphological differences have been observed between the material from the two areas. Further analysis is necessary to establish the specific status of the population in Madagascar and adjacent waters.

Galathea aegyptiaca can be distinguished from *G. corbariae*, *G. homologa* and *G. imitata* by the presence of a short posterior median protogastric ridge and a short posterior median mesogastric ridge. These ridges are absent in the other species (sometimes one of them can be present). *Galathea simulata* can be differentiated from *G. aegyptiaca* by having the P2–3 propodi more elongate, 5 times longer than broad, whereas they are less slender, equal or less than 4 times longer than broad, in the other species.

Distribution. Eastern African coasts, from the Red Sea to Mozambique, Madagascar, Amirante, Saya De Malha Bank, Cargados Carajos, Chagos Islands, 0–146 m. Specimens collected on *Stylophora pistillata*, *Pavona decussata*, and in dead *Pocillopora*.

***Galathea aequata* n. sp.**

(Figs 6, 115D)

Dubious identifications:

Galathea affinis.—Nobili, 1907: 375, pl. 1, fig. 11 (Tuamotu Archipelago).—Peyrot-Clausade, 1989: 112 (Tuamotu Archipelago, 5–30 m).—Poupin, 1996: 19 (compilation of French Polynesia records).

Material examined. *Holotype:* French Polynesia. Society Islands. Moorea Island, 17.4964°S, 149.7528°W, 0–1 m, 20 June 2006: 1 M 4.1 mm (UF9860).

Paratypes: French Polynesia. Society Islands. Moorea Island, 17.5311°S, 149.9053°W, 0–2 m, 22 June 2005: 1 M 3.0 mm (UF10006), 1 M 3.3 mm, 1 ov. F 3.1 mm (UF10007).— N shore of Moorea, 3–5 m, 13 April 2006: 1 M 2.1 mm (UF9614).— NE corner of Moorea lagoon, 0–2 m, 4 May 2006: 1 M 2.0 mm (UF9491).— Opunohu Bay, 3.5–4.5 m, 26 May 2006: 1 ov. F 3.0 mm (UF9424), 1 ov. F 3.3 mm (UF9620).— June–August 2006: 1 M 2.2 mm (UF13852). 17.4747°S, 149.8128°W, no depth: 2 ov. F 2.2–2.3 mm, 1 F 2.2 mm (UF10270), 1 M 2.9 mm (UF10280), 1 ov. F 2.7 mm (UF10281), 1 M 1.9 mm (UF10282).— 17.4775°S, 149.8412°W, 1–2 m, 18 October 2008: 1 M 4.1 mm (UF15761). Paorea Point, 0–0.5 m, 19 October 2008: 1 ov. F 2.7 mm (UF18369).— June 2009: 1 ov. F 3.0 mm (UF37852).— 17.4824°S, 149.824°W, 1 m, 1 November 2010: 1 M 2.2 mm (UF28828).

French Polynesia. Tuamotu Islands. 18 October 1965: 1 ov. F 3.2 mm (MNHN-IU-2013-9738).— 16 October 1965: 1 ov. F 3.4 mm (MNHN-IU-2013-9739).— Mururoa Atoll, ref. 248, 1965: 1 M 3.5 mm (MNHN-IU-2013-9737).— April 1996: 3 M 3.6–4.0 mm, 2 ov. F 3.6–4.1 mm (MNHN-IU-2013-14170).— Makemo Atoll, April 2009: 1 M 3.6 mm (UF18685).— Hao Atoll, 18.0709°S, 140.9822°W, 0.5–2 m, 17 January 2013: 1 ov. F 2.1 mm (UF35295).

French Polynesia. Gambier Islands. Terevai Island, 23.144°S, 135.0968°W, 13.7 m, 30 January 2013: 1 M 3.9 mm (UF35419).— 23.1548°S, 135.0189°W, 23.2 m, 2 February 2013, 1 M 1.3 mm.— 23.1517°S, 135.0554°W, 0.5–9 m, 8 February 2013: 1 M 2.0 mm (UF35498).

Etymology. From the Latin *aequatus*, equality, in reference to the similarity with *G. mauritiana*.

Description. *Carapace*: As long as broad; anterior cervical groove indistinct; transverse ridges with dense short setae, and a few scattered long and thick setae. Gastric region with some transverse ridges: 1 epigastric ridge with 2 submedian spines, medially interrupted; protogastric ridge uninterrupted and extending laterally to first anterolateral spine, laterally interrupted in some specimens; 1 mesogastric ridge uninterrupted and extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, anterior ridge convex and usually uninterrupted, not extending laterally to anterior branchial ridges, posterior ridge short, sometimes absent. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges, 2 of them uninterrupted. Lateral margins medially convex, with 8 spines: 2 spines in front of and 6 spines behind indistinct anterior cervical groove; first anterolateral, well-developed, behind level of external limit of orbit; second minute, 1 spine ventral to between first and second; 3 spines on anterior branchial margin, and 3 spines on posterior branchial margin, last small. External limit of orbit unarmed, with well-developed frontal spine between external limit of orbit and anterolateral spine, infra-orbital margin with strong spine. Rostrum broadly triangular, 1.3–1.4 times as long as broad, length 0.5 of, breadth 0.3–0.4 of carapace, distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions, dorsal surface slightly concave medially; lateral margin with 4 sharp teeth.

Pterygostomial flap rugose, with 1 distinct spine on upper margin near linea anomurica, anterior margin ending in well-developed spine.

Sternum: Slightly longer than broad, lateral limits divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somites 5 and 6 each with 2 ridges, medially interrupted, posteromedian margin of somite 6 distinct. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger; distomesial smaller than others. Ultimate article with a few short setae not in tuft on distodorsal margin.

Antenna: Article 1 with depressed distomesial process not reaching distal margin of article 2. Article 2 with subequal distal spines, reaching midlength of article 3. Article 3 with distinct distomesial spine. Article 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor margin unarmed; crista dentata with 22–24 denticles. Merus shorter than ischium, with strong proximal spine on flexor margin, located at midlength, and clearly not reaching distal margin of merus, small or obsolescent distal spine on flexor margin; extensor margin with distal spine. Carpus spineless.

P1: 1.8–2.5 times carapace length, relatively slender, subcylindrical, with numerous short setae and some long setae on dorsal surface and along lateral and mesial margins of all articles. Merus 0.8–0.9 length of carapace, 1.3–1.5 times as long as carpus, with rows of spines, mesial and distal spines strong. Carpus as long as palm, 1.7–2.1 times longer than broad, lateral and mesial margins subparallel, dorsal surface with small spines; mesial surface with row of 3 or 4 well-developed spines; and row of small spines along lateral margin. Palm 1.4–1.7 times longer than broad; spines arranged in irregular longitudinal rows on dorsal, mesial and lateral surfaces, lateral row continued onto whole lateral margin of fixed finger. Fingers as long as palm, each finger distally with two rows of teeth, spooned; movable finger with row of dorsomesial spines.

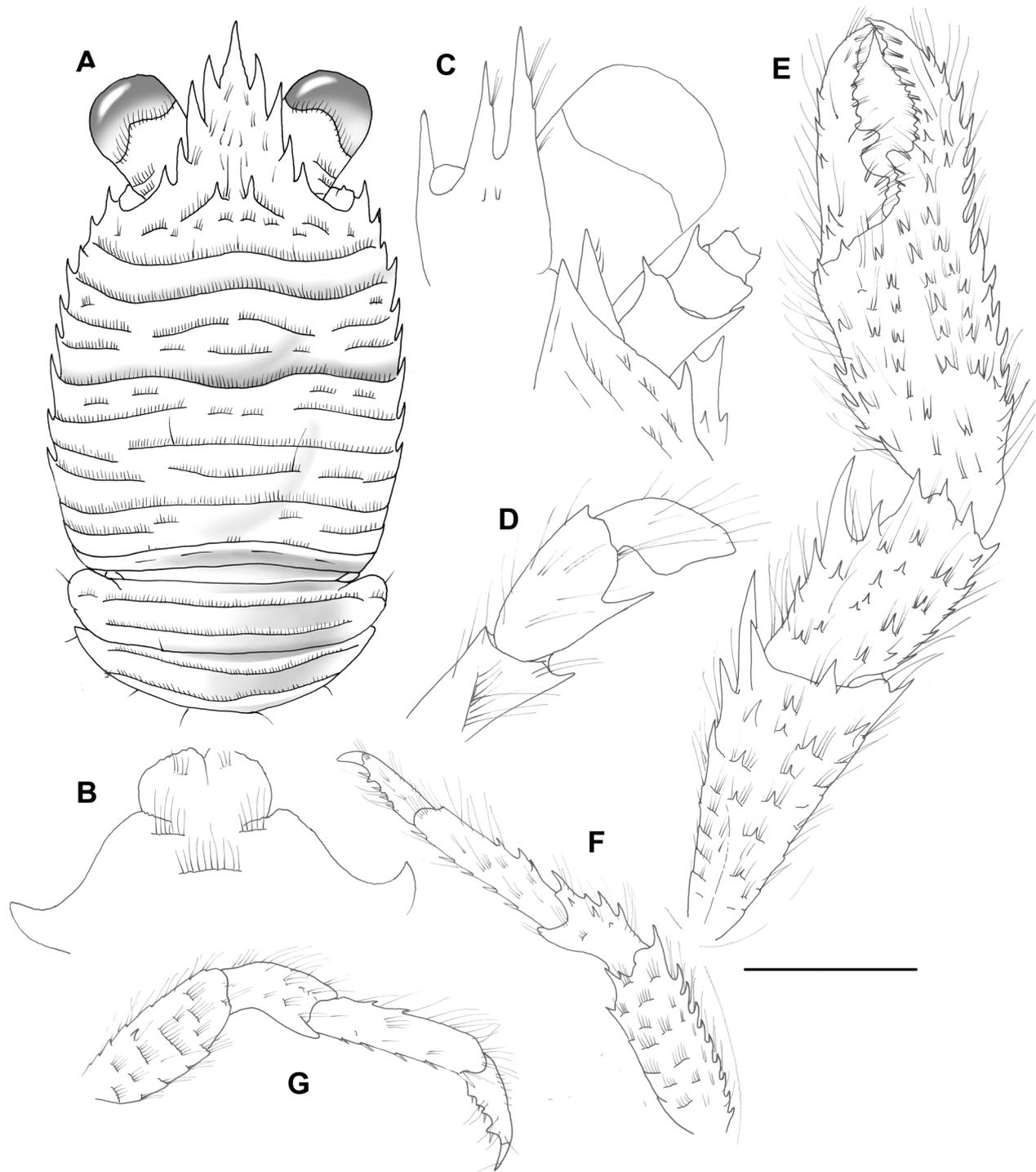


FIGURE 6. *Galathea aequata* n. sp., holotype, male, 4.1 mm, French Polynesia (UF9860). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, left P2, lateral view; G, right P4, lateral view. Scale: A, E–G = 1 mm; B–D = 0.5 mm.

P2–4: Relatively slender, somewhat compressed, moderately setose, sparsely with long setae on all articles. *P2* 1.5 times carapace length. Meri successively shorter posteriorly (*P3* merus 0.8 length of *P2* merus, *P4* merus 0.7 length of *P3* merus); *P2* merus 0.6 carapace length, 2.9–3.0 times as long as broad, 1.4 times longer than *P2* propodus; *P3* merus 3.0 times as long as broad, 1.2 times length of *P3* propodus; *P4* merus 2.4 times as long as broad, 1.0–1.2 length of *P4* propodus; extensor margins each with row of 8–10 proximally diminishing spines in

P2–3, 1 or 2 distal spines in P4; lateral surfaces unarmed in P2–3, 1 or 2 spines in P4; 2 well-developed spines on terminal flexor margins, sometimes obsolescent in P4; flexor mesial margin with terminal spine on P2 only. Carpi each with 3 or 4 spines on extensor margin in P2–3, 0 or 1 minute spine in P4; lateral surfaces with row of 2 or 3 acute granules or spines paralleling extensor row in P2–3, obsolescent in P4; flexor distal margins ending in acute projection. Propodi 3.4–3.6 times as long as broad in P2–4; extensor margins each with 3 proximal spines in P2, unarmed in P3–4; flexor margins each with 5 or 6 (rarely 4) slender movable spines in P2–4; lateral surfaces unarmed. Dactyli 0.6–0.7 length of propodi, ending in incurved, strong, sharp spine; flexor margins each with prominent triangular terminal tooth preceded by low 4 teeth, each tooth bearing robust setae.

Epipods absent on pereopods.

Coloration. Ground color of carapace, abdominal somites 2–4 and pereopods greenish, with darker transverse ridges; some whitish patches scattered on carapace and abdomen surface. Distal part of P1 palm and proximal portion of P1 fingers whitish; one distinct black spot and one yellow spot on distal part of P1 palm.

Remarks. The new species resembles *G. mauritiana* Bouvier, 1914 and *G. acis* n. sp. (for details, see Remarks for these species). Previous records of *G. affinis* from French Polynesia, are likely to be *G. aequata*, and should be confirmed after the examination of the specimens.

Distribution. French Polynesia, Society, Gambier and Tuamotu Islands, 0–23 m.

***Galathea ahyongi* n. sp.**

(Figs 7, 115E)

Galathea affinis—Lewinsohn, 1969: 112, fig. 21 (Red Sea, 0–2 m).

Galathea mauritiana.—Laurie, 1926: 125 (in part, Chagos, 48 m).

Material examined. *Holotype*: Red Sea. Farasan Banks, Dolphen Lagoon, 19.0053°N, 40.1482°E, 1–7 m, 4 March 2013: 1 ov. F 3.5 mm (UF36149).

Paratypes: Red Sea. Gulf of Aqaba. Nahorst Expedition'77, 10 km Aqaba, 20 March 1977: 1 F 3.5 mm (SMF). Ferry Port, 5–10 m, 22 July 1995: 2 M 2.5–3.0 mm, 1 ov. F 3.0 mm (SMF). Rabigh, Stn 1, 7 April 2011: 2 M 2.9–3.0 mm, 1 ov. F 3.1 mm (SMF). Jeddah, Stn 1, 17 April 2011: 1 ov. F 2.6 mm (SMF).

Red Sea. Sudan, Al Bahr al Ahmar, Sanganeb. SAN49, 1 m, 26 March 1991: 1 ov. F 3.6 mm (SMF).—SAN50, 26 March 1991: 2 M 3.5–3.8 mm, 3 ov. F 3.8–4.0 mm (SMF).—SAN36, 28 March 1991: 1 ov. F 3.5 mm (SMF).—SAN39, 5 m, 28 March 1991: 2 M 2.0–2.3 mm, 2 F 2.0–2.1 mm (SMF).—SAN51, 1 m, 30 March 1991. 2 M 2.9–3.3 mm, 2 ov. F 3.8–4.0 mm (SMF).—SAN12, 1 m, 4 April 1991: 8 M 2.2–3.4 mm, 10 ov. F 2.8–4.6 mm, 7 F 1.8–2.5 mm (SMF).—SAN3, 1 m, 5 April 1991: 15 M 2.4–3.5 mm, 13 ov. F 2.5–3.6 mm, 8 F 2.0–2.7 mm (SMF).—SAN35, 5 April 1991: 1 M 2.7 mm (SMF).—SAN 2, 1 m, 6 April 1991: 1 M 1.6 mm, 3 ov. F 2.1–2.4 mm, 2 F 1.6–1.8 mm (SMF).—SAN8, 1 m, 6 April 1991: 34 M 2.2–3.6 mm, 27 ov. F 2.6–4.0 mm, 16 F 2.1–2.9 mm (SMF).—SAN38, 1 m, 8 April 1991: 1 F 2.8 mm (SMF).—SAN13, 1 m, 8 April 1991: 16 M 1.6–3.5 mm, 21 ov. F 3.0–4.5 mm, 7 F 2.1–2.6 mm (SMF).—SAN166, 5 m, 21 September 1992: 3 M 2.2–2.6 mm, 2 ov. F 2.2–2.5 mm (SMF).—SAN133, 1 m, 25 September 1992: 1 ov. F 3.5 mm (SMF).—SAN154, 1 m, 25 September 1992: 2 M 3.0–3.4 mm, 1 ov. F 3.6 mm, 1 F 3.0 mm (SMF).—SAN101, 1 m, 26 September 1992: 4 M 2.0–2.6 mm, 8 ov. F 2.4–2.9 mm, 1 F 2.2 mm (SMF).—SAN113, 1 m, 27 September 1992: 1 M 3.0 mm, 1 ov. F 3.2 mm (SMF).—SAN144, 8 m, 1 October 1992: 1 ov. F 2.3 mm (SMF).—SAN120, 6–10 m, 3 October 1992: 1 M 3.0 mm (SMF).—SAN57, 1 m, no date: 5 M 2.8–3.6 mm, 3 ov. F 2.3–4.1 mm (SMF). Red Sea. Al Wajh, 26°15.769'N, 36°26.034'E, 0.5 m, 11 April 2011: 1 ov. F 2.8 mm (SMF).—Al Maqunah, 28°27.239'N, 34°45.799'E, 0–5 m, 12 April 2011: 10 M 1.9–3.8 mm, 11 ov. F 2.5–3.1 mm (SMF).—Jeddah, 21°53.09'N, 38°58'22"E, 0.5 m, 17 April 2011: 8 M 1.8–3.3 mm, 7 ov. F 2.8–4.0 mm, 3 F 1.8–2.7 mm (SMF).—Farasan Islands, Saso Island, 16°52.211'N, 41°35.545'E, 0.5–1 m, 21 February 2012: 8 M 1.9–4.1 mm, 6 ov. F 3.2–3.7 mm, 1 F 3.1 mm (SMF).—Thuwai, Al-Fahal reef, 1–15 m, 6 October 2012: 1 ov. F 2.7 mm (UF32937).—Al Lith, 20°12.012'N, 40°07.104'E, 0–5 m, 6 March 2012: 1 M 2.1 mm (SMF).—Al Wajh, 26°14'47"N, 36°26'47"E, 0–5 m, 12 June 2013: 1 ov. F 3.2 mm (SMF).—25°12'39"N, 37°12.22"E, 0–5 m, 14 June 2013: 1 ov. F 3.6 mm (SMF).—Dubai, 27°20'39"N, 35°41'41"E, 0.5 m, 21 June 2013: 1 M 4.0 mm (SMF).—Alkhuraybath, 28°06'27"N, 34°59'27"E, 0–1 m, 23 June 2013: 1 M 2.1 mm (SMF). Saudi Arabia. Yanbu, 24.4427°N, 37.2477°E, 3–22 m, 4 October 2013: 1 M 2.1 mm (UF38284).

Oman. Gulf of Oman. SE of Muscat, Bandar Karyan, 23°31.623'N, 58°44.367'E, 4–15 m, 28 January 2005: 1 M 3.2 mm (UF7578).

Etymology. Named for Shane T. Ahyong, for his major contributions to Anomuran systematics and decapod crustacean phylogeny.

Description. *Carapace:* Slightly longer than broad; anterior cervical groove indistinct; tranverse ridges with dense short setae, and a few scattered long and thick setae. Gastric region with 5 transverse ridges: 1 epigastric ridge with 2 submedian spines, medially interrupted; 1 protogastric ridge, slightly convex medially, uninterrupted and extending laterally to carapace margin; 1 mesogastric ridge interrupted laterally by cervical groove; 2 metogastric ridges, anterior one convex and usually medially interrupted, posterior ridge scale-like. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges, 1 or 2 of them uninterrupted. Lateral margins medially convex, with 8 spines: 2 spines in front of and 6 spines behind indistinct anterior cervical groove; first spine anterolateral, well-developed, behind of lateral limit of orbit; second minute, 1 spine ventral to between first and second; 3 spines on anterior branchial margin and 3 spines on posterior branchial margin, last small. External limit of orbit unarmed, 1 well-developed frontal spine between external limit of orbit and first anterolateral spine, infra-orbital margin with strong spine. Rostrum broadly triangular, 1.4–1.5 times as long as broad, length 0.4 that of, breadth 0.3–0.4 that of carapace, distance between distalmost lateral incisions 0.3 of distance between proximalmost lateral incisions, dorsal surface slightly concave medially; lateral margin with 4 sharp teeth.

Pterygostomial flap rugose, with 1 distinct spine on upper margin near linea anomurica, anterior margin ending in well-developed spine.

Sternum: Slightly longer than broad, lateral limits divergent posteriorly

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somites 5 and 6 each with 2 ridges, medially interrupted. Males with G1 and G2.

Eyes: Ocular peduncles 1.3–1.4 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger; distomesial smaller than others. Ultimate article with a few short setae not in tuft on distodorsal margin.

Antenna: Article 1 with depressed distomesial process not reaching distal margin of article 2. Article 2 with subequal distal spines, nearly reaching midlength of article 3. Article 3 with distinct distomesial spine. Article 4 unarmed.

Mxp3: Ischium with distal spine on flexor margin; extensor margin unarmed; crista dentata with 22–24 denticles. Merus subequal in length to ischium, with strong proximal spine on flexor margin, located at midlength, and reaching distal margin of merus; 1 small distal spine; extensor margin with small distal spine. Carpus spineless.

P1: 1.8–2.2 times carapace length, relatively slender, subcylindrical, with numerous short setae and some long setae on dorsal surface and along lateral and mesial margins of all articles. Merus 0.6–0.8 length of carapace, 1.5 times as long as carpus, with rows of spines, mesial and distal spines strong. Carpus as long as palm, 1.8–2.1 times longer than broad, lateral and mesial margins subparallel, dorsal surface with small spines; mesial surface with row of 3–5 well-developed spines; and row of small spines along lateral margin. Palm 1.5–1.7 times longer than broad; spines arranged in irregular longitudinal rows on dorsal, mesial and lateral surfaces; lateral row continued onto whole lateral margin of fixed finger; mesial row continuing along mesial margin of movable finger. Fingers 0.9–1.1 times longer than palm, each finger distally with two rows of teeth, spooned.

P2–4: Relatively slender, somewhat compressed, moderately setose, sparsely with long setae on all articles. P2 1.6–1.7 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.6–0.7 carapace length, 3.0–3.2 times as long as broad, 1.6–1.7 times longer than P2 propodus; P3 merus 2.8–3.0 times as long as broad, 1.2–1.3 times length of P3 propodus; P4 merus 2.1–2.2 times as long as broad, 1.0–1.1 length of P4 propodus; extensor margins each with row of 11–13 proximally diminishing spines on P2–3, 2–4 spines on P4; lateral surfaces unarmed on P2–4; 2 well-developed spines on terminal flexor margin, sometimes obsolescent in P4; flexor mesial margin with terminal spine on P2 only. Carpi each with 4 or 5 spines on extensor margin in P2–3, 0–1 minute spine in P4; lateral surfaces each with row of 2 or 3 acute granules paralleling extensor row of spines; flexor distal margin ending in acute angle. P2–4 propodi 3.5–3.7 times as long as broad; extensor margin with 3 or 4 proximal spines in P2–3, unarmed in P4; flexor margin with 4 or 5 slender movable spines in P2–4. Dactyli 0.6–0.7 length of propodi, ending in incurved, strong, sharp spine; flexor margin with prominent triangular terminal tooth preceded by obsolescent 4 teeth.

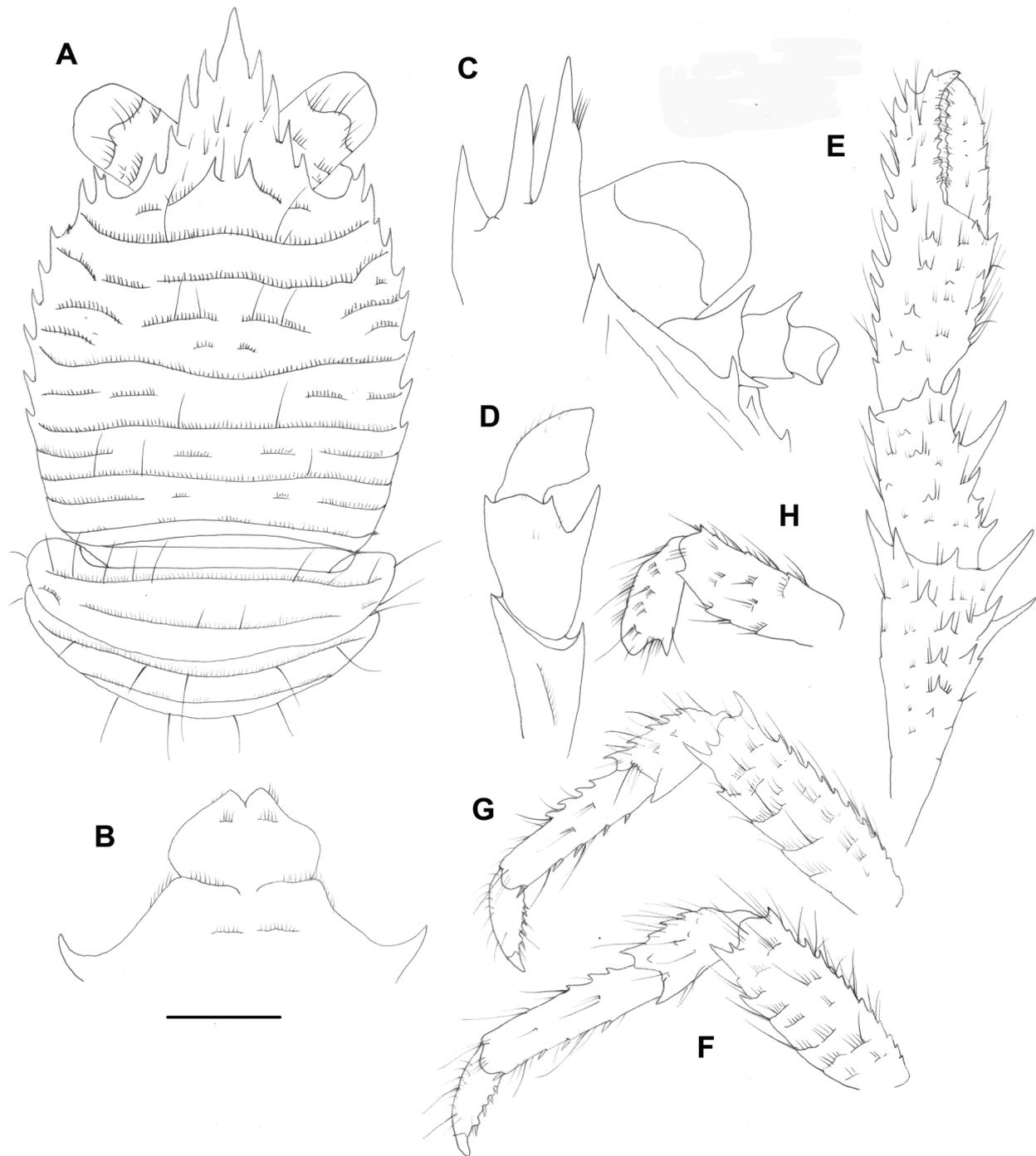


FIGURE 7. *Galathea ahyongi* n. sp., holotype, ovigerous female, 3.5 mm, Red Sea (UF36149). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, left P2, lateral view; G, left P3, lateral view; H, left P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Epipods absent on pereopods.

Coloration: Ground color of carapace, abdominal somites 2–4 and pereopods greenish, with darker transverse ridges; some whitish patches scattered on carapace and abdomen surface; each branchial region with one small black spot near posterior cervical groove. Distal part of P1 palm and proximal portion of P1 fingers whitish; one distinct black spot on distal part of P1 palm. P2–4 with green and whitish transverse bands.

Remarks. The new species resembles *G. mauritiana* Bouvier, 1914 and other species characterized by the pterygostomial flap with one or two spines on the upper margin near the linea anomurica, and an uninterrupted

mesogastric ridge between the anteriormost branchial marginal spines (e.g. *G. acis* **n. sp.**, *G. aequata* and *G. senta* **n. sp.**). *Galathea ahyongi* **n. sp.** is easily distinguished from the other species of the group by having the anterior mesogastric ridge interrupted medially and/or laterally, instead of uninterrupted in the other species.

The genetic divergences among *G. ahyongi* and the other closely related species are always larger than 9.8% (COI) (Tab. 1).

Distribution. Red Sea, Oman, on *Stylophora* sp., *Pocillopora* sp. and *Pavona decussata*, 0–15 m.

***Galathea albatrossae* Baba, 1988**

Galathea albatrossae Baba, 1988: 65, fig. 26 (off northwestern Palawan, 26–46 m) (Sulu Sea off western Mindanao, off northwestern Palawan, South China Sea off southwestern Luzon, 20–60 m).—Baba 1989: 128 (Oshima Strait, Amami-oshima, 25–45 m).—Komai 2000: 352 (list).—Baba *et al.* 2009: 109, figs. 88–89 (Taiwan, 36 m).—Poore *et al.* 2011: 332, pl. 10C (color photo, Taiwan).

Material examined. Japan. Ryukyu Islands, Okinawa Island, Toukamuri, 26.5439°N, 128.0497°E, 20–23 m, 21 July 2010: 1 ov. F 5.5 mm (UF 27166).

Palau. 8 M 3.2–4.4 mm, 4 ov. F 3.6–4.0 mm (UF 5218).—Palau. Ngeremlengui Channel, 15 m, 21 June 1995: 1 M 2.4 mm (UF 5050).

Philippines. MUSORSTOM 1, Stn 73, 14°15'N, 120°31'E, 70–76 m, 28 March 1976: 1 M 2.6 mm, 2 ov. F 3.4–3.6 mm (MNHN-IU-2013-8105).

Vanuatu. SANTO, Stn DS22, 15°31.7'S, 167°09.7'E, 25 m, 15 September 2006: 1 F 4.2 mm (MNHN-IU-2013-13974).

New Caledonia. Lagon East. Stn 833, 20°49.8'S, 165°17.7'E, 52–70 m, 11 January 1987: 2 ov. F 4.6–4.8 mm (MNHN-IU-2013-8107).

Remarks. The specimens examined agree quite well with the original description and illustrations (Baba 1988). The P1 fingers are distally ending in incurved teeth to cross each other when closed. This character, together with the shallowly incised rostral lateral teeth, can be used to differentiate *G. albatrossae* to other closely related species, e.g. *G. pubescens* Stimpson, 1858, *G. tagaloa* **n. sp.**, that have P1 fingers distally spooned and the rostral lateral teeth deeply incised.

No molecular data is available from *G. albatrossae*.

Distribution. Western Pacific, from Japan to New Caledonia, 15–76 m.

***Galathea algae* Baba, 1969**

(Fig. 8)

Galathea algae Baba, 1969b: 11, fig. 2 (type locality: Tosa Bay, 27 m [holotype, male, ZLKU 7046]).

Not *Galathea algae*. — Baba 1979b: 646 (Gorong Island and Marsegu Island, Moluccas, subtidal) (= *G. leporis* **n. sp.**).

Dubious identifications:

Galathea algae Baba, 1977a: 248 (Obi latoe, Ternate, and Seychelles, 0–4 m).—Baba, 1982b: 59 (Palau Islands and Yap Island, subtidal).—Peyrot-Clausade, 1989: 112 (Tuamotu Archipelago, 5–30 m).—Poupin, 1996: 20 (compilation of French Polynesia records).

Material examined. *Holotype*: Japan. Off Tosa, Shimizu, Tosa Bay, 27 m, in seabeds, June 1959: 1 M 4.2 mm (ZLKU 7046).

Paratype: Japan. Off Tosa, Shimizu, Tosa Bay, 27 m, in seabeds, June 1959: 1 F 4.1 mm (ZLKU 7046).

Remarks. This species was described by Baba (1969), but was later synonymized with *G. spinosorostris* (cf. Baba *et al.* 2008). However, the examination of the type material from Japan, and a comparison with the topotypic material of *G. spinosorostris* Dana 1852 from Hawaii (see also Remarks of this latter species) indicates that both species can be distinguished by morphologically and they should be considered as separate species. The two species can be distinguished by the following constant characters:

- The P1 movable finger has a row of well-developed marginal spines in *G. spinosorostris*, whereas this finger is unarmed in *G. algae*.
- The posteromedian margin of the abdominal somite 6 is convex in *G. spinosorostris*, instead of transverse in *G. algae*.

Galathea algae is also closely related to *G. cephyra* n. sp. from New Caledonia and *G. eulimene* n. sp. from the western Indian Ocean (see below under Remarks of these species).

No molecular data are available from *G. algae*.

Distribution. So far known only from Japan, Tosa Bay, 27 m.

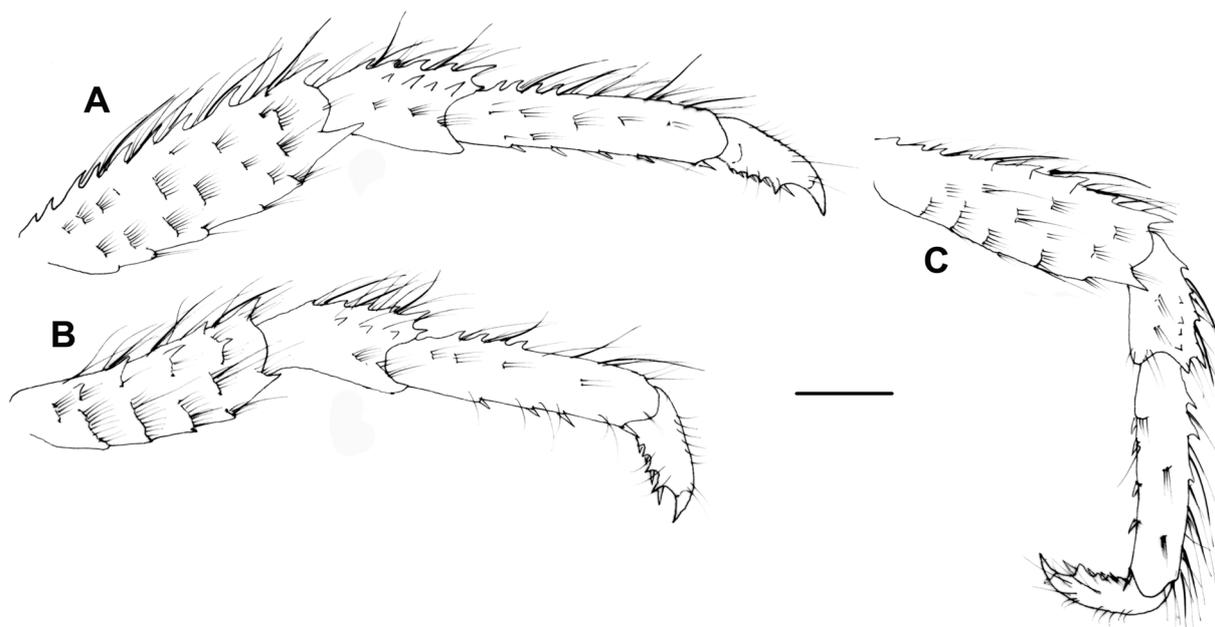


FIGURE 8. *Galathea algae* Baba, 1969, A, B, paratype, female, 4.1 mm; C, holotype, male, 4.2 mm, Japan (ZLKU 7046). A, right P2, lateral view; B, C, right P4, lateral view. Scale = 1 mm.

Galathea amamiensis Miyake & Baba, 1966

(Figs 115F, G)

Galathea amamiensis Miyake & Baba, 1966: 75, figs 13, 14 (type locality: northern coast of Amami-oshima, intertidal).—Baba, 1979b: 647, fig. 1 (Gorong Island, subtidal).—Kamezaki *et al.*, 1988: 96, with color fig. (Okinawa).—Baba, 1989: 130 (Oshima Strait, Amami-oshima, 40 m).—Baba, 1990: 953 (Madagascar, 50 m).—Jones & Morgan, 2002: 135, color figure (no record).—Kawamoto & Okuno, 2003: 94, unnumbered fig. (Kume-jima, Okinawa, 10 m).—Osawa, 2004: 93, fig. 3C, D (Ryukyu Islands, 2–26 m).—Kawamoto & Okuno, 2006: 94, unnumbered fig. (Kume-jima, Okinawa, 10 m).—Baba *et al.*, 2008: 65 (compilation).—Macpherson & Cleve, 2010: 58, (Mayotte, 15–30 m).—Poupin *et al.*, 2013a: 12, fig. 6a–b (Mayotte, 15–30 m).

Galathea aff. *amamiensis*.—Poupin, 1996: 19 (compilation of French Polynesia records).

Material examined. Mariana Islands. Guam Island. Apra harbour, entrance to Sumay Cove, 2–3 m, 27 November 1998: 1 M 4.2 mm (UF).—Glass Breakwater, near mouth of Apra harbour. 5–8 m, 24 September 2001: 1 ov. F 3.0 mm (UF).—NW coast, Dos Amantes, close to Guam Beach, 28 m, 21 June 2002: 1 ov. F 2.3 mm (UF).—Cabras. 13.4649°N, 144.6872°E, 0–4 m, 20 June 2010: 1 ov. F 2.9 mm (UF26636).

South China Sea. Macclesfield Bank. Stn 1, 15°54'N, 113°58'30"E, 24 m, May 1892: 1 M 3.3 mm, 1 ov. F 3.2 mm (NHMUK).—Stn 73, 15°46'45"N, 114°27'23"E, 86 m, 5 May 1893: 1 M 3.0 mm (NHMUK).—Stn 24, 15°26'30"N, 114°14'E, 24–62 m, May 1892: 5 M 4.2–5.3 mm, 1 ov. F 3.2 mm, 1 F 3.1 mm (NHMUK).

Indonesia. Gorong Island. 1 ov. F 3.5 mm (MNHN-Ga1147).

Papua New Guinea. PAPUA NIUGINI, Stn PB02, 05°12.1'S, 145°49.3'E, 17 m, 30 December 2012: 1 M 3.0 mm (MNHN-IU-2013-8208).—Stn PB10, 05°17.9'S, 145°46.7'E, 10 m, 30 December 2012: 1 F 3.1 mm (MNHN-

IU-2013-356).— Stn PB31, 05°09.4'S, 145°50'E, 31 m, 30 December 2012: 1 ov. F 2.9 mm (MNHN-IU-2013-8209).— Stn PD19, 05°05.4'S, 145°48.5'E, 3–10 m, 30 December 2012: 1 ov. F 2.6 mm (MNHN-IU-2013-8207).

Micronesia. Kosrae, Utwe, Pinglap. 5.2595°N, 162.9864°E, 22–25m, 5 March 2008: 1 ov. F 2.2 mm, 1 F 1.9 mm (UF).

Vanuatu. MUSORSTOM 8, Stn CP961, 20°18.50'S, 169°49.90'E, 100–110 m, 21 September 1994: 1 ov. F 3.5 mm, 1 F 2.8 mm (MNHN-IU-2013-8177). BOA 1, Stn DW2478, 16°39.38'S, 167°52.22'E, 100–360 m, 15 September 2005: 1 F 2.9 mm (MNHN-IU-2013-8198). SANTO, Stn DB8, 15°34.6'S, 167°13.8'E, 12 m, 12 September 2006: 6 M 2.1–4.0 mm (MNHN-IU-2013-8151), 2 M 3.8–4.0 mm (MNHN-IU-2013-81509).— Stn DB12, 15°36.6'S, 167°10.1'E, 10–18 m, 13 September 2006: 1 F 2.9 mm (MNHN-IU-2013-8182).— Stn DB16, 15°35.5'S, 167°15.8'E, 32–40 m, 14 September 2006: 3 ov. F 2.4–3.6 mm (MNHN-IU-2013-8190).— Stn DB20, 15°30.5'S, 167°01.4'E, 20–25 m, 15 September 2006: 1 M 3.4 mm (MNHN-IU-2013-8140).— Stn DB20, 15°30.5'S, 167°01.4'E, 20–25 m, 15 September 2006: 6 M 2.0–2.6 mm, 4, ov. F 2.1–3.0 mm, 3 F 2.1–2.7 mm (MNHN-IU-2013-8125).— Stn DB29, 15°38.9'S, 167°05.1'E, 15 m, 17 September 2006: 2 M 3.1–3.2 mm, 3 ov. F 2.8–3.0 mm, 1 F 2.3 mm (MNHN-IU-2013-8189).— Stn NB12, 15°33.1'S, 167°09.6'E, 20 m, 19 September 2006: 1 M 2.7 mm, 1 F 3.2 mm (MNHN-IU-2013-8153).— Stn DB48, 15°38.7'S, 167°5.2'E, 10–17 m, 21 September 2006: 1 M 3.3 mm, 1 F 2.5 mm (MNHN-IU-2013-8191).— Stn DB58, 15°24.6'S, 167°14.3'E, 6–43 m, 23 September 2006: 1 ov. F 2.8 mm, 2 F 2.2–3.0 mm (MNHN-IU-2013-8194).— Stn DB63, 15°26.9'S, 167°15.8'E, 21 m, 25 September 2006: 2 M 1.9–2.3 mm, 3 ov. F 2.2–3.4 mm (MNHN-IU-2013-8146).— Stn DB65, 15°25.8'S, 167°13.0'E, 13 m, 26 September 2006: 2 M 2.2–3.3 mm, 2 ov. F 3.2–3.3 mm, 1 F 2.2 mm (MNHN-IU-2013-8136).— Stn DB67, 15°22.9'S, 167°13.1'E, 7 m, 26 September 2006: 1 M 2.5 mm, 1 F 3.1 mm (MNHN-IU-2013-8187).— Stn DB75, 15°22.9'S, 167°11.9'E, 20 m, 28 September 2006: 1 M 3.2 mm, 1 ov. F 4.0 mm (MNHN-IU-2013-8188).— Stn ZB6, 15°36.8'S, 167°01.3'E, 30 m, 28 September 2006: 10 M 2.0–2.9 mm, 8 ov. F 2.0–3.0 mm, 2 F 1.7–1.9 mm (MNHN-IU-2013-8152).— Stn FB40, 15°22.9'S, 167°11.7'E, 9 m, 29 September 2006: 1 F 3.3 mm (MNHN-IU-2013-8195), 1 F 3.5 mm (MNHN-IU-2013-8215).— Stn FB43, 15°28.4'S, 167°14.9'E, 19 m, 30 September 2006: 1 F 2.5 mm (MNHN-IU-2013-8167).— Stn ZB9, 15°40.6'S, 167°05.1'E, 5–7 m, 2 October 2006: 4 M 2.2–3.3 mm, 3 ov. F 2.9–3.0 mm, 2 F 2.3–3.0 mm (MNHN-IU-2013-8142).— Stn DB86, 15°38.5'S, 167°15.1'E, 13 m, 4 October 2006: 1 M 2.2 mm, 2 ov. F 2.0–3.1 mm (MNHN-IU-2013-8192).— Stn NB43, 15°35.6'S, 167°16.0'E, 6–30 m, 4 October 2006: 2 M 3.3–3.4 mm (MNHN-IU-2013-8143).— Stn FP50, 15°36.8'S, 167°08.7'E, 25 m, 4 October 2006: 1 F 1.5 mm (MNHN-IU-2013-8168).— Stn ZR12, 15°36.7'S, 167°02.0'E, 2–30 m, 5 October 2006: 2 M 3.1–3.4 mm, 1 F 2.0 mm (MNHN-IU-2013-8155).— Stn DS91, 15°33.7'S, 167°08.4'E, 7 m, 6 October 2006: 1 M 4.0 mm (MNHN-IU-2013-8185).— Stn FB56, 15°35.2'S, 167°02.1'E, 3–18 m, 7 October 2006: 1 M 3.1 mm (MNHN-IU-2013-8180).— Stn FB64, 15°35.4'S, 166°59.2'E, intertidal, 10 October 2006: 2 M 3.0–3.1 mm (MNHN-IU-2013-8210).— Stn FB68, 15°35.4'S, 166°59.7'E, 11 m, 11 October 2006: 1 M 2.8 mm, 1 ov. F 2.9 mm (MNHN-IU-2013-8144).— Stn EP35, 15°34.9–35.1'S, 167°13.9–14.1'E, 10–51 m, 15 October 2006: 1 ov. F 3.0 mm (MNHN-IU-2013-8159).— Stn FB83, 15°32.6'S, 167°17.4'E, 8–20 m, 15 October 2006: 3 M 2.3–3.4 mm, 4 ov. F 2.8–3.5 mm, 1 F 2.0 mm (MNHN-IU-2013-8193).— Stn NR64, 15°31.5'S, 167°14.1'E, 22 m, 18 October 2006: 1 M 4.0 mm, 1 ov. F 3.3 mm, 1 F 2.0 mm (MNHN-IU-2013-8135).

New Caledonia. Chesterfield islands. CHALCAL 84, Stn D15, 19°23.30'S, 158°38.60'E, 65 m, 16 July 1984: 1 M 3.4 mm (MNHN-IU-2013-8152).— Stn D18, 19°07.80'S, 158°48.10'E, 60 m, 17 July 1984: 1 M 3.3 mm (MNHN-IU-2013-8123).— Stn D25, 19°08.60'S, 158°31.80'E, 56 m, 18 July 1984: 1 ov. F 4.7 mm (MNHN-IU-2013-8126).— Stn D34, 19°52.10'S, 158°20.10'E, 33–37 m, 21 July 1984: 1 ov. F 3.7 mm (MNHN-IU-2013-8164).— Stn DW34, 19°22'S, 158°56'E, 47 m, 23 July 1988: 1 ov. F 2.9 mm (MNHN-IU-2013-8130).— Stn DW33, 19°25'S, 158°52'E, 52 m, 23 July 1988: 1 M 2.9 mm, 1 ov. F 4.0 mm (MNHN-IU-2013-8158).— Stn DW35, 19°22'S, 158°53'E, 52 m, 23 July 1988: 1 M 4.3 mm (MNHN-IU-2013-8165).— Stn DW44, 19°22'S, 158°23'E, 40 m, 23 July 1988: 1 ov. F 3.9 mm (MNHN-IU-2013-8163).— Stn DW50, 19°18'S, 158°34'E, 50 m, 23 July 1988: 1 ov. F 3.6 mm (MNHN-IU-2013-8211).— Stn DW70, 19°15'S, 158°27'E, 54 m, 25 July 1988: 1 M 4.2 mm, 1 ov. F 4.2 mm (MNHN-IU-2013-8161).— Stn DW76, 19°12'S, 158°33'E, 53 m, 25 July 1988: 1 M 3.9 mm (MNHN-IU-2013-8212).— Stn DW84, 19°12'S, 158°57'E, 16–26 m, 25 July 1988: 1 M 4.2 mm (MNHN-IU-2013-8169).— Stn DW88, 19°06'S, 158°56'E, 32 m, 26 July 1988: 2 ov. F 3.8–3.9 mm (MNHN-IU-2013-8173).— Stn DW105, 19°08.91'S, 158°39.19'E, 35 m, 27 July 1988: 2 M 4.1–4.2 mm (MNHN-IU-2013-8200).— Stn DW106, 19°09'S, 158°43'E, 62 m, 27 July 1988: 1 M 5.1 mm (MNHN-IU-2013-8171).— Stn DW115, 19°22'S, 158°38'E, 44 m, 28 July 1988: 3 M 3.5–3.7 mm (MNHN-IU-2013-8145).— Stn DW117, 19°25'S, 158°32'E, 52 m, 28 July

1988: 1 F 2.9 mm (MNHN-IU-2013-8124).— Stn DW118, 19°25.06'S, 158°28.35'E, 52 m, 28 July 1988: 1 M 3.9 mm (MNHN-IU-2013-8202).— Stn CP127, 19°28'S, 158°27'E, 44–45 m, 29 July 1988, 1 M 3.0 mm (MNHN-IU-2013-8170).— Stn DW144, 19°28'S, 158°23'E, 50 m, 30 July 1988: 1 ov. F 3.1 mm (MNHN-IU-2013-8131).— Stn DW145, 19°37'S, 158°19'E, 54 m, 30 July 1988: 1 M 3.6 mm (MNHN-IU-2013-8121).— Stn DW159, 19°46'S, 158°20'E, 52 m, 1 August 1988: 2 M 3.8–3.9 mm (MNHN-IU-2013-8157).— Stn DW165, 19°41'S, 158°22'E, 45 m, 2 August 1988: 1 M 4.5 mm, 2 ov. F 3.0–4.1 mm (MNHN-IU-2013-8127). Lifou Island. LIFOU, Stn 1410, 20°56.7'S, 167°03.1'E, 2–4 m, 25 November 2000: 1 M 4.3 mm, 2 ov. F 2.8–3.9 mm (MNHN-IU-2013-8196).— Stn 1435, 20°55.2'S, 167°00.7'E, 5–30 m, 8 November 2000: 1 M 3.2 mm (MNHN-IU-2013-8149).— Stn 1432, 20°53.5'S, 167°02.7'E, 12–32 m, 04/07/21 November 2000: 1 ov. F 3.8 mm (MNHN-IU-2013-13918).— Stn 1451, 20°47.3'S, 167°06.8'E, 10–21 m, 19 November 2000: 1 ov. F 4.8 mm (MNHN-IU-2013-8154).— Stn 1456, 20°49.3'S, 167°10.4'E, 25–30 m, 26 November 2000: 1 ov. F 3.1 mm (MNHN-IU-2013-8137).— Stn 1457, 20°46.8'S, 167°02.75'E, 5–10 m, 27 November 2000: 1 M 2.6 mm, 1 ov. F 2.7 mm (MNHN-IU-2013-8178), 1 M 4.2 mm, 3 ov. F 3.1–3.3 mm (MNHN-IU-2013-8184).— Stn 1459, 20°47.0'S, 167°03.0'E, 55–80 m, 05/13 November 2000: 1 F 4.2 mm (MNHN-IU-2013-8179).— Stn 1464, 20°54.5'S, 167°05.9'E, 35–50 m, 14 November 2000: 2 M 3.3–3.4 mm (MNHN-IU-2013-8148). Loyalty Islands. MUSORSTOM 6, Stn DW430, 20°21.17'S, 166°07.25'E, 30 m, 17 February 1989: 1 ov. F 3.4 mm (MNHN-IU-2013-8166). MUSORSTOM 6, Stn DW431, 20°22.25'S, 166°10'E, 21 m, 18 February 1989: 1 M 2.8 mm, 1 ov. F 3.7 mm (MNHN-IU-2013-8201). Huon Atoll. Stn 432, 18°04'S, 162°54'E, 50 m, 25 February 1985: 1 ov. F 4.6 mm (MNHN-IU-2013-8203). Koumac Passage. 20 m, 6 October 1993: 2 M 4.2–4.6 mm, 1 ov. F 3.9 mm (MNHN-IU-2013-8147). Lagon East. Stn 597, 22°20.3'S, 167°03.7'E, 50–70 m, August 1986: 1 M 3.8 mm (MNHN-IU-2013-8141).— Stn 607, 22°12.1'S, 167°02.5'E, 48–54 m, August 1986: 1 F 2.9 mm (MNHN-IU-2013-8139).— Stn 608, 22°10.7'S, 167°01.3'E, 50–56 m, August 1986: 1 M 4.4 mm (MNHN-IU-2013-8186).— Stn 620, 22°02.4'S, 166°56.2'E, 50–52 m, August 1986: 1 M 5.2 mm (MNHN-IU-2013-8133).— Stn 625, 21°59.2'S, 166°53.6'E, 34–40 m, 6 August 1986: 2 M 4.0–5.0 mm (MNHN-IU-2013-8128).— Stn 641, 21°53'S, 166°43'E, 50–52 m, August 1986: 2 M 3.9–4.8 mm (MNHN-IU-2013-8160).— Stn 651, 21°48'S, 166°36.4'E, 48 m, August 1986: 1 M 3.1 mm (MNHN-IU-2013-8214).— Stn 656, 21°49.1'S, 166°32.5'E, 30–40 m, August 1986: 1 M 4.1 mm (MNHN-IU-2013-8134).— Stn 659, 21°45.3'S, 166°33.4'E, 46–48 m, August 1986: 1 ov. F 4.6 mm (MNHN-IU-2013-8183).— Stn 664, 21°43.9'S, 166°29.4'E, 28–30 m, August 1986: 1 M 5.8 mm (MNHN-IU-2013-8181).— Stn 668, 21°40.5'S, 166°29.1'E, 40 m, August 1986: 1 M 5.0 mm (MNHN-IU-2013-8199).— Stn 671, 21°38.1'S, 166°25.5'E, 36–39 m, August 1986: 1 M 4.9 mm (MNHN-IU-2013-8197).— Stn 677, 21°36.8'S, 166°21.6'E, 32 m, August 1986: 1 ov. F 4.1 mm (MNHN-IU-2013-8175).— Stn 693, 21°30.3'S, 166°13.4'E, 35–38 m, August 1986: 1 M 4.8 mm (MNHN-IU-2013-8213).— Stn 736, 22°06.7'S, 166°58.4'E, 44–45 m, August 1986: 1 M 3.9 mm (MNHN-IU-2013-8156).— Stn 782, 21°06.1'S, 165°36.7'E, 30 m, January 1987: 1 F 2.6 mm (MNHN-IU-2013-8176).— Stn 853, 20°41.35'S, 165°07.4'E, 27 m, 12 January 1987: 1 ov. F 3.4 mm (MNHN-IU-2013-8205).— Stn 879, 20°31.1'S, 164°49.2'E, 25 m, 13 January 1987: 1 ov. F 4.4 mm (MNHN-IU-2013-8204). Lagon Nord. Stn 483, 19°01'S, 163°32'E, 33 m, 2 March 1985: 1 M 3.7 mm (MNHN-IU-2013-13969).— Stn DW1120, 19°36'S, 163°45.3'E, 47 m, October–November 1989: 1 ov. F 4.5 mm (MNHN-IU-2013-8129). Noumea. Stn 34, 22°12'S, 166°24'E, 10 m, May 1984: 1 ov. F 4.7 mm (MNHN-IU-2013-8206). South Reef. Stn 413, 22°38.9'S, 167°16.6'E, 40–60 m, January 1985: 1 M 4.9 mm (MNHN-IU-2013-8122).— Stn 426, 22°43'S, 167°20'E, 53 m, 25 January 1985: 1 ov. F 4.0 mm (MNHN-IU-2013-13968). Touho. 20°47'S, 165°13'E, 10 m, 6 September 1993: 1 M 3.9 mm, 1 ov. F 4.2 mm (MNHN-IU-2013-8172), 3 M 3.2–4.3 mm, 1 ov. F 4.2 mm (MNHN-IU-2013-8138). SURPRISES, Stn CP1388, 18°23.8'S, 163°06.9'E, 40 m, 11 May 1999: 1 F 2.6 mm (MNHN-IU-2013-8174).— Stn DW1397, 18°21.9'S, 163°03.9'E, 43 m, 13 May 1999: 1 M 3.5 mm (MNHN-IU-2013-8132).

Coloration. Base color of carapace and abdomen pale bluish brown, with darker transverse ridges. Rostrum and ocular peduncles reddish. P1 with brownish bands, distal part of palm whitish, proximal portion of fingers bluish. P2–4 with pale brownish bands.

Remarks. The material examined agrees quite well with previous descriptions and illustrations (see above references). The closest species is *G. boucheti* n. sp. (see differences under Remarks of this species).

Distribution. Madagascar, Japan, Mariana Islands, South China Sea (Macclesfield Bank), Indonesia (Gorong Islands), Micronesia, Papua New Guinea, Vanuatu, New Caledonia, Chesterfield Islands, 0–110 m.

***Galathea amboinensis* De Man, 1888**

Galathea amboinensis De Man, 1888: 457, pl. 19: fig. 3 (type locality: Ambon).—Baba, 1979b: 648 (Gorong Island, subtidal).—Baba, 1988: 68, fig. 27 (Sulu Archipelago, shore).—Fujita & Baba, 1999: 112, fig. 1 (Okinawa, Ryukyu Islands, 5.5–29.8 m, on crinoids).—Fujita *et al.*, 2003: 80, figs 2–11 (larvae) (Okinawa, Ryukyu Islands, subtidal).—Davie, 2002: 60 (no record).—Poore *et al.*, 2008: 19 (SW Australia, 96–101 m).—Baba & Fujita, 2008: 44, figs. 1, 2 (Ryuku Islands, 7.1–9.7 m).—Baba *et al.*, 2008: 65 (compilation).

Galathea minuta Potts, 1915: 87, pl. 1, fig. 6 (type locality: off Mabuigu Island, Torres Strait, 7 m; type not located).

Material examined. Indonesia. Gorong Island, in front of Kotasirih, 27 January 1975: 1 M 3.2 mm (MNHN-Ga1148).

New Caledonia. Chesterfield Islands. CORAIL 2, Stn CP90, 19°03'S, 158°56'E, 44–48 m, 26 July 1988: 1 M 5.7 mm, 1 ov. F 6.8 mm (MNHN-IU-2013-8305).

Remarks. No significant differences were observed between the present material and the previous descriptions (for example, see Baba & Fujita 2008). No molecular data are available from *G. amboinensis*.

Distribution. Ryuku Islands, Indonesia, New Caledonia, Chesterfield Islands, SW Australia, 5–48 m. On crinoids, on *Capillaster multiradiatus*, *Comanthina schlegeli*, and *Comanthus timorensis*.

***Galathea anepipoda* Baba, 1990**

Galathea anepipoda Baba, 1990: 953, fig. 12 (Madagascar, 85–150 m).—Baba *et al.* 2008: 65 (in part, compilation).

Galathea balssi.—Tirmizi & Javed, 1993: 47, fig. 21 (off Somali Republic, Mozambique Channel, and central part of Indian Ocean, 47–165 m) (not *Galathea balssi* Miyake & Baba, 1967).

Dubious identifications:

Galathea orientalis.—Tirmizi, 1966: 182, figs 6–8 (Red Sea, South Arabian Sea, 29–100 m).

Galathea anepipoda.—Baba, 2005: 74, 243 (Sagami Bay, Japan, 366–732 m, Kei Islands, 245 m).—Dong & Li, 2010: 2, fig. 1 (East China Sea, 106–110 m) (possibly *G. paleroi* n.sp.).

Material examined. Mozambique. MAINBAZA, Stn CP3132, 25°11.24'S, 35°01.51'E, 101–102 m, 10 April 2009: 1 ov. F 3.3 mm (MNHN-IU-2013-8306).

Madagascar. ATIMO VATAE, Stn CP3512, 25°15'S, 47°17'E, 140–144 m, 29 April 2010: 1 ov. F 3.4 mm (MNHN-IU-2010-4022).—Stn CP3620, 25°47'S, 46°02'E, 133–178 m, 15 May 2010: 1 ov. F 3.2 mm (MNHN-IU-2013-8307).

Remarks. The specimens illustrated by Tirmizi & Javed (1993), and identified as *G. balssi*, probably belong to *G. anepipoda*. Further analyses should confirm the identity of these specimens, as well as other material collected by Tirmizi (1966), Baba (2005) and Dong & Li (2010). The descriptions and illustrations provided by these authors suggest that they do not belong to *G. anepipoda*. The genetic divergence between *G. anepipoda* and *G. balssi* is quite large (13.1% COI) (Tab. 1).

Distribution. Western Indian Ocean from the Red Sea to Madagascar and Mozambique, 47–165 m. The records from Japan and East China Sea should be revised.

***Galathea anoplos* n. sp.**

(Fig. 9)

Material examined. *Holotype*: Solomon Islands. SALOMON 1, Stn DW1854, 9°46.4'S, 160°52.9'E, 229–260 m, 7 October 2001: 1 M 5.2 mm (MNHN-IU-2013-15867).

Etymology. From the Greek, *anoplos*, unarmed, in reference to the unarmed dorsal carapace surface.

Description. *Carapace*: as long as broad; transverse ridges with dense short setae, and some scattered long non-plumose iridescent setae; cervical groove shallow, but distinct, laterally bifurcated. Dorsal surface unarmed. Gastric region with 5 transverse ridges: 1 epigastric ridge, uninterrupted; 2 protogastric ridges, anterior one uninterrupted, posterior ridge short, median in position, and arcuate with some long setae; 1 mesogastric ridge not extending laterally to anteriormost branchial marginal spines; 1 metogastric ridge not continuing laterally to

anterior branchial regions. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by cervical groove, followed by 5 transverse ridges, of them 2 uninterrupted. Lateral margins convex medially, with 6 spines: 1 spine in front of and 5 spines behind anterior cervical groove; first spine anterolateral, well-developed, located at same level of lateral limit of orbit, without spine ventral to between first and anteriormost branchial spine; 2 spines on anterior branchial margin, and 3 spines on posterior branchial margin, last small. External limit of orbit with small spine; infraorbital margin with strong spine. Rostrum twice longer than broad, length 0.7 of postorbital carapace length and breadth 0.3 of carapace breadth; distance between distalmost lateral incisions 0.35 of distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous short simple setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed on upper margin or surface, ridges with short setae, anterior margin ending in blunt angle.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted; somites 5 and 6 each with 2 scale-like ridges. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine slightly smaller than distoventral. Ultimate article with a few short fine setae, not in tuft on distodorsal margin.

Antenna: Article 1 with strong distomesial spine reaching distal margin of article 2. Article 2 with 2 well-developed subequal distal spines, exceeding midlength of article 3. Article 3 with distodorsal spine: Article 4 unarmed.

Mxp3: Ischium with long distal spine on flexor margin, unarmed on extensor margin; crista dentata with 22 denticles. Merus as long as ischium; flexor margin with 2 spines, proximal clearly stronger than distal; extensor margin unarmed. Carpus unarmed.

P1: 3.0 times of carapace length, somewhat depressed on palm, more so on fingers, covered with finely setiferous scales, with numerous long plumose and non-plumose setae. Merus 1.2 times carapace length, 1.8 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.8 length of palm, 1.5 times as long as broad; dorsal and lateral surfaces with a few spines; mesial margin with strong spines. Palm twice longer than broad, lateral and mesial margins subparallel; small spines arranged in irregular dorsolateral and dorsomesial rows; some small spines scattered on dorsal side. Fingers 0.8 times palm length, unarmed, each finger distally with 2 rows of teeth, spooned.

P2–4: moderately slender, with setose striae and sparse long plumose and non-plumose setae. P2 1.9 times of carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P3 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.7 of carapace length, 3.0 times as long as broad, 1.5 times longer than P2 propodus; extensor margins each with row of 6–8 proximally diminishing spines in P2–3, 3 spines in P4; ventral margins distally ending in strong spine followed proximally by several short transverse ridges, lateral sides unarmed. Carpi each with 5 or 6 small spines on extensor margin in P2–3, 2 or 3 small spines in P4; lateral surface with granules subparalleling extensor margin; flexor distal margins acutely produced. Propodi 3.0–4.0 times as long as broad; extensor margins each with 2 proximal spines in P2–3, 1 spine in P4; flexor margins each with 5 slender movable spines. Dactyli distally ending in moderately curved strong spine, length 0.7 of propodi; flexor margins each with 5 proximally diminishing teeth, distalmost one prominent.

Epipods absent on pereopods.

Remarks. *Galathea anoplos* n. sp. resembles *G. connudata* n. sp. from the Philippines, and Wallis and Futuna. The two species share several characters: interrupted mesogastric ridge, gastric ridges not scale-like, carapace lateral margin without spines between anterolateral spine and anteriormost branchial marginal spine, and pereopods without epipods (differentiating characters are discussed under Remarks of *G. connudata*).

No molecular data are available from *G. anoplos*.

Distribution. Solomon Islands, 229–260 m.

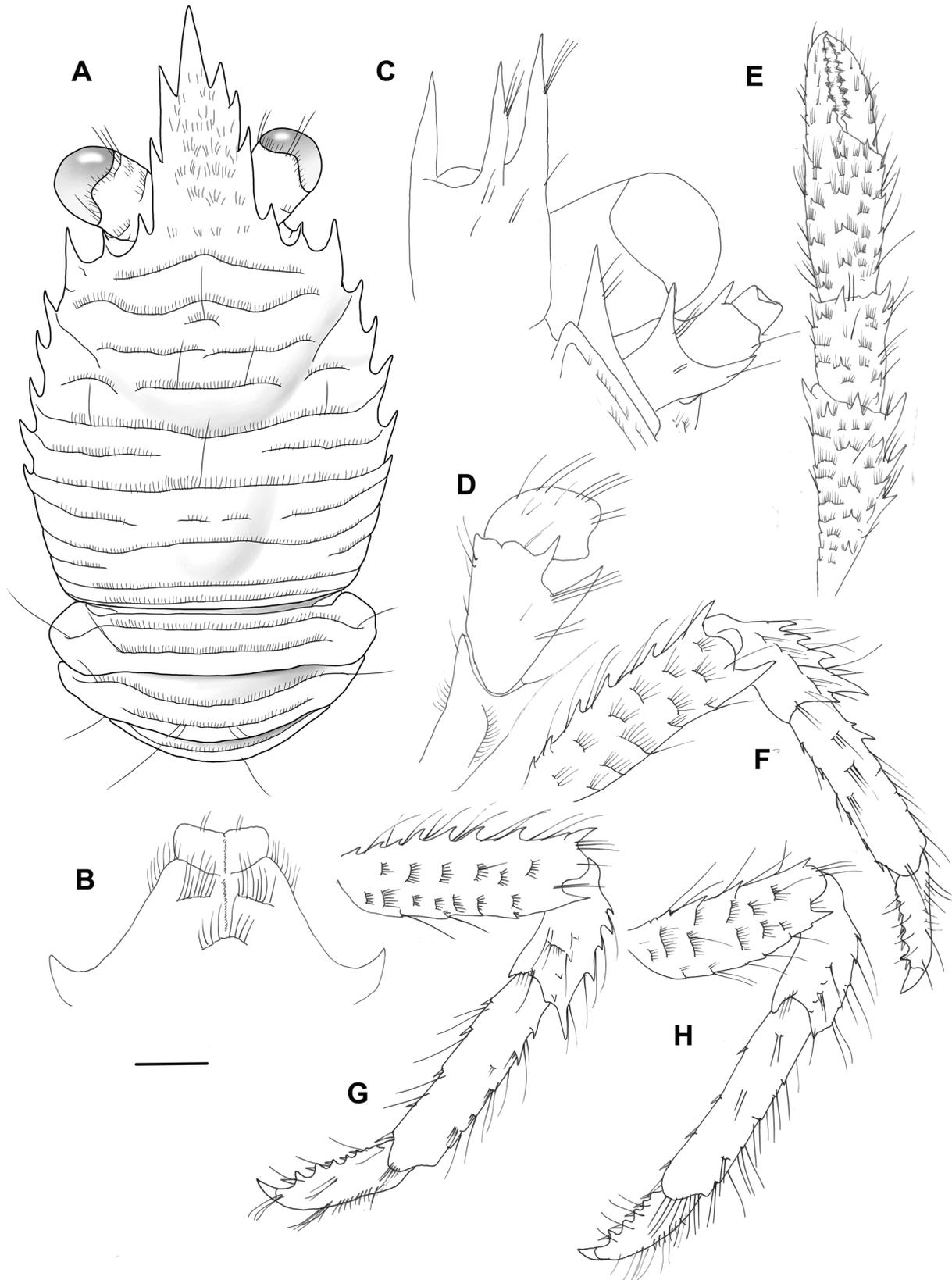


FIGURE 9. *Galathea anoplos* n. sp., holotype, male, 5.2 mm, Solomon Islands (MNHN-IU-2013-15867). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

***Galathea anouchkae* n. sp.**

(Fig. 10)

Material examined. *Holotype*: Fiji. MUSORSTOM 10, Stn CP1364, 18°11.95'S, 178°34.50'E, 80–86 m, 15 August 1998: 1 F 2.5 mm (MNHN-IU-2013-8371).

Paratypes: Fiji. MUSORSTOM 10, Stn CP1364, 18°11.95'S, 178°34.50'E, 80–86 m, 15 August 1998: 1 ov. F 3.0 mm, 1 F 2.7 mm (MNHN-IU-2013-8370). SUVA, Stn DW08, 18°22.3'S, 178°02.4'E, 28–30 m, 24 September 1999: 1 M 4.2 mm (MNHN-IU-2013-8378).

Vanuatu. MUSORSTOM 8, Stn CP961, 20°18.50'S, 169°49.90'E, 100–110 m, 21 September 1994: 3 M 3.4–3.9 mm, 3 ov. F 2.9–3.8 mm (MNHN-IU-2013-8376), 1 ov. F 3.4 mm (MNHN-IU-2013-8372).— Stn DW966, 20°18.80'S, 169°51.91'E, 128–150 m, 21 September 1994: 1 M 3.2 mm, 1 ov. F 3.4 mm, 1 F 3.0 mm (MNHN-IU-2013-8379). TERRALIS, Stn D9, 16°39.635'S, 167°52.270'E, 136 m, 12 December 2003: 1 ov. F 3.3 mm (MNHN-IU-2013-8377).

New Caledonia. Chesterfield Islands. CHALCAL 84, Stn D29, 19°30.60'S, 158°31.10'E, 100 m, 19 July 1984: 2 M 3.0–3.2 mm (MNHN-IU-2013-8381). New Caledonia. NORFOLK 2, Stn CP2141, 23°00.52'S, 168°19.80'E, 92–100 m, 3 November 2003: 1 M 4.8 mm (MNHN-IU-2013-8373). Lifou Island. LIFOU, Stn 1648, 20°54.1'S, 167°03.3'E, 150–200 m, 07 November 2000: 1 M 3.6 mm (MNHN-IU-2013-8374), 1 F 3.5 mm (MNHN-IU-2013-8375).— Stn 1462, 20°47.1'S, 167°03.2'E, 70–120 m, 21 November 2000: 1 F 3.4 mm (MNHN-IU-2013-8380).

Etymology. This species is dedicated to Anouchka Krygelmans-Sato of the Muséum nationale d'Histoire Naturelle, Paris, for her support to crustacean collections.

Description. *Carapace*: as long as broad; transverse ridges with dense short setae, and a few scattered long non-plumose setae; cervical groove distinct, laterally bifurcated into anterior and posterior parts. Gastric region with 5 transverse ridges: 1 epigastric ridge with 2 submedian spines and medially interrupted; 1 protogastric ridge uninterrupted, with 1 small parahepatic spine on each side; 1 mesogastric ridge medially interrupted, not extending laterally to anterior branchial ridges; 2 metagastric ridges, anterior medially interrupted, and extending laterally to anterior branchial ridges, posterior ridge very short. One small hepatic spine on each side. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, followed by 5 transverse ridges. Lateral margins slightly convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first spine (anterolateral), well-developed, at same level of lateral limit of orbit, second spine small, located at midlength between anterolateral spine and anteriormost spine of branchial margin, accompanied by 1 additional spine ventral to between first and second; 2 spines on anterior branchial margin, posterior one smaller than anterior one, and 3 spines on posterior branchial margin, last small. Small spine on external limit of orbit; infraorbital margin with strong spine. Rostrum 1.6 times as long as broad, length 0.6 of postorbital carapace length and breadth 0.4 of carapace width; distance between distalmost lateral incisions 0.25 of distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with a few setose scales; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acutely pointed.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with anterior transverse ridge, and 1 additional uninterrupted or medially interrupted ridge; somites 5 and 6 each with 1 medially interrupted ridge, posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 of rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine smaller than others. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 with distomesial spine reaching distal margin of article 2. Article 2 with 2 well-developed distal spines, distomesial spine slightly longer than distolateral and reaching midlength of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with small spine on flexor and extensor distal margins; crista dentata with 18–20 denticles. Merus shorter than ischium; flexor margin with 2 subequal spines; extensor margin unarmed.

Pl: 1.9 times carapace length, covered with finely setiferous scales, with some long setae. Merus 0.8 times carapace length, 5 times as long as carpus, with some spines, dorsomesial spines stronger; distal spines prominent. Carpus 0.5 length of palm, 2.5 times as long as broad; dorsal and lateral surfaces with some spines; mesial margin

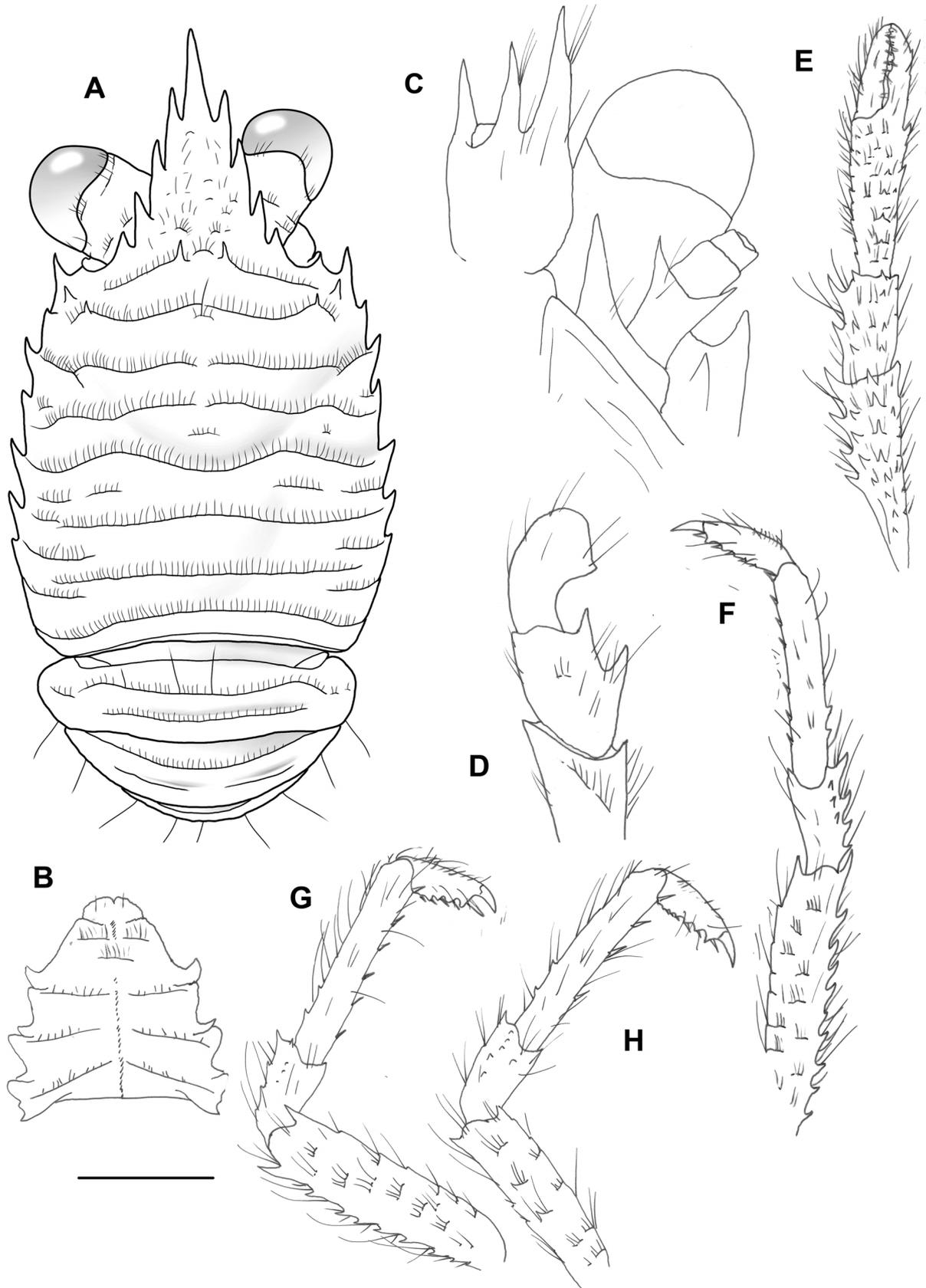


FIGURE 10. *Galathea anouchkae* n. sp., holotype, female, 2.5 mm, Fiji (MNHN-IU-2013-8371). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, left P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

with 3 or 4 spines (distal second strong). Palm 1.8 times longer than broad, lateral and mesial margins slightly convex; spines arranged in dorsolateral and dorsomesial rows, former extending onto fixed finger; dorsal surface with scattered some small spines. Fingers slightly longer than palm, movable fingers unarmed; each finger distally with two rows of teeth, spooned.

P2–4: moderately slender, with setose striae and sparse long plumose setae. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P3 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7 carapace length, 5.0 times as long as broad, 1.5 times longer than P2 propodus; extensor margins each with row of 7–9 proximally diminishing spines on P2–3, 2 spines on P4; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several transverse ridges, lateral sides unarmed in P2–3, bearing 2 or 3 spines in P4. Carpi each with 3 or 4 spines on extensor margin in P2–3, unarmed in P4; lateral surfaces each with 1–3 spines or granules sub-parallel to extensor margin; flexor distal margins acute. Propodi 4.3–4.9 times as long as broad; extensor margins each with 0–2 proximal spines; flexor margins each with 4 slender movable spines. Dactyli distally ending in strongly curved strong spine, length 0.6–0.7 that of propodi; flexor margins each with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods absent on pereopods.

Remarks. The new species is closely related to *G. erythrina* n. sp. from the Red Sea and *G. ceti* n. sp. from Papua New Guinea and New Caledonia (see the differences in Remarks of these species).

Distribution. New Caledonia, Chesterfield Islands, Vanuatu, Fiji, 28–200 m.

***Galathea argus* n.sp.**

(Fig. 11)

Galathea balssi.—Poore *et al.*, 2008: 19 (SW Australia, 100–382 m).

Material examined. *Holotype*: Australia. Western Australia. 20°59.05'S, 114°54.25'E, 100–101 m, 13 December 2005: 1 ov. F 3.7 mm (J55127).

Etymology. From *Argo*, Jason's ship; also one of the southern hemisphere constellations.

Description. *Carapace*: As long as broad; transverse ridges with dense short setae, without long setae; cervical groove distinct, laterally bifurcated into anterior and posterior parts. Gastric region with 9 transverse ridges: 2 epigastric ridges, anterior one medially convex and interrupted, with 3 spines (2 epigastric spines and 1 extra spine lateral to right epigastric spine), posterior ridge interrupted; 2 protogastric ridges, anterior ridge uninterrupted, medially convex, with 1 parahepatic spine on each side, posterior ridge interrupted; 2 mesogastric ridges, anterior ridge uninterrupted but not extending laterally to anteriormost branchial marginal spines, posterior ridge interrupted; 3 metagastric ridges, anterior ridge uninterrupted, continuing laterally to anteriorbranchial ridges, posteriormost ridge short. Each hepatic region with 1 spine. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by cervical groove, usually followed by 6 ridges, including 2 uninterrupted ridges. Lateral margins slightly convex medially, with 7 (right) or 8 (left) spines: 2 spines in front of and 5 or 6 spines behind anterior cervical groove; first (anterolateral) well-developed, at same level of lateral limit of orbit; second, small, located at midlength between anterolateral spine and anteriormost spine of branchial margin, with additional small spine ventral to between first and second spines; 2 spines on anterior branchial margin, and 3 or 4 spines on posterior branchial margin, last on right side small. Lateral limit of orbit with small spine; infraorbital margin with strong spine. Rostrum 1.9 times as long as broad, length 0.6 of postorbital carapace length and breadth 0.3 of carapace width; distance between distalmost lateral incisions 0.35 of distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous small scale-like setose ridges; lateral margin with 4 deeply incised teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acutely pointed.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 each with 4 uninterrupted transverse ridges on tergite; somite 4 with 3 transverse ridges; somites 5 and 6 each with 2 medially interrupted ridges, posteromedian margin of somite 6 slightly convex. Males with G1 and G2.

Eyes: Ocular peduncles 1.4 times longer than broad, maximum corneal diameter 0.7 rostrum width.

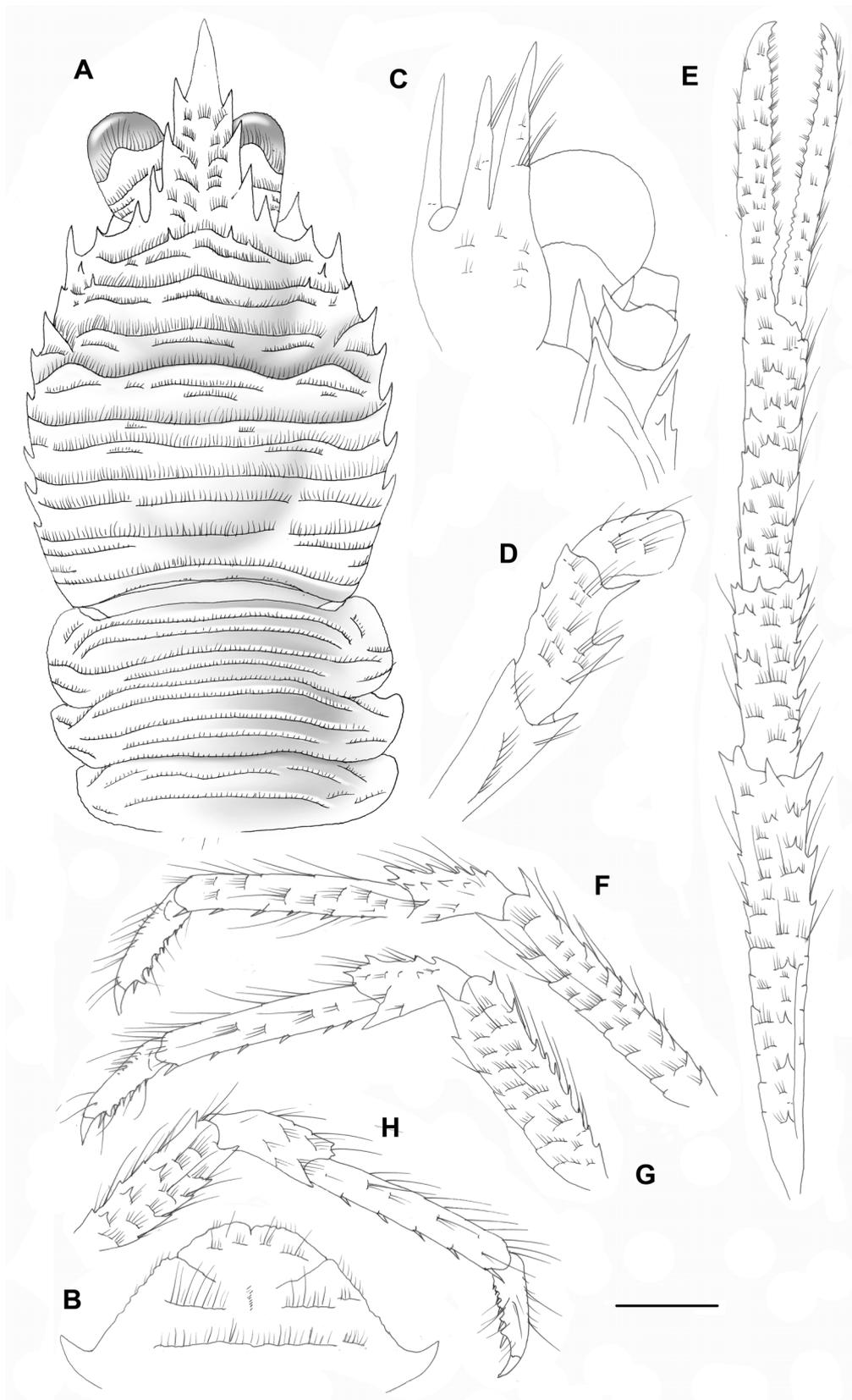


FIGURE 11. *Galathea argus* n. sp., holotype, ovigerous female, 3.7 mm, Western Australia (J55127). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, left P2, lateral view; G, left P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine smaller than others. Ultimate article with some fine setae, not in tuft, on distodorsal margin.

Antenna: Article 1 with distomesial spine exceeding distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine longer than distomesial, and exceeding midlength of article 3. Article 3 with distomesial spine; article 4 unarmed.

Mxp3: Ischium with flexor margin ending in spine; crista dentata with 20–21 denticles. Merus as long as ischium; flexor margin with 2 subequal spines; extensor margin with 2 small spines. Carpus unarmed.

P1: 3 times carapace length, with numerous setiferous scales, and some scattered long, non-plumose setae. Merus 1.3 times carapace length, 2.7 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.7 length of palm, 2.2 times as long as broad; dorsal surface with some small spines; mesial margin with row of spines, distal slightly stronger than others. Palm 3.7 times longer than broad, lateral and mesial margins slightly divergent; small spines arranged in dorsal, dorsolateral and dorsomesial rows. Fingers 0.7 times of palm length, each finger distally with 2 rows of teeth, spooned; lateral margin of fixed finger and mesial margin of movable finger unarmed.

P2–4: long and slender, with some setose striae and some long non-plumose setae. P2 2.1 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.7 length of P3 merus); P2 merus 0.8 carapace length, 4.8 times as long as broad, 1.4 times longer than P2 propodus; P3 3.5 times as long as broad, 1.2 times longer than P3 propodus; P4 merus 3 times as long as broad, 0.9 times longer than P4 propodus; extensor margins each with row of 9 proximally diminishing spines in P2–3, 3 spines in P4; ventral margins distally ending in strong spine, lateral sides with 3 small spines in P4. Carpi each with 4 or 5 spines on extensor margin in P2–3, 1 distal spine in P4; lateral surfaces each with 4 or 5 small spines or acute granules sub-parallel to extensor margin; flexor distal margins acute. Propodi 5.3–5.5 times as long as broad; extensor margins unarmed; flexor margins each with 5 or 6 movable spines. Dactyli distally ending in noticeably curved strong spine, 0.6 times as long as propodi; flexor margins each with 6 or 7 proximally diminishing teeth, terminal one prominent.

Epipods absent on pereopods.

Remarks. *Galathea argus* most closely resembles *G. tagaro* n. sp. and *G. consobrina* De Man 1902 (see the differences in Remarks of *G. consobrina*). No molecular data are available from *G. argus*.

Distribution. Western Australia, 100–101 m.

***Galathea atua* n. sp.**

(Fig. 12)

Material examined. *Holotype*: French Polynesia. Austral Islands, RAPA, Stn 5, 27°05.6'S, 144°18.5'W, 8 m, 4 November 2002: 1 ov. F 3.8 mm (MNHN-IU-2013-13218).

Etymology. *Atua* is the family god in Polynesian mythology. It is considered as a substantive in apposition.

Description. *Carapace*: Slightly broader than long; transverse ridges with dense very short setae, without long setae; posterior cervical groove distinct, anterior branch indistinct. Gastric region with 4 transverse ridges: 1 epigastric ridge medially interrupted, with 2 submedian spines; 1 protogastric ridge uninterrupted, without parahepatic spines; 1 mesogastric ridge medially interrupted and laterally extending to anteriormost branchial spines; 2 metagastric ridges, anterior one medially interrupted, not continuing to anterior branchial regions, posterior ridge scale-like. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by cervical groove, followed by 4 ridges, 2 of them uninterrupted. Lateral margins slightly convex, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first (anterolateral) well-developed, at same level of lateral limit of orbit; second small, additional spine present ventral to between first and second spines; 2 spines on anterior branchial margin, and 3 spines on posterior branchial margin, last small. Lateral limit of orbit with spine; infraorbital margin with strong spine. Rostrum 1.2 times as long as broad, length 0.5 of postorbital carapace length and breadth 0.4 of carapace width; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin acutely pointed.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

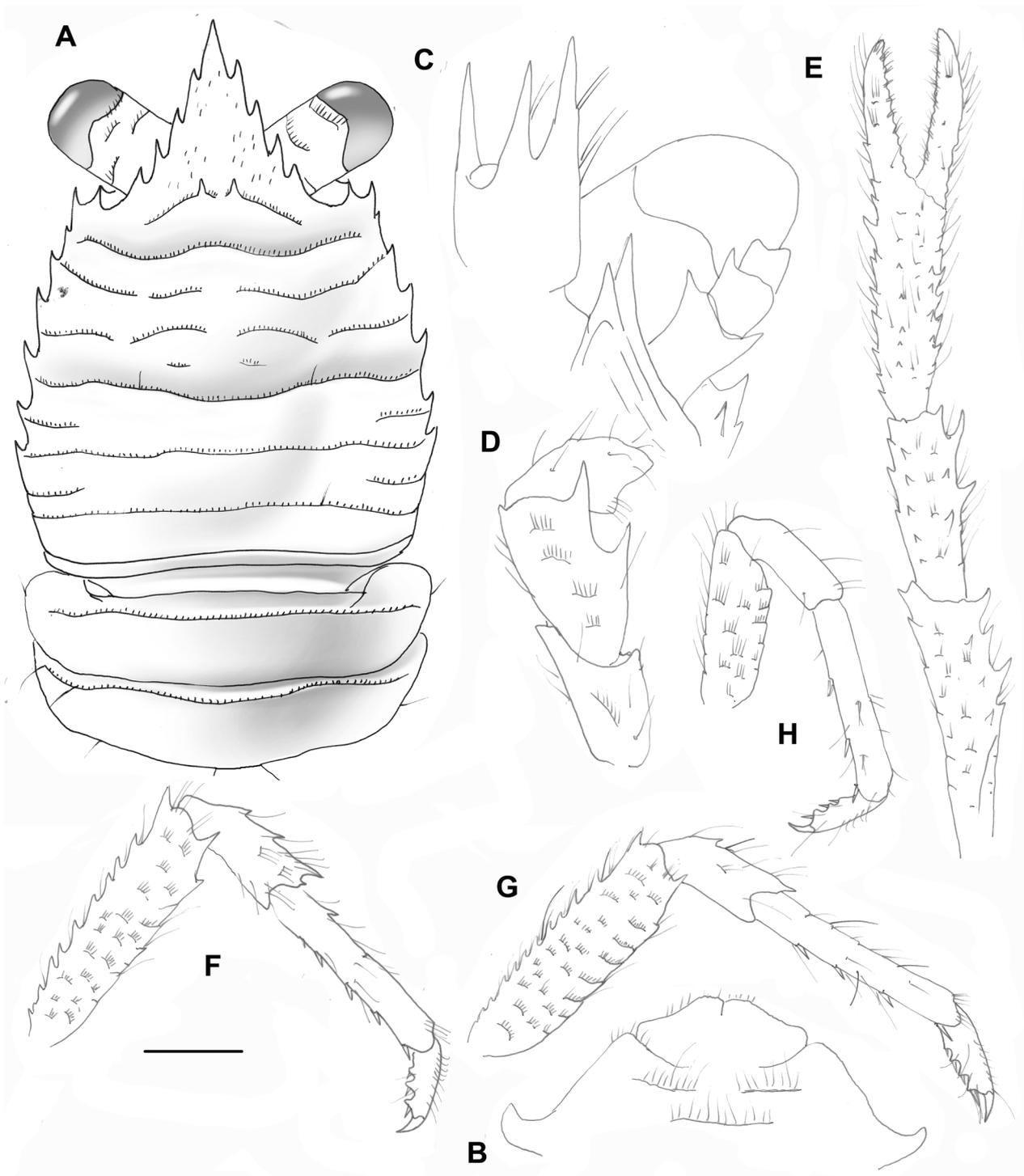


FIGURE 12. *Galathea atua* n. sp., holotype, ovigerous female, 3.8 mm, French Polynesia (MNHN-IU-2013-13218). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Abdomen: Somite 2 with 2 transverse uninterrupted ridges; somites 3–6 with anterior margin only, tergites smooth; posteromedian margin of somite 6 straight.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine slightly smaller. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with distomesial spine reaching distal margin of article 2. Article 2 with 2 subequal distal spines, reaching midlength of article 3. Article 3 with distomesial spine. Article 4 unarmed.

Mxp3: Ischium with small spine on flexor and extensor distal margins; crista dentata with 27 or 28 denticles. Merus as long as ischium; flexor margin with 2 subequal well-developed spines; extensor margin with distinct spine. Carpus unarmed, rugose along extensor margin.

P1: 2.2 times carapace length, covered with finely setiferous scales, with scattered long non-iridescent setae. Merus 0.8 length of carapace, 1.4 times as long as carpus, with spines arranged in longitudinal rows, dorsomesial spines stronger. Carpus as long as palm, 3.0 times as long as broad; dorsal and lateral surfaces with some spines; mesial margin also with some spines. Palm 3.0 times longer than broad, lateral and mesial margins subparallel; spines arranged in dorsolateral and dorsomesial rows, dorsolateral row continuing along proximal half of fixed finger; a few small spines scattered on dorsal side. Fingers 0.8 length of palm, each finger with 2 rows of teeth distally spooned; movable finger without spines.

P2–4: moderately slender, with setose striae and sparse long setae (setae non-iridescent). P2 twice carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.7 length of P2 merus); P2 merus 0.8 of carapace length, 3.8 times as long as broad, 1.4 times longer than P2 propodus; P3 merus 3.4 times as long as broad, 1.3 times longer than P3 propodus; P4 merus 3.0 times as long as broad, as long as P2 propodus; extensor margins each with row of 10 or 11 proximally diminishing spines on P2–3, unarmed in P4; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several transverse ridges; lateral sides unarmed. Carpi each with 2–4 spines on extensor margin in P2–3, unarmed in P4; lateral surfaces with some acute granules sub-parallel to extensor margin; flexor distal margins acute. P2–4 propodi 4.8–5.0 times as long as broad; extensor margins each with 0–1 proximal spines; flexor margins each with 4 or 5 slender movable spines. Dactyli distally ending in noticeably curved strong spine, 0.5 times as long as propodi; flexor margins each with 4 proximally diminishing teeth, terminal one prominent.

Epipod present only on P1.

Remarks. This species resembles *G. eridani* n. sp. from Mozambique and New Caledonia, *G. mariae* n. sp. from French Polynesia, New Caledonia and the Maldives, and *G. whiteleggii* Grant & McCulloch 1906 from Australia (see below under Remarks for these species).

No molecular data are available from *G. atua*.

Distribution. French Polynesia, Austral Islands, 8 m.

***Galathea australiensis* Stimpson, 1858**

(Fig. 13)

Galathea australiensis Stimpson, 1858: 89 (Port Jackson, 11 m).—Haswell, 1882b: 161 (Port Jackson and Port Stephens).—Henderson, 1888: 118, pl. 12, fig. 5 (Arafura Sea, 90 m).—Grant & McCulloch, 1906: 44, pl. 4, figs 1, 1a (Mast Head Island, Queensland).—Southwell, 1906: 220 (Sri Lanka S of Galle, off Kaltura, coral reefs in Gulf of Manaar, shallow water to 183 m).—Stimpson, 1907: 230 (Port Jackson, 11 m).—Hale, 1927: 78, fig. 74 (no record).—Lewinsohn, 1967: 180, figs 1–13 (Port Jackson, 5.5 m).—McNeill, 1968: 33 (Great Barrier Reef, Low Island, subtidal).—Haig, 1973: 277 (Cliffy I. off Corner Inlet, Victoria and Spencer Gulf, South Australia, 29 m).—Haig, 1974: 446 (no record).—Davie, 2002: 60 (no record).—Poore, 2004: 232, fig. 63f, pl. 13d (compilation).—Baba *et al.*, 2008: 65 (compilation).—Poore *et al.*, 2011: 332, pl. 10A (color photo, southern Australia).

Not *Galathea australiensis*.—Yokoya, 1933: 57 (Suruga Bay and SE of Tsushima, 51–110 m) = ?*Galathea balssi* Miyake & Baba, 1964.

Dubious identifications:

Galathea australiensis.—Ortmann, 1892: 251, pl. 11, figs 8, 8a, 8i (Amami-oshima, Ryukyu Islands).—Borradaile, 1900: 421 (Lifu, Loyalty Islands).—De Man, 1902: 710 (Ternate).—Southwell, 1906: 220 (Sri Lanka S of Galle, off Kaltura, coral reefs in Gulf of Manaar, shallow water to 183 m).—Balss, 1913b: 2 (Red Sea).—Laurie, 1926: 123 (Amirante, Saya De Malha Bank, Cargados Carazos, 37–146 m).—Melin, 1939: 56, figs 32–35 (Port Lloyd, Taninoura and Kopepe Bay (Bonin Islands)).—Miyake & Baba, 1966a: 60, figs 3–5 (Ishigaki-jima, Okinawa-jima, Amami-oshima, intertidal).—Tirmizi & Javed, 1993: 55, fig. 24 (Indian Ocean).

Material examined. Australia. New South Wales. Port Jackson, 33.85°S, 151.27°E: 2 M 3.4–4.5 mm, 4 ov. F 4.4–5.3 mm (AM-P269).—NE Bass Point, The Humps, 34.59286°S, 150.90611°E, 23.5 m, 3 May 2010, 1 M 3.3 mm (AM-P83431).

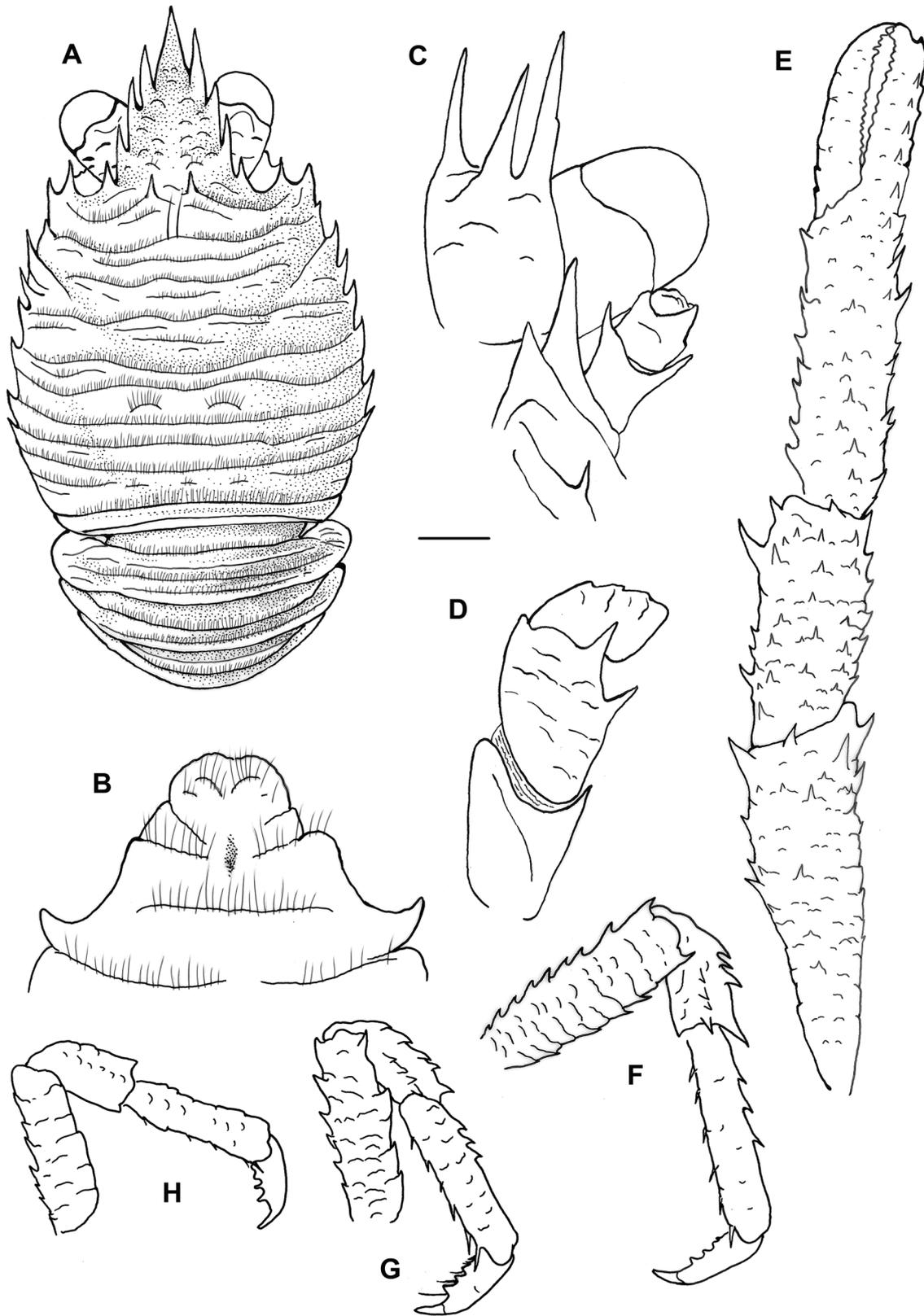


FIGURE 13. *Galathea australiensis* Stimpson, 1858, male, 3.3 mm, Australia, New South Wales (P269). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view (setae on appendages not figured). Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Australia. Queensland. Bramton Islands, intertidal, 5 May 2009: 1 F 3.5 mm (SMF 3635).

Australia. Victoria. E Bass Strait, Cruise 83-54-1, Stn 209, 38°18'S, 147°37'E, 55 m, 31 September 1993: 12 M 2.3–3.4 mm, 18 F 2.4–3.0 mm (NMV-J13358).

Description. *Carapace:* As long as broad; transverse ridges with numerous short fine setae and a few long thick plumose setae; setae non iridescent; cervical groove laterally bifurcated. Gastric region with 9 ridges: 2 epigastric ridges, sometimes medially interrupted, with 2 submedian spines, posterior ridge scale-like; 2 protogastric ridges, anterior one medially convex, uninterrupted and laterally reaching second lateral marginal spine, without parahepatic spine, posterior ridge uninterrupted; 2 mesogastric ridges, anterior ridge uninterrupted, not continuing laterally to anterior branchial region, posterior ridge scale-like; 3 metogastric ridges, anterior ridge uninterrupted and continuing laterally to lateral marginal, following ridge scale-like, posteriormost ridge moderately short. Hepatic spine absent. Mid-transverse ridge uninterrupted, preceded by cervical groove. Posterior branchial region with 6 or 7 transverse ridges. Lateral margins convex medially, with 8 spines: 2 spines in front of and 6 spines behind anterior cervical groove; first (anterolateral) moderately strong, second small, located at midlength between first spine and anteriormost spine of branchial margin, additional spine ventral to between first and second lateral spines; 3 spines on anterior branchial margin, and 3 spines on posterior branchial margin, last small. External limit of orbit with small spine subequal to anterolateral spine; infraorbital margin with 1 spine. Rostrum 1.5 times as long as broad, length 0.5 of postorbital carapace length and breadth 0.3 of carapace width, nearly horizontal in lateral view; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface with small setiferous ridges; lateral margin with 4 deeply incised sharp teeth, each bearing stiff long setae on mesial base (setae not figured).

Pterygostomian flap rugose, with facial spine on anterior part, anterior margin spiniform.

Sternum: 0.8 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 each with 3 or 4 transverse uninterrupted ridges on tergite, anterior ridge more distinctly elevated than posterior ridge; tergite of somite 4 with 2 interrupted and 2 uninterrupted transverse ridges placed alternately; somites 5 with 2 uninterrupted or medially interrupted ridges; somite 6 with 2 medially interrupted ridges, posteromedian margin straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.1–1.3 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 spines; well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine also well-developed, slightly shorter than distolateral. Ultimate article moderately elongate, twice longer than broad, without fine setae on distodorsal margin.

Antenna: Article 1 with strong distomesial spine not reaching distal margin of article 3. Article 2 with 2 subequal well-developed distal spines, overreaching midlength of but not reaching end of article 3. Article 3 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; flexor margin with small but distinct distal spine; crista dentata with 17–19 denticles. Merus slightly shorter than ischium; flexor margin with 2 subequal well-developed spines; extensor margin with 1 distal spine. Carpus unarmed.

P1: 2.4–2.6 (females), 3.0–3.4 (males) times postorbital carapace length, relatively slender, subcylindrical, somewhat depressed in palm, more so in fingers; scales setose, with scattered long thick plumose setae (not figured). Merus as long as carapace, 1.5–2.0 times as long as carpus, with spines arranged in longitudinal rows, distal spines prominent. Carpus 0.6–0.9 length of palm, 2.0–2.5 times as long as broad; dorsal surface with small spines arranged in longitudinal rows; mesial margin with 1 or 2 strong spines, distal second largest. Palm 3.0–3.2 times longer than broad, lateral and mesial margins subparallel; spines arranged in longitudinal rows, some small spines scattered on dorsal side. Fingers 0.6–0.8 length of palm, each finger distally with 2 rows of teeth, spooned; some spines along lateral margin of fixed finger, mesial margin of movable finger with minute proximal spines.

P2–4: moderately slender, with setose striae and long sparse plumose setae (not figured). Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.7 of carapace length, 2.9 times as long as broad, 1.1 times longer than P2 propodus; P3 merus 3.3 times longer than broad, 1.2 times longer than P3 propodus; P4 merus 3.1 times as long as broad, 1.2 length of P4 propodus; extensor margins each with row of 6–10 proximally diminishing spines in P2–4; lateral surfaces unarmed; flexor margins distally ending in strong spine in P2–3 followed proximally by small spine and several tubercles or transverse ridges. Carpi each with 4 or 5 spines on extensor margin in P2–3, 1 or 2 spines in P4; lateral surface with small spines subparallel to extensor margin in P2–4; flexor distal margin with small spine. Propodi 4.5 (P2), 4.0 (P3) and 3.5 (P4)

times as long as broad; extensor margins each with 3 proximal spines in P2–3; flexor margins each with 5–7 movable spines in P2–4. Dactyli subequal in length, distally ending in noticeably curved strong spine, 0.5–0.7 length of propodi; flexor margins each with prominent triangular subterminal tooth followed by 5–7 low teeth.

Epipods present on P1–3.

Remarks. *Galathea australiensis* seems to be restricted to Australian waters and records from other areas should be revised. The presence of epipods on P1–3, 1 facial spine on the pterygostomial flap, 2 anterolateral marginal spines on the carapace, and 3 well-developed terminal spines on the antennular basal article, are the main characters to distinguish *G. australiensis* from the other species.

Galathea australiensis resembles *G. corallicola* Haswell 1882 from Australia and Papua New Guinea, but they can be easily distinguished by the presence of epipods on the P1–3 in *G. australiensis*, instead only on the P1 in *G. corallicola*.

No molecular data are available from *G. australiensis*.

Distribution. Australia, Queensland, New South Wales, Victoria, at depths of 5–55 m.

***Galathea autahi* n. sp.**

(Figs 14, 115H)

Material examined. *Holotype:* French Polynesia. Marquesas Islands. MUSORSTOM 9, Stn CP1264, 9°21.3'S, 140°07.7'W, 53–57 m, 3 September 1997: 1 ov. F 3.9 mm (MNHN-IU-2013-13559).

Paratypes: French Polynesia. Marquesas Islands. MUSORSTOM 9, Stn CP1157, 7°59.2'S, 140°44.2'W, 100 m, 23 August 1997: 1 M 2.2 mm (MNHN-IU-2013-13568).—Stn DW1154, 7°58.5'S, 140°43.7'W, 102 m, 23 August 1997: 2 M 2.1–3.1 mm, 1 ov. F 2.7 mm (MNHN-IU-2013-13567).—Stn CP1177, 8°45.1'S, 140°14.1'W, 108–112 m, 25 August 1997: 6 M 2.4–4.6 mm, 14 ov. F 3.0–3.7 mm (MNHN-IU-2013-13570); 2 M 3.6–4.8 mm (MNHN-IU-2013-13569).—Stn CP1178, 8°46.1'S, 140°14.5'W, 74–75 m, 25 August 1997: 1 M 3.7 mm, 1 ov. F 3.4 mm, 1 F 2.0 mm (MNHN-IU-2013-13571).—Stn DW1170, 8°45.1'S, 140°13.1'W, 104–109 m, 25 August 1997: 1 M 3.6 mm (MNHN-IU-2013-13566); 1 ov. F 3.3 mm (MNHN-IU-2013-13564); 1 M 3.1 mm (MNHN-IU-2013-13565).—Stn DW1203, 9°52.7'S, 139°02.2'W, 60 m, 28 August 1997: 5 M 1.8–2.2 mm (MNHN-IU-2013-13575).—Stn DW1204, 9°52.6'S, 139°03.2'W, 60–62 m, 28 August 1997: 1 M 3.3 mm (MNHN-IU-2013-13563); 1 M 3.4 mm (MNHN-IU-2013-13562); 1 ov. F 3.9 mm (MNHN-IU-2013-13561).—Stn CP1238, 9°41.4'S, 139°03.8'W, 280–370 m, 31 August 1997: 2 M 2.9–3.2 mm (MNHN-IU-2013-13572).—Stn DR1246, 10°28.9'S, 138°35.9'W, 90–130 m, 1 September 1997: 1 ov. F 3.1 mm (MNHN-IU-2013-13573).—Stn CP1264, 9°21.3'S, 140°07.7'W, 53–57 m, 3 September 1997: 4 M 2.2–4.0 mm, 4 ov. F 2.2–3.7 mm, 5 F 1.6–2.0 mm (MNHN-IU-2013-13560).—Stn DW1274, 7°54.6'S, 140°40.1'W, 100–120 m, 5 September 1997: 1 M 2.8 mm, 1 ov. F 2.4 mm (MNHN-IU-2013-13574).—Stn MQ15-GR, 10°28.31'S, 138°40.68'W, 0–28 m, 17–18 January 2012: 1 ov. F 2.6 mm (MNHN-IU-2013-13577).—Stn MQ2-GR, 8°56.231'S, 140°07.240'W, 20–23 m, 07-11-12-13-29 January 2012: 2 ov. F 3.0–4.0 mm (MNHN-IU-2013-13576); 1 M 2.4 mm (MNHN-IU-2013-13578).

Vanuatu. SANTO, Stn DB16, 15°35.5'S, 167°15.8'E, 32–40 m, 14 September 2006: 4 M 1.9–3.2 mm, 6 ov. F 2.8–3.3 mm (MNHN-IU-2013-13602).—Stn DB61, 15°32.3'S, 167°16.9'E, 41 m, 25 September 2006: 1 ov. F 2.6 mm (MNHN-IU-2013-13601).—Stn DB65, 15°25.8'S, 167°13.0'E, 13 m, 26 September 2006: 1 M 2.0 mm (MNHN-IU-2013-13603).—Stn DB77, 15°27.9'S, 167°14.7'E, 42–45 m, 29 September 2006: 3 M 2.9–3.8 mm, 4 ov. F 2.3–3.0 mm (MNHN-IU-2013-13597).—Stn FP47, 15°32.4'S, 167°12.7'E, 45–50 m, 2–3 October 2006: 4 M 2.0–2.4 mm, 1 F 2.3 mm (MNHN-IU-2013-13599).—Stn ZR12, 15°36.7'S, 167°02.0'E, 2–30 m, 5 October 2006: 1 M 3.8 mm (MNHN-IU-2013-13991).—Stn EP30, 15°37.6'S, 167°05.4'E, 103–120 m, 12 October 2006: 1 F 1.3 mm (MNHN-IU-2013-13600).—Stn DS104, 15°34.1'S, 167°16.0'E, 10–80 m, 15 October 2006: 1 ov. F 2.5 mm (MNHN-IU-2013-13598).

New Caledonia. Lifou Island, LIFOU, Stn 1458, 20°46.7'S, 167°03.1'E, 17–24 m, 4 November 2000: 1 M 4.1 mm (MNHN-IU-2013-13593).—Stn 1459, 20°47.0'S, 167°03.0'E, 55–80 m, 5 November 2000: 1 M 3.2 mm, 2 ov. F 2.8–3.0 mm (MNHN-IU-2013-13580 & 13584); 1 ov. F 3.0 mm (MNHN-IU-2013-13581).—Stn 1464, 20°54.5'S, 167°05.9'E, 35–50 m, 14 November 2000: 1 ov. F 3.4 mm (MNHN-IU-2013-13591).—Stn 1650, 20°54.15'S, 167°01.7'E, 120–250 m, 15 November 2000; 2 M 3.5–3.7 mm (MNHN-IU-2013-13592).—Stn 1465, 20°47.7'S, 167°07.0'E, 35–45 m, 16 November 2000: 4 M 1.9–3.0 mm, 1 ov. F 3.5 mm, 5 F 2.6–3.0 mm (MNHN-IU-2013-13586); 1 F 3.5 mm (MNHN-IU-2013-13579).—Stn 1466, 20°46.5'S, 167°06.2'E, 25–45 m, 17

November 2000: 6 M 2.1–5.3 mm, 4 ov. F 3.0–4.7 mm, 3 F 2.6–2.8 mm (MNHN-IU-2013-13588).—Stn 1451, 20°47.3'S, 167°06.8'E, 10–21 m, 19 November 2000: 2 ov. F 4.5–4.6 mm (MNHN-IU-2013-13587).—Stn 1462, 20°47.1'S, 167°03.2'E, 70–120 m, 21 November 2000: 1 M 3.0 mm (MNHN-IU-2013-13590).—Stn 1469, 20°54.2'S, 167°00.4'E, 70–130 m, 22–23 November 2000: 3 F 2.7–3.7 mm (MNHN-IU-2013-13585); 1 ov. F 3.8 mm (MNHN-IU-2013-13594).—Stn 1456, 20°49.3'S, 167°10.4'E, 25–30 m, 26 November 2000: 2 M 2.7–3.0 mm, 1 ov. F 2.5 mm (MNHN-IU-2013-13589). Loyalty Island, MUSORSTOM 6, Stn DW430, 20°21.17'S, 166°07.25'E, 30 m, 17 February 1989: 1 ov. F 3.7 mm (MNHN-IU-2013-13582); 1 ov. F 3.8 mm (MNHN-IU-2013-13583).—Ouvea, 4 m, 17 November 1991: 1 M 4.8 mm, 1 F 3.6 mm (MNHN-IU-2013-13595). Surprises Atoll, SURPRISES, Stn CP1388, 18°23.8'S, 163°06.9'E, 40 m, 11 May 1999: 1 M 3.1 mm (MNHN-IU-2013-13596).

Australia. New South Wales. South of Batemans Bay, N side of Burrewarra, NSW2490, 35.830°S, 150.233°E, 21 m, 23 March 2004: 1 F 2.3 mm (AM P74715).

Etymology. *Autahi*, is the South Star or mother of the Moon and stars which guided Polynesian navigators. The name is considered as a substantive in apposition.

Description. *Carapace:* As long as broad; transverse ridges with dense short setae, and numerous scattered long plumose setae; cervical groove distinct, laterally bifurcated into anterior and posterior branches. Gastric region with 5 transverse ridges: 1 epigastric ridge usually with 2 submedian spines (3 in holotype), medially interrupted; 1 protogastric ridge uninterrupted, with 1 parahepatic spine on each side; 1 mesogastric ridge scale-like; 2 metagastric ridges, anterior one uninterrupted or medially interrupted, not extending laterally to anterior branchial ridges, posterior ridge short. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by cervical groove. Posterior branchial region with 4 ridges, 2 of them uninterrupted. Lateral margins slightly convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first (anterolateral) at same level of lateral limit of orbit, second small, located at midlength between anterolateral spine and anteriormost spine of branchial margin, with additional spine ventral to between first and second spines; 2 spines on anterior branchial margin, posterior one small, and 3 spines on posterior branchial margin; sometimes second and third spines with secondary ventral spine. Small spine on external limit of orbit; infraorbital margin with strong spine. Rostrum 1.8–1.9 times as long as broad, length 0.6 of postorbital carapace length and breadth 0.3 of carapace breadth; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface longitudinally concave, with numerous some small setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin acutely pointed.

Sternum: 0.8 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somite 2 with 2 uninterrupted transverse ridges on tergite; somite 3–4 with anterior ridge only; somites 5–6 smooth, posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.4 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine slightly smaller than others. Ultimate article with a few fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with strong distomesial spine exceeding distal margin of article 4. Article 2 with 2 distal spines, distolateral spine longer than distomesial, and barely reaching end of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor margins ending in small spine, extensor margin ending in acute angle; crista dentata with 26 or 27 denticles. Merus shorter than ischium; flexor margin with 2 or 3 well-developed spines, proximal spine larger than others; extensor margin ending in small spine. Carpus unarmed.

P1: 2.3–2.5 times carapace length, somewhat depressed on palm, more so on fingers, with numerous setiferous scales, and some scattered long setae. Merus 1.0–1.5 times carapace length, 1.7–2.4 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.9–1.1 length of palm, 2.1–2.6 times as long as broad; dorsal surface with some small spines; mesial margin with row of spines, distal second much stronger than others. Palm 1.9–2.6 times longer than broad, lateral and mesial margins subparallel; well-developed spines arranged in dorsal, dorsolateral and dorsomesial rows; dorsolateral row continuing along entire fixed finger. Fingers as long as palm, each finger with 2 rows of teeth, distally spooned; movable finger with small basal spine.

P2–4: long and slender, with some setose striae and sparse long plumose setae. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P3 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7 of carapace length, 3.4 times as long as broad, 1.4 times longer than P2 propodus; P3 merus 3.1 times as

long as broad, 1.3 times longer than P3 propodus; P4 merus 2.9–3.1 times as long as broad, as long as P4 propodus: extensor margins each with row of 8–10 proximally diminishing spines in P2–3, 6 spines in P4; ventral margins distally ending in strong spine, lateral sides unarmed; ventromesial margin with terminal spine in P2. Carpi each with 4–6 spines on extensor margin in P2–3, 1 small distal spine in P4; lateral surfaces each with 3 or 4 small spines or acute granules sub-parallel to extensor margin; flexor distal margins each with small spine. Propodi 4.0–5.0 times as long as broad; extensor margins each with 2 or 3 minute proximal spines; flexor margins each with 5 or 6 slender movable spines. Dactyli distally ending in noticeably curved strong spine, 0.5–0.6 times as long as propodi; flexor margins each with 5 or 6 proximally diminishing teeth, terminal one prominent.

Epipods present only on P1.

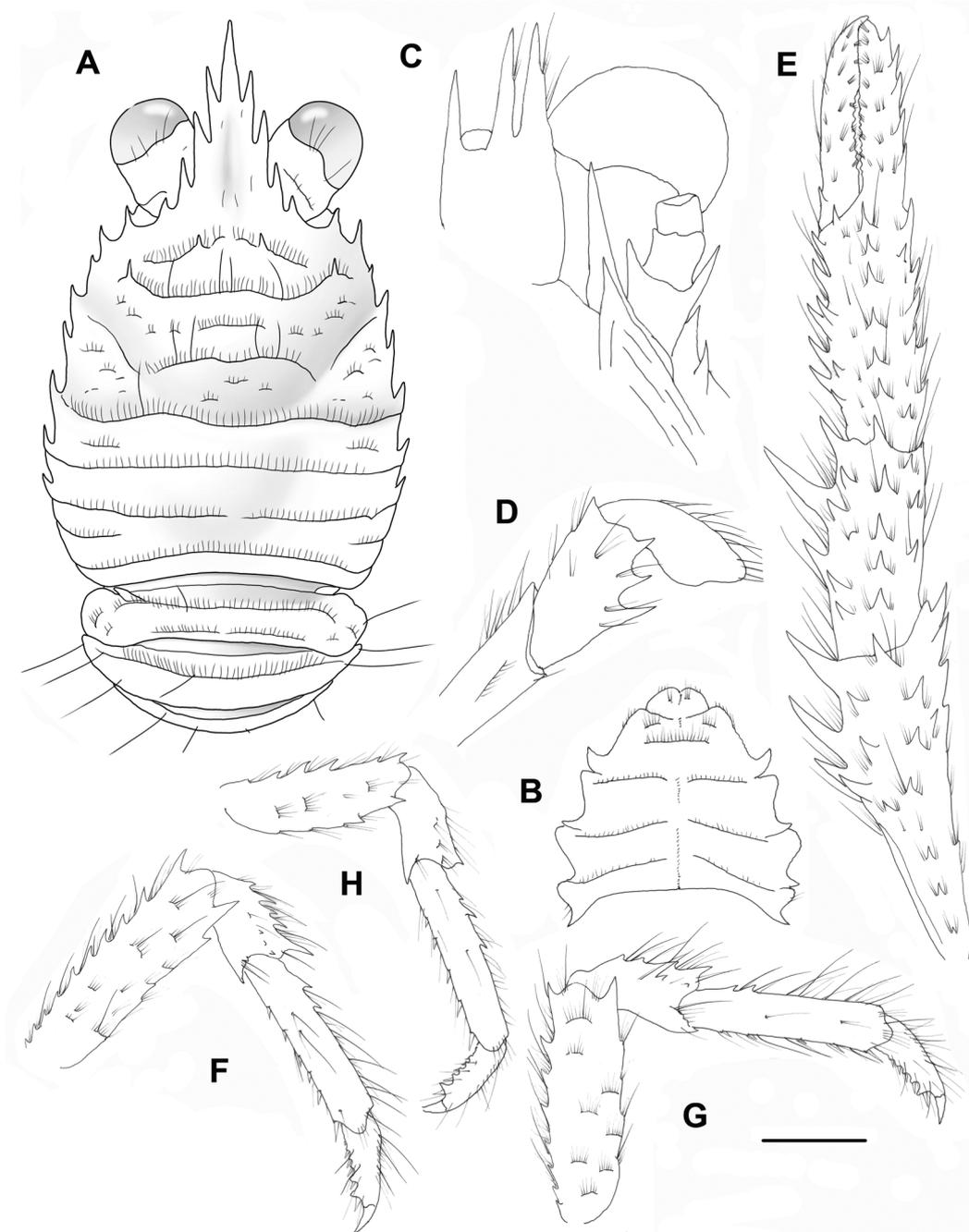


FIGURE 14. *Galathea autahi* n. sp., holotype, ovigerous female, 3.9 mm, French Polynesia (MNHN-IU-2013-13559). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Coloration. Reddish overall. P2–4 with light bands.

Remarks. *Galathea autahi* n. sp. is very close to *G. lemaitrei* n. sp. from the Red Sea and *G. halia* n. sp. from the Philippines to NW Australia, Vanuatu and New Caledonia. The three species can be distinguished by some characters (see the differences under Remarks of *G. lemaitrei* n. sp.).

The molecular data indicate that the specimens from French Polynesia have a low genetic divergence with specimens from New Caledonia (ca. 3% in COI). Nevertheless, no significant morphological differences have been observed between specimens from the two localities, and further analyses are recommended.

Distribution. French Polynesia (Marquesas Islands), Vanuatu, New Caledonia, Australia (New South Wales), 0–370 m.

***Galathea balssi* Miyake & Baba, 1964**

Galathea australiensis.—Balss, 1913b: 13, figs 13 (Uraga Strait, Sagami Bay, and Nagasaki, 150 m) (not *G. australiensis* Stimpson, 1858).

Galathea balssi Miyake & Baba, 1964: 205, figs 1, 2 (East China Sea, 120–122 m).—Miyake & Baba, 1967c: 228 (East China Sea, 84–130 m).—Haig, 1973: 278, fig. 2a–f (E of Rockhampton, Queensland, 31 m).—Baba, 1988: 69 (Sulu Archipelago, E of Masbate, and South China Sea off SW Luzon, 140–216 m).—Davie, 2002: 61 (list).—Komai, 2000: 352 (list).—Baba, 2005: 243 (key, synonymies).—Baba *et al.*, 2008: 66 (compilation).—Poore *et al.*, 2008: 19 (SW Australia, 100–382 m).—Dong & Li, 2010: 6 (East and South China Sea, Nansha Islands, 55–139 m).

?*Galathea australiensis*.—Yokoya, 1933: 57 (Suruga Bay and SE of Tsushima, 51–110m).

Not *Galathea balssi*.—Tirmizi & Javed, 1993: 47, fig. 21 (= *Galathea anepipoda* Baba, 1990).

Not *Galathea balssi*.—Poore *et al.*, 2008: 19 (SW Australia, 100–382 m) (= *Galathea argus* n. sp.).

Material examined. Japan. Kochi Prefecture, no depth recorded: 1 ov. F 5.3 mm (SMF).

Philippines. MUSORSTOM 1, Stn CP2, 14°03'N, 120°19'E, 182–187 m, 19 March 1976: 1 ov. F 5.7 mm, 3 F 4.1–4.4 mm (MNHN-IU-2013-8232).—Stn CP3, 14°02'N, 120°16'E, 183–185 m, 19 March 1976: 2 M 3.0–5.1 mm (MNHN-IU-2013-8236).—Stn CP5, 14°01'N, 120°23'E, 200–215 m, 19 March 1976: 1 F 5.9 mm (MNHN-IU-2013-8240).—Stn CP6, 14°01'N, 120°20'E, 182–200 m, 19 March 1976: 1 F 6.8 mm (MNHN-IU-2013-8247).—Stn CP10, 14°00'N, 120°18'E, 187–205 m, 19 March 1976: 1 M 5.9 mm, 3 ov. F 5.8–6.8 mm (MNHN-IU-2013-8238).—Stn CP20, 13°59'N, 120°20'E, 208–222 m, 21 March 1976: 1 M 5.9 mm, 1 ov. F 5.8 mm (MNHN-IU-2013-8237).—Stn CP24, 14°00'N, 120°18'E, 189–209 m, 22 March 1976: 1 M 4.8 mm, 2 ov. F 5.9–6.0 mm (MNHN-IU-2013-8235).—Stn CP25, 14°03'N, 120°20'E, 191–200 m, 22 March 1976: 1 M 5.7 mm (MNHN-IU-2013-8234), 7 M 4.4–6.9 mm, 11 ov. F 4.8–7.0 mm, 1 F 5.5 mm (MNHN-IU-2013-8233).—Stn CP27, 14°00'N, 120°19'E, 188–192 m, 22 March 1976: 1 ov. F 5.6 mm (MNHN-IU-2013-8241).—Stn CP32, 14°02'N, 120°18'E, 184–193 m, 23 March 1976: 1 M 6.0 mm (MNHN-IU-2013-8243).—Stn CP33, 13°59'N, 120°19'E, 187–197 m, 23 March 1976: 1 ov. F 7.1 mm (MNHN-IU-2013-8248).—Stn CP36, 14°01'N, 120°20'E, 187–210 m, 23 March 1976: 1 M 3.8 mm, 1 ov. F 6.7 mm (MNHN-IU-2013-8244).—Stn CP60, 14°07'N, 120°18'E, 124–129 m, 27 March 1976: 1 F 2.4 mm (MNHN-IU-2013-8249).—Stn CP61, 14°02'N, 120°18'E, 184–202 m, 27 March 1976: 2 ov. F 5.6–7.8 mm (MNHN-IU-2013-8239). MUSORSTOM 2, Stn CP12, 14°01'N, 120°20'E, 197–210 m, 21 November 1980: 1 ov. F 5.1 mm (MNHN-IU-2013-8242). MUSORSTOM 3, Stn CP124, 12°03'N, 121°35'E, 10–123 m, 4 June 1985: 1 ov. F 5.3 mm (MNHN-IU-2013-8246), 1 M 6.3 mm (MNHN-IU-2013-13977).

Indonesia. Kei Islands. KARUBAR, Stn CP66, 09°01'S, 132°09'E, 211–217 m, 1 November 1991: 1 F 6.6 mm (MNHN-IU-2013-8245).

Vanuatu. SANTO, Stn AT69, 15°40.4'S, 167°17.3'E, 207–229 m, 5 October 2006: 1 M 3.2 mm (MNHN-IU-2013-8250).

Remarks. The material examined agrees quite well with the original description and illustrations. Nevertheless, the parapehatic and epigastric spines can be absent in some specimens.

Galathea balssi resembles *G. galene* n. sp. from Vanuatu (see below under Remarks for the latter species).

Distribution. Western Pacific, from Japan to Queensland and Vanuatu, 31–222 m.

***Galathea barbata* n.sp.**

(Fig. 15)

Material examined. *Holotype*: New Caledonia. Chesterfield Islands. CORAIL 2, Stn DW9, 20°53'S, 161°35'E, 62 m, 20 July 1988: 1 M 3.9 mm (MNHN-IU-2013-15845).

Paratypes: New Caledonia. Chesterfield Islands. CHALCAL 84, Stn D1, 21°15.04'S, 162°15.41'E, 48 m, 13 July 1984: 1 M 2.9 mm, 1 ov. F 2.7 mm (MNHN-IU-2013-15854).—Stn D36, 19°45.37'S, 158°32.03'E, 50 m, 21 July 1984: 1 ov. F 3.3 mm (MNHN-IU-2013-15846).—Stn D51, 21°13.21'S, 158°42.50'E, 55 m, 24 July 1984: 1 M 3.2 mm, 1 ov. F 4.0 mm (MNHN-IU-2013-15853).—Stn D55, 21°23.90'S, 158°59.60'E, 55 m, 25 July 1984: 1 M 4.3 mm (MNHN-IU-2013-15847).—Stn CP15, 21°24.90'S, 159°09.30'E, 60 m, 25 July 1984: 1 M 4.0 mm (MNHN-IU-2013-15851). CORAIL 2, Stn DW8, 20°52'S, 161°38'E, 63 m, 20 July 1988: 3 ov. F 3.6–3.7 mm (MNHN-IU-2013-15848).—Stn CP22, 20°33'S, 161°01'E, 85–88 m, 22 July 1988: 1 M 3.5 mm (MNHN-IU-2013-13971).—Stn CP24, 20°27'S, 161°05'E, 74–75 m, 22 July 1988: 1 M 3.5 mm (MNHN-IU-2013-15850).—Stn DW115, 19°22'S, 158°38'E, 44 m, 28 July 1988: 1 ov. F 3.8 mm (MNHN-IU-2013-15849).—Stn DW165, 19°41'S, 158°19'E, 45 m, 2 August 1988: 1 ov. F 3.5 mm (MNHN-IU-2013-15852).

New Caledonia. Pines Island. Stn 583, 22°45'S, 167°29'E, 44 m, 18 July 1985: 1 M 3.8 mm (MNHN-IU-2013-13972).

Etymology. From the Latin *barbatus*, bearded, in reference to the numerous setae on the body.

Description. *Carapace*: As long as broad; transverse ridges with dense short setae and some scattered long non-plumose setae; cervical groove distinct, laterally bifurcated into anterior and posterior parts. Gastric region with 8 transverse ridges: 1 epigastric ridge uninterrupted, with 2 submedian spines; 2 protogastric ridges, anterior one uninterrupted, medially convex, with 1 parahepatic spine on each side, posterior ridge medially interrupted; median scale between posterior protogastric ridge and anterior mesogastric ridge; 2 mesogastric ridge, anterior ridge uninterrupted, not extending laterally to anterolateral spines, posterior ridge scale-like; 3 metagastric ridges not extending laterally to anterior branchial region, posterior one very short; some additional scattered scale-like ridges between main ridges. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by cervical groove, followed by 6 transverse ridges, 3 of them uninterrupted. Lateral margins convex medially, with 8 spines: 2 spines in front of and 6 spines behind anterior cervical groove; first (anterolateral) spine well-developed, behind level of lateral limit of orbit; second spine small, located at midlength between anterolateral spine and anteriormost spine of branchial margin, with strong additional spine ventral to between first and second spines; 3 spines on anterior branchial margin, and 3 spines on posterior branchial margin, last small. External limit of orbit with spine; infraorbital margin with strong spine. Rostrum 1.8 as long as broad, length 0.6 of postorbital carapace length and breadth 0.3 of carapace breadth; distance between distalmost lateral incisions 0.3 of distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin ending in spine.

Sternum: 0.8 times as long as broad, lateral extremities gently divergent posteriorly. Some specimens with 1 spine on each side of distolateral margin of sternite 4.

Abdomen: Somites 2–3 each with 4 uninterrupted transverse ridges on tergite; somite 4 with 2 uninterrupted and 2 interrupted ridges; somite 5 with 2 uninterrupted; somite 6 with 2 medially interrupted ridges, posteromedian margin slightly convex. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 2 spines; well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine obsolescent. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with distomesial spine not reaching distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine slightly longer than distomesial and exceeding midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; extensor margin ending in acute angle; crista dentata with 18–20 denticles. Merus shorter than ischium; flexor margin with 2 strong subequal spines; extensor margin with 2 small spines. Carpus unarmed.

Pl: 2.8 times carapace length, covered with finely setiferous scales, with scattered long non-plumose setae. Merus 1.1 times length of carapace, 1.6 times as long as carpus, with spines arranged in longitudinal rows,

dorsomesial spines stronger; other distal spines also prominent. Carpus 0.7 length of palm, 1.6 times as long as broad; dorsal surface with some small spines; mesial margin with 4 or 5 strong spines. Palm 1.7 times longer than broad; some small spines arranged in dorsolateral and dorsomesial rows, both rows continuing along fixed and movable fingers, respectively; some small spines scattered on dorsal side. Fingers 0.6 length of palm, each finger distally with 2 rows of teeth, spooned.

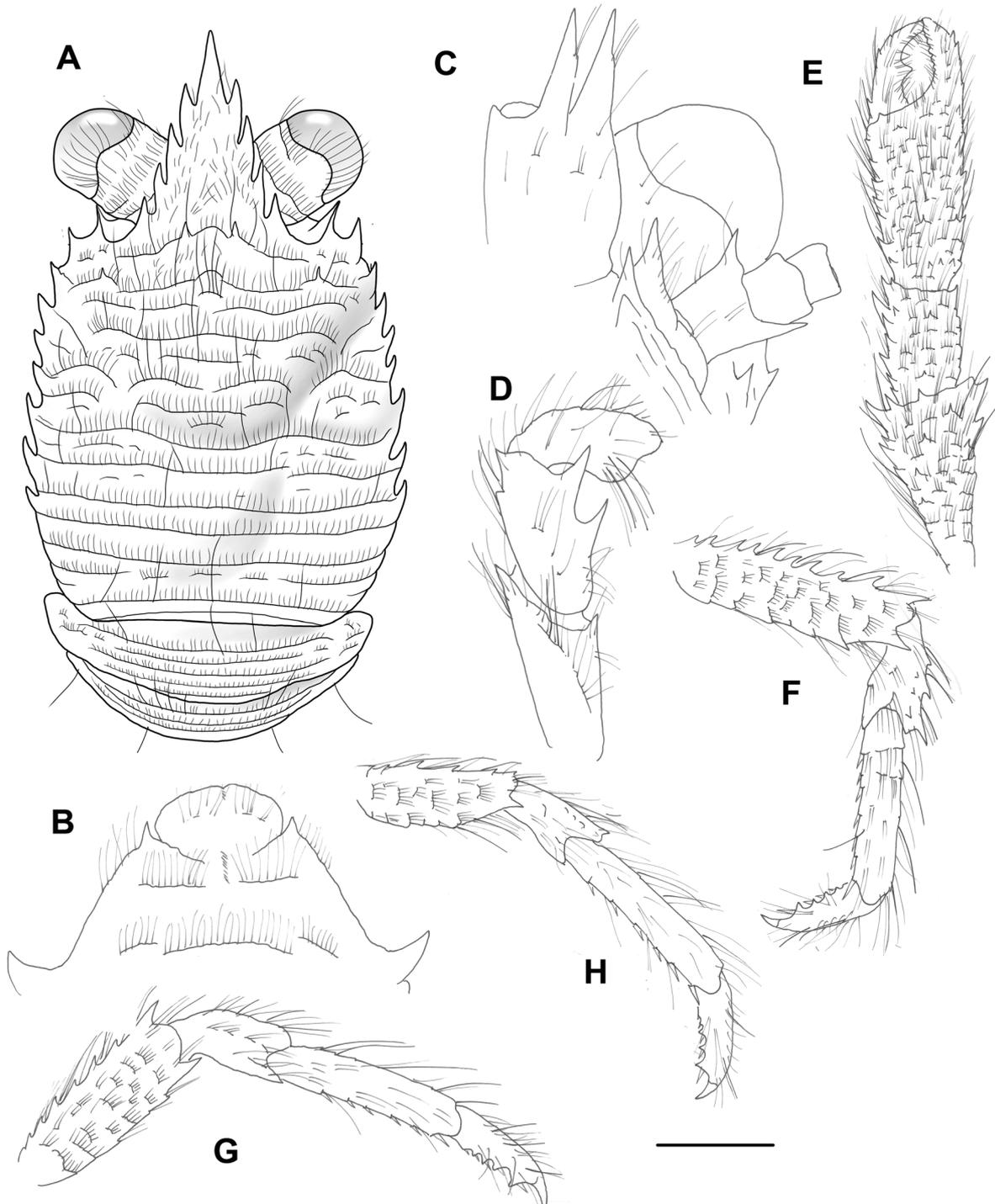


FIGURE 15. *Galathea barbata* n. sp., holotype, male, 3.9 mm, New Caledonia, Chesterfield Islands (MNHN-IU-2013-15845). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

P2–4: moderately slender, with setose striae and numerous long, non-plumose setae. P2 1.7 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7 of carapace length, 3.9 times as long as broad, 1.5 times longer than P2 propodus; P3 merus 2.9 times longer than broad, 1.2 times longer than P3 propodus; P4 merus 2.8 times as long as broad, 1.2 length of P4 propodus; extensor margins each with row of 8–10 proximally diminishing spines in P2–3, 6 spines in P4; ventral margins distally ending in strong spine followed proximally by several tubercles or transverse ridges; lateral sides unarmed. Carpi each with 4 spines on extensor margin in P2, 0–1 spines in P3–4; lateral surfaces each with 3 or 4 small spines or acute granules sub-parallel to extensor margin in P2–4; flexor distal margins ending in acute angle. P2–4 propodi 4.0–4.4 times as long as broad; extensor margins unarmed; flexor margins each with 6 or 7 slender movable spines on P2–4. Dactyli distally ending in noticeably curved strong spine, 0.6–0.7 times as long as propodi; flexor margins each with 5 or 6 proximally diminishing teeth, terminal one prominent.

Epipods on P1, sometimes on P2.

Remarks. The new species resembles *G. punctata* n. sp. from the Philippines to New Caledonia and *G. hispida* Baba, 2005 from Indonesia (see Remarks of *G. punctata* n. sp.).

Distribucion. New Caledonia, Chesterfield Islands, 44–88 m.

***Galathea barbellata* Macpherson, 2012**

Galathea barbellata Macpherson, 2012: 410, fig. 1 (New Caledonia, Vanuatu, 182–262 m).

Material examined. New Caledonia. SMIB 5, Stn DW101, 23°21.20'S, 168°04.90'E, 270 m, 14 September 1989: 1 ov. F 3.9 mm (MNHN-IU-2013-8293). SMIB 8, Stn DW155, 24°45.7'S, 168°08.2'E, 257–262 m, 28 January 1993: 1 ov. F 3.1 mm (MNHN-IU-2013-8294).

Remarks. The genetic divergence between *G. barbellata* and other species is always greater than 14.5% (COI) and 6.2% (16S rRNA) (Tab. 3).

Distribution. New Caledonia, Vanuatu, 182–270 m.

***Galathea bidens* Baba, 1988**

Galathea bidens Baba, 1988: 71, figs 28, 29 (between Cebu and Bohol, 265 m).—Baba, 2005: 243 (key, synonymies).—Baba *et al.*, 2008: 66 (compilation).—Poore *et al.*, 2011: 332, pl. 10D–E (color photo, Philippines).

Material examined. Mariana Islands: Guam Island, Agat Bay, 9 March 2000: 1 M 4.3 mm (UF3170).

Solomon Islands. SALOMON 1, Stn CP1802, 9°31.1'S, 160°35.0'E, 245–269 m, 2 October 2001: 1 M 4.0 mm (MNHN-IU-2013-8302).

Remarks. The specimens examined agree quite well with the original description, but the flexor margin of the Mxp3 merus has three spines (two in the types). No genetic data are available.

Distribution. Philippines, Mariana Islands, Solomon Islands, 245–269 m.

***Galathea bimaculata* Miyake & Baba, 1966**

(Fig. 1151)

Galathea bimaculata Miyake & Baba, 1966a: 69, figs 9, 10 (Okinawa Island, Kume Island, Amami-oshima Island, intertidal).—Baba, 1979b: 652 (Marsegu Island, subtidal).—Miyake, 1982: 145, pl. 49, fig. 2 (Ishigaki Island, subtidal).—Baba, 1982b: 60 (Palau Islands, subtidal).—Kamezaki *et al.*, 1988: 97, with color fig. (Okinawa Island).—Minemizu, 2000: 166, with fig. (Kume Island, Ryukyu Island, 10 m).—Baba *et al.*, 2008: 66 (compilation).

Material examined. Taiwan. 22.0873°S, 120.8911°E, 1 May 2009: 1 M 2.1 mm (UF23103).

Indonesia. Bali, Tubuhau, 4 April 1982: 1 M 3.6 mm (SMF16599). NE coast of Marsegu Island. Rumphius Expedition II, 18 January 1975: 2 M 2.3–2.6 mm, 1 ov. F 2.3 mm (MNHN-Ga 1151).

Papua New Guinea. PAPUA NIUGINI. Stn PR76, 05°01.6'S, 145°47.9'E, 2–15 m, 21 November 2012: 1 ov. F 2.5 mm (MNHN-IU-2013-13907). — Stn PR174, 05°11.3'S, 145°49.5'E, 5–36 m, 4 December 2012: 1 M 2.8 mm, 1 ov. F 2.9 mm (MNHN-IU-2013-13910).— Stn PB07, 05°10.8'S, 145°49.8'E, 22 m, 30 December 2012: 1 F 2.0 mm (MNHN-IU-2013-396).— Stn PB14, 05°13.8'S, 145°48'E, 15 m, 30 December 2012: 1 ov. F 2.3 mm, 1 F 3.0 mm (MNHN-IU-2013-13906).— Stn PB15, 05°04.7'S, 145°48.9'E, 5 m, 30 December 2012: 1 ov. F 3.0 mm (MNHN-IU-2013-13909).— Stn PB23, 04°59.5'S, 145°47.7'E, 13 m, 30 December 2012: 3 M 1.8–2.5 mm, 1 ov. F 2.0 mm (MNHN-IU-2013-13908), 1 M 2.8 mm (MNHN-IU-2013-687).

Vanuatu. SANTO, Stn DB1, 15°33.1'S, 167°17.8'E, 15–25 m, 10 September 2006: 1 M 2.6 mm (MNHN-IU-2013-9726), 8 M 1.8–2.9 mm, 8 ov. F 2.1–3.0 mm, 6 F 1.6–2.0 mm (MNHN-IU-2013-15886).—Stn DB8, 15°34.6'S, 167°13.8'E, 12 m, 12 September 2006: 1 M 2.4 mm (MNHN-IU-2013-9728).—Stn DB33, 15°34.7'S, 167°13.8'E, 14–25 m, 18 September 2006: 2 M 2.7–3.3 mm, 1 ov. F 2.8 mm (MNHN-IU-2013-15887).—Stn DB63, 15°26.9'S, 167°15.8'E, 21 m, 25 September 2006: 3 M 2.5–3.0 mm, 2 ov. F 2.3–3.2 mm (MNHN-IU-2013-15888).—Stn NB43, 15°35.6'S, 167°16.0'E, 6–30 m, 4 October 2006: 2 M 2.4–2.6 mm, 1 F 3.0 mm (MNHN-IU-2013-15889), 1 ov. F 2.4 mm (MNHN-IU-2013-9729), 1 ov. F 3.0 mm (MNHN-IU-2013-9730).—Stn FB92, 15°33.6'S, 167°16.6'E, 2–4 m, 14 October 2006: 1 M 3.2 mm, 1 ov. F 3.0 mm (MNHN-IU-2013-9727).

Australia. Western Australia, Ningaloo Reef, 22.6216°S, 113.9758°E, 6 m, 1 May 2009: 1 M 2.7 mm (UF21832).— 22.6234°S, 113.6367°E, 6 m, 1 May 2009: 1 ov. F 2.9 mm (UF21917).— 22.6232°S, 113.6532°E, 5–6 m, 1 May 2009: 2 M 2.3–3.0 mm, 1 ov. F 2.4 mm (UF23071).

New Caledonia. Lifou Island. LIFOU, Stn 1455, 20°56.8'S, 167°02.7'E, 15–20 m, 25 October 2000: 1 ov. F 2.6 mm (MNHN-IU-2013-9725).—Stn 1429, 20°47.5'S, 167°07.1'E, 8–18 m, 3–5 November 2000: 1 M 2.4 mm (MNHN-IU-2013-9733).—Stn 1449, 20°45.8'S, 167°01.65'E, 17 m, 17 November 2000: 1 M 2.4 mm (MNHN-IU-2013-9731), 1 ov. F 2.0 mm (MNHN-IU-2013-9732). New Caledonia. CHALCAL 2, Stn CP18, 24°47.00'S, 168°09.43'E, 274 m, 27 October 1986: 1 ov. F 3.4 mm (MNHN-IU-2013-8303).

Coloration. Base color of carapace and abdomen whitish. Dark bluish or brownish blotch behind each orbit, on each anterior branchial region, on each side of abdominal somites 2–3, and along median part of abdominal somites 4–5. P1 with transverse brown and whitish stripes; base of both fingers white, each tip with red spot. P2–4 with distal part of meri and propodi and along extensor margin of propodi and dactyli pink, with darker transverse ridges. Rostrum and eyes peduncle reddish or pale.

Remarks. *Galathea bimaculata* is closely related to *G. psila* **n. sp.** from New Caledonia (see Remarks of *G. psila*).

Distribution. Western Pacific, from Japan to New Caledonia, Western Australia; on bryozoan and seaweeds, 2–36 m.

***Galathea boisseliera* n.sp.**

(Fig. 16)

Galathea ternatensis.—Dong & Li, 2010: 21, fig. 13 (South China Sea, 21–92 m).

Material examined. *Holotype*: New Caledonia. Ouen Island, Stn 63, 22°26'S, 166°26.3'E, 20 m, August 1984: 1 M 4.6 mm (MNHN-IU-2013-13673).

Paratypes: Indonesia. Makassar Strait, CORINDON, Stn CH260, 1°56.9'S, 119°17.6'E, 15–50 m, 6 November 1980: 3 M 2.1–4.2 mm, 1 ov. F 3.5 mm, 2 F 4.9–5.0 mm (MNHN-IU-2013-13783); 1 ov. F 4.3 mm (MNHN-IU-2013-13936); 1 M 2.8 mm (MNHN-IU-2013-13937).

Philippines. MUSORSTOM 3, Stn CP121, 12°08'N, 121°17'E, 73–84 m, 3 June 1985: 1 F 3.6 mm (MNHN-IU-2013-13721).

New Caledonia. MUSORSTOM 4, Stn CC146, 19°53.40'S, 163°47.10'E, 33 m, 13 September 1985: 6 M 3.0–3.6 mm, 6 ov. F 3.0–4.7 mm, 8 F 2.7–3.5 mm (MNHN-IU-2013-13712).—Stn DW149, 19°07.60'S, 163°22.7'E, 165 m, 14 September 1985: 1 juv. 1.4 mm (MNHN-IU-2013-13722).—Stn 189, 19°07.50'S, 163°29.00'E, 215 m, 19 September 1985: 1 ov. F 4.4 mm (MNHN-IU-2013-13716).—Stn DW203, 22°35.80'S, 167°04.80'E, 105–110 m, 27 September 1985: 1 ov. F 3.0 mm (MNHN-IU-2013-13713). New Caledonia. 30 m, 13 September 1978: 2 M 2.5–3.4 mm (MNHN-IU-2013-13774).—Stn 1, 22°18'S, 166°24.6'E, 22 m, 22 May 1984: 6

M 2.9–4.5 mm, 1 ov. F 3.8 mm, 2 F 4.0–5.6 mm (MNHN-IU-2013-13785).—Stn 260, 22°17'S, 166°24'E, 23 m, November 1984: 1 M 3.2 mm, 1 ov. F 3.3 mm (MNHN-IU-2013-13709).—Stn 82, 22°31.1'S, 166°28.5'E, 10.5 m, 14 November 1995: 7 M 2.3–4.0 mm, 7 ov. F 3.6–4.0 mm, 1 F 4.9 mm (MNHN-IU-2013-13728). Croissant Reef, 20 m, 18–24 April 1994: 1 ov. F 2.7 mm (MNHN-IU-2013-13781); 3 M 3.4–3.8 mm (MNHN-IU-2013-13782); 1 ov. F 2.7 mm (MNHN-IU-2013-13780). East Lagon, Stn 597, 22°20.3'S, 167°03.7'E, 50–70 m, August 1986: 1 M 3.4 mm, 1 ov. F 3.1 mm (MNHN-IU-2013-13762).—Stn 697, 21°27.6'S, 166°10'E, 35–36 m, 10 August 1986: 1 M 2.7 mm (MNHN-IU-2013-13743).—Stn 738, 22°09.8'S, 167°00.2'E, 59–61 m, 12 August 1986: 1 M 3.3 mm, 1 ov. F 3.8 mm (MNHN-IU-2013-13764).—Stn 741, 22°14.8'S, 167°02.8'E, 77–80 m, August 1986: 1 F 3.3 mm (MNHN-IU-2013-13759). Lagon, 4 September 1978: 5 M 2.7–5.3 mm, 2 ov. F 3.8–6.0 mm (MNHN-IU-2013-13678).—14 September 1978: 1 M 3.4 mm, 1 ov. F 3.7 mm, 1 F 4.0 mm (MNHN-IU-2013-13679).—4 October 1978: 3 M 2.2–4.6 mm, 7 ov. F 1.9–4.2 mm (MNHN-IU-2013-13775).—Stn 7, 22°24'S, 166°19.7'E, 14 m, 21 May 1984: 1 M 4.2 mm (MNHN-IU-2013-13731).—Stn 187, 22°02.8'S, 166°01.7'E, 13 m, 19 September 1984: 1 M 3.5 mm (MNHN-IU-2013-13742).—Stn 253, 22°22.1'S, 166°22.9'E, 16 m, November 1984: 1 F 2.9 mm (MNHN-IU-2013-13732).—Stn 336, 22°41.5'S, 166°51.4'E, 26 m, 28 November 1984: 2 M 2.5–3.6 mm, 5 ov. F 3.1–4.0 mm (MNHN-IU-2013-13778). Aquarium Noumea, 4 September 1978: 1 M 3.1 mm, 2 ov. F 3.4–3.6 mm (MNHN-IU-2013-13772); 1 ov. F 3.9 mm (MNHN-IU-2013-13676); 1 ov. F 4.2 mm (MNHN-IU-2013-13677); 3 M 3.0–3.5 mm, 7 ov. F 2.8–3.6 mm (MNHN-IU-2013-13784). North Lagon, Stn 489, 18°51.3'S, 163°28.8'E, 43 m, February 1985: 1 M 3.9 mm (MNHN-IU-2013-13749).—Stn DW1067, 19°55.8'S, 163°52.8'E, 28 m, October–November 1989: 1 M 3.6 mm (MNHN-IU-2013-13710).—Stn DW1068, 19°57.3'S, 163°52.8'E, 26 m, October 1989: 5 M 3.0–5.1 mm, 4 ov. F 3.1–4.4 mm, 1 F 2.8 mm (MNHN-IU-2013-13753).—Stn DW1069, 19°59.1'S, 163°52.5'E, 30 m, 23 October 1989: 2 M 3.8–4.8 mm, 2 ov. F 3.9–4.0 mm, 1 F 4.1 mm (MNHN-IU-2013-13734).—Stn DW1097, 19°51.7'S, 163°42.5'E, 34 m, October 1989: 1 M 4.9 mm (MNHN-IU-2013-13755).—Stn DW1116, 19°37.3'S, 163°53.6'E, 38 m, October 1989: 1 M 4.0 mm, 2 F 4.3–4.8 mm (MNHN-IU-2013-13675); 1 F 4.5 mm (MNHN-IU-2013-13674).—Stn DW1173, 19°18'S, 163°16.2'E, 64 m, 31 October 1989: 1 M 3.6 mm, 1 ov. F 4.0 mm (MNHN-IU-2013-13758).—Stn DW1214, 19°49.9'S, 163°36.6'E, 29 m, 3 November 1989: 1 M 3.5 mm, 1 F 4.8 mm (MNHN-IU-2013-13746).—Stn DW1215, 19°48'S, 163°40'E, 26 m, 3 November 1989: 1 M 3.8 mm (MNHN-IU-2013-13760). Maitre Island, 25 m, 5 September 1978: 41 M 2.0–4.4 mm, 44 ov. F 1.9–4.2 mm, 4 F 1.9–2.2 mm (MNHN-IU-2013-13725).—25 m, 19 September 1978: 4 M 4.2–5.1 mm, 11 ov. F 3.1–4.4 mm, 2 F 2.0–3.6 mm (MNHN-IU-2013-13771).—22 m, 3 October 1978: 1 M 3.1 mm, 1 ov. F 3.2 mm, 2 F 3.3–4.5 mm (MNHN-IU-2013-13726).—20 m, June 1992: 7 M 3.2–4.8 mm, 1 ov. F 2.9 mm (MNHN-IU-2013-13730); 1 ov. F 4.8 mm (MNHN-IU-2013-13957); 1 M 3.7 mm (MNHN-IU-2013-13958).—Stn 99, 22°19.61'S, 166°24.07'E, 10.5 m, 14 November 1995: 4 M 2.7–4.1 mm, 5 ov. F 3.3–4.2 mm, 1 F 4.2 mm (MNHN-IU-2013-13729). Noumea, no depth, 14 September 1978: 1 M 3.8 mm, 1 ov. F 4.1 mm (MNHN-IU-2013-13773).—Stn 2, 22°19.3'S, 166°23.5'E, 14 m, 1 May 1984: 1 ov. F 4.2 mm (MNHN-IU-2013-13714).—Stn 12, 22°16.8'S, 166°23'E, 23 m, 1 May 1984: 1 M 3.3 mm (MNHN-IU-2013-13733).—Stn 13, 22°19.6'S, 166°26.1'E, 20 m, 1 May 1984: 1 M 5.0 mm (MNHN-IU-2013-13763).—Stn 54, 22°12.9'S, 166°15.4'E, 25 m, 1 May 1984: 1 M 3.1 mm (MNHN-IU-2013-13745).—Stn 56, 22°10'S, 166°15'E, 11 m, 1 May 1984: 1 M 3.4 mm (MNHN-IU-2013-13707).—Stn 59, 22°10.7'S, 166°11.8'E, 21 m, 1 May 1984: 1 M 2.8 mm (MNHN-IU-2013-9876).—Stn 267, 22°21.5'S, 166°14.9'E, 70 m, November 1984: 1 ov. F 3.0 mm (MNHN-IU-2013-13720).—22°23.7'S, 166°24'E, 10 m, November 1984: 1 M 4.2 mm (MNHN-IU-2013-13738). Nouville, 18–20 m, 1 April 1993: 16 M 2.4–5.0 mm, 24 ov. F 2.8–3.8 mm, 15 F 2.0–4.1 mm (MNHN-IU-2013-13724). NW Lagoon, Stn DW948, 20°32.2'S, 164°08.8'E, 16 m, 28 April 1988: 1 ov. F 4.0 mm (MNHN-IU-2013-13686).—Stn DW1008, 20°11'S, 163°53.4'E, 27 m, April 1988: 1 M 4.5 mm (MNHN-IU-2013-13752). SW Lagon, 22°19.41'S, 166°20.89'E, 20 m, 9 November 1995: 1 ov. F 3.0 mm (MNHN-IU-2013-13779). Ouen Island, Stn 103, 22°27.8'S, 166°38.6'E, 25 m, August 1984: 2 M 2.8–3.0 mm, 5 ov. F 2.7–3.9 mm (MNHN-IU-2013-9877).—Stn 110bis, 22°23.8'S, 166°47'E, 49 m, August 1984: 1 ov. F 5.0 mm (MNHN-IU-2013-13711).—Stn 112, 22°23'S, 166°48'E, 42 m, August 1984: 1 F 4.2 mm (MNHN-IU-2013-13685).—Stn 123, 22°29.8'S, 166°39.8'E, 21 m, August 1984: 1 M 3.0 mm (MNHN-IU-2013-13769).—Stn 127, 22°30.6'S, 166°45.9'E, 55 m, August 1984: 1 ov. F 5.3 mm (MNHN-IU-2013-13744).—Stn 129, 22°30.5'S, 166°47.2'E, 45–55 m, August 1984: 1 M 5.4 mm (MNHN-IU-2013-13737).—Stn 133, 22°24'S, 166°52.3'E, 59–62 m, August 1984: 1 ov. F 4.0 mm (MNHN-IU-2013-13754).—Stn 156, 22°32.9'S, 166°37'E, 21 m, August 1984: 4 M 3.1–5.5 mm, 3 ov. F 4.0–4.2 mm (MNHN-IU-2013-13765).—Stn 158, 22°36.1'S, 166°34.4'E, 22 m, August 1984: 1 M 3.9 mm (MNHN-IU-2013-13768).—Stn 159, 22°37.6'S, 166°35.9'E, 17 m, August 1984: 1 ov. F 5.4 mm (MNHN-IU-

2013-13717).—Stn 225, 22°35.9'S, 166°40.0'E, 15 m, October 1984: 2 M 3.0–3.8 mm, 4 ov. F 4.0–4.6 mm (MNHN-IU-2013-13719).—Stn 230, 22°36'S, 166°42'E, 35 m, October 1984: 3 M 4.4–5.7 mm, 1 ov. F 5.5 mm (MNHN-IU-2013-13702).—Stn 234b, 22°32.5'S, 166°51.1'E, 56 m, October 1984: 2 F 4.2–4.4 mm (MNHN-IU-2013-13741).—Stn 240, 22°22.6'S, 166°59'E, 42 m, October 1984: 3 M 3.6–4.7 mm (MNHN-IU-2013-13751).—Stn 247, 22°24'S, 166°50.9'E, 43 m, October 1984: 1 M 4.3 mm, 1 ov. F 4.4 mm (MNHN-IU-2013-13756).—Stn 63, 22°26'S, 166°26.3'E, 20 m, August 1984: 5 M 2.6–4.7 mm, 1 F 2.1 mm (MNHN-IU-2013-13723).—Stn 64, 22°27.6'S, 166°24.9'E, 15 m, August 1984: 1 ov. F 4.4 mm (MNHN-IU-2013-13718).—Stn 67, 22°25.9'S, 166°28.8'E, 21 m, August 1984: 1 M 3.6 mm (MNHN-IU-2013-13715).—Stn 77, 22°25.9'S, 166°31.8'E, 22 m, August 1984: 1 ov. F 2.8 mm (MNHN-IU-2013-13770).—Stn 92, 22°26.6'S, 166°36.9'E, 24 m, August 1984: 2 M 2.7–4.4 mm (MNHN-IU-2013-13747). Passe Sarcelle, 35–40 m, no date: 1 M 4.1 mm, 1 ov. F 4.2 mm (MNHN-IU-2013-13776). Sant Vincent Bay, Stn 165, 22°09'S, 166°10'E, 21 m, September 1984: 2 ov. F 3.1–3.2 mm (MNHN-IU-2013-13706). South Goelands Island, 11 m, 23 March 2000: 2 M 2.5–3.6 mm, 1 ov. F 3.4 mm (MNHN-IU-2013-13777). South Reef, Stn 291, 22°38.4'S, 166°43.7'E, 31 m, November 1984: 6 M 3.0–3.4 mm, 13 ov. F 3.0–3.8 mm (MNHN-IU-2013-13727).—Stn 297, 22°38.9'S, 116°45.6'E, 30 m, November 1984: 2 M 3.3–3.8 mm (MNHN-IU-2013-13761).—Stn 300, 22°34'S, 166°50'E, 21 m, November 1984: 1 M 3.2 mm, 2 ov. F 4.1–4.6 mm (MNHN-IU-2013-13696).—Stn 301, 22°35'S, 166°52'E, 46 m, November 1984: 4 M 3.2–4.9 mm, 4 ov. F 3.1–4.8 mm, 3 F 2.6–4.1 mm (MNHN-IU-2013-13684).—Stn 305, 22°41.5'S, 166°46.3'E, 26 m, November 1984: 1 M 3.9 mm, 2 ov. F 3.8–3.9 mm (MNHN-IU-2013-13766).—Stn 310, 22°45.5'S, 166°45.8'E, 31 m, November 1984: 1 ov. F 3.4 mm (MNHN-IU-2013-13750).—Stn 312, 22°41.9'S, 166°48.8'E, 26 m, November 1984: 1 M 3.2 mm, 1 ov. F 3.1 mm (MNHN-IU-2013-13757).—Stn 316, 22°35'S, 166°54'E, 68 m, November 1984: 3 M 2.4–4.3 mm, 8 ov. F 2.9–4.5 mm (MNHN-IU-2013-13680).—Stn 317, 22°33'S, 166°53'E, 66 m, November 1984: 2 ov. F 3.1–3.5 mm, 1 F 3.0 mm (MNHN-IU-2013-13692).—Stn 327, 22°26'S, 167°04'E, 60 m, November 1984: 7 M 3.0–4.4 mm, 3 ov. F 2.8–3.5 mm (MNHN-IU-2013-13682).—Stn 328, 22°28'S, 167°03'E, 72 m, November 1984: 1 M 3.9 mm (MNHN-IU-2013-13700).—Stn 330, 22°31'S, 167°00'E, 82 m, November 1984: 2 M 3.3–3.5 mm (MNHN-IU-2013-13687).—Stn 335, 22°40'S, 166°53'E, 47 m, November 1984: 2 ov. F 2.7–3.5 mm, 1 F 3.0 mm (MNHN-IU-2013-13681).—Stn 345, 22°45'S, 166°52'E, 39 m, November 1984: 1 ov. F 3.8 mm (MNHN-IU-2013-13695).—Stn 347, 22°43.3'S, 166°53.3'E, 46 m, November 1984: 1 M 3.5 mm, 1 ov. F 3.4 mm (MNHN-IU-2013-13739).—Stn 348, 22°42'S, 166°54'E, 45 m, November 1984: 3 M 3.5–4.6 mm, 2 ov. F 3.3–3.4 mm (MNHN-IU-2013-13691).—Stn 350, 22°38'S, 166°57'E, 67 m, November 1984: 3 M 2.9–4.2 mm, 1 ov. F 4.7 mm (MNHN-IU-2013-13693).—Stn 356, 22°29'S, 167°05'E, 78 m, November 1984: 1 M 3.2 mm (MNHN-IU-2013-13701).—Stn 357, 22°31'S, 167°05'E, 77 m, November 1984: 1 ov. F 2.8 mm (MNHN-IU-2013-13748).—Stn 359, 22°33'S, 167°04'E, 74 m, November 1984: 1 ov. F 3.3 mm (MNHN-IU-2013-13704).—Stn 367, 22°37'S, 167°04'E, 105 m, November 1984: 1 M 3.9 mm (MNHN-IU-2013-13690).—Stn 373, 22°28'S, 167°11'E, 52–57 m, 21 January 1985: 1 ov. F 3.8 mm (MNHN-IU-2013-13689).—Stn 374, 22°30.2'S, 167°08.9'E, 70–72 m, 21 January 1985: 1 M 2.9 mm, 1 ov. F 3.2 mm (MNHN-IU-2013-13735).—Stn 389, 22°43'S, 167°05'E, 274 m, 22 January 1985: 1 M 3.1 mm (MNHN-IU-2013-13688).—Stn 398, 22°37'S, 167°11.8'E, 71 m, January 1985: 1 M 3.4 mm (MNHN-IU-2013-13736).—Stn 403, 22°34.5'S, 167°17.5'E, 45 m, January 1985: 1 ov. F 4.0 mm (MNHN-IU-2013-13740).—Stn 405, 22°38'S, 167°20'E, 27 m, 23 January 1985: 1 M 4.5 mm (MNHN-IU-2013-13697).—Stn 413, 22°38.9'S, 167°16.6'E, 40–60 m, January 1985: 1 M 2.9 mm (MNHN-IU-2013-13767).—Stn 414, 22°37'S, 167°16'E, 60 m, 24 January 1985: 1 M 3.7 mm, 2 ov. F 3.8–4.5 mm (MNHN-IU-2013-13698).—Stn 464, 18°21'S, 163°03.1'E, 44 m, February 1985: 1 M 4.0 mm (MNHN-IU-2013-13705).—Stn 556, 22°48'S, 166°52'E, 30 m, 16 July 1985: 1 M 3.5 mm, 1 ov. F 4.1 mm (MNHN-IU-2013-13694).—Stn 564, 22°47'S, 166°56'E, 35 m, 16 July 1985: 3 M 4.5–4.6 mm, 4 ov. F 3.5–3.8 mm (MNHN-IU-2013-13683).—Stn 569, 22°49'S, 166°59'E, 62 m, 17 July 1985: 1 M 2.8 mm, 2 ov. F 3.2–3.3 mm (MNHN-IU-2013-13703).—Stn 572, 22°52'S, 167°00'E, 65 m, 17 July 1985: 4 ov. F 4.0–4.2 mm (MNHN-IU-2013-13708).

Etymology. This species is dedicated to Marie-Catherine Boisselier of the Muséum nationale d'Histoire Naturelle, Paris, for her support of crustacean research.

Description. *Carapace:* As broad as long; transverse ridges with dense short setae, and a few scattered moderately long non-plumose setae; cervical groove distinct, laterally bifurcated into anterior and posterior parts. Gastric region with 6 transverse ridges: 1 epigastric ridge unarmed, uninterrupted, and medially convex; 2 protogastric ridges, anterior one usually uninterrupted, unarmed or with parahepatic spine on each side, posterior ridge median, short and arcuate; 1 mesogastric ridge uninterrupted, not extending laterally to base of anteriormost

branchial marginal spines; 2 metagastric ridges uninterrupted, not continuing laterally to anterior branchial ridges, posterior ridge scale-like. Hepatic spine present (minute in some small individuals). Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by cervical groove. Posterior branchial region with 5 transverse ridges, 2 of them uninterrupted. Lateral margins moderately convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first (anterolateral) spine moderately small, located at same level of lateral limit of orbit, second spine small, at midlength between anterolateral spine and anteriormost spine of branchial margin, with additional spine ventral to between first and second; 2 spines on anterior branchial margin, posterior spine smaller than anterior spine, and 4 spines on posterior branchial margin. External limit of orbit with spine; infraorbital margin with strong spine. Rostrum 1.7–1.8 times as long as broad, length 0.6 of postorbital carapace length and breadth 0.3 of carapace breadth; distance between distalmost lateral incisions 0.35 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous small scale-like setose ridges; lateral margin with 4 deeply incised teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acutely pointed.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somites 5 and 6 each with 2 medially interrupted ridges, posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.6 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine exceeding distal margin of article 2. Article 2 with 2 distal spines, distolateral spine longer than distomesial and reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor margins ending in small spine, extensor margin ending in acute angle; crista dentata with 20 or 21 denticles. Merus shorter than ischium; flexor margin with 2 spines, proximal spine slightly longer than distal; extensor margin ending in acute point. Carpus unarmed.

P1: 3.0–3.5 times carapace length, with numerous setiferous scales, and some scattered long non-plumose setae. Merus 1.2 times carapace length, 1.6 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.8 length of palm, 1.5 times as long as broad; dorsal surface with some small spines; mesial margin with row of spines, distal second spine stronger than others. Palm 1.6 times longer than broad; small spines arranged in dorsal, dorsolateral and dorsomesial rows. Fingers 0.7 times palm length, each finger with 2 rows of teeth distally spooned; fingers unarmed.

P2–4: long and slender, with some setose striae and sparse long plumose and non-plumose setae. P2 1.9–2.1 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.6–0.8 times carapace length, 4.0–4.5 times as long as broad, 1.5 times longer than P2 propodus; P3 merus 3.5 times as long as broad, 1.5 times longer than P3 propodus; P4 merus 2.9–3.1 times as long as broad, as long as P4 propodus; extensor margins each with row of 8 or 9 proximally diminishing spines in P2–3, 0–1 spines in P4; ventral margins distally ending in strong spine, and 1 or 2 additional distal spines, lateral sides with 1 or 2 spines on P4 only. Carpi each with 2–4 spines on extensor margin in P2–3, unarmed in P4; lateral surfaces each with 3 or 4 small spines or granules sub-parallel to extensor margin; flexor distal margins acute. Propodi 3.4–4.2 times as long as broad; extensor margins unarmed; flexor margins each with 4–6 slender movable spines, terminal 2 paired with another smaller spine mesial to it. Dactyli distally ending in noticeably curved strong spine, 0.5–0.6 times as long as propodi; flexor margins each with 5 or 6 proximally diminishing teeth, terminal one prominent.

Epipods present only on P1.

Remarks. *Galathea boisseliera* n. sp. is very close to *G. patriciae* n. sp. from Wallis and Futuna and *G. providentia* Laurie, 1926 from the SW Indian Ocean and Western Pacific, from the Philippines, to New Caledonia, and Fiji (see differences among the three species under Remarks of *G. providentia*). The specimens from the South China Sea and illustrated by Dong & Li (2010) agree quite well with the present new species. However, further studies should confirm the identity of this material.

Distribution. Philippines, Indonesia (Makassar Strait), New Caledonia, 10–215 m, on sponges, on *Acropora* spp., eunicid polychaete tubes, and crinoids.

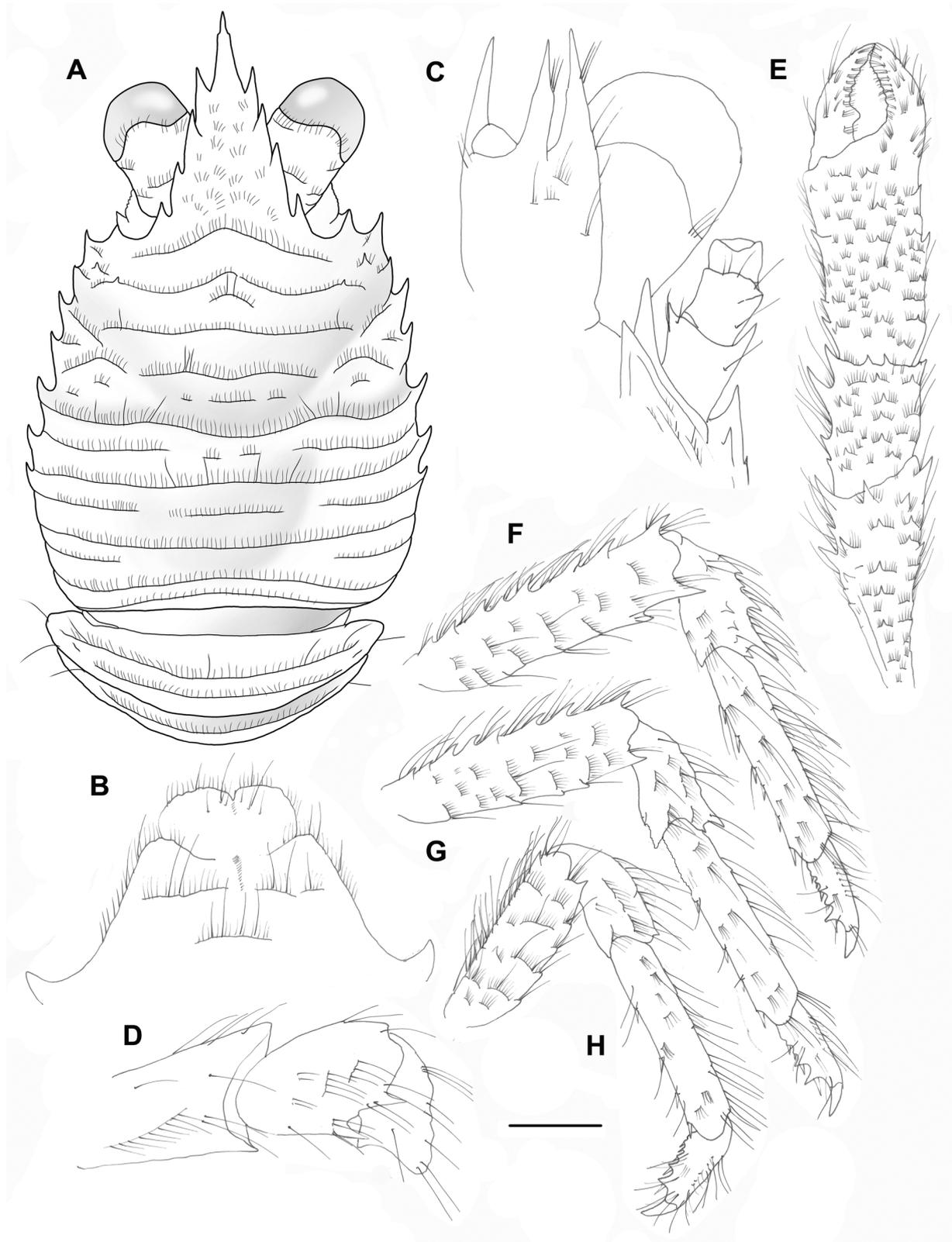


FIGURE 16. *Galathea boisseliera* n. sp., holotype, male, 4.6 mm, New Caledonia (MNHN-IU-2013-13673). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

***Galathea boucheti* n. sp.**

(Figs 17, 116A)

Galathea sp.—Poore *et al.*, 2011: 334, pl. 12E (color photo, Vanuatu).

Material examined. *Holotype*: Madagascar. ATIMO VATAE, Stn TB2, 25°01.3'S, 47° 00.5'E, 18 m, 1 May 2010: 1 M 4.0 mm (MNHN-IU-2013-8110).

Paratypes: Red Sea. Djibouti. Moucha Island, Maskali Bank, 11.6992°N, 43.1432°E, 7–17 m, 27 September 2012: 1 ov. F 3.0 mm (UF32758), 1 M 2.5 mm (UF33346). Saudi Arabia. off Thuwai, Shark reef, 22.4268°N, 38.9963°E, sheltered side, 18 March 2013: 1 M 2.8 mm (UF37106).

Red Sea. Sudan, Al Bahr al Ahmar. Sanganeb, Stn SAN114, 50 m, 25 September 1992: 7 M 1.9–2.6 mm, 1 ov. F 2.5 mm, 4 F 1.6–2.1 mm (SMF).—Stn SAN123, 20 m, 27 September 1992: 1 M 2.8 mm, 1 ov. F 2.3 mm (SMF).—Stn SAN139, 30 m, 29 September 1992: 1 M 2.0 mm (SMF).—Stn SAN125, 14 m, 30 September 1992: 1 M 2.4 mm (SMF).—Stn SAN107, 10 m, 1 October 1992: 4 M 2.0–2.5 mm, 6 F 2.0–2.4 mm (SMF).—Stn SAN129, 1 m, 1 October 1992: 1 M 2.2 mm (SMF).—Stn SAN142, 50 m, 1 October 1992: 1 ov. F 2.2 mm (SMF).—Stn SAN110, 30 m, 2 October 1992: 1 M 2.3 mm (SMF).—Stn SAN124, 40 m, 2 October 1992: 2 M 3.0–3.2 mm (SMF).—Stn SAN120, 6–10 m, 3 October 1992: 2 M 2.3–2.4 mm, 1 F 2.3 mm (SMF).—Stn SAN32, 40 m, 2 April 1991: 1 M 3.5 mm (SMF). Red Sea. Sudan, Al Bahr al Ahmar. Port Sudan, Stn SAN174, 20 m, 19 September 1992: 1 F 2.4 mm (SMF). Red Sea. Gulf of Aqaba, Marine Science Station, Stn AQ80, 25 m, 14 July 1995: 1 F 3.4 mm (SMF). Stn AQ103, 8 m, 19 July 1995: 1 M 2.8 mm (SMF). Saudi Arabia, Al Wajh, 25.3919°N, 36.6839°E, 7 m, 25 September 2013: 1 F 3.0 mm (UF36334), 1 M 2.4 mm (UF36337).—Gulf of Aqaba, 28.4039°N, 34.7407°E, 20 m, 29 September 2013: 1 F 2.0 mm (UF38058).—28.4039°N, 34.7407°E, 2 m, 30 September 2013: 7 M 1.8–3.1 mm, 3 ov. F 3.3–3.7 mm, 3 F 2.2–2.9 mm (UF38140).—28.4039°N, 34.7407°E, 60 m, 30 September 2013: 1 M 3.0 mm (UF38158).

Madagascar. BENTHEDI, Stn 14R, 12°22'S, 46°23.7'E, 5–20 m, 21 March 1977: 2 M 2.0–2.7 mm, 3 F 1.8–2.1 mm (MNHN-IU-2013-8120). ATIMO VATAE, Stn TB2, 25°01.3'S, 47° 00.5'E, 18 m, 1 May 2010: 2 juv. Broken (MNHN-IU-2010-2737).—Stn CP3572, 25°11.7'S, 47°12.5'E, 75–77 m, 8 May 2010: 1 M 2.5 mm (MNHN-IU-2013-8113).—Stn CP3579, 25°54.5'S, 45°33.2'E, 65–66 m, 9 May 2010: 2 M 2.8–3.3 mm (MNHN-IU-2013-8116).—Stn DW3605, 24°54.5'S, 44°51.0'E, 56–57 m, 13 May 2010: 1 ov. F 2.2 mm (MNHN-IU-2013-8111), 1 M 3.4 mm (MNHN-IU-2013-8117).—Stn DW3627, 25°29.4'S, 45°45.8'E, 37–38 m, 15 May 2010: 1 M 3.6 mm (MNHN-IU-2013-8115).

South China Sea. Macclesfield Bank, Stn 63, 15°37'2"N, 114°28'42"E, 63 m, 3 May 1893: 1 M 3.2 mm (NHMUK). 1 ov. F 3.6 mm (NHMUK).—Stn 15, 15°37'N, 113°52'E, 67 m, May 1892: 1 M 3.5 mm, 1 F 4.1 mm (NHMUK).

Vanuatu. SANTO, Stn DB61, 15°32.3'S, 167°16.9'E, 41 m, 25 September 2006: 1 M 2.4 mm (MNHN-IU-2013-8114), 1 M 2.2 mm (MNHN-IU-2013-8118).—Stn ZB20, 15°36.1'S, 167°05.4'E, 15–20 m, 10 October 2006: 1 F 2.7 mm (MNHN-IU-2013-8119), 1 ov. F 3.0 mm (MNHN-IU-2013-8112).

Etymology. This species is dedicated to Philippe Bouchet of the Muséum nationale d'Histoire Naturelle, Paris, for his enormous support to scientific collection and marine research.

Description. *Carapace*: As long as broad; cervical groove distinct, but anterior cervical groove indistinct. Gastric region with 7 ridges: 1 epigastric ridge medially interrupted, with 2 submedian spines; 2 protogastric ridges, anterior ridge uninterrupted and medially convex, with 1 parahepatic spine at each side, posterior ridge short and placed medially; 2 mesogastric ridges, anterior ridge uninterruptedly extending laterally to anteriormost of branchial marginal spines, posterior ridge short; 2 metogastric ridges, anterior ridge uninterrupted and extending laterally to anterior branchial ridge. Mid-transverse ridge uninterrupted, preceded by cervical groove, followed by 5 ridges. Lateral margins medially convex, with 6 spines: 1 spine in front of and 5 spines behind anterior cervical groove; first (anterolateral) well-developed, at level of lateral limit of orbit; one small spine ventral to between first anterolateral spine and anteriormost branchial spine; 2 spines on anterior branchial margin, and 3 spines on posterior branchial margin, last small. External limit of orbit ending in small spine; infra-orbital margin with strong spine. Rostrum broadly triangular, 1.3 times as long as broad, 0.5 times of as long as carapace, breadth 0.4 of carapace breadth, distance between distalmost lateral incisions 0.25–0.3 distance between proximalmost lateral incisions, dorsal surface nearly horizontal in lateral view, with some setose scales; lateral margin with 4 deeply incised sharp teeth.

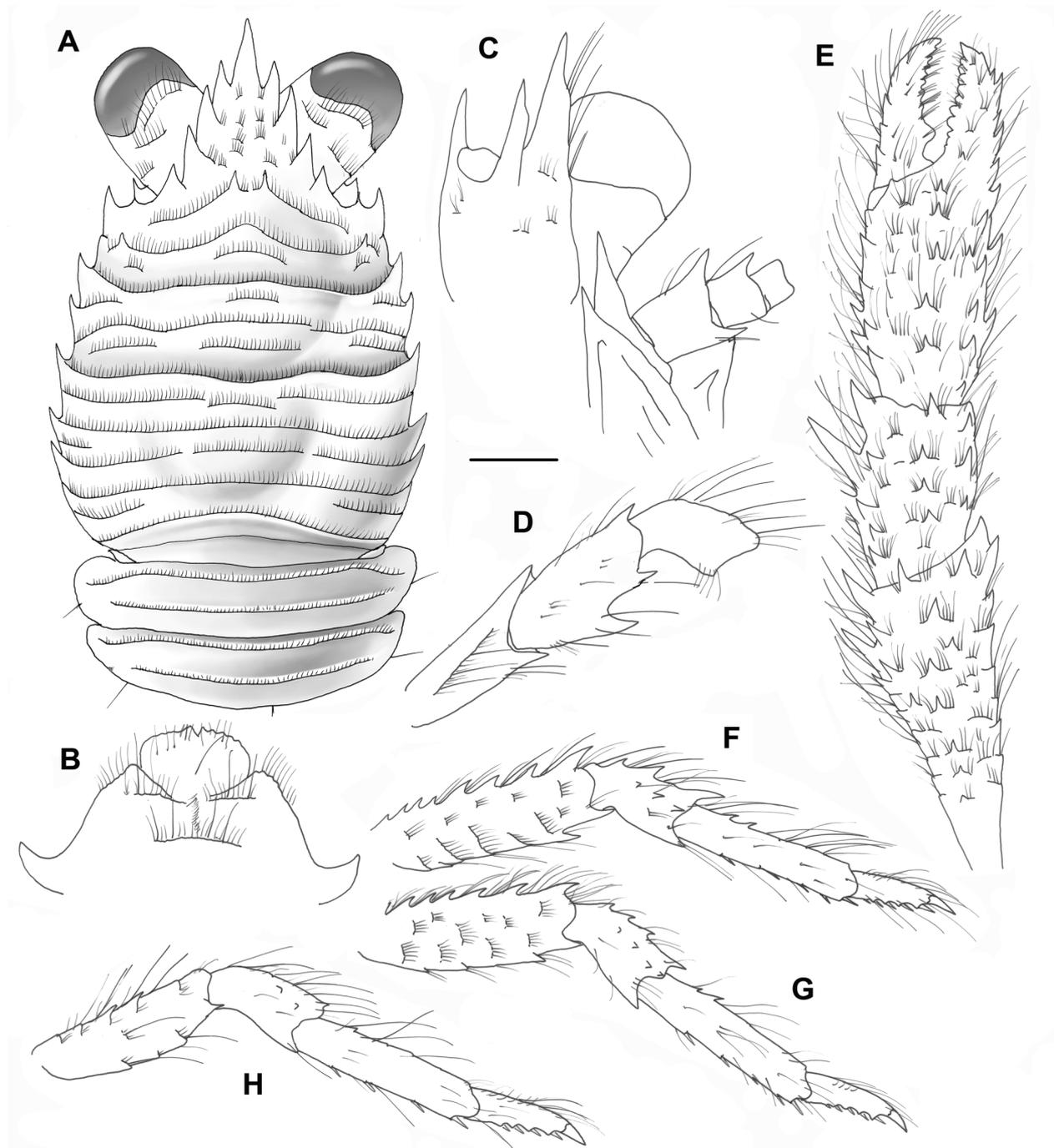


FIGURE 17. *Galathea boucheti* n. sp., holotype, male, 4.0 mm, Madagascar (MNHN-IU-2013-8110). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Pterygostomian flap rugose with sparse setae, unarmed, anterior margin spiniform.

Sternum: plastron nearly as long as broad, lateral limits divergent posteriorly.

Abdomen: Somites 2–3 each with 2 uninterrupted transverse ridges on tergite, somite 4 with posterior ridge medially interrupted; somites 5 and 6 each with 2 medially interrupted ridges; posteromedian margin on somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger. Ultimate article moderately long, twice longer than broad, with tuft of long setae on distolateral and distomesial margins.

Antenna: Article 1 hardly visible from dorsal view, with depressed distomesial spine reaching distal margin of article 2. Article 2 with distolateral and distomesial subequal, reaching midlength of article 3. Article 3 with small, distinct distomesial spine. Article 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor margin unarmed; crista dentata with 25 or 26 denticles. Merus subequal in length to ischium, with 2 strong spines on flexor margin, proximal spine located at midlength and clearly larger than distal spine; extensor margin with distal spine. Carpus spineless.

P1: 2.5 times postorbital carapace length, with short and long setae on dorsal surface and along lateral and mesial margins of all articles. Merus as long as carapace, 1.5 times as long as carpus, with numerous spines, stronger spines along mesial and dorsodistal margins. Carpus as long as palm, 1.7 times longer than broad, lateral and mesial margins subparallel, dorsal surface with small spines; mesial surface with some strong spines; row of spines along lateral margin. Palm 1.5 times longer than broad, lateral and mesial margins subparallel; spines arranged in longitudinal rows; dorsolateral row continued onto whole lateral margin of fixed finger. Fingers 0.7 as long as palm, each finger distally with 2 rows of teeth, spooned; movable finger with row of some spines in proximal half of mesial margin, otherwise unarmed.

P2–4: moderately setose, sparsely with long plumose setae on all articles. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.7 of carapace length, 3.4 times as long as broad, 1.4 times longer than P2 propodus; P3 merus 3.2 times as long as broad, 1.3 times length of P3 propodus; P4 merus 3.0 times as long as broad, 1.2 length of P4 propodus; extensor margins each with row of 8–9 proximally diminishing spines in P2–3, unarmed or with 1 or 2 small spines in P4; lateral surfaces unarmed in all P2–4; flexor margins each with strong terminal spine and 1 or 2 additional spines in P2–3, unarmed in P4; ventromesial margins each with terminal spine in P2–4. Carpi each with 4 spines on extensor margin of P2–3, unarmed in P4; lateral surfaces each all with row of 2 or 3 small spines paralleling extensor row; flexor distal margins each with small spine. P2–4 propodi 4 times as long as broad; extensor margins each with 1 or 2 proximal spines in P2–4; flexor margins each with 4 or 5 slender movable spines. Dactyli subequal in length, 0.6–0.7 length of propodi, ending in incurved, strong, sharp spine; flexor margins each with prominent triangular terminal tooth preceded by 4 or 5 low teeth.

Epipods present only on P1.

Coloration. Base color of carapace and abdomen orange. Carapace with some blue spots on gastric region, each branchial region with blue whorl. Abdominal somites with some symmetrically arranged blue spots. P1 orange-reddish, base of fingers bluish. P2–4 with orange and bluish transverse bands or rings.

Remarks. The new species is closely related to *G. amamiensis* Miyake & Baba, 1966 known from Japan, Indonesia, and Madagascar. Both species have an uninterrupted ridge between the anteriormost branchial marginal spines, the rostrum has 4 deeply incised lateral teeth, 2 epigastric spines on the carapace, and epipods on P1 only. However, *G. amamiensis* and the new species can be separated by the following aspects:

- The proximal spine on the flexor margin of the Mxp3 merus is clearly larger than the distal spine in the new species, whereas these flexor spines are subequal in *G. amamiensis*.
- The P2–4 propodi are less than 5 times longer than broad in *G. boucheti* n. sp., whereas they are more than 5 times in *G. amamiensis*.
- The color patterns are quite different. The ground color of the carapace and abdomen is yellow-orange with some blue spots and one blue spiral on each branchial region in the new species, whereas the ground color is brownish (without spots), and the rostrum is sometimes reddish in *G. amamiensis*.

The genetic divergence between *G. boucheti* and *G. amamiensis* is 16.6% (COI) (Tab. 1).

Distribution. Red Sea, Madagascar, South China Sea (Macclesfield Bank), Vanuatu, on rocky and coral areas, 2–77 m.

***Galathea bracteosa* n. sp.**

(Fig. 18)

Material examined. *Holotype*: French Polynesia. Austral Islands. BENTHAUS, Stn DW1968, 23°22.88'S, 150°43.52'W, 100–120 m, 20 November 2002: 1 M 3.1 mm (MNHN-IU-2013-9720).

Paratypes: French Polynesia. Austral Islands. BENTHAUS, Stn DW1880, 27°54.8'S, 143°29.45'W, 90–94 m, 6 November 2002: 1 ov. F 2.3 mm (MNHN-IU-2013-9723).—Stn DW1888, 27°51.38'S, 143°31.42'W, 100–120 m, 6 November 2002: 2 M 2.1–2.5 mm, 1 F 2.5 mm (MNHN-IU-2013-15884).—Stn DW1894, 27°40.13'S, 144°21.51'W, 100 m, 8 November 2002: 1 M 2.5 mm (MNHN-IU-2013-9724).—Stn DW1968, 23°22.88'S, 150°43.52'W, 100–120 m, 20 November 2002: 3 M 2.5–3.1 mm, 2 ov. F 2.6–3.2 mm, 1 F 1.7 mm (MNHN-IU-2013-15883); 1 ov. F 2.7 mm (MNHN-IU-2013-9722); 1 M 2.4 mm (MNHN-IU-2013-9905).—Stn DW1985, 23°26.35'S, 150°44.22'W, 100–107 m, 21 November 2002: 1 M 2.4 mm (MNHN-IU-2013-9721), 1 M 2.5 mm (MNHN-IU-2010-9904).—Stn DW1997, 22°29.14'S, 151°22.30'W, 700–1350 m, 23 November 2002: 1 M 2.8 mm, 2 ov. F 2.5–3.0 mm (MNHN-IU-2013-15885).

Etymology. From the Latin *bractea*, scale, in reference to the numerous scale-like ridges on the carapace.

Description. *Carapace:* As long as broad; ridges with short fine setae, with a few scattered long plumose setae; cervical groove very shallow, laterally bifurcated into anterior and posterior parts; gastric and anterior branchial regions only with interrupted transverse or scale-like ridges; 2 epigastric spines and 1 small hepatic spine on each side; mid-transverse ridge uninterrupted, followed by 4 transverse ridges, 2 of them uninterrupted. Lateral margins convex medially, with 6 spines: 1 spine in front of and 5 spines behind anterior cervical groove; first (anterolateral) accompanying additional spine ventral to between first and lateral end of anterior cervical groove; 2 spines on anterior branchial margin, and 3 spines on posterior branchial margin. External limit of orbit ending in minute spine; infraorbital margin with 1 spine. Rostrum broadly triangular, 1.6 times as long as broad, length 0.6 of postorbital carapace length and breadth 0.3 of carapace width, nearly horizontal in lateral view; distance between distalmost lateral incisions 0.25 of distance between proximalmost lateral incisions; dorsal surface with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, 1 facial spine on anterior part, anterior margin spiniform.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 with 2 transverse ridges, anterior ridge more distinctly elevated than posterior ridge; somite 5 smooth, with 1 anterior ridge; tergite of somite 6 smooth or with some scale-like ridges, posteromedian margin nearly straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed spines, distodorsal larger; distomesial spine slightly smaller than distoventral. Ultimate article with a few short fine setae on distodorsal margin.

Antenna: Article 1 with distomesial spine nearly reaching end of article 2. Article 2 with 2 subequal distal spines, reaching midlength of article 3. Articles 3–4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor and flexor margins ending in spine; crista dentata with 17–20 denticles. Merus as long as ischium; flexor margin with 2 spines, proximal one located at midlength and larger than distal one; extensor margin with small distal spine. Carpus unarmed.

P1: 3 times carapace length, relatively slender. Merus 1.1 times length of carapace, 1.3 times as long as carpus, with spines arranged in longitudinal rows, distal spines prominent. Carpus 0.9 length of palm, 1.7 times as long as broad; dorsal surface with small spines arranged in longitudinal double row; mesial margin with 3 or 4 strong spines, distal second strongest. Palm 1.6 times longer than broad, lateral and mesial margins subparallel; spines arranged in longitudinal rows; dorsolateral row extending onto nearly tip of fixed finger. Fingers 0.8 length of palm, each finger distally with 2 rows of teeth and spooned; movable finger with row of small mesial spines.

P2–4: moderately slender, with setose striae and sparse long plumose setae. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P3 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7 of carapace length, 4.0 times as long as broad, 1.5 times longer than P2 propodus; extensor margins each with row of 7–9 proximally diminishing spines in P2–3, 1 small distal spine in P4; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several low protuberances, lateral surfaces unarmed. Carpi each with 4 spines on extensor margin in P2; 0–1 spines in P3–4; lateral surfaces each with 2 or 3 spines or acute granules sub-parallelizing extensor margin; flexor distal margins acute. Propodi 4.0–4.8 times as long as broad; extensor margin with 3 proximal spines in P2, unarmed in P3–4; flexor margins each with 5 slender movable spines. Dactyli distally ending in noticeably curved strong spine, 0.6 times as long as propodi; flexor margins each with 5 or 6 proximally diminishing teeth, terminal one prominent.

Epipods only on P1.

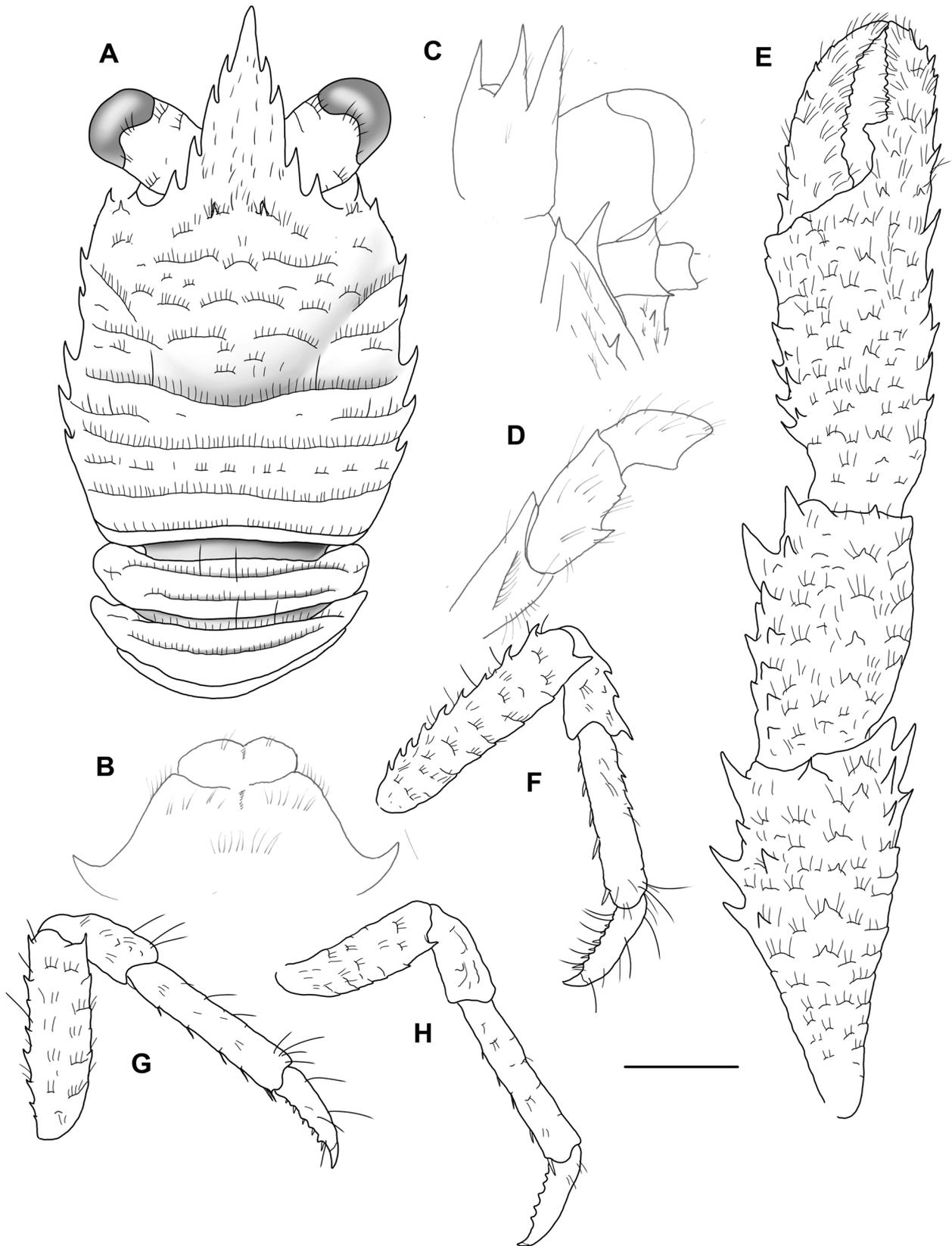


FIGURE 18. *Galathea bracteosa* n. sp., holotype, male, 3.1 mm, French Polynesia (MNHN-IU-2013-9720). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Remarks. *Galathea bracteosa* belongs to the group of species with scale-like ridges on the gastric region and without dorsal spines on the anterior branchial regions. The closest relatives are *G. bimaculata* Miyake & Baba, 1966 from Japan to New Caledonia and Western Australia, *G. ploto* n. sp. from New Caledonia, and *G. psila* n. sp. from New Caledonia. *G. bracteosa* is easily differentiated by the presence of a facial spine on the pterygostomial flap that is always absent in the other species.

The genetic divergences among *G. bracteosa* with these three species are always higher than 14.2% (COI) and 6.1% (16S rRNA) (Tab. 3).

Distribution. French Polynesia, Austral Islands, 90–120 m. The specimens from Station DW1997 (700–1350 m) should be considered with caution.

***Galathea brevimana* Paul'son, 1875**

(Fig. 19)

Galathea brevimana Paul'son, 1875: 95 (Ras Muhammad, Red Sea).—Nobili, 1906: 128 (Red Sea).—Doflein & Balss, 1913: 169 (Dahab, Berenice, Egypt).—Lewinsohn, 1969: 105, fig. 19 (Red Sea, 0–3 m).—Tirmizi & Javed, 1993: 53, fig. 25 (Indian Ocean).—Baba *et al.*, 2008: 67 (compilation).

?*Galathea australiensis*.—Balss, 1915: 2 (not *G. australiensis* Stimpson, 1858).

Material examined. Red Sea. Jubal, 29 December 1928: 1 M 2.7 mm, 1 ov. F 3.0 mm (MNHN Ga752). Red Sea. Gulf of Aqaba. Stn AQ55, 13 m, 11 July 1995: 2 M 3.3–3.8 mm, 1 ov. F 4.3 mm, 6 F 2.8–4.5 mm (SMF).—Stn AQ80, 25 m, 14 July 1995: 1 M 3.0 mm, 4 F 2.7–3.2 mm (SMF).—Stn AQ129, 5 m, 22 July 1995: 2 M 2.6–5.7 mm, 1 F 4.7 mm (SMF). Red Sea. Sudan, Al Bahr al Ahmar, Sanganeb. Stn SAN113, 30 m, 27 September 1992: 1 ov. F 2.8 mm, 1 F 2.0 mm (SMF). Red Sea. 16°43.08'N, 42°03.934'E, 0.5–1 m, 20 February 2012: 1 M 6.0 mm (SMF). Red Sea, Farasan Island. 16°43.130'N, 42°03.902'E, 0–5 m, 23 February 2012: 1 ov. F 4.0 mm (SMF). Red Sea. Saudi Arabia, Jaz'air, 27.6384°N, 35.3062°E, 10 m, 27 September 2013: 2 F 2.0–2.2 mm (UF36438).

Description. *Carapace*: slightly longer than broad; transverse ridges with dense short non-iridescent setae, without long setae; cervical groove distinct, laterally bifurcated. Gastric region with some transverse ridges: 1 epigastric ridge medially interrupted, with 1 pair of spines; 2 protogastric ridges, anterior one uninterrupted, convex medially, extending laterally to second marginal spine, without parahepatic spines; some scales between epigastric and protogastric ridges, posterior protogastric ridge moderately short, convex; 1 mesogastric ridge uninterrupted but not extending laterally to anteriormost of branchial marginal spines; 2 metogastric ridges moderately short, uninterrupted, not extending laterally to anterior branchial region. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 transverse ridges. Lateral margins well convex medially, with 8 spines: 2 spines in front of and 6 spines behind anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, with spine ventral to between first and second spines; second spine small; 3 spines on anterior branchial region, last small, and 3 spines on posterior branchial margin, last small. Small spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum 1.5–1.8 as long as broad, length 0.6–0.7 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.2 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin bluntly produced.

Sternum: 0.9 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 each with 2 or 3 uninterrupted transverse ridges on tergite and usually 1 additional interrupted ridge; somites 5 and 6 each with 2 medially interrupted ridges; posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine smaller. Ultimate article twice longer than broad, with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with distomesial spine exceeding distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine slightly longer than distomesial, both exceeding midlength of article 3. Article 3 with small distomesial spine; article 4 unarmed.

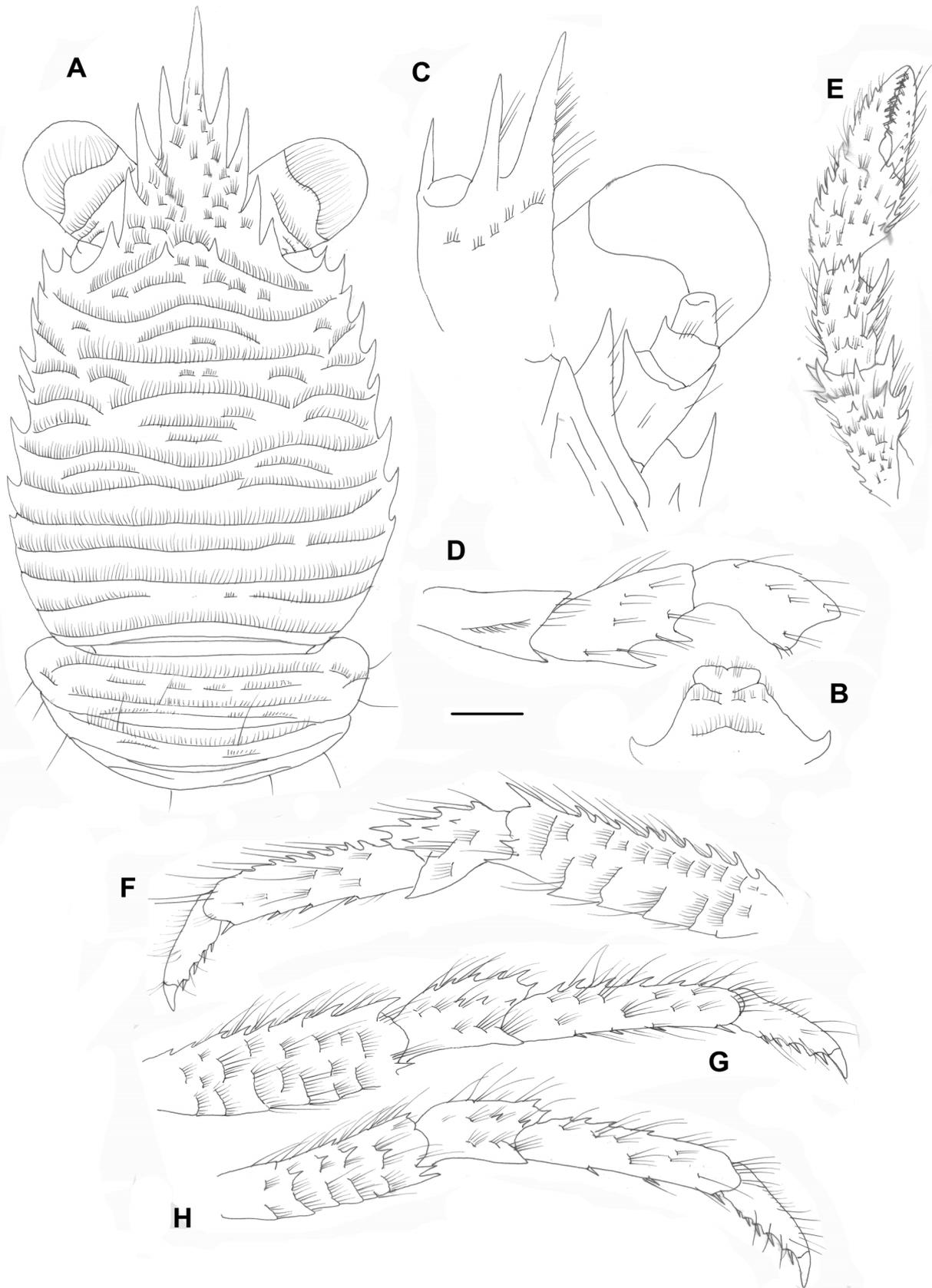


FIGURE 19. *Galathea brevimana* Paul'son, 1875, male, 5.7 mm, Red Sea (SMF). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

Mxp3: Ischium with small spine on flexor and extensor distal margins; crista dentata with 24 or 25 denticles. Merus as long as ischium; flexor margin with 2 spines, proximal slightly larger than distal; extensor margin unarmad. Carpus unarmed.

P1: 2.1–2.3 times carapace length, covered with finely setiferous scales, with scattered long setae, a few of them iridescent. Merus 0.7–0.8 times length of carapace, 2.0–3.1 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.6–1.1 length of palm, 1.3–1.8 times as long as broad; dorsal and lateral surfaces with some spines; mesial margin with 3 or 4 spines (distal second strong). Palm 1.3–1.5 times longer than broad, lateral and mesial margins slightly convex; spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side; dorsolateral row continuing along entire fixed finger. Fingers slightly longer than palm; each finger distally with two rows of teeth, spooned; mesial margin of movable finger with some small spines.

P2–4: moderately slender, with setose striae and sparse long setae, some of them iridescent. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.6–0.8 carapace length, 3.1–3.7 times as long as broad, 1.2–1.7 times longer than P2 propodus. Extensor margin of P2–3 meri with row of 8–10 proximally diminishing spines, 2 or 3 on P4; lateral sides unarmed on P2–3, with row of 4 spines on P4; distoflexor angle of P2–4 with 2 spines, flexor margin with 0–1 spines and several eminences. Carpi with 4–6 spines on extensor margin on P2–3, 0–2 spines on P4; lateral surface with 2 or 3 small spines sub-parallel to extensor margin; flexor distal margin acute. P2–4 propodi 3.5–4.2 times as long as broad; extensor margin with 4–7 proximal spines; flexor margin with 3–5 movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.8 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods present on P1.

Remarks. *Galathea brevimana* was described from one female specimen collected in Ras Muhammad, Red Sea. The type material is lost, and the original description is very short; no illustrations were given. A few diagnostic characters mentioned in the original description match quite well with the present material collected near the type locality. The description and illustrations based on material from the Gulf of Aqaba by Lewinsohn (1969) agree with the present material. However, the specimens collected by Tirmizi & Javed (1993) present a few differences (e.g. presence of a mesogastric ridge extending laterally to branchial margins) and need further study.

Galathea brevimana is easily differentiated by the presence of two spines on the flexor distal angle of P2–4 meri. Only *G. hydrae* n. sp. from Mozambique, *G. lepidota* n. sp. from the Philippines to Solomon Islands and *G. magnifica* Haswell, 1882 from New South Wales, Australia, similarly have two spines on those angles.

Galathea lepidota and *G. magnifica* can be easily differentiated from *G. brevimana* by the ridges on the gastric area. These ridges are interrupted in short scales in *G. lepidota* and *G. magnifica*, instead of mostly complete in *G. brevimana*.

Galathea hydrae can be distinguished from *G. brevimana* by the presence of four or more epigastric spines, instead of only two spines in *G. brevimana*. Furthermore, *G. brevimana* has epipods on P1 only, and on P1–3 in *G. hydrae*.

No genetic data are available from *G. brevimana*.

Distribution. Red Sea, 0–30 m.

***Galathea caesariata* n. sp.**

(Figs 20, 116B)

Material examined. *Holotype*: Vanuatu. SANTO, Stn AT28, 15°23.6'S, 167°16.1'E, 342–350 m, 23 September 2006: 1 M 5.1 mm (MNHN-IU-2013-15938).

Paratypes: Papua New Guinea. PAPUA NIUGINI, Stn CP4023, 05°22'S, 145°48'E, 340–385 m, 14 December 2012: 1 M 5.0 mm (MNHN-IU-2013-13973).

New Caledonia. BATHUS 1, Stn CP707, 21°42'S, 166°35'E, 347–375 m, 19 March 1993: 1 ov. F 3.8 mm (MNHN-IU-2013-13942). BATHUS 4, Stn CP899, 20°16.68'S, 163°50.26'E, 500–600 m, 3 August 1994: 1 M 6.0 mm (MNHN-IU-2013-13960).

Etymology. From the Latin *caesariatus*, covered with hair, in reference to the hairy aspect of the species.

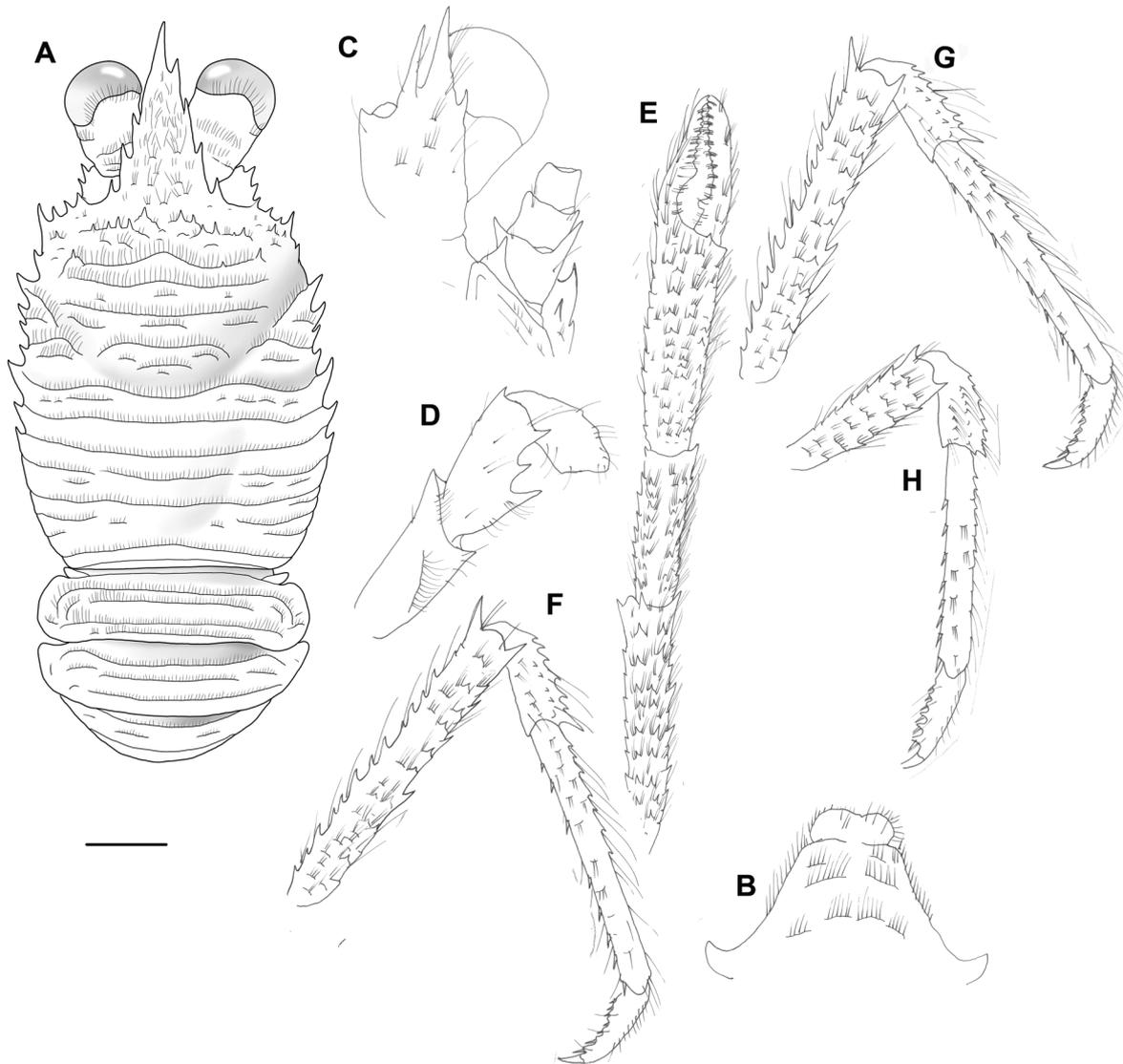


FIGURE 20. *Galathea caesariata* n. sp., holotype, male, 5.1 mm, Vanuatu (MNHN-IU-2013-15938). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Description. *Carapace:* 1.2 times as long as broad; transverse ridges with numerous short fine setae; cervical groove distinct, laterally bifurcated; most ridges on gastric region uninterrupted, with some scattered scale-like ridges; 1 epigastric ridge, with 8 or 9 spines; 2 protogastric ridges, anterior ridge with 1 or 2 small parahepatic spines on each side; 2 mesogastric ridge, anterior one not extending to anteriormost marginal branchial spine, posterior ridge scale-like; 2 or 3 metagastric ridges, anterior one not extending to anterior branchial ridges. Each hepatic region with 1 or 2 small spines. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 4 uninterrupted and 3 interrupted transverse ridges. Lateral margins slightly convex medially, with 9 spines: 2 spines in front of and 7 spines behind anterior cervical groove; first spine anterolateral, well-developed, behind level of orbit, second very small but distinct, located at midlength between first spine and anteriormost spine of branchial margin, with small spine ventral to between first and second; 4 spines on anterior branchial margin, and 3 spines on posterior branchial margin. Small outer orbital spine and 2 small frontal spines between orbital and first anterolateral spines; infraorbital margin with 2 strong spines. Rostrum triangular, twice longer than broad, length 0.5 that of, breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions, dorsal surface nearly horizontal in lateral view, with some setose scales; lateral margin with 4 moderately incised sharp teeth.

Pterygostomial flap rugose, with sparse short setae, anterior margin bluntly angular.

Sternum: About as long as broad; lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 each with 3 or 4 uninterrupted transverse ridges on tergite, anterior ridge slightly more elevated than posterior ridge; somites 4–5 each with 2 uninterrupted ridges; somite 6 with 2 medially interrupted ridges, posteromedian margin straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.9 rostrum width.

Antennule: Article 1 with 2 well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine obsolescent; 1 small spine on lateral margin. Ultimate article with a tuft of fine setae on distodorsal margin.

Antenna: Article 1 with distomesial spine barely reaching distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine longer than distomesial and reaching end of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; crista dentata with 20–22 denticles. Merus as long as ischium; flexor margin with 3 spines, proximal stronger than others; extensor margin with 1 or 2 spines, distal spine well-developed. Carpus unarmed.

P1: 4.2 times carapace length, with numerous finely setiferous scales, with scattered long thick non-plumose setae. Merus twice length of carapace, 2.0 times as long as carpus, with spines arranged roughly in rows, dorsomesial and ventromesial spines stronger; distal spines prominent. Carpus 0.7 length of palm, 3.1 times as long as broad; dorsal surface with small spines arranged roughly in 2 longitudinal rows; mesial row of small spines. Palm 3.0 times longer than broad, lateral and mesial margins with small spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side. Fingers 0.7 length of palm, each finger distally with two rows of teeth, spooned; mesial margin of movable finger and lateral margin of fixed finger unarmed.

P2–4: Moderately long and slender, with setose striae and long non-plumose setae. P2 2.6 times carapace length. Meri successively shorter posteriorly (P3 merus 0.7 length of P2 merus, P4 merus 0.7 length of P3 merus); P2 merus 1.1 carapace length, 7.8 times as long as broad, 1.2 times longer than P2 propodus; P3 merus 5.0 times longer than broad, 1.0–1.1 times longer than P3 propodus; P4 merus 3.6 times as long as broad, 0.8 length of P4 propodus. Extensor margins of meri with row of 11–14 proximally diminishing spines on P2–3, 7 spines on P4; flexor margins distally ending in strong spine followed proximally by 6 or 7 small spines on P2, and 1 or 2 spines and several tubercles or eminences on P3–4; lateral sides with some minute spines on P2–4. Carpi with 6–8 spines on extensor margin, distalmost longer than distal second; lateral surface with 4 or 5 small spines and acute granules sub-parallel to extensor margin on P2–4; flexor distal margin with small spine. P2–4 propodi 8.0 (P2), 9.0 (P3) and 7.0 (P4) times as long as broad, respectively; extensor margin with 4–7 small proximal spines on P2–4; flexor margin with 8 or 9 slender movable spines on P2–4. Dactyli distally ending in well-curved strong spine, length 0.4–0.5 that of propodi; flexor margin with 7 or 8 proximally diminishing teeth, terminal one prominent.

Epipods on P1.

Coloration. Base color of carapace, abdomen and pereopods light brown. Anterior half of abdomen sometimes with brown median longitudinal stripe. Most distal portion of pereopod articles darker.

Remarks. *Galathea caesariata* is closely related to *G. crinita* n. sp. from New Caledonia and Chesterfield Islands and *G. villosa* n. sp. from Madagascar, Mozambique, and Vanuatu. These species are characterized by the presence of more than four epigastric spines and often with spinules on the hepatic and branchial regions, the lateral margin of the carapace has one small but distinct spine between the anterolateral spine and the anteriormost branchial marginal spine, and the antennular basal article with two distal spines, being obsolescent the distomesial spine. *Galathea caesariata* is easily distinguished from the other species by the relatively longer walking legs. For instance, the P2 propodus is more than eight times longer than broad in *G. caesariata*, whereas is clearly less than eight times in the other species.

The genetic divergence with *G. villosa* (no data for *G. crinita*) is 11.3% (16S rRNA) (no data for COI) (Tab. 2).

Distribution. Papua New Guinea, Vanuatu and New Caledonia, 340–600 m.

***Galathea celiae* n. sp.**

(Figs 21, 116C)

Material examined. *Holotype*: Red Sea. AQ117, Gulf of Aqaba, Marine Science Station, 25 m, 21 July 1995: M 3.2 mm (SMF).

Paratypes: Red Sea. Gulf of Aqaba, Marine Science Station. AQ94, 25 m, 17 July 1995: 1 M 1.7 mm (SMF).—AQ98, 44 m, 18 July 1995: 4 M 2.0–3.1 mm, 2 ov. F 2.5–3.2 mm (SMF).—AQ117, 25 m, 21 July 1995: 3 M 2.0–3.3 mm, 1 ov. F 3.3 mm, 1 F 2.5 mm (SMF).—AQ119, 25 m, 21 July 1995: 2 M 2.7–3.3 mm, 1 ov. F 3.5 mm (SMF). Sudan, Al Bahr al Ahmar. Sanganeb, SAN32, 40 m, 2 April 1991: 1 ov. F 3.2 mm (SMF).—SAN113, 30 m, 27 September 1992: 1 M 2.3 mm, 1 F 2.6 mm (SMF).—SAN147, 35 m, 30 September 1992: 1 M 2.1 mm, 1 F 2.0 mm (SMF).—SAN148, 22 m, 3 October 1992: 1 F 2.4 mm (SMF). Al Maqunah, 28°26.134'N, 34°45.478'E, 0–5 m, 13 April 2011: 1 ov. F 3.0 mm (SMF). Farasan Island, 16°37.123'N, 41°56.038'E, 0–5 m, 27 February 2012: 1 M 3.2 mm, 2 ov. F 4.0–4.2 mm (SMF). Djibouti. Moucha Island, Bay of Ghoubbet, 11.51°N, 42.6725°E, 5–23 m, 30 September 2012: 6 M 1.7–2.6 mm, 5 ov. F 1.9–2.8 mm, 8 F 1.5–2.3 mm (UF32859); 1 M 2.8 mm (UF32860).

Red Sea. AQ117, holotype, M 3.2 mm

Etymology. This species is dedicated to Celia Schunter of the Centre d'Estudis Avançats de Blanes (CEAB-CSIC), for her support to marine research.

Description. *Carapace*: As long as broad; transverse ridges with dense very short setae, without long plumose setae; cervical groove laterally bifurcated. Gastric region with 5 transverse ridges: 1 epigastric ridge uninterrupted or medially interrupted, medially convex, without epigastric spines; 1 protogastric uninterrupted ridge, without parahepatic spines; 1 mesogastric ridge uninterrupted and extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, anterior uninterrupted and not continuing laterally to anteriorbranchial ridges, posterior short. One small hepatic spine, at level between first and second lateral spines. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 2 transverse uninterrupted ridges. Lateral margins slightly convex, with 6 spines: 1 spine in front of and 5 spines behind anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, with spine ventral to between first and second spines; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. Small spine between lateral limit of orbit and anterolateral spine; infraorbital margin with strong spine. Rostrum 1.5 as long as broad, length 0.6–0.7 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: 1.1 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–5 smooth, each anterior ridge slightly more elevated than posterior ridge; somite 6 with posteromedian margin straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine smaller. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching distal margin of article 2. Article 2 with 2 subequal distal spines, reaching midlength of article 3. Article 3 with distomesial spine; article 4 unarmed.

Mxp3: Ischium unarmed on flexor and extensor distal margins; crista dentata with 20–22 denticles. Merus shorter than ischium; flexor margin with 2 subequal well-developed spines; extensor margin unarmed. Carpus unarmed.

P1: 2.6–2.9 times carapace length, covered with finely setiferous scales, with scattered long setae. Merus as long as carapace, 1.8 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.8 length of palm, 1.4 times as long as broad; dorsal and lateral surfaces with some spines; mesial margin with 3 or 4 spines (distal second strong). Palm 1.7–1.8 times longer than broad, lateral and mesial margins slightly convex; spines arranged roughly in dorsolateral and dorsomesial rows, dorsal side unarmed; dorsolateral row continuing along proximal half of fixed finger. Fingers slightly longer than palm, each finger distally with two rows of teeth, spooned; movable finger with 1 or 2 proximal spines.

P2–4: moderately slender, with setose striae and sparse long plumose setae. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P2 merus); P2 merus 0.7 carapace length, 2.8 times as long as broad, 1.4 times longer than P2 propodus; P3 merus 2.9 times as long as broad, 1.4 times longer than P3 propodus; P4 merus 2.3 times as long as broad, 1.1 times longer than P4 propodus. Extensor margin of P2–3 meri with row of 7 or 8 proximally diminishing spines, 4 spines on P4; ventral margins

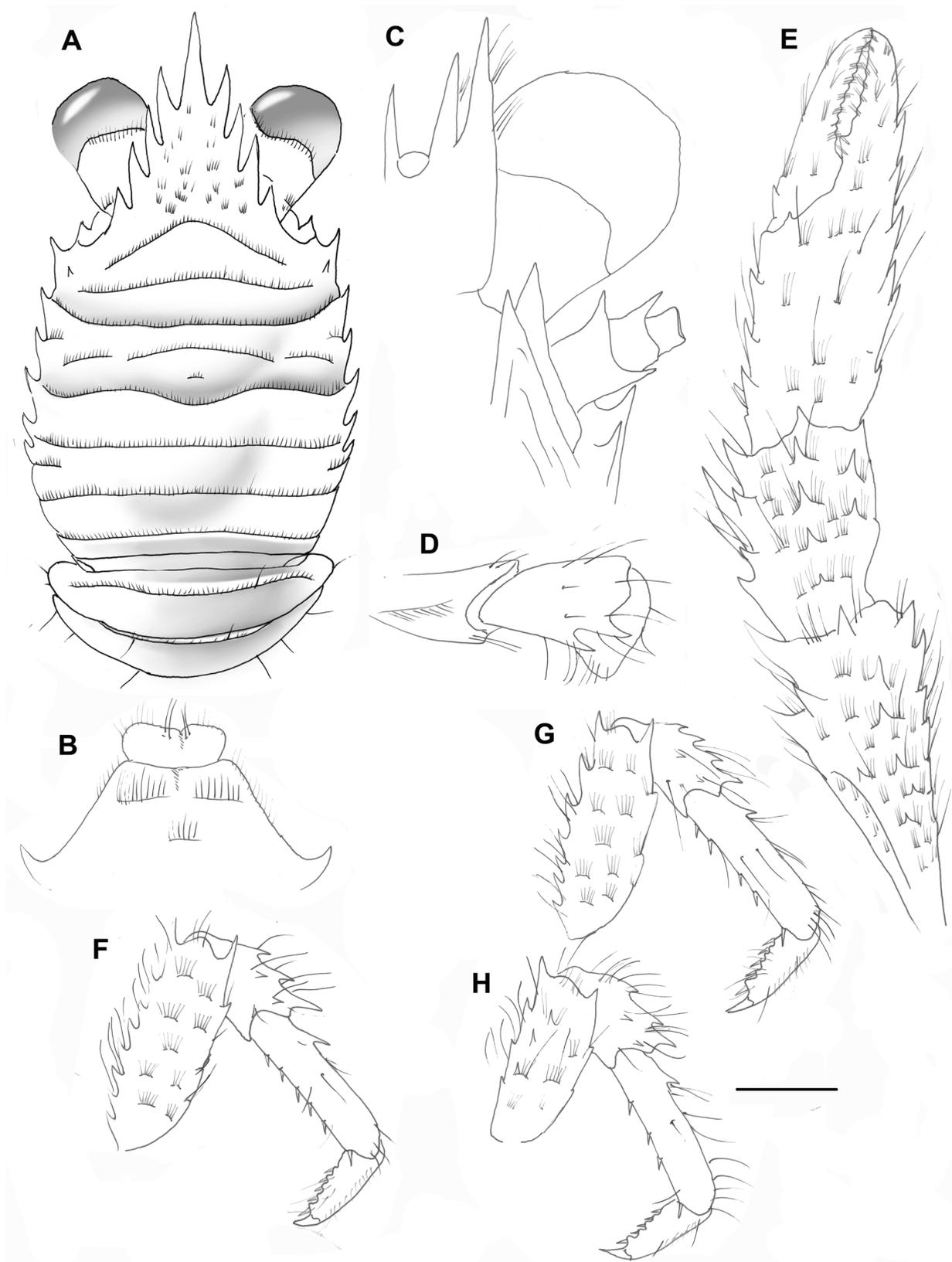


FIGURE 21. *Galathea celiae* n. sp., holotype, male, 3.2 mm, Red Sea (SMF). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

distally ending in strong spine followed proximally by 0–1 spines and several eminences; lateral sides unarmed on P2–3, 3 spines on P4. Carpi with 3 or 4 spines on extensor margin on P2–3, 2 or 3 spines on P4; lateral surface with 2 or 3 small spines or granules sub-parallel to extensor margin; flexor distal margin acute. P2–4 propodi 3.5–3.6 times as long as broad; extensor margin with 1 or 2 proximal spines; flexor margin with 4–6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.7 that of propodi; flexor margin with 5 or 6 proximally diminishing teeth, terminal one prominent.

Epipods present on P1.

Coloration. Base color of carapace, abdomen and pereopods orange. Whitish narrow stripe before each transverse ridge on carapace and abdomen. Abdominal somites 3 and 4 each with one purple spot on each side. P1 with some yellowish spots on palm and fingers; tips of fingers whitish. P2–4 with some darker stripes.

Remarks. *Galathea celiae* n. sp. appears closest to *G. spinimanus* Borradaile 1900 from Lifou, New Caledonia, but is easily differentiated from the latter by the following features:

- The carapace has a hepatic spine in *G. celiae*, whereas this spine is absent in *G. spinimanus*.
- All gastric ridges are uninterrupted and continuing laterally to lateral margins of the carapace in *G. spinimanus*, whereas these ridges are laterally interrupted, except the mesogastric ridge, in *G. celiae*.

The genetic divergences between *G. celiae* and all other related species, for which genetic data are available, are always higher than 16.2% (COI) (no genetic data are available for *G. spinimanus*) (Tab. 1).

Distribution. Red Sea, 0–44 m.

***Galathea cephyra* n. sp.**

(Fig. 22)

Material examined. *Holotype*: New Caledonia. BIOCAL. Stn DW104, 21°30.62'S, 166°21.26'E, 375–450 m, 8 September 1985: 1 M 3.1 mm (MNHN-IU-2013-13316).

Etymology. In the Greek mythology *Cephyra* was a daughter of Oceanus.

Description. *Carapace*: As long as broad; transverse ridges with dense very short setae, with scattered long setae; cervical groove distinct, laterally bifurcated. Gastric region with 5 transverse ridges: 1 epigastric ridge medially interrupted, with 2 spines; 2 mesogastric ridges, anterior one uninterrupted, not extending laterally to anteriormost branchial spines, posterior ridge scale-like; 2 metagastric ridges, anterior one medially interrupted, posterior ridge short. One hepatic and 1 parahepatic spine on each side. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 4 ridges, 2 of them uninterrupted. Lateral margins slightly convex, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second small, with spine ventral to between first and second spines; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. Well-developed spine on lateral limit of orbit, and 1 small frontal spine; infraorbital margin with strong spine. Rostrum 1.2 as long as broad, length 0.5 carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 with 2 transverse uninterrupted ridges; somites 4–6 smooth; posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine slightly smaller. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching distal margin of article 2. Article 2 with distomesial spine slightly longer than distolateral spine, reaching midlength of article 3. Article 3 with distomesial spine. Article 4 unarmed.

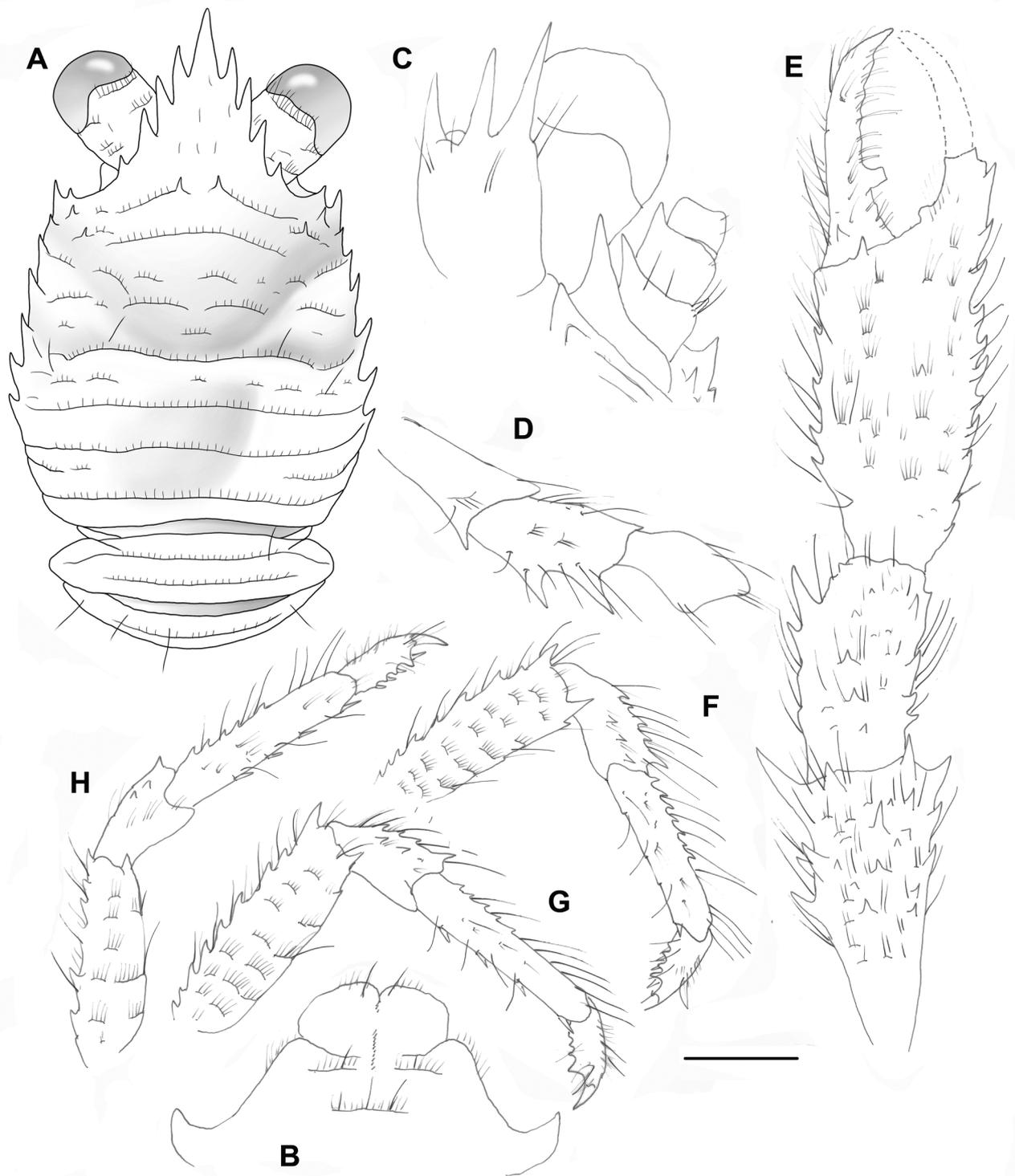


FIGURE 22. *Galathea cephyra* n. sp., holotype, male, 3.1 mm, New Caledonia (MNHN-IU-2013-13316). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Mxp3: Ischium with small spine on flexor and extensor distal margins; crista dentata with 21 or 22 denticles. Merus as long as ischium; flexor margin with 2 subequal well-developed spines; extensor margin with distinct spine. Carpus unarmed.

P1: 2.9 times carapace length, somewhat depressed on palm, more so on fingers, covered with finely setiferous

scales, with scattered long setae. Merus 0.9 times length of carapace, 1.3 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.8 length of palm, 1.8 times as long as broad; dorsal and lateral surfaces with some spines; mesial margin with some spines. Palm 1.8 times longer than broad, lateral and mesial margins slightly divergent; spines arranged roughly in dorsolateral and dorsomesial rows; dorsolateral row; 1 or 2 small spines on dorsal side. Fingers 0.9 length of palm, distally spooned, gapping, prehensile distal edges close fitting with small blunt teeth; movable finger with 1 proximal spine, movable finger missing.

P2–4: moderately slender, with setose striae and sparse long setae. *P2* 1.7 times carapace length; *P3* longer than *P2*, 1.9 times carapace length; *P4* shorter than *P2*. *P2* merus 0.7 carapace length, 3.1 times as long as broad, 1.4 times longer than *P2* propodus; *P3* merus 3.2 times as long as broad, 1.3 times longer than *P3* propodus; *P4* merus 2.9 times as long as broad, 1.1 times longer than *P2* propodus. Extensor margin of *P2–3* meri with row of 9 proximally diminishing spines, 6 spines on *P4*; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several eminences; lateral sides unarmed. Carpi with 5 or 6 spines on extensor margin on *P2–3*, 1 distal spine on *P4*; lateral surface with 2 or 3 spines sub-parallel to extensor margin; flexor distal margin acute. Propodi 3.5 (*P2*), 4.2 (*P3–4*) times as long as broad; extensor margin with 5–7 proximal spines on *P2–4*; flexor margin with 4 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.5–0.6 that of propodi; flexor margin with 4 proximally diminishing teeth, terminal one prominent.

Epipods present on *P1*.

Remarks. *Galathea cephyra* n. sp. is easily differentiated from the other closely related species (*G. algae* Baba, 1969 from Japan and *G. eulimene* n. sp. from the Western Indian Ocean) by the armature of *P1* (chelipeds). The *P1* palm is unarmed on the dorsal surface in *G. cephyra* (or rarely with 1 or 2 minute spines), yet has a row of small dorsal spines in the other two species. Furthermore, *G. cephyra* is a deep-water species, whereas the other species live in shallow-water.

Galathea cephyra is also close to *G. spinosorostris* Dana, 1852 (see under Remarks of this species).

No genetic data are available for *G. cephyra*.

Distribution. New Caledonia, 375–450 m.

***Galathea ceti* n.sp.**

(Fig. 23)

Material examined. *Holotype*: New Caledonia. Lagon. Stn DW1235, 22°24.08'S, 166°55.44'E, 51 m, 9 March 1993: M 4.0 mm (MNHN-IU-2013-8354).

Paratypes: Papua New Guinea. PAPUA NIUGINI Stn PR42, 05°10.2'S, 145°50.3'E, 0 m, 15 November 2012: 1 F 1.6 mm (MNHN-IU-2013-8368).—Stn PP13, 05°15'S, 145°48'E, 120 m, 30 December 2012: 2 ov. F 3.2–3.3 mm (MNHN-IU-2013-8369).

Etymology. The name *Cetus*, the sea monster, refers to one of the southern constellations.

Description. *Carapace*: as long as broad; transverse ridges with dense short setae, and some scattered long plumose setae (more numerous in Papua New Guinea paratypes, than in the holotype); cervical groove distinct, laterally bifurcated. Gastric region with 6 transverse ridges: 1 epigastric ridge with 2 median spines, medially interrupted; 2 protogastric ridges, anterior one medially interrupted, with 1 parahepatic spine on each side, posterior ridge short, with some thick long plumose setae; 1 mesogastric ridge uninterrupted but not extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, anterior uninterrupted and extending laterally to anterior branchial ridges, posterior ridge moderately short. Hepatic region with small spine. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges. Lateral margins well convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, with small spine ventral to between first and second; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. Small spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum 1.5 as long as broad, length 0.6 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.4 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous short uniramous setae; lateral margin with 4 deeply incised sharp teeth.

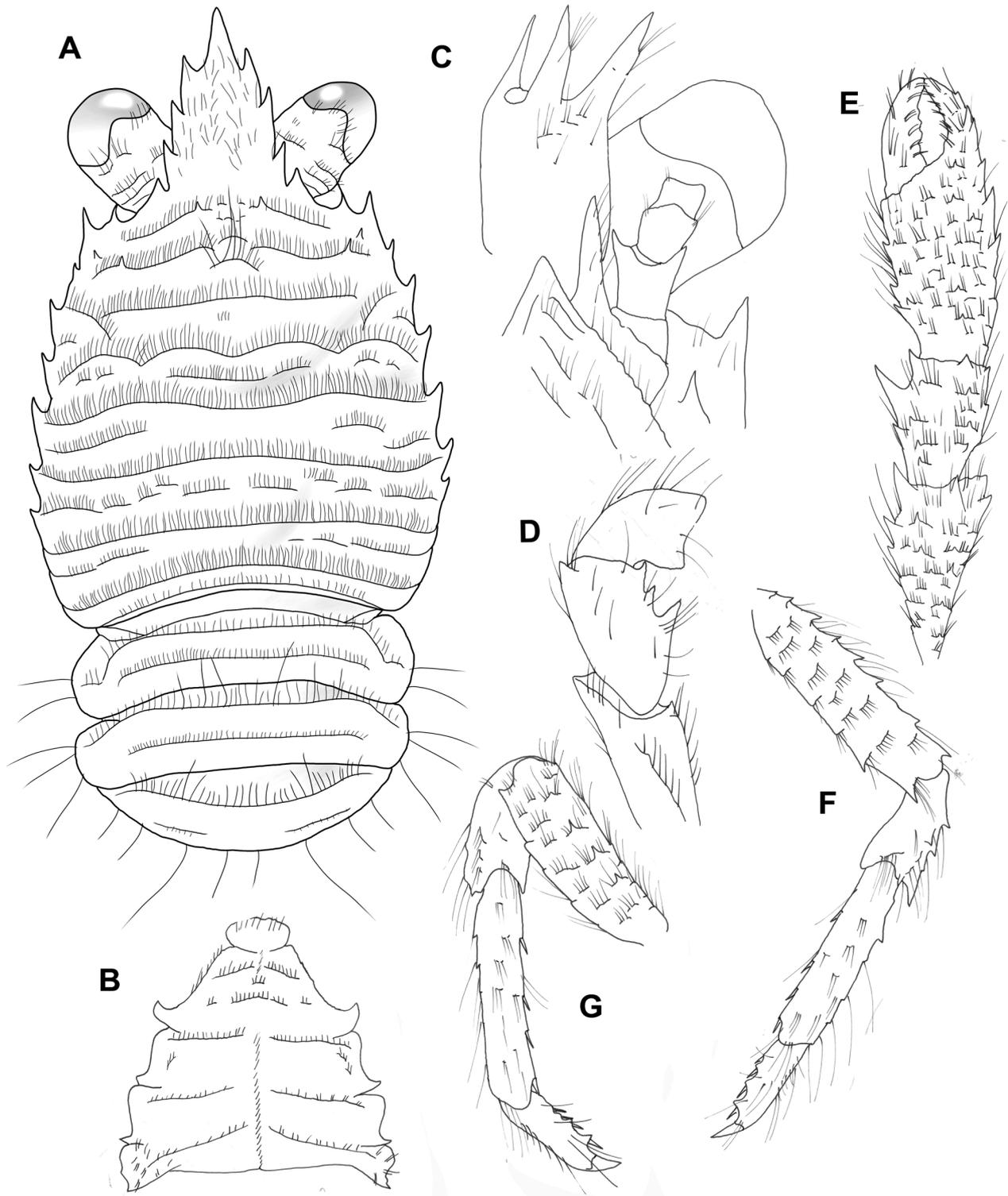


FIGURE 23. *Galathea ceti* n. sp., holotype, male, 4.0 mm, New Caledonia (MNHN-IU-2013-8354). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P3, lateral view; G, left P4, lateral view. Scale: A, F, G = 1 mm; E = 2 mm; B–D = 0.5 mm.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: 0.9 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 each with 2 uninterrupted transverse ridges on tergite; somite 4 with posterior ridge medially interrupted; somites 5 and 6 each smooth. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine smaller than others. Ultimate article with tuft of setae on distodorsal margin.

Antenna: Article 1 with strong distomesial spine exceeding distal margin of article 2. Article 2 with 2 well-developed subequal distal spines, nearly reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor and extensor margins ending in acute angle; crista dentata with 17 denticles. Merus as long as ischium; flexor margin with 3 spines, proximal stronger than others; extensor margin with small distal spine.

P1: 2.7 times carapace length, with numerous setiferous scales, and a few scattered long setae. Merus as long as carapace, 1.5 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.8 length of palm, 1.5 times as long as broad; dorsal surface with some small spines; mesial margin with 3 spines, second clearly stronger than others. Palm 1.4 times longer than broad, lateral and mesial margins slightly convex; spines arranged roughly in dorsolateral and dorsomesial rows, and some small spines on dorsal side. Fingers 0.8 times palm length, each finger distally with two rows of teeth, spooned; fixed finger with spines along lateral margin; movable finger unarmed.

P2–4 (P2 missing in holotype): moderately long and slender, with some setose striae and sparse long plumose setae. P2 1.7 times carapace length, P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus. P2 merus 0.6 carapace length, 3.5 times as long as broad, 1.4 times longer than P2 propodus. Extensor margin with row of 8 proximally diminishing spines on P2–3, unarmed on P4; ventral margins distally ending in spine; lateral sides unarmed on P2–3, with 3 spines on P4. Carpi with 4 spines on extensor margin on P2–3, 1 small distal spine on P4; lateral surface with 3 or 4 spines or acute granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 3.7–4.3 times as long as broad; extensor margin with 2 or 3 minute proximal spines; flexor margin with 4 movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 4 proximally diminishing teeth, terminal one prominent.

Epipods absent on pereopods.

Remarks. *Galathea ceti* resembles to *G. anouchkae* n. sp. from New Caledonia, Chesterfield Islands, Vanuatu and Fiji, and *G. erythrina* n. sp. from the Red Sea. *G. ceti* can be distinguished from the other species by the size of the spines on the flexor margin of the Mxp3 merus, being the proximal spine clearly stronger than the distal spine in *G. ceti* instead of subequal in the other species.

The genetic divergence with *G. anouchkae* is 14.1% (COI) and 6.7% (16S rRNA).

Distribution. Papua New Guinea, New Caledonia, 0–51 m.

***Galathea ciliosa* n. sp.**

(Fig. 24)

Material examined. *Holotype:* Vanuatu. SANTO, Stn AT116, 15°32.9'S, 167°16.2'E, 153–196 m, 18 October 2006: 1 M 5.4 mm (MNHN-IU-2013-15939).

Etymology. From the Latin *cilium*, ciliate, in reference to the numerous short setae on the carapace.

Description. *Carapace:* As long as broad; transverse ridges with dense short setae, without long setae; cervical groove distinct, laterally bifurcated. Gastric region with 7 transverse ridges: 1 epigastric ridge with 2 pair of spines, medially interrupted; some scales between epigastric and protogastric ridges; 2 protogastric ridges, anterior ridge medially interrupted, not extending laterally to anteriormost of branchial marginal spines, without parahepatic spines, posterior ridge uninterrupted; 2 mesogastric ridges, anterior ridge uninterrupted, not extending laterally to anterior branchial ridges, posterior ridge interrupted; 2 metagastric ridges, posterior ridge scale-like. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 6 ridges, 4 of them uninterrupted. Lateral margins slightly convex medially, with 10–12 spines: 3 spines in front of and 7–9 spines behind anterior cervical groove; first anterolateral, well-developed, mesial to lateral margin, at level of lateral limit of orbit, second and third spines small, 2 spines ventral to between first and anterior branch of cervical groove; 3–5 spines on anterior branchial region, and 4 spines on posterior branchial margin. Small spine on limit of orbit; infraorbital margin with well-developed spine. Rostrum spatulate, 1.6 times as long as broad, length 0.5 postorbital carapace length and breadth 0.3 that of carapace;

distance between distalmost lateral incisions 0.35 distance between proximalmost lateral incisions; dorsal surface with numerous setose scales; lateral margin with 5 deeply incised sharp teeth, distal pair small.

Pterygostomial flap rugose, with sparse short setae, anterior margin bluntly angular.

Sternum: About as long as broad; lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 4 uninterrupted transverse ridges on tergite, anterior ridge slightly more elevated than posterior ridges; somites 5 and 6 each with 2 uninterrupted or medially interrupted ridges, posteriormedian margin of somite 6 straight. Males with G1 and G2.

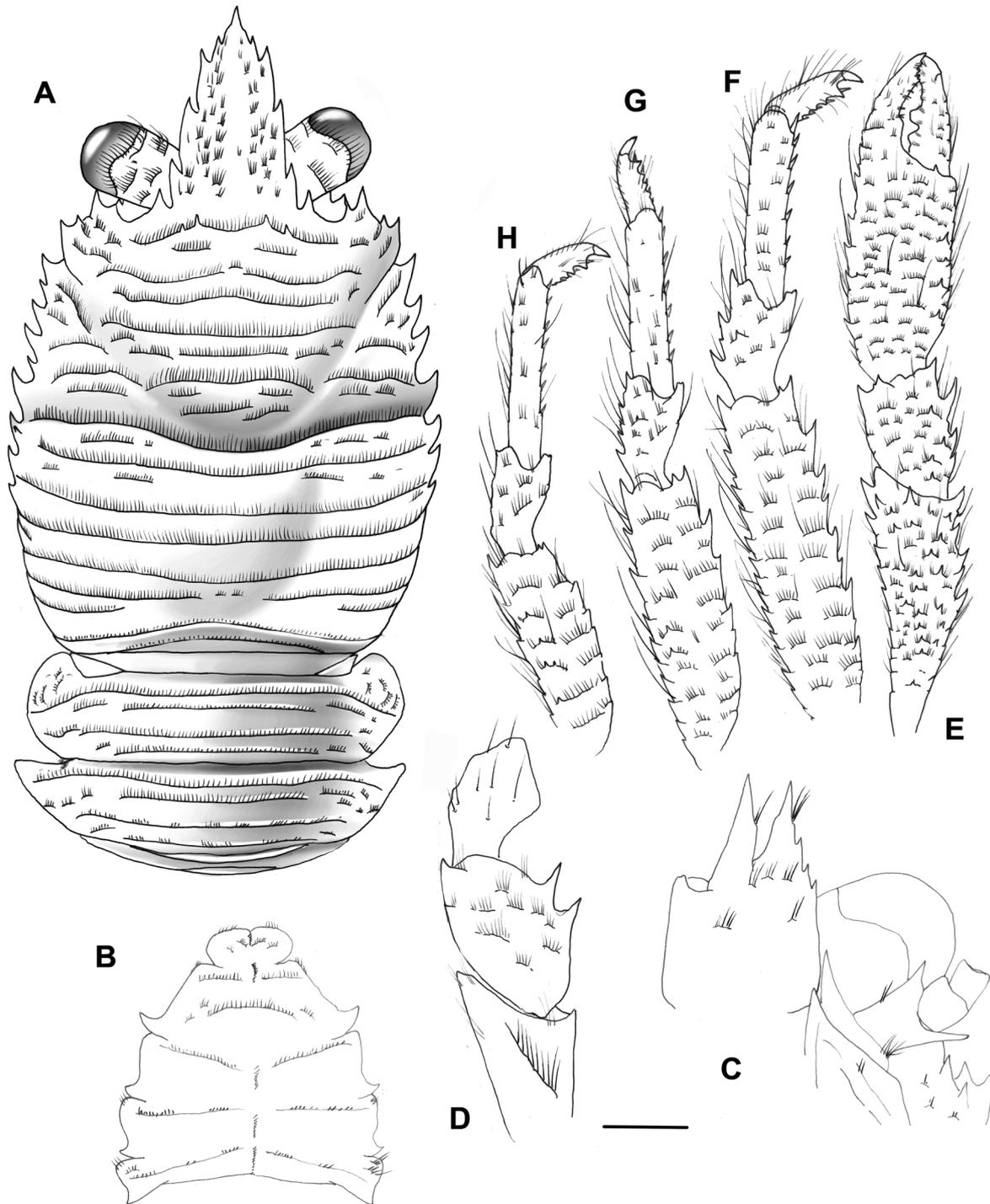


FIGURE 24. *Galathea ciliosa* n. sp., holotype, male, 5.4 mm, Vanuatu (MNHN-IU-2013-15939). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 2 well-developed subequal distodorsal and distolateral spines; distomesial spine obsolescent; lateral margin with 3 small spines. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 with distomesial spine reaching midlength of article 2. Article 2 with 2 subequal distal spines, exceeding midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with spine on flexor distal margin; crista dentata with 18 denticles. Merus slightly shorter than ischium; flexor margin with 2 subequal spines; extensor margin with 1 small distal spine. Carpus unarmed.

P1: 3.0 times carapace length, somewhat depressed on palm, more so on fingers, with numerous finely setiferous scales, with numerous long thick setae on mesial and lateral borders, some of them iridescent. Merus 1 as long as carapace, twice longer than carpus, with numerous spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.7 length of palm, 1.6 times as long as broad; dorsal surface with a few small spines; mesial row of well-developed spines. Palm twice longer than broad, lateral and mesial margins with some small spines, dorsal side with a few small spines. Fingers 0.6 length of palm, each finger distally with two rows of teeth, spooned; mesial margin of movable finger and lateral margin of fixed finger unarmed.

P2–4: Moderately long, with setose striae and long plumose and non-plumose setae, some of them iridescent. P2 1.6 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7 carapace length, 4.2 times as long as broad, 2.2 times longer than P2 propodus; P3 merus 3.8 times longer than broad, 1.9 times longer than P3 propodus; P4 merus 3.1 times as long as broad, 1.3 length of P4 propodus. Extensor margins of meri with row of 10–14 proximally diminishing spines on P2–3, 2 distal spines on P4; flexor margins with 9 spines on P2, 6 on P3, and 2 on P4, distoflexor angle with 2 spines; lateral sides with some spines on P3–4. Carpi with 3–5 spines on extensor margin on P2–3, unarmed on P4; lateral surface with 2–3 small spines or acute granules sub-parallel to extensor margin on P2–4; flexor distal margin acute. Propodi 3.2–4.2 times as long as broad; extensor margin unarmed; flexor margin with 7 slender movable spines on P2–4. Dactyli distally ending in well-curved strong spine, length 0.4–0.5 that of propodi; flexor margin with 5 proximally diminishing teeth, terminal one prominent.

Epipods on P1.

Remarks. The new species belongs to the group of species with five lateral spines on the rostrum, epipods on P1 only, two or more epigastric spines and the distoflexor angle of the P2–4 meri with spines. The closest species is *G. multicristata* n. sp. from New Caledonia (see under Remarks of *G. multicristata*).

Distribution. Vanuatu, 153–196 m.

***Galathea clarki* n. sp.**

(Fig. 25)

Material examined. *Holotype:* South China Sea. Macclesfield Bank, Stn 24, 15°26'30"N, 114°14'E, 24–63 m, May 1892: 1 M 4.2 mm (NHMUK).

Paratypes: South China Sea. Macclesfield Bank, Stn 19, 15°32'N, 113°45'E, 24 m, May 1892: 1 ov. F 3.5 mm (NHMUK).—Stn 24, 15°26'30"N, 114°14'E, 24–63 m, May 1892: 1 ov. F 3.3 mm, 1 F 2.8 mm (NHMUK).

Etymology. This species is dedicated to Paul Clark from the Natural History Museum, London, for his important contribution to the decapod taxonomy.

Description. *Carapace:* 1.3 times longer than broad; transverse ridges with dense moderately long uniramous setae, and a few scattered long non-plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with 7 transverse ridges: 1 epigastric ridge with 2 spines; 2 protogastric ridges, anterior one laterally interrupted, with 1 parahepatic spine on each side, posterior ridge scale-like; 2 mesogastric ridges, anterior ridge interrupted, not extending laterally to anteriormost of branchial marginal spines, posterior ridge short; 2 metogastric ridges, anterior one not extending laterally to anterior branchial ridges. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 transverse ridges, 2 of them uninterrupted. Lateral margins convex medially, with 8 spines: 2 spines in front of and 6 spines behind anterior cervical groove; first anterolateral, well-developed, at level of lateral limit of orbit; second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, with accompanying spine ventral to between first and second; 3 spines on anterior branchial region, and 3 spines on posterior branchial margin, last

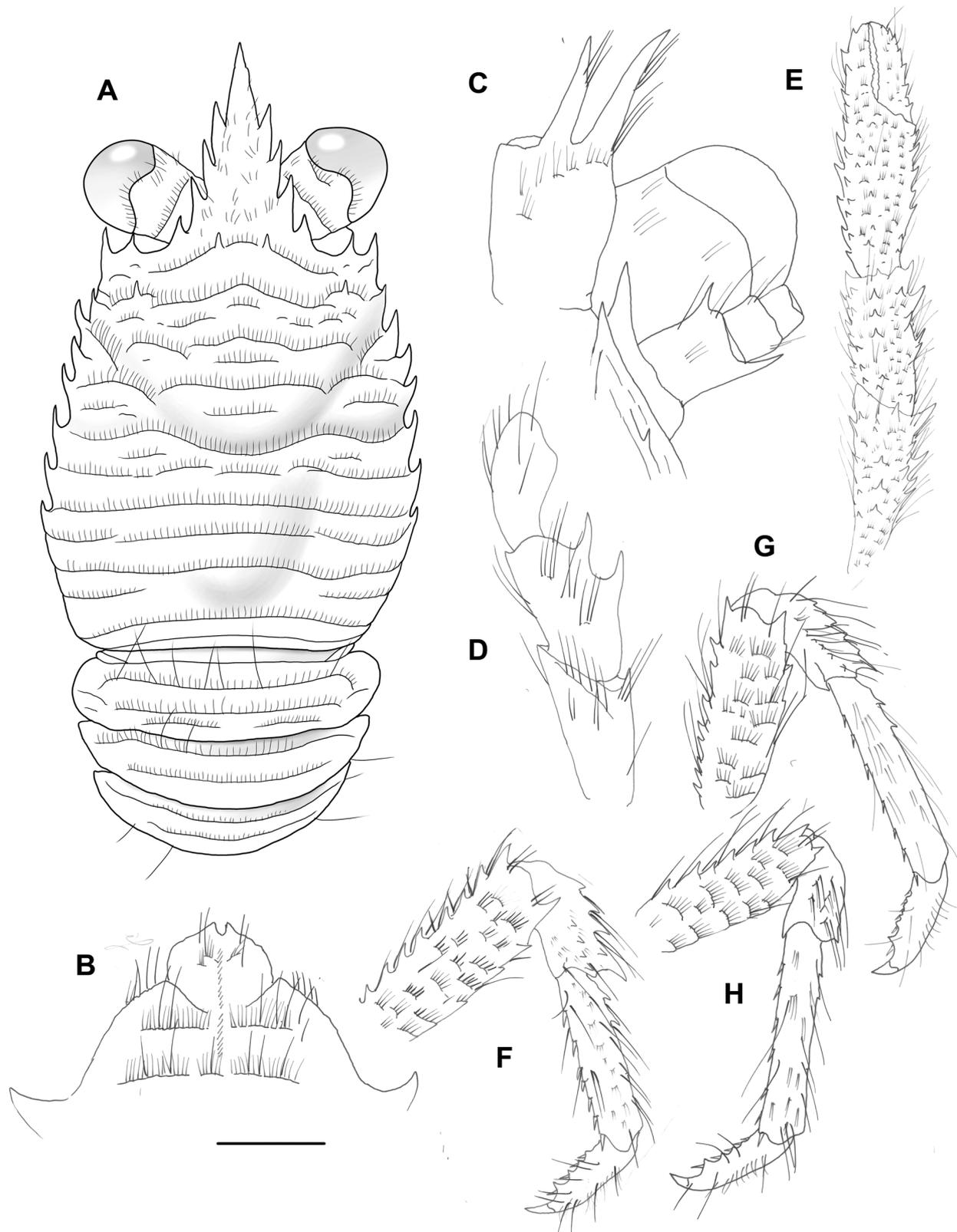


FIGURE 25. *Galathea clarki* n. sp., holotype, male, 4.2 mm, South China Sea (NHMUK). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2.0 mm; B–D = 0.5 mm.

small. Small spine between lateral limit of orbit and anterolateral spine; infraorbital margin with strong spine. Rostrum 1.9 as long as broad, length 0.5 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, ridges with short setae, anterior surface with spine, anterior margin ending in acute angle.

Sternum: 0.8 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–5 each with 2 uninterrupted transverse ridges on tergite, additional interrupted ridge on somite 2; somite 6 each with 2 medially interrupted ridges, posteromedian margin straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 2 spines; well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine obsolescent. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine not reaching distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine clearly longer than distomesial and exceeding midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; extensor margin ending in acute angle; crista dentata with 18–21 denticles. Merus shorter than ischium; flexor margin with 2 subequal spines; extensor margin unarmed. Carpus unarmed.

P1: 2.6 times carapace length, covered with finely setiferous scales, with scattered long non-plumose setae. Merus 1.1 times length of carapace, 1.3 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.9 length of palm, 2.3 times as long as broad; dorsal surface with some small spines; mesial margin with row of well-developed spines. Palm 2.3 times longer than broad, lateral and mesial margins subparallel; a few small spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side; dorsolateral spines continuing along fixed finger; dorsomesial spines continuing along movable finger. Fingers 0.7 length of palm, each finger distally with two rows of teeth, spooned.

P2–4: moderately slender, with setose striae and numerous long non-plumose setae. P2 1.6 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.6 carapace length, 2.9 times as long as broad, 1.4 times longer than P2 propodus; P3 merus 2.8 times longer than broad, 1.1 times longer than P3 propodus; P4 merus 2.8 times as long as broad, 0.9 length of P4 propodus. Extensor margin of P2–3 meri with row of 9 or 10 proximally diminishing spines, and 7 or 8 spines on P4; ventral margins distally ending in strong spine followed proximally by several tubercles or eminences; lateral sides unarmed on P2–4. Carpi with 6 or 7 spines on extensor margin on P2–4, 1 distal spine on P4; lateral surface with 3 or 4 spines (on P2) or acute granules (P3–4) sub-parallel to extensor margin on P2–4; flexor distal margin ending in acute angle. P2–4 propodi 4 or 5 times as long as broad; extensor margin with 2 proximal spines; flexor margin with 7 or 8 slender movable spines on P2–4. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 5 proximally diminishing teeth, terminal one prominent.

Epipods on P1–3.

Remarks. The new species belongs to the group of species only with two well-developed terminal spines on the antennular basal article (the distomesial spine is greatly reduced, obsolescent). The closest relative is *G. cymothoe* n. sp. from Vanuatu, New Caledonia and Chesterfield Islands (see Remarks of *G. cymothoe*).

No genetic data are available.

Distribution. South China Sea. Macclesfield Bank, 24–63 m.

***Galathea connudata* n.sp.**

(Fig. 26)

Material examined. *Holotype*: Wallis and Futuna. MUSORSTOM 7, Stn DW509, 14°14.8'S, 178°11.5' W, 200–240 m, 12 May 1992: M 3.6 mm (MNHN-IU-2013-8295).

Paratypes: Philippines. MUSORSTOM 1, Stn CP41, 13°58'N, 120°31'E, 208–236 m, 24 March 1976: 1 ov. F 3.6 mm (MNHN-IU-2013-8300). MUSORSTOM 2, Stn DR33, 13°32'N, 121°07'E, 120–137 m, 24 November 1980: 1 ov. F 4.3 mm (MNHN-IU-2013-8301).

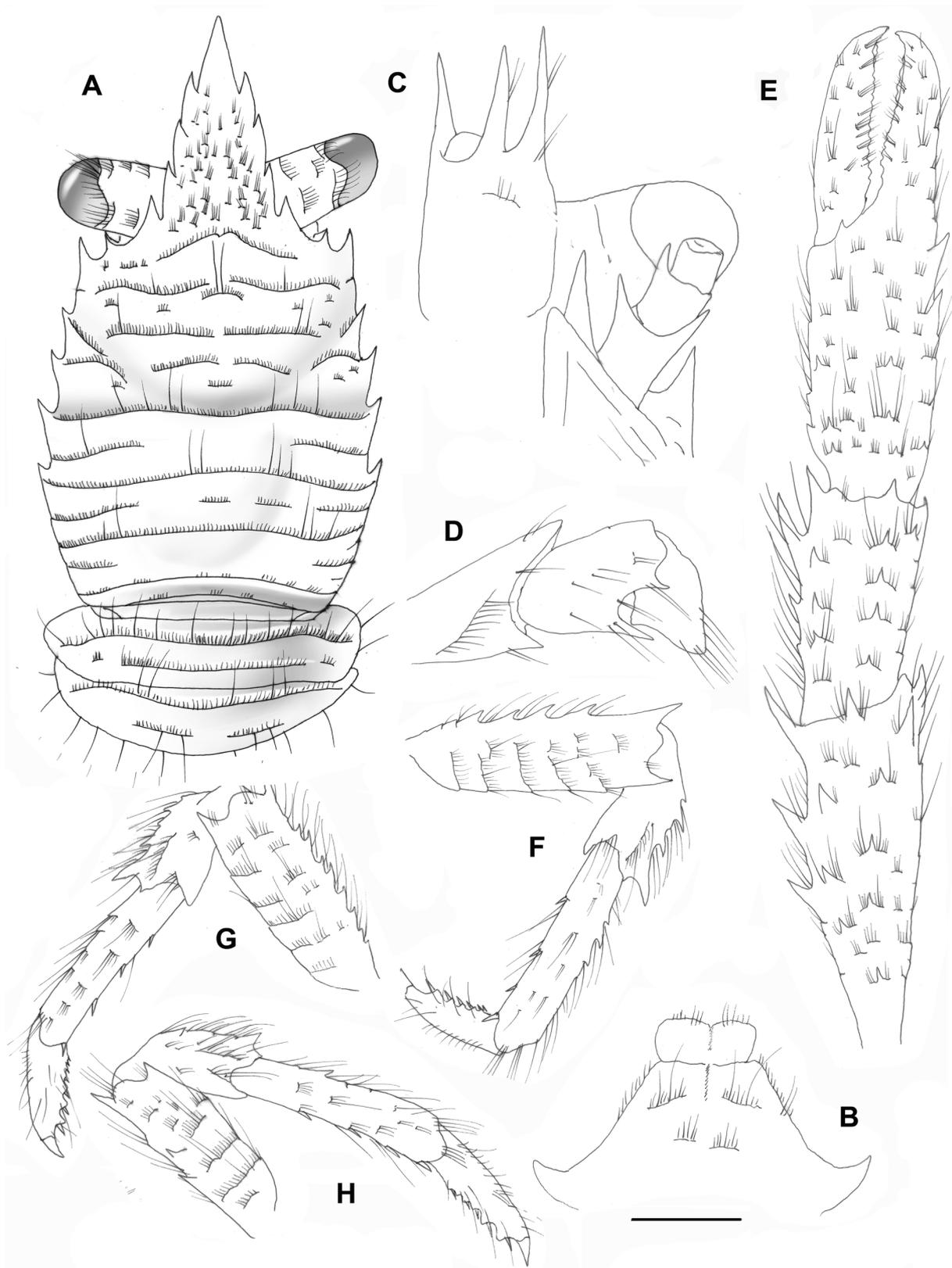


FIGURE 26. *Galathea connudata* n. sp., holotype, male, 3.6 mm, Wallis and Futuna (MNHN-IU-2013-8295). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, left P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Wallis and Futuna. MUSORSTOM 7, Stn DW509, 14°14.8'S, 178°11.5' W, 200–240 m, 12 May 1992: 1 ov. F 4.0 mm (MNHN-IU-2013-8296); 1 ov. F 4.7 mm (MNHN-IU-2013-8297).—Stn CP515, 14°13.5'S, 178°10.3'W, 224–252 m, 12 May 1992: 1 ov. F 2.9 mm (MNHN-IU-2013-8299).

Etymology. From the Latin, *connudatus*, wholly bare, in reference to the absence of spines on the carapace dorsal surface.

Description. *Carapace:* Slightly longer than broad; transverse ridges with dense short setae, and some scattered long non-plumose and non-iridescent setae; cervical groove distinct, laterally bifurcated. Gastric region with 6 transverse ridges: 1 epigastric ridge, unarmed, medially interrupted; 2 protogastric ridges, anterior ridge medially interrupted, without parahepatic spines, posterior ridge short, arcuate, with a few long setae; 1 mesogastric ridge, medially interrupted not extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, anterior ridge medially interrupted, not fused with anterior branchial ridges, posterior ridge short. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 5 transverse ridges, 2 of them uninterrupted. Lateral margins slightly convex medially, with 5 spines: 1 spine in front of and 4 spines behind anterior cervical groove; first, anterolateral, well-developed, behind level of lateral limit of orbit, no spine ventral to between first and anterior branch of cervical groove; 2 spines on anterior branchial region, and 2 spines on posterior branchial margin. Minute spine on limit of orbit; infraorbital margin with well-developed spine. Rostrum 1.8 times longer than broad, length 0.7 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.4 distance between proximalmost lateral incisions; dorsal surface flatish, with numerous small setose scales; lateral margin with 4 shallowly incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: 0.8 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somite 2 with 2 uninterrupted transverse ridges on tergite; somites 3–4 with 2 ridges, posterior medially interrupted ridge; somites 5–6 smooth, posteriormedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger than others. Ultimate article with a few fine setae, not in tuft, on distodorsal margin.

Antenna: Article 1 with strong distomesial spine exceeding distal margin of article 2. Article 2 with 2 subequal distal spines, reaching midlength of article 3. Article 3 with distomesial spine; article 4 unarmed.

Mxp3: Ischium with flexor margins ending in small spine, extensor margin ending in acute angle; crista dentata with 20–23 denticles. Merus shorter than ischium; flexor margin with 2 spines, proximal spine clearly longer than distal; extensor margin unarmed. Carpus unarmed.

P1: 2.5–3.5 times carapace length, with setose scales and numerous long simple non-iridescent setae. Merus 1.3–1.5 times as long as carapace, 1.5–1.7 times as long as carpus, with small spines arranged roughly in rows, dorsomesial and ventromesial spines stronger, distal spines prominent. Carpus as long as palm, 1.7–2.0 times longer than broad; dorsal surface with some small spines arranged roughly in rows; mesial margin with 2 strong spines. Palm 1.8 times longer than broad, lateral and mesial margins subparallel; small spines arranged roughly in dorsolateral and dorsomesial rows. Fingers 0.8–0.9 length of palm, each finger distally with two rows of teeth, spooned; fingers unarmed.

P2–4: moderately short and slender, with some setose striae and numerous long plumose and non-plumose setae, some of them iridescent. P2 1.9–2.0 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P3 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.7–0.8 carapace length, 3.5–3.9 times as long as broad, 1.3 times longer than P2 propodus. P3 merus 3.0–3.5 times as long as broad, 1.3 times longer than P3 propodus. P4 merus 2.7–3.3 times as long as broad, 1.1 times longer than P4 propodus. Extensor margin with row of 7–9 proximally diminishing spines on P2–3, 2 or 3 spines on P4; ventral margins distally ending in strong spine, lateral sides unarmed on P2–3, 1 or 2 spines on P4; ventromesial margins unarmed. Carpi with 5–7 spines on extensor margin on P2–4; lateral surface with 4 or 5 small spines sub-parallel to extensor margin; flexor distal margin bluntly produced. Propodi 3.0–4.0 times as long as broad; extensor margin with 2 or 3 proximal spines; flexor margin with 4 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 7 proximally diminishing teeth, terminal one prominent.

Epipods absent on pereopods.

Remarks. *Galathea connudata* n. sp. Is closely related to *G. anoplos* n. sp. from the Solomon Islands from which it can be distinguished by the following characters:

- The rostrum has the rostral lateral teeth shallowly incised in *G. connudata*, instead of deeply incised in *G. anoplos*.
- The anterior protogastric ridge is medially interrupted in *G. connudata*, rather than uninterrupted in *G. anoplos*.
- The proximal spine of the flexor margin of the Mxp3 merus is very strong, nearly reaching the distal margin of the merus in *G. anoplos*. This spine never reaches the distal margin in *G. connudata*.

The genetic divergences with other congeneric species are always higher than 13.7% (COI) and 4.6% (16S rRNA) (Tab. 1). No genetic data are available for *G. anoplos*.

Distribution. Philippines, Wallis and Futuna, 120–252 m.

***Galathea consobrina* De Man, 1902**

(Figs 27, 116D)

Galathea consobrina De Man, 1902: 720, pl. 23, figs 41a–41f (Ternate, Indonesia, Moluccas).—Baba, 1988: 73, fig. 30 (Sulu Archipelago, Davao Gulf off southeastern Mindanao, Sibuyan Sea, 37–68 m).—Baba *et al.*, 2008: 67 (compilation).—Poore *et al.*, 2008: 19 (SW Australia, 95–100 m).—Dong & Li, 2010: 7, fig. 4 (South China Sea, 7–100 m).

Material examined. *Holotype:* Indonesia. Moluccas, Ternate: M 2.5 mm (SMF4556).

Philippines. MUSORSTOM 1, Stn 57, 13°53'N, 120°13'S, 96–107 m, 26 March 1976: 1 ov. F 3.0 mm (MNHN-IU-2013-13992). MUSORSTOM 2, Stn CP8, 13°55'N, 120°20'E, 85–90 m, 21 November 1980: 1 M 4.3 mm, 1 F 3.5 mm (MNHN-IU-2013-8384).—Stn CP28, 13°41'N, 120°50'E, 90–110 m, 23 November 1980: 1 ov. F 3.5 mm, 1 F 2.6 mm (MNHN-IU-2013-8389).—Stn CP47, 13°33'N, 122°10'E, 81–84 m, 26 November 1980: 1 F 4.4 mm (MNHN-IU-2013-13984). MUSORSTOM 3, Stn DR117, 12°31'N, 120°39'E, 92–97 m, 3 June 1985: 2 M 2.3–3.6 mm (MNHN-IU-2013-8399), 1 M 2.7 mm (MNHN-IU-2013-8398), 1 ov. F 2.7 mm (MNHN-IU-2013-8397).—Stn DR137, 12°03'N, 122°06'E, 56 m, 6 June 1985: 1 M 4.0 mm (MNHN-IU-2013-8385).

Indonesia. Makassar Strait. CORINDON, Stn DR258, 01°56.8'S, 119°17.3'E, 30 m, 6 November 1980: 1 ov. F 2.8 mm (MNHN-IU-2013-8396). Kei Islands. KARUBAR, Stn DW22, 05°22'S, 133°01'E, 85–124 m, 25 October 1991: 1 F 2.8 mm (MNHN-IU-2013-13954).

Vanuatu. SANTO, Stn EP10, 15°38.0'S, 167°13.6'E, 45–101 m, 15 September 2006: 1 M 2.6 mm, 1 ov. F 2.8 mm (MNHN-IU-2013-8387).—Stn AT56, 15°36.1'S, 167°01.3'E, 98–105 m, 2 October 2006: 2 M 2.4–3.3 mm, 1 ov. F 3.4 mm (MNHN-IU-2013-8395).—Stn AT65, 15°40.3'S, 167°15.9'E, 160–167 m, 5 October 2006: 1 F 3.2 mm (MNHN-IU-2013-8386).—Stn AT75, 15°37.0–37.3'S, 167°09.2–09.6'E, 52–66 m, 10 October 2006: 1 ov. F 3.5 mm (MNHN-IU-2013-8390).—Stn AT80, 15°31.7'S, 167°10.8'E, 36–43 m, 12 October 2006: 1 ov. F 3.4 mm (MNHN-IU-2013-8400).—Stn AT84, 15°32.4'S, 167°14.3'E, 71–104 m, 12 October 2006: 1 M 2.4 mm (MNHN-IU-2013-8394).—Stn EP41, 15°37.7'S, 167°05.1'E, 112 m, 19 October 2006: 1 F 3.0 mm (MNHN-IU-2013-8391).

Australia. Western Australia. 34°53.10'S, 115°30.25'E, 95–100 m, 21 November 2005: 1 ov. F 2.8 mm (J55124).

New Caledonia. Lagon East. Stn 656, 21°49.1'S, 166°32.5'E, 30–40 m, August 1986: 1 M 3.5 mm (MNHN-IU-2013-8392).—Stn 732, 21°18.9'S, 165°50.9'E, 43–50 m, August 1986: 1 M 4.3 mm (MNHN-IU-2013-8388). Touho. 20°47'S, 165°13'E, September 1993: 1 M 2.7 mm (MNHN-IU-2013-8394), 1 ov. F 3.6 mm (MNHN-IU-2013-8383).

Description. *Carapace:* as long as broad; transverse ridges with dense short setae, and a few scattered long non-plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with 6 transverse ridges: 1 epigastric ridge with 2 epigastric spines, medially interrupted; 2 protogastric ridges, anterior uninterrupted, convex medially, with 1 parahepatic spine on each side, posterior ridge short and median, sometimes with a few long setae; 1 mesogastric ridge uninterrupted but not extending laterally to anteriormost of branchial marginal spines; 2 metogastric ridges, anterior ridge usually uninterrupted extending laterally to anterior branchial ridges, posterior

ridge short or absent. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges. One small hepatic spine on each side, near first (anterolateral) marginal spine. Lateral margins well convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, accompanying another spine ventral to between first and second; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. Small spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum 1.5 as long as broad, length 0.6 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some setose scales; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin blunt.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite, posterior ridge sometimes medially interrupted; somites 5 and 6 each with 2 medially interrupted ridges, sometimes absent. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine slightly smaller than others. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine exceeding distal margin of article 2. Article 2 wider than or as wide as long, with 2 well-developed subequal distal spines, reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with small spine on flexor and extensor distal margins; crista dentata with 23 or 24 denticles. Merus as long as ischium; flexor margin with 2 subequal spines; extensor margin with small distal spine. Carpus unarmed.

P1: 2.5 times carapace length, covered with finely setiferous scales, with scattered long setae. Merus as long as carapace, 4 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.4 length of palm, 2.1 times as long as broad; dorsal and lateral surfaces with some spines; mesial margin with 3 or 4 spines (distal second strong). Palm twice longer than broad, lateral and mesial margins slightly convex; spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side. Fingers slightly shorter than palm, unarmed; each finger distally with two rows of teeth, spooned.

P2–4: moderately slender, with setose striae and sparse long plumose setae. P2 1.9 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P3 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7 carapace length, 4.5 times as long as broad, 1.5 times longer than P2 propodus. Extensor margin with row of 7–9 proximally diminishing spines on P2–3, 6 spines on P4; ventral margins distally ending in strong spine followed proximally by 0 or 1 spines and several eminences, lateral sides unarmed. Carpi with 2 or 3 spines on extensor margin on P2–3, 1 spine on P4; lateral surface with 2 or 3 acute granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 3.5–4.0 times as long as broad; extensor margin unarmed; flexor margin with 4–6 movable spines. Dactyli distally ending in well-curved strong spine, length 0.7–0.8 that of propodi; flexor margin with 5 or 6 proximally diminishing teeth, terminal one prominent.

Epipods absent on pereopods.

Coloration. Translucent reddish brown or light brown overall. Long setae on carapace and abdomen reddish. P1 fingers distally whitish. P2–4 with brownish and whitish stripes.

Remarks. *Galathea consobrina* belongs to the group of species with non-scale-like gastric ridges, including a laterally interrupted mesogastric ridge carapace lateral margin with one small but distinct spine between anterolateral spine and anteriormost branchial marginal spine, antennular basal article with 3 well-developed terminal spines, two epigastric spines, P1 are distally spooned and pereopods without epipods. The closest species are *G. argus* **n. sp.** from Western Australia, and *G. tagaro* **n. sp.** from Vanuatu and Solomon Islands. The species can be distinguished by the following aspects:

Galathea argus resembles *G. tagaro* and *G. consobrina* from which it can be differentiated by having the carapace dorsal surface without scale-like median ridge behind the protogastric transverse ridge, whereas this median ridge is always present in *G. consobrina* and *G. tagaro*.

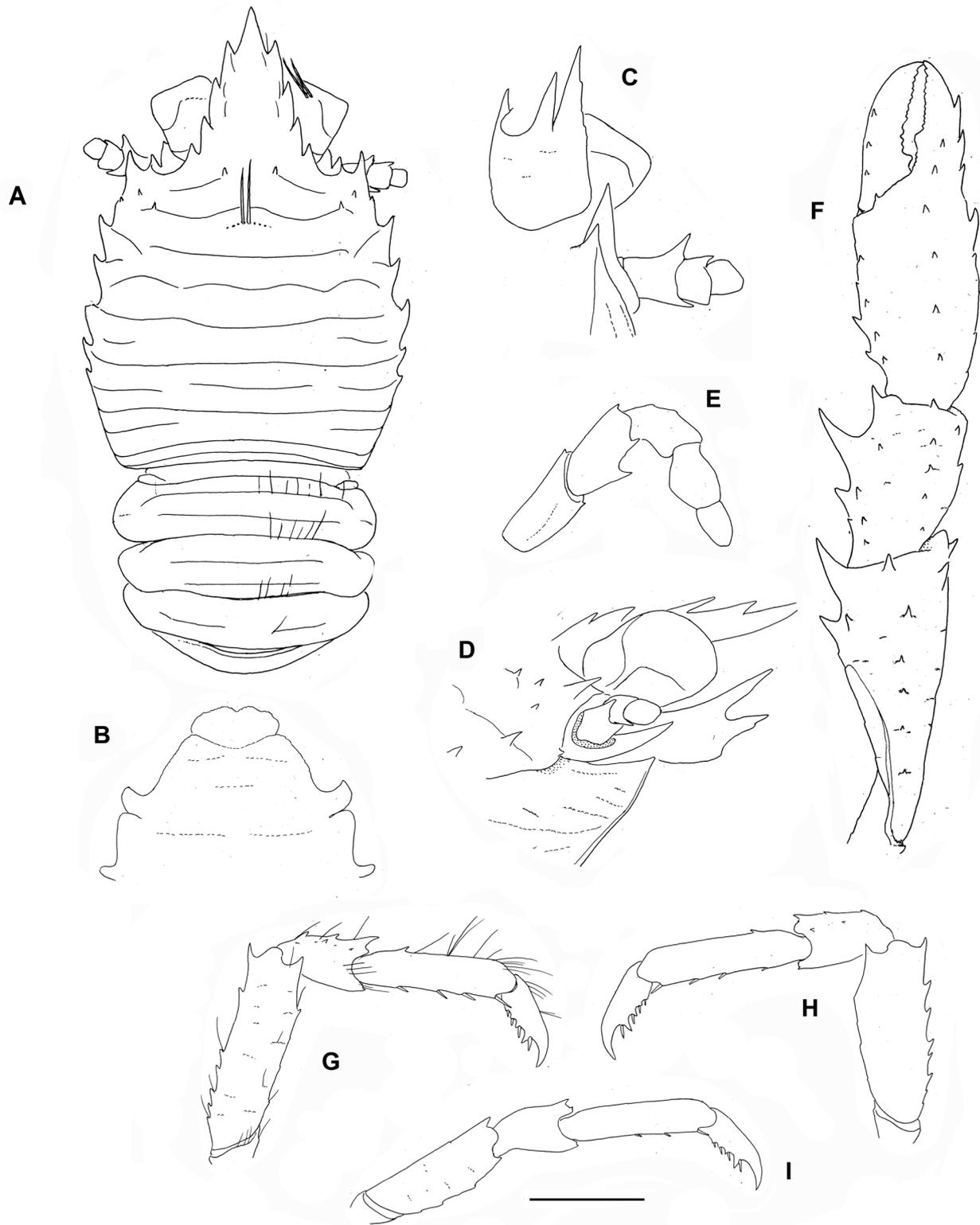


FIGURE 27. *Galathea consobrina* De Man, 1902, holotype, male, 2.5 mm, Indonesia, Moluccas (SMF4556). A, carapace and abdomen, dorsal view; B, thoracic sternites 3, 4 and 5; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, right cephalic region, showing rostrum, antennular and antennal peduncles, and anterior pterygostomian region, lateral view; E, right Mxp3, lateral view; F, right P1, dorsal view; G, right P2, lateral view; H, left P3, lateral view; I, right P4, lateral view. Scale: A, F–I = 1 mm; B–D, E = 0.5 mm.

Galathea consobrina is also very similar to *G. tagaro* n. sp. The two species can be distinguished by the length of the P2–4 propodi, being 3.5–4.0 times longer than broad in *G. consobrina*, whereas they are 4.5–4.8 times in *G. tagaro*. Furthermore, the ground color of *G. consobrina* is light brown, instead of green in *G. tagaro*.

No genetic data are available for *G. argus* and *G. tagaro*.

Distribution. Philippines, Indonesia, Vanuatu, New Caledonia and Western Australia, 30–167 m.

***Galathea continua* Baba & Fujita, 2008**

Galathea continua Baba & Fujita, 2008: 47, figs. 3, 4, 8A–B (Ryuku Islands, 6.0–7.6 m).

Material examined. Papua New Guinea. PAPUA NIUGINI, Stn PD35, 05°01.3'S, 145°47.9'E, 10–12 m, 19–20 November 2012: 1 M 3.8 mm (MNHN-IU-2013-8401).

Remarks. The specimen collected in Papua New Guinea agrees quite well with the original description. No genetic data are available.

Distribution. Japan (Ryuku Islands), Papua New Guinea, 6–12 m.

***Galathea corallicola* Haswell, 1882**

Galathea corallicola Haswell, 1882a: 761 (Port Molle, Queensland, tide marks).—Haswell, 1882b: 162 (no record).—Whitelegge, 1900: 190 (no record).—Haig, 1974: 447 (Western Australia).—Davie, 2002: 61 (no record).—Macpherson, 2008: 290, fig. 1 (syntypes, Port Molle, Queensland, tide marks).—Baba *et al.*, 2008: 68 (compilation).

Dubious identifications:

Galathea corallicola.—Southwell, 1906: 220 (Sri Lanka S of Galle, off Kaltura, coral reefs in Gulf of Manaar, shallow water to 183 m).

Material examined. Papua New Guinea. PAPUA NIUGINI, Stn PR69, 05°01.6'S, 145°48.1'E, 2–15 m, 20 November 2012: 1 ov. F 3.2 mm (MNHN-IU-2013-8403).

Australia. South Australia. Edithburgh jetty, 35.085°S, 137.749°E, 1–3 m, 3 May 2009: 1 F 3.7 mm (UF19005).

Remarks. The two specimens agree quite well with the type material. *G. corallicola* is close to *G. eupompe* n. sp. (see Remarks of the latter species). No genetic data are available for *G. corallicola*.

Distribution. Australia (Queensland and South Australia), Papua New Guinea, 1–15 m.

***Galathea coralliophilus* Baba & Oh, 1990**

Galathea coralliophilus Baba & Oh, 1990: 358, fig. 1 (Gulf of Thailand and Singapore, intertidal).—Komai, 2000: 352 (list).—Baba *et al.*, 2008: 68 (compilation).—Dong & Li, 2010: 9, fig. 5 (South China Sea, intertidal to 17 m).

? *Galathea* aff. *consobrina*.—Gordon, 1935: 5, figs 2, 3a, 3b (Sorong Doom).

Galathea spinosorostris.—Johnson, 1970: 6, fig. 1b (Raffles Light, Cape Rachado (Malacca), Pulau Pawai, Sultan Shoal, Pulau Sudong (all Singapore), low tide to 3.6 m)

Not *Galathea coralliophilus*.—Wu *et al.*, 1998: 90, figs 9, 42F (Taiwan) (= *G. orientalis* Stimpson, 1858).

Material examined. Taiwan. Mao-ao, 25.0177°N, 121.9896°E, 9–11 m, 30 June 2011: 1 F 2.2 mm (UF29382).

Remarks. No genetic data are available.

Distribution. Gulf of Thailand, Singapore, the South China Sea and Taiwan; 3.6–15 m.

***Galathea corbariae* n. sp.**

(Fig. 28)

Material examined. *Holotype*: Vanuatu. SANTO, Stn FB61, 15°34.4'S, 167°12.6'E, 2–3 m, 7 October 2006: 1 ov. F 2.8 mm (MNHN-IU-2013-8020).

Paratypes: Japan. Ryukyu Islands. Yaeyama Islands, Iriomote Island, Hoshizuna Beach, 24.44°N, 123.7769°E, 17 m, 10 July 2010: 1 M 4.1 mm (UF26922); 1 ov. F 5.0 mm (UF26923); Mitara Beach, 24.3738°N, 123.7505°E, 2–3 m, 11 July 2010: 1 ov. F 5.0 mm (UF26929); Unari-Zaki, 24.4259°N, 123.7659°E, 3–21 m, 8 July 2010: 1 M 5.3 mm (UF26896).

Indonesia. Moluccas Islands. Ternate, 1894: 1 M 3.5 mm, 2 ov. F 3.9–4.1 mm (SM4571). East coast of Marsegu Island. 18 January 1975: 1 M 4.7 mm (MNHN-Ga1139, MNHN-IU-2013-14267). Gorong Island. 26 January 1975: 3 M 3.0–4.9 mm, 1 ov. F 2.5 mm, 1 F 2.2 mm (MNHN-Ga1140, MNHN-IU-2013-14266). 27 January 1975: 1 ov. F 2.4 mm, 1 F 2.3 mm (MNHN-Ga1141, MNHN-IU-2013-14268).

Vanuatu. SANTO, Stn DB48, 15°38.7'S, 167°5.2'E, 10–17 m, 21 September 2006: 1 ov. F 3.9 mm (MNHN-IU-2013-8022).—Stn FB61, 15°34.4'S, 167°12.6'E, 2–3 m, 7 October 2006: 6 M 2.2–4.1 mm, 6 ov. F 2.5–3.8 mm (MNHN-IU-2013-8021).

Etymology. This species is dedicated to Laure Corbari of the Muséum nationale d'Histoire Naturelle, Paris, for her support to crustacean research.

Description. *Carapace:* Slightly longer than broad; anterior cervical groove indistinct. Five ridges on gastric region: 1 epigastric ridge medially interrupted, with 2 epigastric spines; 1 protogastric ridge, strongly convex medially, uninterrupted, with 1 parahepatic spine at each side; 1 mesogastric ridge uninterruptedly extending laterally to anteriormost of branchial marginal spines; 2 uninterrupted metagastric ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 transverse ridges, 2 of them uninterrupted. Lateral margins medially convex, with 7 spines: 2 spines in front of, and 5 spines behind, indistinct anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit; second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, accompanying another spine ventral to between first and second; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. External limit of orbit ending in small spine; infra-orbital margin with strong spine. Rostrum broad triangular, as long as broad, length 0.5 that of, breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions, dorsal surface nearly horizontal in lateral view, with some thick long plumose setae; lateral margin with 4 sharp spines. Ridges with numerous uniramous setae, and some thick long plumose setae more dense on dorsal surface of rostrum, between epigastric spines, on median convexity of anterior protogastric ridge and cardiac region.

Pterygostomial flap rugose, anterior margin ending in well-developed spine.

Sternum: As long as broad, lateral limits divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somite 5 and 6 each with 2 medially interrupted ridges, posteriomedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.1 times longer than broad, maximum corneal diameter 0.5 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger. Ultimate article elongate, 2.5 times longer than broad, with tuft of setae on distodorsal margin.

Antenna: Article 1 hardly visible from dorsal view, with depressed ventral distomesial process slightly exceeding distal margin of peduncle. Article 2 with distomesial spine as long as distolateral, reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor margin unarmed; crista dentata with 23–27 denticles. Merus subequal in length to ischium, with 2 strong spines of subequal size on flexor margin, proximal one located at midlength, distal one at terminal end; extensor margin with small distal spine. Carpus spineless.

P1: 2.6–3.0 times carapace length, with numerous short setae and some scattered long plumose setae on dorsal surface and along lateral and mesial margins of all articles. Merus 0.9 times length of carapace, 1.6 times as long as carpus, with rows of spines, mesial and distal spines strong. Carpus 0.8 length of palm, 2.2 times longer than broad, lateral and mesial margins subparallel, dorsal surface with small spines in longitudinal row; mesial surface with row of well-developed spines; and row of small spines along lateral margin. Palm 2.5 times longer than broad, lateral and mesial margins subparallel; spines roughly in rows on dorsal, mesial and lateral; lateral row continued on to whole lateral margin of fixed finger. Fingers 0.8 as long as palm, each finger distally with two rows of teeth, spooned, mesial margin of movable finger unarmed.

P2–4: Relatively slender, moderately setose, sparsely with long setae on all articles. P2 1.7 times carapace length. P2–3 meri subequal in length, P4 merus 0.8 length of P3 merus, equally broad on P2–4. P2 merus 0.7 carapace length, 3 times as long as broad, 1.5 times longer than P2 propodus; P3 merus 3 times as long as broad, 1.3 times length of P3 propodus; P4 merus 2.4 times as long as broad, as long as P4 propodus. Extensor margins with row of 8 or 9 proximally diminishing spines on P2–3, only distal spine on P4; lateral surface unarmed on P2–3, row of 2 or 3 spines on P4; flexor margins with strong terminal spine; ventromesial margin with terminal

spine on P2 only. Carpi with 4 spines on extensor margin; lateral surface with row of 2 or 3 small spines paralleling extensor row; flexor distal margins with small spine. Propodi subequal in length on P3 and P4, slightly shorter on P2, equally broad on P2–4, and 4 times as long as broad; extensor margin with 2 or 3 proximal spines on P2–4; flexor margin with 4 slender movable spines on P2–4; 1 proximal spine on lateral side of P4, unarmed on P2–3. Dactyli subequal in length, 0.6 length of propodi, ending in incurved, strong, sharp spine; flexor margin with prominent triangular terminal tooth preceded by 4 or 5 obsolescent teeth.

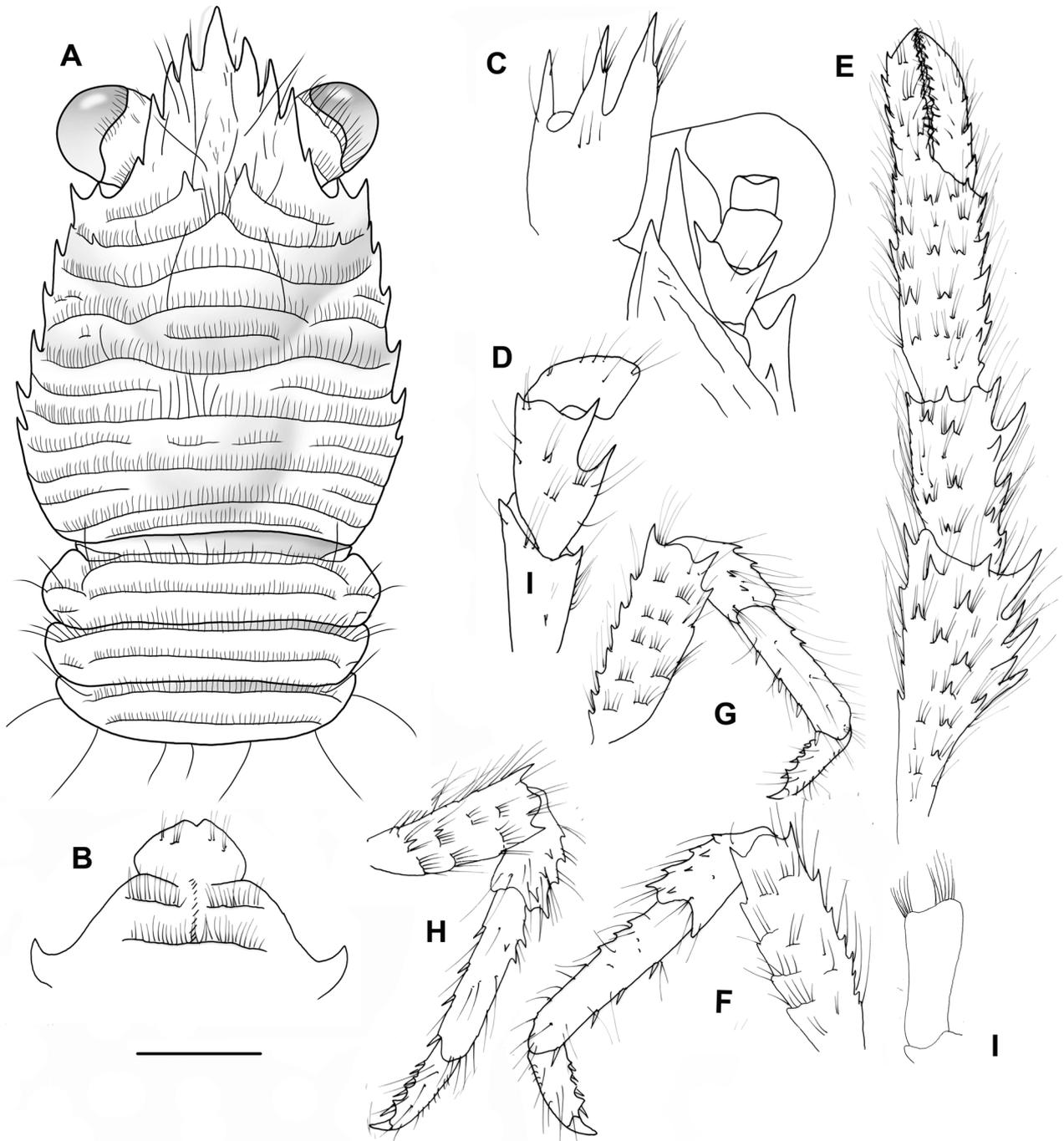


FIGURE 28. *Galathea corbariae* n. sp., holotype, ovigerous female, 2.8 mm, Vanuatu (MNHN-IU-2013-8020). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, left P2, lateral view; G, right P3, lateral view; H, right P4, lateral view; I, ultimate article of antennular peduncle. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Epipods present on P1, absent on P2–3.

Remarks. The new species is closely related to *G. aegyptiaca* Paul'son, 1875 (see the differences under Remarks for *this species*) and *G. homologa* n. sp. *Galathea corbariae* resembles *G. homologa* from which it can be distinguished by the more slender ultimate article of the antennular peduncle, 2.5 times longer than broad in *G. corbariae*, versus at most twice longer than broad in *G. homologa*. Furthermore, the rostrum is longer than broad in *G. homologa*, instead of as long as broad in *G. corbariae*.

The genetic divergences between *G. corbariae* and *G. homologa* are 11.3% COI, and 1.2% 16S rRNA, see Tab. 1).

Distribution. Japan (Ryukyu Islands), Indonesia (Moluccas Islands) and Vanuatu, 2–21 m.

***Galathea crinita* n. sp.**

(Fig. 29)

Material examined. *Holotype*: New Caledonia. BATHUS 4, Stn CP912, 18°55.61'S, 163°07.68'E, 690–702 m, 5 August 1994: M 6.0 mm (MNHN-IU-2008-15936).

Paratypes: New Caledonia. Chesterfield Islands. CORAIL 2, Stn DE16, 20°47.75'S, 160°55.87'E, 500 m, 21 July 1988: 1 ov. F 6.2 mm (MNHN-IU-2013-13981).

New Caledonia. MUSORSTOM 4, Stn CC202, 18°58.00'S, 163°10.50'E, 560 m, 20 September 1985: 1 ov. F 7.2 mm (MNHN-IU-2013-15937).

Etymology. From the Latin *crinitus*, hairy, in reference to the numerous setae on the body and appendages.

Description. *Carapace*: As long as broad; transverse ridges with dense short setae, and some long non-plumose and non iridescent setae; cervical groove distinct, laterally bifurcated; most ridges on gastric region interrupted, with numerous scattered scale-like ridges; epigastric region with 8 small spines; 1 or 2 small hepatic and 1 or 2 small parahepatic spines on each side; 5 protogastric and 4 mesogastric small spines; anterior branchial region with scale-like ridges and 3 or 4 small spines. Mid-transverse ridge uninterrupted, with 1 or 2 small spines on each side, preceded by shallow cervical groove, followed by 6 transverse ridges, 1 ridge uninterrupted. Lateral margins slightly convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, slightly behind level of orbit, second small but distinct, located at midlength between first spine and anteriormost spine of branchial margin, with small 1 spine ventral to between first and second; 2 spines on anterior branchial margin, 1 spine ventral to each spine; 3 spines on posterior branchial margin, last small. Small 2 outer orbital spines; infraorbital margin with well-developed spine. Rostrum triangular, 1.7 times as long as broad, length 0.6 that of, breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions, dorsal surface nearly horizontal in lateral view, with numerous setose scales; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, with sparse short setae, anterior margin bluntly angular.

Sternum: About as long as broad; lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 4 uninterrupted transverse ridges on tergite, anterior ridge slightly more elevated than posterior ridges; somites 5 and 6 each with 2 medially interrupted ridges, posteriormedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 2 well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine obsolescent. Ultimate article with a few short fine setae on distodorsal margin.

Antenna: Article 1 with distomesial spine barely reaching end of article 2. Article 2 with 2 subequal distal spines, reaching end of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; crista dentata with 20 or 21 denticles. Merus slightly shorter than ischium; flexor margin with 3 spines, proximal clearly stronger than median and distal; extensor margin with 1 distinct distal spine. Carpus unarmed.

P1: 3.4 times carapace length, with numerous finely setiferous scales, and some long thick setae. Merus 1.5 times length of carapace; twice as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.8 length of palm, 2.3 times as long as broad; dorsal surface with small spines arranged roughly in longitudinal rows; mesial row of well-developed spines. Palm 2.4 times longer than

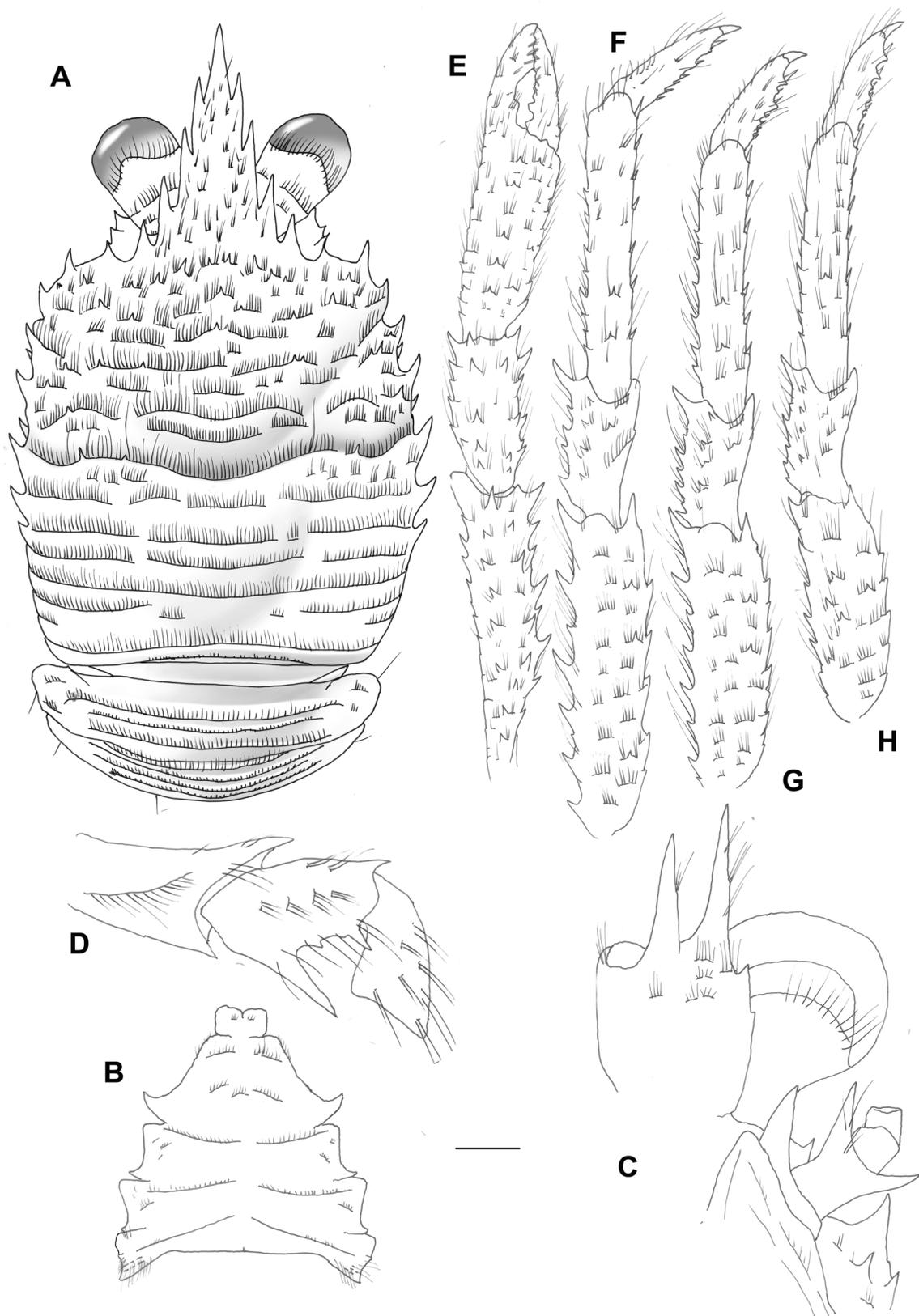


FIGURE 29. *Galathea crinita* n. sp., holotype, male, 6.0 mm, New Caledonia (MNHN-IU-2008-15936). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2.0 mm; B–D = 0.5 mm.

broad, lateral and mesial margins with small spines arranged roughly in dorsolateral and dorsomesial rows, a few small spines scattered on dorsal side. Fingers 0.7 length of palm, each finger distally with two rows of teeth, spooned; mesial margin of movable finger and lateral margin of fixed finger unarmed.

P2–4: Moderately long and slender, with setose striae and long plumose setae. *P2* twice carapace length. Meri successively shorter posteriorly (*P3* merus 0.8 length of *P2* merus, *P4* merus 0.8 length of *P3* merus); *P2* merus 0.8 carapace length, 4.0 times as long as broad, 1.2 times longer than *P2* propodus; *P3* merus 3.4 times longer than broad, 1.1 times longer than *P3* propodus; *P4* merus 3.0 times as long as broad, 0.9–1.0 length of *P4* propodus. Extensor margins of meri with row of 7 proximally diminishing spines on *P2–3*, 5 spines on *P4*; flexor margins distally ending in strong spine followed proximally by 4–6 small spines and several tubercles or eminences; lateral sides with some spines on *P2–4*. Carpi with 5–7 spines on extensor margin; lateral surface with 4–5 small spines and acute granules sub-parallel to extensor margin on *P2–4*; flexor distal margin acute. Propodi 5.0–6.0 times as long as broad; extensor margin with 5–7 small proximal spines on *P2–4*; flexor margin with 6 or 7 slender movable spines on *P2–4*. Dactyli distally ending in well-curved strong spine, length 0.5 that of propodi; flexor margin with 6 or 7 proximally diminishing teeth, terminal one prominent.

Epipods on *P1*.

Remarks. *Galathea crinita* is closely related with *G. villosa* **n. sp.** from Madagascar, Mozambique, and Vanuatu (differentiating characters are discussed under Remarks of *G. villosa*). The species also resembles *G. caesariata* **n. sp.** from Papua New Guinea, Vanuatu and New Caledonia (see above, under Remarks of this species).

Distribution. New Caledonia, Chesterfield Islands, 500–702 m.

***Galathea cymo* n. sp.**

(Figs 30, 116E)

Material examined. *Holotype*: Vanuatu. SANTO, Stn DB86, 15°38.5'S, 167°15.1'E, 13 m, 4 October 2006: M 3.6 mm (MNHN-IU-2013-13327).

Paratypes: Vanuatu. SANTO, Stn DB16, 15°35.5'S, 167°15.8'E, 32–40 m, 14 September 2006: 4 M 3.0–3.4 mm, 4 ov. F 2.7–3.0 mm, 1 F 2.7 mm (MNHN-IU-2013-13351); 1 F 2.5 mm (MNHN-IU-2013-13352); 1 F 2.6 mm (MNHN-IU-2013-13353).—Stn NB12, 15°33.1'S, 167°09.6'E, 20 m, 19 September 2006: 1 M 2.3 mm (MNHN-IU-2013-13346).—Stn DB61, 15°32.3'S, 167°16.9'E, 41 m, 25 September 2006: 2 M 2.4–4.3 mm (MNHN-IU-2013-13342); 1 ov. F 4.0 mm (MNHN-IU-2013-13343).—Stn DB69, 15°24.4'S, 167°13.0'E, 38 m, 27 September 2006: 4 M 1.4–2.5 mm, 3 ov. F 1.9–3.6 mm, 6 F 1.5–2.5 mm (MNHN-IU-2013-13344).—Stn NB43, 15°35.6'S, 167°16.0'E, 6–30 m, 4 October 2006: 1 ov. F 2.4 mm, 1 F 3.8 mm (MNHN-IU-2013-9767).—Stn ZR12, 15°36.7'S, 167°02.0'E, 2–30 m, 5 October 2006: 2 M 3.3–4.4 mm (MNHN-IU-2013-13349).—Stn DS91, 15°33.7'S, 167°08.4'E, 7 m, 6 October 2006: 1 F 2.0 mm (MNHN-IU-2013-13348).—Stn ZB24, 15°31.4'S, 167°14.1'E, 26 m, 12 October 2006: 1 ov. F 3.2 mm (MNHN-IU-2013-13350).—Stn EP36, 15°33.1–33.3'S, 167°12.4–12.7'E, 20–60 m, 15 October 2006: 1 M 2.6 mm, 1 F 2.0 mm (MNHN-IU-2013-13345).—Stn NB12, 15°33.1'S, 167°09.6'E, 20 m, 19 September 2006: 10 M 1.8–3.9 mm, 10 ov. F 2.2–3.4 mm, 1 F 2.4 mm (MNHN-IU-2013-13347).

New Caledonia. Chesterfield Islands. CORAIL 2, Stn DW33, 19°25'S, 158°52'E, 52 m, 23 July 1988: 1 M 2.3 mm (MNHN-IU-2013-13357).—Stn DW35, 19°22'S, 158°53'E, 52 m, 23 July 1988: 2 ov. F 3.8–5.1 mm (MNHN-IU-2013-13358).—Stn DW70, 19°15'S, 158°27'E, 54 m, 25 July 1988: 1 ov. F 3.9 mm (MNHN-IU-2013-9778).—Stn DW77, 19°12'S, 158°36'E, 60 m, 25 July 1988: 1 ov. F 4.7 mm (MNHN-IU-2013-13354); 1 F 4.3 mm (MNHN-IU-2013-13355).—Stn DW94, 19°06'S, 158°50'E, 36–53 m, 27 July 1988: 1 M 3.5 mm (MNHN-IU-2013-13359). Stn CP124, 19°29'S, 158°20'E, 53–56 m, 29 July 1988: 3 M 4.5–5.1 mm (MNHN-IU-2013-13362).—Stn DW143, 19°37'S, 158°25'E, 45 m, 30 July 1988: 1 ov. F 3.7 mm (MNHN-IU-2013-13361). Lagon East, Stn 608, 22°10.7'S, 167°01.3'E, 50–56 m, August 1986: 1 M 3.7 mm, 1 ov. F 4.4 mm (MNHN-IU-2013-13360).—Stn 612, 22°08.9'S, 167°00.5'E, 46–48 m, August 1986: 1 M 4.4 mm, 1 ov. F 4.6 mm (MNHN-IU-2013-13371).—Stn 623, 22°01'S, 166°5.5'E, 32–40 m, August 1986: 1 ov. F 4.2 mm (MNHN-IU-2013-9773).—Stn 625, 21°59.2'S, 166°53.6'E, 34–40 m, August 1986: 1 ov. F 4.7 mm (MNHN-IU-2013-13365).—Stn 631, 21°58.3'S, 166°47.6'E, 43 m, August 1986: 1 ov. F 5.4 mm (MNHN-IU-2013-13366).—Stn 635, 21°57.7'S, 166°44.5'E, 45–52 m, August 1986: 1 M 5.1 mm (MNHN-IU-2013-9779).—Stn 637, 21°56.5'S, 166°42.1'E, 60–65 m, August

1986: 1 M 4.9 mm (MNHN-IU-2013-9775).—Stn 639, 21°55.5'S, 166°44.1'E, 48–50 m, August 1986: 2 M 5.3–5.6 mm (MNHN-IU-2013-13367).—Stn 641, 21°53'S, 166°43'E, 50–52 m, August 1986: 3 M 5.1–5.3 mm, 1 ov. F 4.8 mm (MNHN-IU-2013-13368).—Stn 642, 21°54.2'S, 166°42.2'E, 44–47 m, August 1986: 1 M 6.0 mm (MNHN-IU-2013-9768).—Stn 651, 21°48'S, 166°36.4'E, 48 m, August 1986: 3 M 4.8–5.6 mm, 1 ov. F 4.4 mm (MNHN-IU-2013-13372).—Stn 657, 21°48.2'S, 166°38.2'E, 42 m, August 1986: 1 M 4.7 mm, 1 ov. F 4.2 mm (MNHN-IU-2013-13369).—Stn 658, 21°46.5'S, 166°35.2'E, 49–51 m, August 1986: 1 M 4.8 mm (MNHN-IU-2013-9774).—Stn 659, 21°45.3'S, 166°33.4'E, 46–48 m, August 1986: 1 M 5.3 mm (MNHN-IU-2013-13373).—Stn 660, 21°46.6'S, 166°32.5'E, 48–52 m, August 1986: 1 M 3.4 mm (MNHN-IU-2013-9777).—Stn 661, 21°45.9'S, 166°41.4'E, 32 m, August 1986: 1 F 5.1 mm (MNHN-IU-2013-9771).—Stn 662, 21°44.0'S, 166°32.0'E, 50 m, August 1986: 2 M 4.5–5.8 mm, 2 ov. F 3.7–4.3 mm (MNHN-IU-2013-13363).—Stn 668, 21°40.5'S, 166°29.1'E, 40 m, August 1986: 1 M 5.2 mm (MNHN-IU-2013-9770).—Stn 671, 21°38.1'S, 166°25.5'E, 36–39 m, August 1986: 2 M 4.0–5.4 mm (MNHN-IU-2013-13370).—Stn 675, 21°36.4'S, 166°23.9'E, 43 m, August 1986: 1 M 2.6 mm (MNHN-IU-2013-9772).—Stn 723, 21°21.6'S, 165°56.7'E, 45 m, August 1986: 3 M 4.0–5.3 mm, 4 ov. F 3.8–4.3 mm (MNHN-IU-2013-13364).—Stn 726, 21°20.4'S, 165°55'E, 50–51 m, August 1986: 1 ov. F 4.2 mm (MNHN-IU-2013-9769).—Stn 737, 22°08.4'S, 166°59.1'E, 49–50 m, August 1986: 1 M 3.9 mm (MNHN-IU-2013-9776).—Stn 739, 22°11.6'S, 167°01'E, 41–44 m, August 1986: 1 M 4.5 mm (MNHN-IU-2013-13328).—Stn 880, 20°29.9'S, 164°47.4'E, 30–52 m, 13 January 1987: 3 M 3.6–6.4 mm (MNHN-IU-2013-13330). Lagon, Stn DW1236, 21°18.13'S, 165°53.68'E, 45 m, 13 March 1993: 3 M 5.2–5.6 mm, 1 F 4.9 mm (MNHN-IU-2013-13374). Lagon North, Stn 504, 19°14.7'S, 163°30.5'E, 45 m, February 1985: 1 M 5.5 mm, 1 ov. F 3.1 mm (MNHN-IU-2013-13356). Surprises Atoll, Stn 462, 18°20'S, 162°59'E, 40 m, 1 March 1985: 1 M 5.0 mm, 1 ov. F 3.7 mm (MNHN-IU-2013-13329). Lifou Island. LIFOU, Stn 1460, 20°52.4'S, 167°08.0'E, 40–60 m, 6 November 2000: 2 M 4.3–4.6 mm, 2 ov. F 3.2–3.8 mm (MNHN-IU-2013-13340).—Stn 1463, 20°55.05'S, 167°03.35'E, 20–30 m, 10 November 2000: 1 ov. F 3.0 mm (MNHN-IU-2013-13341).—Stn 1474, 20°54.8'S, 167°16.1'E, 0–3 m, 11 November 2000: 8 M 2.0–4.6 mm, 1 ov. F 2.3 mm, 2 F 2.7–2.8 mm (MNHN-IU-2013-13339).—Stn 1459, 20°47.0'S, 167°03.0'E, 55–80 m, 5/13 November 2000: 4 M 2.0–3.4 mm, 8 ov. F 2.3–4.2 mm (MNHN-IU-2013-13331); 1 M 3.0 mm (MNHN-IU-2013-9906).—Stn 1464, 20°54.5'S, 167°05.9'E, 35–50 m, 14 November 2000: 1 M 3.4 mm (MNHN-IU-2013-13332); 2 M 3.2–3.4 mm (MNHN-IU-2013-13333).—Stn 1465, 20°47.7'S, 167°07.0'E, 35–45 m, 16 November 2000: 2 ov. F 3.0–4.5 mm, 1 F 3.1 mm (MNHN-IU-2013-13337).—Stn 1466, 20°46.5'S, 167°06.2'E, 25–45 m, 17 November 2000: 4 M 1.7–1.8 mm, 2 ov. F 4.3 mm (MNHN-IU-2013-13334).—Stn 1467, 20°46.6'S, 167°05.4'E, 90 m, 20 November 2000: 2 M 3.2–4.4 mm, 1 ov. F 4.3 mm (MNHN-IU-2013-13338).—Stn 1468, 20°46.5'S, 167°05.7'E, 30–80 m, 20 November 2000: 6 M 3.1–4.8 mm, 9 ov. F 2.9–5.5 mm (MNHN-IU-2013-13335).—Stn 1456, 20°49.3'S, 167°10.4'E, 25–30 m, 26 November 2000: 6 M 3.0–4.7 mm, 3 ov. F 3.4–4.8 mm (MNHN-IU-2013-13336).

Etymology. The name *Cymo*, wave, refers to one of the Nereids of Greek mythology. The name is considered as a substantive in apposition.

Description. *Carapace:* Slightly longer than broad; ridges with dense short setae and some scattered long plumose setae; cervical groove nearly indistinct, laterally bifurcated; ridges on gastric and anterior branchial regions scale-like or in concentric arcs; epigastric region with 2 median spines, and 1 small parahepatic spine on each side. Mid-transverse ridge scale-like, preceded by shallow cervical groove, followed by 4 or 5 scale-like ridges, 1 of them uninterrupted; 1 postcervical spine on each side. Lateral margins slightly convex posteriorly, with 6 or 7 spines: 1 or 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, second minute or absent; additional well-developed spine ventral to between first lateral spine and anterior branch of cervical groove; 2 spines on anterior branchial margin, and 3 spines on posterior branchial margin. External limit of orbit ending in small spine; infraorbital margin with 1 spine. Rostrum triangular, 1.5–1.6 times as long as broad, 0.6 carapace length and breadth 0.4 that of carapace, nearly horizontal in lateral view; distance between distalmost lateral incisions 0.2 distance between proximalmost lateral incisions; dorsal surface with small setiferous ridges; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, with sparse short setae, anterior margin with distal spine.

Sternum: Plastron about as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with anterior transverse ridge only; somites 5 and 6 smooth, posteromedian margin of somite 6 nearly transverse. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.8 rostrum width.

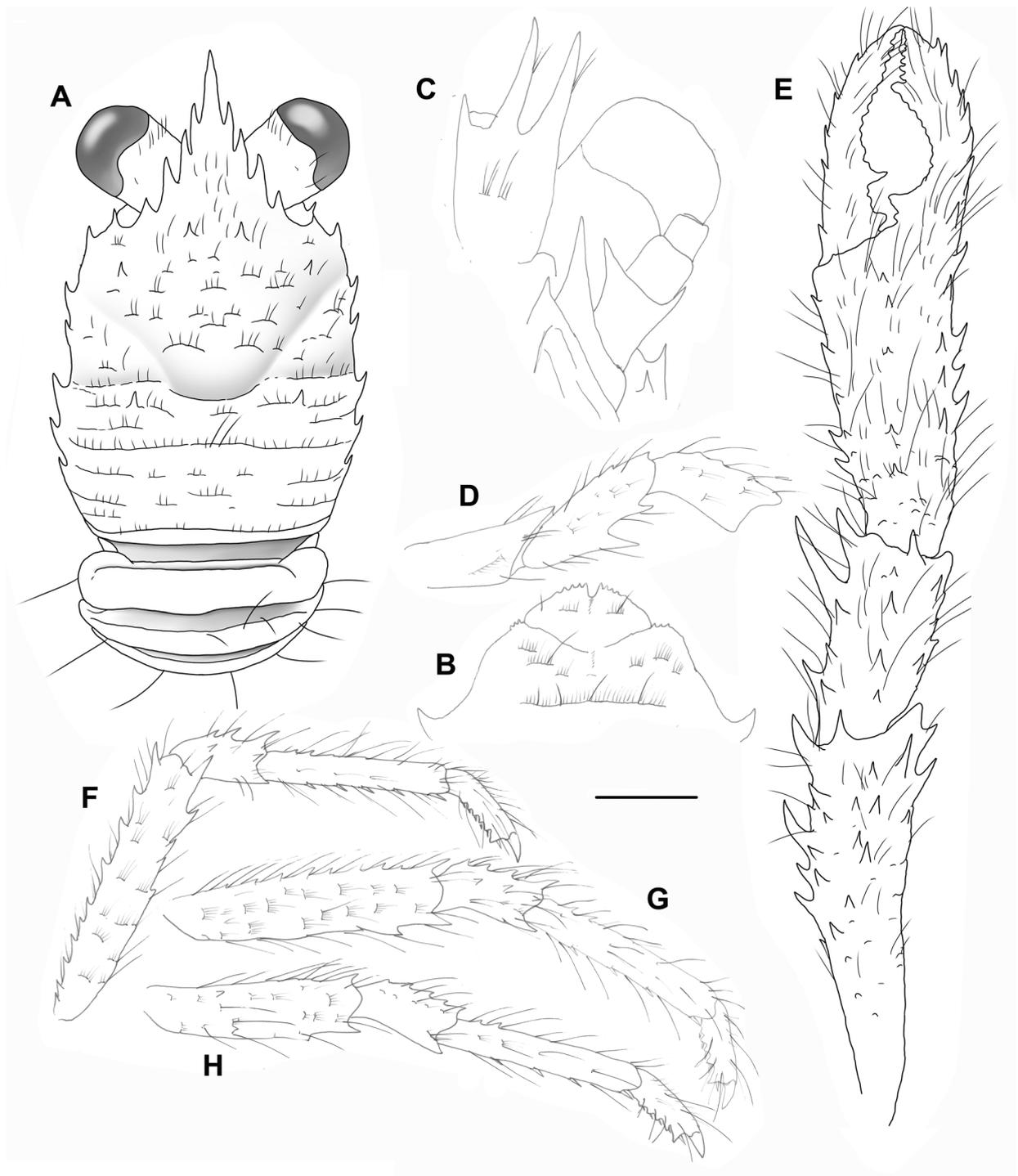


FIGURE 30. *Galathea cymo* n. sp., holotype, male, 3.6 mm, Vanuatu (MNHN-IU-2013-13327). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Antennule: Article 1 with 2 well-developed spines, distodorsal larger; distomesial spine distinct but very small. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine exceeding distal margin of article 2. Article 2 with 2 subequal distal spines, reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with ending in blunt angle on flexor margin; extensor margin with small but distinct distal spine; crista dentata with 26–28 denticles. Merus equally long as ischium; flexor margin with 2 spines, proximal

one located at midlength, distal one at terminal end, proximal clearly longer than distal; extensor margin with 1 or 2 small spines, proximal one located at midlength, distal one at terminal end. Carpus unarmed.

P1: 2.7–3.2 times carapace length, more so on fingers, and spinose, with sparse long plumose setae. Merus 1.2 times length of carapace, 1.8 times as long as carpus, with spines arranged roughly in rows, mesial and distal spines prominent. Carpus 0.8 length of palm, 1.9 times as long as broad; dorsal surface with spines arranged roughly in longitudinal rows; mesial margin with 3 well-developed spines, distal second largest. Palm 1.6–1.9 times longer than broad, lateral and mesial margins slightly divergent; spines arranged roughly in rows, dorsolateral row of spines continued on to whole lateral margin of fixed finger; dorsomesial row of spines continued along entire margin of movable finger. Fingers 0.9 length of palm, each finger with two rows of teeth distally spooned.

P2–4: Moderately slender, with numerous long plumose setae. *P2* 2.1 times carapace length. Meri successively shorter posteriorly (*P3* merus 0.9 length of *P2* merus, *P4* merus 0.8 length of *P3* merus); *P2* merus 0.9 carapace length, 5.5 times as long as broad, 1.6 times longer than *P2* propodus; *P3* merus 4.4 times longer than broad, 1.4 times longer than *P3* propodus; *P4* merus 3.6 times as long as broad, 1.2 length of *P4* propodus. Extensor margins with row of 9 or 10 proximally diminishing spines on *P2–3*, 2 or 3 on *P4*; lateral surface with 1 or 2 small spines on *P4*; flexor margin distally ending in strong spine followed proximally by 1–3 small spines and several eminences. Carpi with 4 or 5 spines on extensor margin on *P2–4*; lateral surface with 3 spines or granules sub-parallel to extensor margin on *P2*; flexor distal margin with small distal spine. Propodi 5.5–5.9 times as long as broad; extensor margin with 2 or 3 spines on proximal half; flexor margin with 4 or 5 slender movable spines. Dactyli subequal in length, distally ending in well-curved strong spine, 0.5–0.6 length of propodi; flexor margin with 5 or 6 proximally diminishing teeth.

Epipods on *P1*.

Coloration. Translucent light brown overall. Long setae on abdomen and pereopods whitish. *P1* palm whitish with transverse dark brown stripe.

Remarks. *Galathea cymothoe* belongs to the group of species characterized by scale-like gastric ridges and the presence of at least one dorsal branchial spine. The closest relative is *G. subsquamata* Stimpson, 1858 from Japan (Oshima Strait), Mariana Islands, and Papua New Guinea (see Remarks of the latter species).

Distribution. Vanuatu, New Caledonia, Chesterfield Islands, 2–90 m, in dead *Pocillopora* spp.

***Galathea cymothoe* n. sp.**

(Fig. 31)

Material examined. *Holotype*: New Caledonia. Chesterfield Islands. CORAIL 2, Stn CP131, 19°25'S, 158°38'E, 215–217 m, 29 July 1988: M 4.3 mm (MNHN-IU-2013-15820).

Paratypes: Vanuatu. SANTO, Stn EP36, 15°33.1/33.3'S, 167°12.4–12.7'E, 20–60 m, 15 October 2006: 3 M 2.0–2.3 mm (MNHN-IU-2013-15822).

New Caledonia. Chesterfield Islands. CHALCAL 84, Stn CP12, 20°34.30'S, 158°47.40'E, 67 m, 23 July 1984: 1 ov. F 3.2 mm (MNHN-IU-2013-8459). CORAIL 2, Stn DW3, 20°50.42'S, 161°34.19'E, 58 m, 20 July 1988: 1 M 4.0 mm (MNHN-IU-2013-13970).—Stn DW117, 19°25'S, 158°32'E, 52 m, 28 July 1988: 1 ov. F 3.5 mm (MNHN-IU-2013-15821).—Stn DW144, 19°28'S, 158°23'E, 50 m, 30 July 1988: 1 ov. F 3.2 mm (MNHN-IU-2013-15824), 1 M 3.2 mm (MNHN-IU-2013-13946), 1 F 3.3 mm (MNHN-IU-2013-13947).—Stn DW160, 19°46'S, 158°23'E, 35–41 m, 1 August 1988: 1 M 4.1 mm (MNHN-IU-2013-13959).—Stn DW166, 19°41'S, 158°25'E, 56 m, 2 August 1988: 1 M 3.6 mm (MNHN-IU-2013-15826).

New Caledonia. SMIB 5, Stn DW99, 23°24.70'S, 168°05.40'E, 58 m, 14 September 1989: 2 ov. F 5.3–6.2 mm (MNHN-IU-2013-15823).

Etymology. The name *Cymothoe*, running waves, refers to one of the Nereids of Greek mythology. The name is considered as a substantive in apposition.

Description. *Carapace*: As long as broad; transverse ridges with dense moderately long uniramous setae, and a few scattered moderately long non-plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with 9 transverse ridges: 2 epigastric ridges, anterior one medially interrupted, with 2 spines, posterior ridge medially interrupted; 2 protogastric ridges, anterior ridge uninterrupted, not extending laterally to second lateral spine, convex medially, with 1 parahepatic spine on each side; 2 mesogastric ridges, anterior ridge not extending

laterally to anteriormost of branchial marginal spines, posterior ridge scale-like; 3 metagastric ridges not extending laterally to anterior branchial ridges; a few additional scattered scale-ridges. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 6 transverse ridges, 3 of them uninterrupted. Lateral margins convex medially, with 8 spines: 2 spines in front of and 6 spines behind anterior cervical groove; first anterolateral, well-developed, at level of lateral limit of orbit; second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, with accompanying spine ventral to between first and second; 3 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. Small spine between lateral limit of orbit and anterolateral spine; infraorbital margin with strong spine. Rostrum 1.8 as long as broad, length 0.6–0.7 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, with spine on anterior ridge, ridges with short setae, anterior margin ending in acute angle.

Sternum: 0.8 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 each with 3 or 4 uninterrupted transverse ridges on tergite; somite 4 with 4 ridges, 2 interrupted and 2 uninterrupted; somites 5 with 2 uninterrupted ridges; somite 6 each with 2 medially interrupted ridges, posteromedian margin straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 2 spines; well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine minute or obsolescent. Ultimate article with a few short fine setae, not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine not reaching distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine slightly longer than distomesial and reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; extensor margin ending in acute angle; crista dentata with 20 or 21 denticles. Merus as long as ischium; flexor margin with 2 subequal spines; extensor margin with 1–2 minute spines. Carpus unarmed.

P1: 3.0 times carapace length, covered with finely setiferous scales, with numerous long non-plumose setae. Merus 1.2 times length of carapace, 1.4 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.9 length of palm, 2.3 times as long as broad; dorsal surface with some small spines; mesial margin with row of well-developed spines. Palm 2.3 times longer than broad, lateral and mesial margins subparallel; a few small spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side; dorsolateral spines continuing along fixed finger. Fingers 0.6 length of palm, each finger with two rows of teeth distally spooned; movable finger with 2 or 3 small proximal spines.

P2–4: Moderately slender, with setose striae and numerous long non-plumose setae. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7 carapace length, 3.6 times as long as broad, 1.4 times longer than P2 propodus; P3 merus 3.1 times longer than broad, 1.2 times longer than P3 propodus; P4 merus 3.0 times as long as broad, 1.2 length of P4 propodus. Extensor margin of P2–3 meri with row of 8 proximally diminishing spines, and 1 distal spine on P4; ventral margins distally ending in strong spine followed proximally by several tubercles or eminences; lateral sides unarmed on P2–3, with 3 small spines on P4. Carpi with 5 or 6 spines on extensor margin on P2–4; lateral surface with 3 or 4 spines (on P2) or acute granules (P3–4) sub-parallel to extensor margin on P2–4; flexor distal margin ending in acute angle. P2–4 propodi 4.5–4.7 times as long as broad; extensor margin with 0–2 proximal spines; flexor margin with 6 or 7 slender movable spines on P2–4. Dactyli distally ending in well-curved strong spine, length 0.5–0.6 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods on P1 and rarely on P2.

Remarks. The closest relative of the present new species is *G. clarki* n. sp. from the South China Sea, from which *G. cymothoe* can be distinguished by the following characters:

- The epipods are present on P1–3 in *G. clarki*, but only on P1 (rarely on P2) in *G. cymothoe*.
- The rostrum is narrower in *G. clarki* (nearly twice longer than broad, and length 0.5 postorbital carapace length) than in *G. cymothoe* (clearly less than twice longer than broad, and length 0.6–0.7 postorbital carapace length).

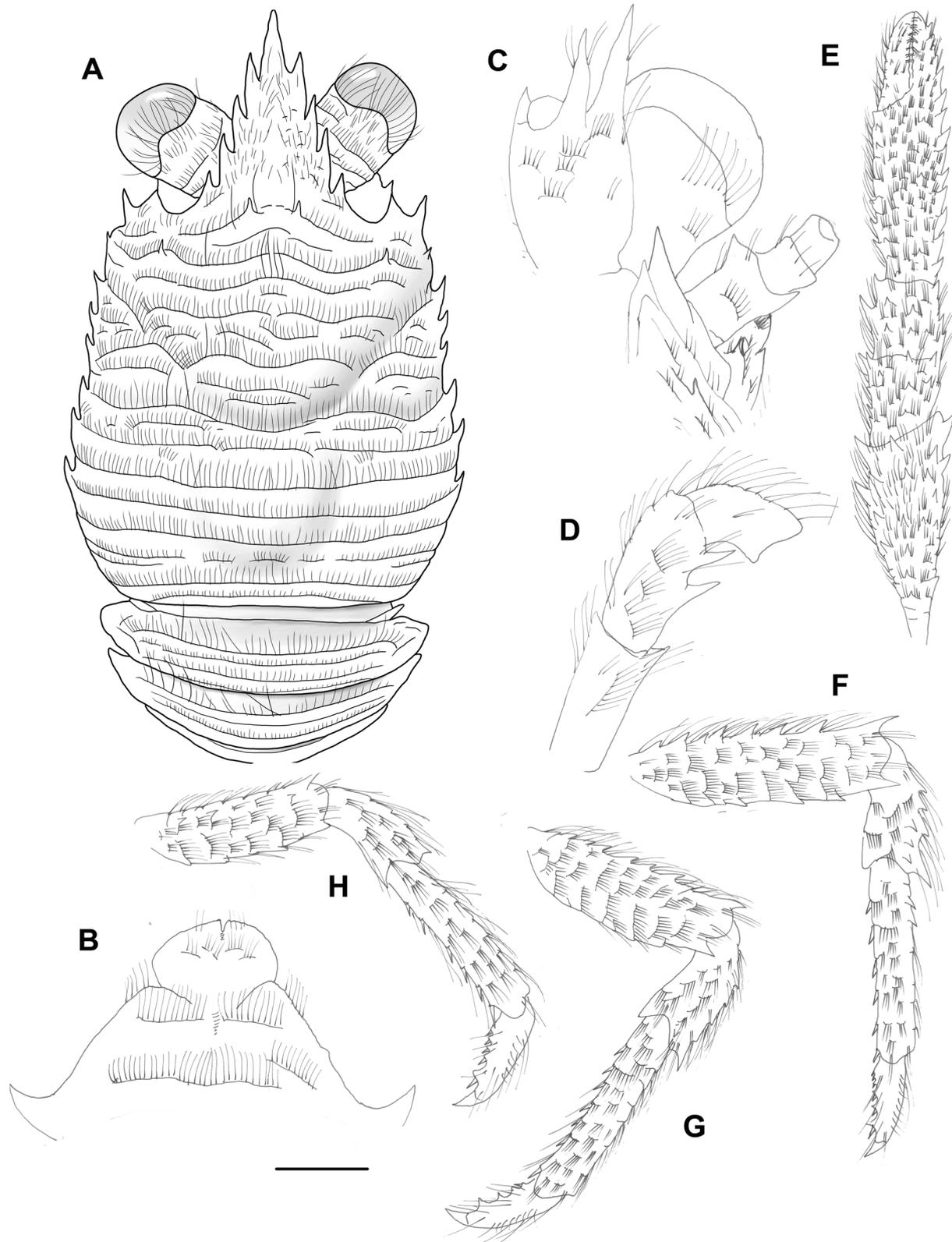


FIGURE 31. *Galathea cymothoe* n. sp., holotype, male, 4.3 mm, New Caledonia, Chesterfield Islands (MNHN-IU-2013-15820). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2.0 mm; B–D = 0.5 mm.

No genetic data are available for this species.

Distribution. Vanuatu, New Caledonia, Chesterfield Islands, 20–217 m.

***Galathea echinata* Macpherson, 2012**

Galathea echinata Macpherson, 2012: 412, fig. 2 (New Caledonia, 350–371 m).

Material examined. New Caledonia. HALIPRO 1, Stn CC856, 21°44.02'S, 166°37.76'E, 311–365 m, 20 March 1994: 1 ov. F 3.8 mm (MNHN-IU-2013-8402).

Remarks. No genetic data are available for this species.

Distribution. New Caledonia, 311–371 m

***Galathea eione* n. sp.**

(Fig. 32)

Material examined. *Holotype:* Fiji. SUVA 2, Stn CP66, 17°45.1'S, 177°13.7'E, 37 m, 21 October 1998: M 4.2 mm (MNHN-IU-2013-13606).

Paratypes: Fiji. MUSORSTOM 10, Stn CP1358, 17°48.49'S, 178°46.70'E, 80–120 m, 13 August 1998: 5 M 2.5–3.5 mm, 2 ov. F 3.3–3.5 mm, 4 F 3.1–3.5 mm (MNHN-IU-2013-13607). SUVA 2, Stn CP46, 17°52.5'S, 177°15.5'E, 25 m, 19 October 1998: 1 ov. F 2.8 mm (MNHN-IU-2013-13609).—Stn CP48, 17°56.2'S, 177°14.3'E, 16 m, 19 October 1998: 20 M 3.3–5.6 mm, 17 ov. F 3.5–5.7 mm, 3 F 3.0–3.1 mm (MNHN-IU-2013-13611).—Stn DW53, 17°44.2'S, 177°18.4'E, 28 m, 20 October 1998: 1 ov. F 4.0 mm (MNHN-IU-2013-13610).—Stn CP66, 17°45.1'S, 177°13.7'E, 37 m, 21 October 1998: 19 M 3.0–5.3 mm, 12 ov. F 2.8–3.7 mm, 4 F 2.4–3.4 mm (MNHN-IU-2013-13612); 1 ov. F 3.5 mm (MNHN-IU-2013-13613); 1 ov. F 3.4 mm (MNHN-IU-2013-13614); 1 ov. F 3.7 mm (MNHN-IU-2013-13615); 1 ov. F 3.5 mm (MNHN-IU-2013-13616). BORDAU 1, Stn CP1438, 17°13.2'S, 178°48'E, 97–104 m, 3 March 1999: 1 ov. F 4.0 mm, 1 F 3.0 mm (MNHN-IU-2013-13608).

Etymology. The name *Eione*, strand, refers to one of the Nereids of Greek mythology. The name is considered as a substantive in apposition.

Description. *Carapace:* As long as broad; transverse ridges with dense short setae, without long setae; cervical groove distinct, laterally bifurcated. Gastric region with some transverse ridges: 1 epigastric ridge unarmed, uninterrupted, medially convex; 2 protogastric ridges, anterior one uninterrupted, medially convex, posterior ridge scale-like; 1 mesogastric ridge uninterrupted but not extending laterally to anteriormost of branchial marginal spines; 2 metogastric ridges, anterior one uninterrupted, not continuing laterally to anteriorbranchial ridges, posterior ridge short; some additional scattered scales in some specimens. Hepatic region unarmed. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges, 3 of them uninterrupted. Lateral margins well convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, with small spine ventral to between first and second; 2 spines on anterior branchial region, last small, and 3 spines on posterior branchial margin, last small and obsolescent in some specimens. Small spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum 1.8–1.9 times as long as broad, length 0.6 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous small scale-like setose ridges; lateral margin with 4 deeply incised teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly. *Abdomen:* Somites 2–4 each with 2 or 3 uninterrupted transverse ridges on tergite; somites 5 and 6 each with 2 medially interrupted ridges, sometimes anterior ridge uninterrupted. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.7 rostrum width.

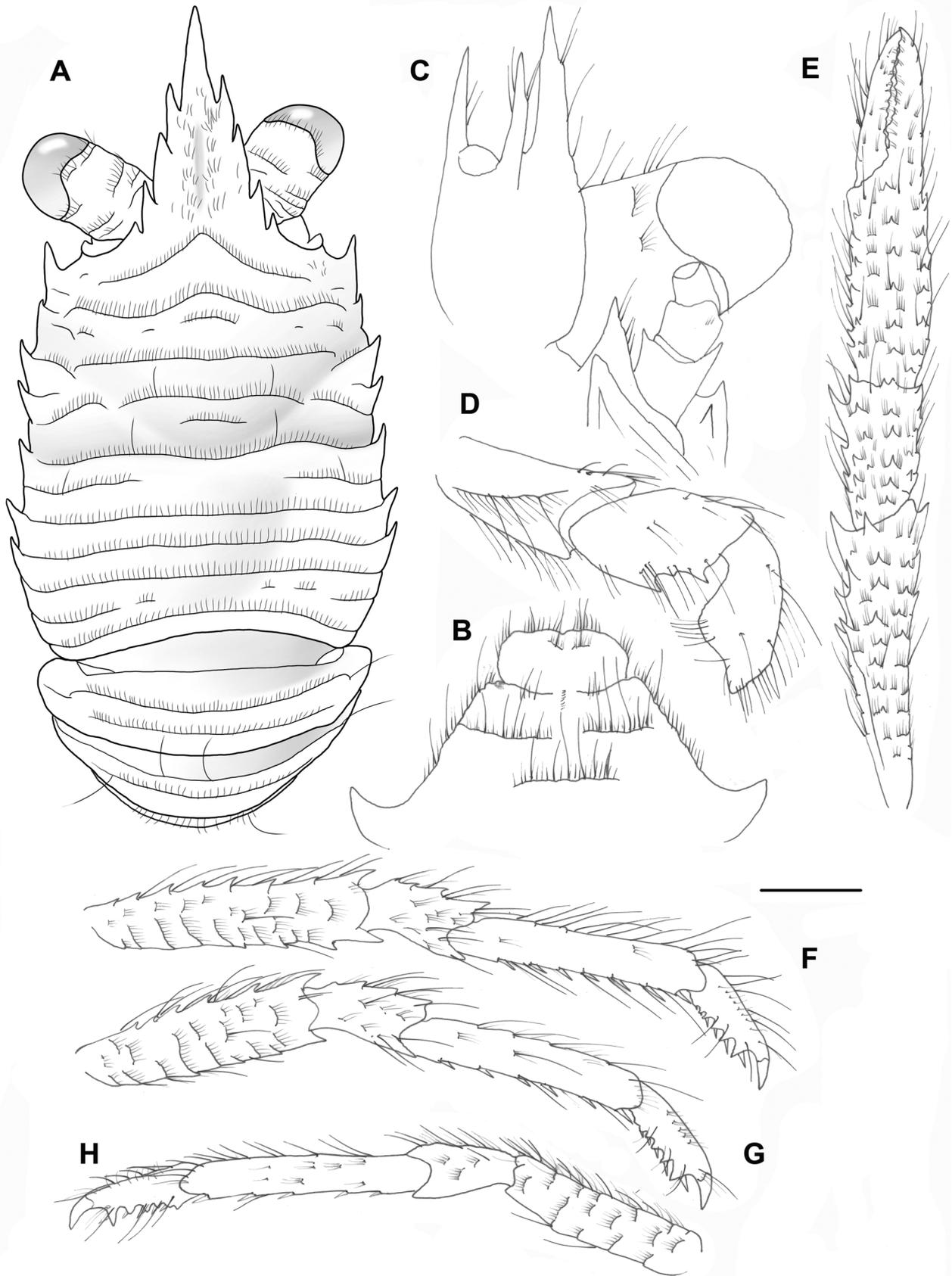


FIGURE 32. *Galathea eione* n. sp., holotype, male, 4.2 mm, Fiji (MNHN-IU-2013-13606). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, left P4, lateral view. Scale: A, F–H = 1 mm; E = 2.0 mm; B–D = 0.5 mm.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine slightly smaller than others. Ultimate article with some fine setae, not in tuft, on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine exceeding distal margin of article 2. Article 2 with 2 small distal spines, distolateral spine longer than distomesial, and reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor and extensor margins ending in blunt angle or with small spine; crista dentata with 20 or 21 denticles. Merus as long as ischium; flexor margin with 2 subequal spines; extensor margin unarmed. Carpus unarmed.

P1: 3.2–3.6 times carapace length, with numerous setiferous scales, and some scattered long non-plumose setae. Merus 1.5 times carapace length, 2.0 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.8 length of palm, twice longer than broad; dorsal surface with some small spines; mesial margin with row of spines, distal slightly stronger than others. Palm 2.3–2.6 times longer than broad, lateral and mesial margins slightly divergent; small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers 0.8 times palm length, each finger with two rows of teeth distally spooned; fixed finger with some proximal spines along lateral margin; movable finger unarmed.

P2–4: Long and slender, with some setose striae and some long non-plumose setae. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7 carapace length, 3.6 times as long as broad, 1.3 times longer than P2 propodus; P3 3.6 times as long as broad, slightly longer than P3 propodus; P4 merus 3.7 times as long as broad, as long as P4 propodus. Extensor margin with row of 7 or 8 proximally diminishing spines on P2–3, 1 distal spine on P4; ventral margins distally ending in strong spine, lateral sides with 0–2 small spines on P4. Carpi with 3–5 spines on extensor margin on P2–3, 0–1 distal spine on P4, distalmost smaller than distal second, sometimes absent; lateral surface with 3 or 4 small spines or acute granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 4.9–5.1 times as long as broad; extensor margin with 0–3 minute proximal spines; flexor margin with 4–6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.5–0.6 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods present on P1.

Remarks. *Galathea eione* n. sp. appears close to *G. providentia* Laurie, 1926 and *G. ternatensis* De Man, 1902. These species are characterized by an interrupted mesogastric ridge, non-scale-like gastric ridges, the carapace lateral margin bearing one small but distinct spine between the anterolateral spine and the anteriormost branchial marginal spine, the antennular basal article with three well-developed terminal spines, the lack of epigastric spines, and the presence of epipod only on P1. *Galathea eione* is easily distinguished from these species by the absence of hepatic spines, which is always present in *G. providentia* and *G. ternatensis* (see Remarks of *G. providentia* and *G. ternatensis*).

Distribution. Fiji, 16–120 m.

***Galathea eridani* n. sp.**

(Fig. 33)

Material examined. *Holotype*: Mozambique. MAINBAZA, Stn DW3168, 26°11.93'S, 35°02.85'E, 87–90 m, 16 April 2009: M 3.8 mm (MNHN-IU-2013-13217).

Paratypes: New Caledonia. Lagon Est, Stn 899, 20°14.2'S, 164°25.15'E, 16 m, 14 January 1987: 1 M 3.0 mm (MNHN-IU-2013-13980).

Etymology. The name *Erudanus*, the River, refers to one of the southern constellations.

Description. *Carapace*: As long as broad; transverse ridges with dense very short setae, without long setae; cervical groove distinct, laterally bifurcated. Gastric region with 5 transverse ridges: 1 epigastric ridge medially interrupted, with 2 spines; 2 mesogastric ridges, anterior ridge uninterrupted, not extending laterally to anteriormost branchial spines, posterior one short; 2 metogastric ridges not extending laterally to anterior branchial ridges. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 4 ridges, 1 or 2 of them uninterrupted, shallow groove preceding posterior uninterrupted ridge. Lateral margins slightly convex, with 8 spines: 2 spines in front of and 6 spines behind anterior

cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second small, with spine ventral to between first and second spines; 3 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. Well-developed spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum 1.3 as long as broad, length 0.6 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 with 2 transverse uninterrupted ridges; somites 4–6 each with uninterrupted anterior ridge and 1 or 2 medially interrupted ridges; posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine slightly smaller. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching distal margin of article 2. Article 2 with 2 subequal distal spines, exceeding midlength of article 3. Article 3 with distomesial spine. Article 4 unarmed.

Mxp3: Ischium with small spine on flexor and extensor distal margins; crista dentata with 20 or 21 denticles. Merus as long as ischium; flexor margin with 2 subequal well-developed spines; extensor margin with 3 spines. Carpus unarmed, rugose along extensor margin.

P1: 3.0 times carapace length, covered with finely setiferous scales, with scattered long non-iridescent setae. Merus 1.2 times length of carapace, 1.5–1.6 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus as long as palm, 1.8 times as long as broad; dorsal and lateral surfaces with some spines; mesial margin with some spines (distal second strong). Palm 1.8–2.0 times longer than broad, lateral and mesial margins subparallel; spines arranged roughly in dorsolateral and dorsomesial rows; dorsolateral row continuing along entire fixed finger; a few small spines scattered on dorsal side. Fingers 0.8 length of palm, each finger with two rows of teeth, distally spooned; movable finger unarmed.

P2–4: moderately slender, with setose striae and sparse long setae (setae non-iridescent). P2 twice carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.7 length of P2 merus); P2 merus 0.8 carapace length, 3.7 times as long as broad, 1.7 times longer than P2 propodus; P3 merus 3.3 times as long as broad, 1.5 times longer than P3 propodus; P4 merus 2.5 times as long as broad, 1.2 times longer than P2 propodus. Extensor margin of P2–3 meri with row of 9 or 10 proximally diminishing spines, 3 spines on P4; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several eminences; lateral sides with 3 spines on P4. Carpi with 4–6 spines on extensor margin on P2–3, 2 spines on P4; lateral surface with 1–3 small spines or acute granules sub-parallel to extensor margin; flexor distal margin acute. P2–4 propodi 3.5–3.8 times as long as broad; extensor margin with 3–4 proximal spines on P2–4; flexor margin with 4–6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.5–0.6 that of propodi; flexor margin with 4 proximally diminishing teeth, terminal one prominent.

Epipods present on P1.

Remarks. The present new species is close to *G. atua* n. sp. from the French Polynesia but the two can be easily distinguished by the following characters:

- The anterior branchial margin has three spines in *G. eridani*, instead of two spines in *G. atua*.
- The Mxp3 merus has two or three spines on the extensor margin in *G. eridani*, whereas this margin is unarmed or has at most one distal spine in *G. atua*.
- The P2–4 propodi are less than 4 times longer than broad in *G. eridani*, rather than more than 4 times longer than broad in *G. atua*.

The new species is also close to *G. mariae* n. sp. from the French Polynesia, New Caledonia and Maldivic Islands, and *G. whiteleggi* Grant & McCulloch, 1906 from Australia (see Remarks for these species).

The specimens from the two far distant localities are similar, without clear morphological differences. Unfortunately no molecular sequences are available.

Distribution. Mozambique, New Caledonia; 16–90 m.

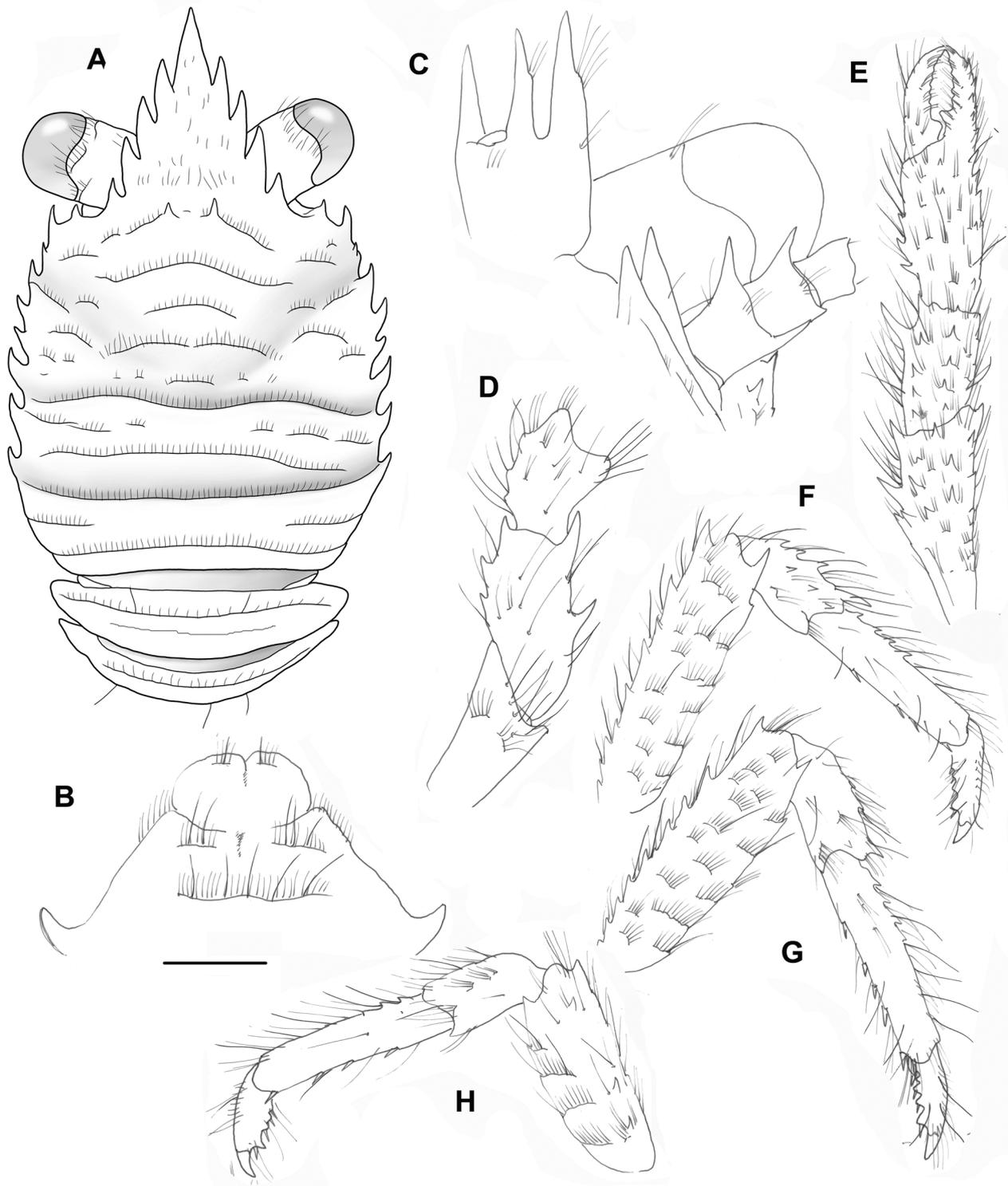


FIGURE 33. *Galathea eridani* n. sp., holotype, male, 3.8 mm, Mozambique (MNHN-IU-2013-13217). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, left P4, lateral view. Scale: A, F–H = 1 mm; E = 2.0 mm; B–D = 0.5 mm.

***Galathea erythrina* n.sp.**

(Figs 34, 116F)

Material examined. *Holotype*: Red Sea. Saudi Arabia. Farasan Banks, Shib Radib, 18.0731°N, 40.8859°E, 7–9 m, 8 March 2013: F 1.3 mm (UF36824).

Paratype: Red Sea, Saudi Arabia. Gulf of Aqaba, 28.4039°N, 34.7407°E, 2 m, 30 September 2013: 1 F 1.5 mm (UF38147)

Etymology. From the Greek *erythros*, red, in relation to the color of the carapace.

Description. *Carapace*: 0.9 times as long as broad; transverse ridges with short fine setae and some scattered long plumose iridescent setae; cervical groove slightly distinct, laterally bifurcated; 1 epigastric ridge medially interrupted, with 2 spines; 1 protogastric ridge laterally interrupted on each side, strongly medially convex, with some long plumose iridescent setae, other ridges on gastric and anterior branchial regions scale-like or in concentric arcs; mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 3 transverse ridges, 2 of them uninterrupted. Lateral margins slightly convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, second very small, without additional spine ventral to between first lateral spine and anteriormost spine of branchial margin, 2 spines on anterior branchial margin, and 3 spines on posterior branchial margin. External limit of orbit rounded; infraorbital margin with 1 spine. Rostrum broad triangular, 1.2 times as long as broad, length 0.7 postorbital carapace length and breadth 0.4 that of carapace, nearly horizontal in lateral view; distance between distalmost lateral incisions 0.2 distance between proximalmost lateral incisions; dorsal surface with a few small scale-like setiferous ridges; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, with sparse short setae, anterior margin bluntly produced.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somite 2 with 2 transverse ridges, anterior ridge more distinctly elevated than posterior ridge; somites 3–5 with 1 anterior ridge; somite 6 smooth.

Eyes: Ocular peduncles as long as broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 well-developed spines, distodorsal larger; distomesial spine clearly smaller than others. Ultimate article with tuft of long fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine overreaching end of article 2. Article 2 with 2 distal spines, distomesial spine longer than distolateral and barely reaching end of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor margin ending in blunt angle; flexor margin ending in acute angle: crista dentata with 15 denticles. Merus equally long as ischium; flexor margin with 2 spines, proximal spine slightly longer than distal spine, proximal one located at midlength, distal one at terminal end; extensor margin with small distal spine. Carpus unarmed.

P1: 2.2 times carapace length. Merus as long as carapace, twice longer than carpus, with spines arranged roughly in rows, distal spines prominent. Carpus as long as palm, 1.5 times as long as broad; dorsal surface with small spines arranged roughly in longitudinal rows; mesial margin with 1 strong spine. Palm twice longer than broad, lateral and mesial margins subparallel; spines arranged roughly in rows; dorsolateral row continuing on to lateral margin of fixed finger. Fingers as long as palm, each finger distally with two rows of teeth, spooned; mesial margin of movable finger unarmed, 1 small proximal spine on dorsal side.

P2–4: moderately slender, with setose striae and sparse long plumose setae. P2 twice carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P3 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.8 carapace length, 4.3 times as long as broad, 1.1 times longer than P2 propodus. Extensor margin with row of 7 or 8 proximally diminishing spines on P2–3, 3 spines on P4; ventral margins distally ending in strong spine followed proximally by 0–2 spines and several eminences, lateral sides unarmed. Carpi with 3 spines on extensor margin on P2–3, unarmed on P4; lateral surface with 2 or 3 acute granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 4.5–5.0 times as long as broad; extensor margin with 2–4 proximal spines on P2–3, unarmed on P4; flexor margin with 4 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6 that of propodi; flexor margin with 4 proximally diminishing teeth, terminal one prominent.

Epipods absent on pereopods.

Coloration. Carapace and abdomen reddish; median white spots on abdominal somites 2–4. P1–4 with whitish and greenish bands; some P1 spines with red tip. P2–4 meri each with orange spot on distal part.

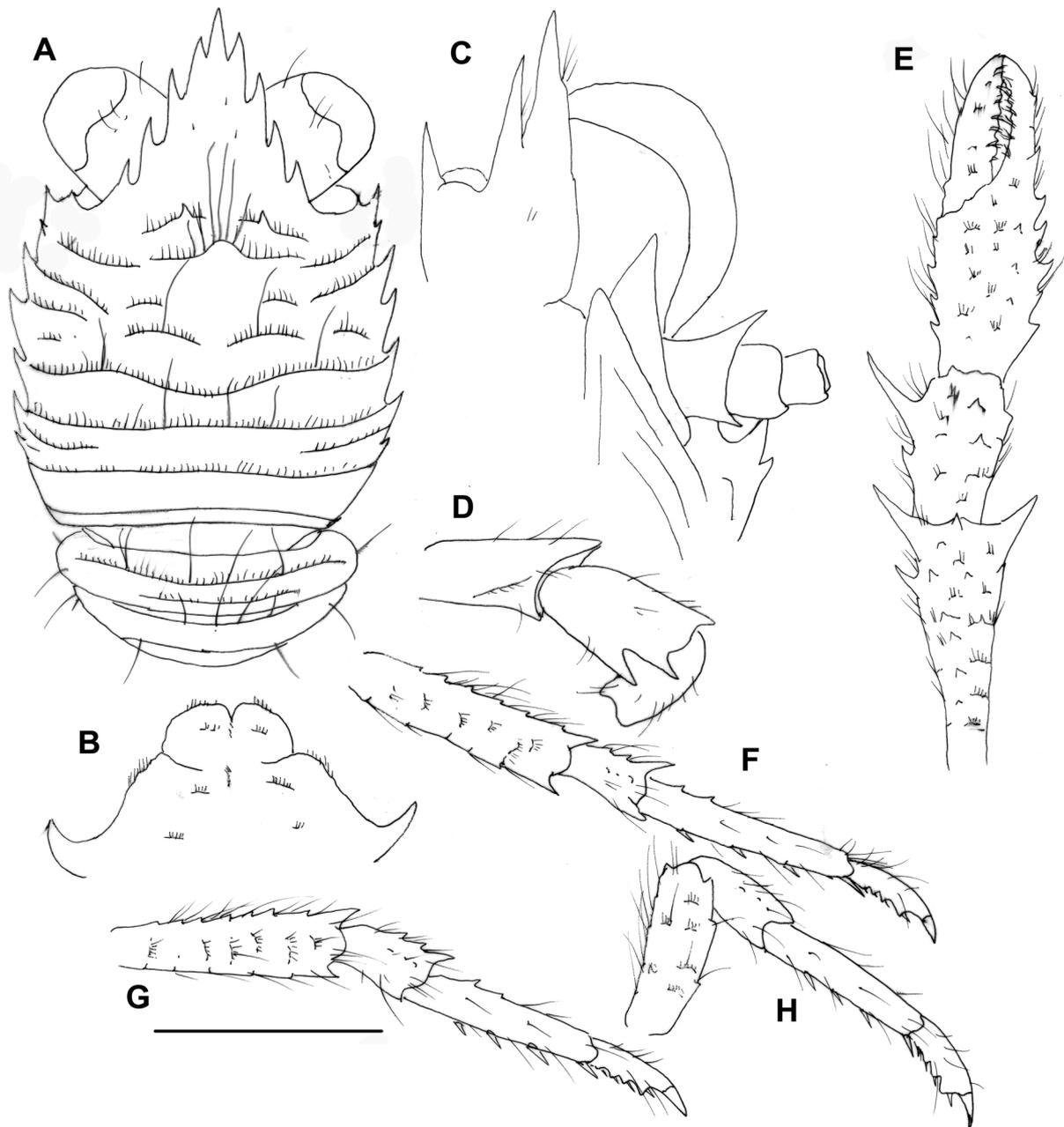


FIGURE 34. *Galathea erythrina* n. sp., holotype, female, 1.3 mm, Western Australia (UF36824). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Remarks. *Galathea erythrina* is closely related to *G. anouchkae* n. sp. from New Caledonia, Chesterfield Islands, Vanuatu and Fiji. *G. erythrina* is easily distinguished from *G. anouchkae* by the shape of the anterior protogastric ridge. This ridge is medially convex in *G. erythrina*, instead of straight in the other species.

The species is also close to *G. ceti* n. sp. from Papua New Guinea and New Caledonia (see under Remarks of *G. ceti*).

No genetic data are available for *G. erythrina*.

Distribution. Red Sea, Gulf of Aqaba, Farasan Banks; 2–9 m.

***Galathea eucrante* n. sp.**

(Fig. 35)

Material examined. *Holotype*: Papua New Guinea. Alotau, 13 m: M 2.8 mm (UF2388).

Etymology. The name *Eucrante*, success, refers to one of the Nereids of Greek mythology. The name is considered as a substantive in apposition.

Description. *Carapace*: As long as broad; transverse ridges with dense short setae, without long plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with 6 transverse ridges: 1 epigastric ridge medially uninterrupted, with 2 median spines; 2 protogastric ridges, anterior ridge uninterrupted and medially convex, 1 parahepatic spine on left side only, posterior ridge median, short and convex, with a few long and thick setae; 1 mesogastric ridge uninterrupted, not extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, anterior one uninterrupted, extending to anterior branchial ridges, posterior ridge short. Hepatic region with 1 spine on each side. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 5 transverse ridges, 3 ridges uninterrupted. Lateral margins well convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at level of lateral limit of orbit; second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, with minute accompanying spine ventral to between first and second; 2 spines on anterior branchial region, last small, and 3 spines on posterior branchial margin, last small. Small spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum twice as long as broad, length 0.6 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin bluntly angular.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–5 each with 3 or 4 transverse ridges on tergite, 2 uninterrupted; somite 6 with 2 interrupted ridges. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 2 spines; well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine obsolescent. Ultimate article with tuft of long setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching distal margin of article 2. Article 2 with 2 well-developed distal spines, lateral spine longer than mesial and reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; extensor margin ending in acute angle; crista dentata with 22 denticles. Merus shorter than ischium; flexor margin with 3 spines, decreasing in size distally; extensor margin with distal spine. Carpus unarmed.

P1: 3.1 times carapace length, covered with finely setiferous scales, with numerous long setae. Merus 1.3 times length of carapace, 2.1 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.8 length of palm, twice longer than broad; dorsal surface with some small spines; mesial margin with 4 spines. Palm 1.8 times longer than broad, lateral and mesial margins subparallel; a few small spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side. Fingers 0.8 times palm length, each finger distally with two rows of teeth, spooned; fingers each with some small proximal spines.

P2 and *4* (*P3* missing): moderately slender, with setose striae and numerous long plumose setae. *P2* 1.8 times carapace length. Meri successively shorter posteriorly; *P2* merus 0.7 carapace length, 4.4 times as long as broad, 1.5 times longer than *P2* propodus; *P4* merus 3.0 times as long as broad, as long as *P4* propodus. Extensor margin of *P2* merus with row of 10 proximally diminishing spines, and 1 spine on *P4*; ventral margins distally ending in strong spine followed proximally by several tubercles or eminences; lateral sides unarmed. Carpi with 4 spines on extensor margin on *P2*, 1 distal spine on *P4*; lateral surface with 3–4 acute granules sub-parallel to extensor margin; flexor distal margin ending in acute angle. *P2* and *P4* propodi 4.7 times as long as broad; extensor margin with 2 or 3 proximal spines; flexor margin with 5 or 6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 5 or 6 proximally diminishing teeth, terminal one prominent.

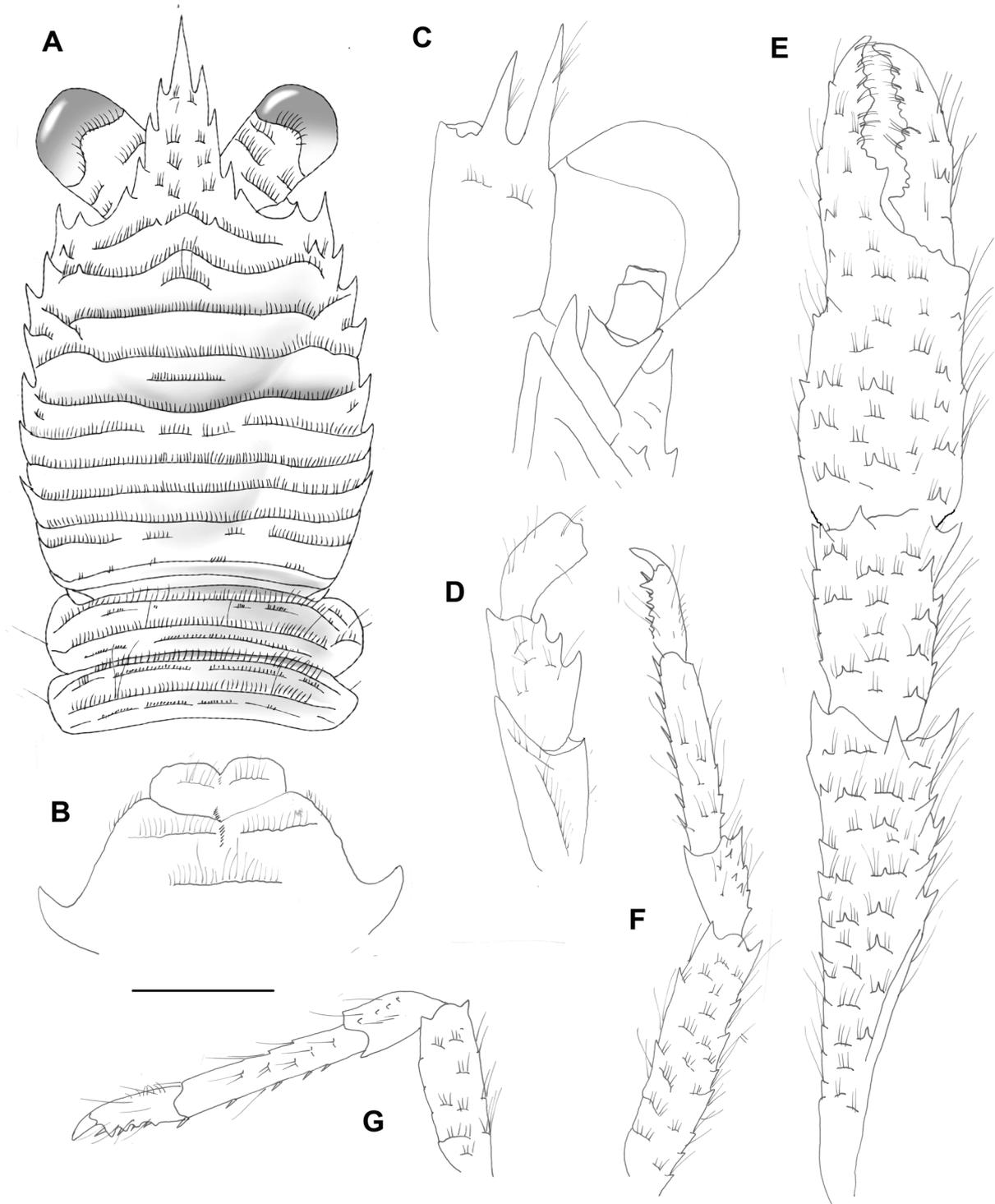


FIGURE 35. *Galathea eucrante* n. sp., holotype, male, 2.8 mm, Papua New Guinea (UF2388). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, left P2, lateral view; G, left P4, lateral view. Scale: A, E, F, G = 1 mm; B–D = 0.5 mm.

Epipods absent on pereopods.

Remarks. The new species is referred to the group of species characterized by the presence of one small spine on the carapace lateral margin with one small but distinct spine between the anterolateral spine and the anteriormost branchial marginal spine, two well-developed distal spines on the antennular basal article, and the

possession of two epigastric spines. It resembles *G. hispida* Baba, 2005 from Indonesia, Kei Islands, *G. barbata* n. sp. from New Caledonia and Chesterfield Islands and *G. punctata* n. sp. from Philippines, Indonesia (Makassar Strait), Solomon Islands, Vanuatu, and New Caledonia. However, *G. eucrante* is easily distinguished from the others by the presence of epipods on P1–3, in contrast the other species having epipod only on P1.

No genetic data for this species are available.

Distribution. Papua New Guinea; 13 m, in sponges.

***Galathea eulimene* n. sp.**

(Figs 36, 116G)

Galathea spinosorostris.—Laurie, 1926: 124 (Providence, Seychelles, Amirante, Saya de Malha Bank, Cargados Carajos, Chagos, 13–81 m).—Baba, 1990: 959 (Madagascar, 14–340 m).—Tirmizi & Javed, 1993: 59, fig. 26 (Andaman Sea and N Madagascar, 1.5–772 m).—Macpherson & Cleva, 2010: 62, color fig 3F (La Réunion, Mayotte, 10–30 m).

Galathea longimana.—Lewinsohn, 1969: 107, fig. 20 (Red Sea, 0–3 m).

Dubious identifications:

Galathea spinosorostris.—Miers, 1884: 560 (Marie-Louise des Neufs, and Providence Islands, 27–35 m).—Tirmizi, 1966: 181, figs 4B, 5 (Zanzibar, 73–165 m).—Lewinsohn, 1969: 110 (no record).—Lewinsohn, 1981: 184 (compilation).

Galathea algae.—Baba, 1977a: 248 (Obi latoe, Ternate, and Seychelles, 0–4 m).

Material examined. *Holotype*: Scattered Islands. Glorieuses, 11.5813°S, 47.3413°E, 13–14 m, 8 May 2009: M 3.2 mm (UF21038).

Paratypes: Red Sea. Sudan, Al Bahr al Ahmar. Sanganeb, SAN31, 70 m, 1 July 1991: 1 juv. 1.8 mm (SMF).

Red Sea. Gulf of Aqaba, Ferry Port, 5 m, 12 July 1995: 1 M 3.0 mm, 1 F 2.6 mm (SMF).—5–10 m, 22 July 1995: 1 M 3.4 mm, 1 ov. F 3.0 mm (SMF). Marine Science Station, AQ44, 5 m, 9 July 1995: 1 ov. F 2.6 mm (SMF).—AQ55, 13 m, 11 July 1995: 1 ov. F 2.7 mm, 2 F 2.5–2.6 mm (SMF).—8 m, 19 July 1995: 1 F 2.7 mm (SMF). Sudan, Al Bahr al Ahmar. Sanganeb, SAN17, 20 m, 29 March 1991: 1 F 2.0 mm (SMF).—SAN21, 20 m, 29 March 1991: 2 M 2.2–2.6 mm, 1 ov. F 3.0 mm (SMF).—SANGANEB, 0 m, 29 March 1991: 1 M 1.8 mm (SMF).—SAN33, 20 m, 30 March 1991: 2 M 2.6–3.0 mm, 1 ov. F 3.0 mm, 1 F 2.4 mm (SMF).—SAN51, 1 m, 30 March 1991: 1 M 2.7 mm, 1 F 2.8 mm (SMF). SAN52, 12 m, 1 April 1991: 3 M 2.6–3.0 mm, 1 ov. F 2.8 mm, 1 F 3.0 mm (SMF).—SAN42, 12 m, 2 April 1991: 3 M 2.2–2.5 mm, 1 ov. F 3.1 mm, 1 F 2.4 mm (SMF).—SAN34, 13 m, 3 April 1991: 1 F 2.4 mm (SMF).—SAN1, 15 m, 4 April 1991: 2 F 2.0–2.1 mm (SMF).—SAN25, 11 m, 8 April 1991: 3 M 2.0–2.5 mm, 1 ov. F 3.1 mm, 2 F 2.0–2.1 mm (SMF).—SAN26, 12 m, 9 April 1991: 2 M 2.5–3.2 mm (SMF).—SAN45, no depth, 15 April 1991: 4 M 2.4–2.8 mm, 3 ov. F 2.3–2.7 mm (SMF).—SAN170, 20 September 1992: 1 M 2.6 mm (SMF).—SAN114, 50 m, 25 September 1992: 6 M 1.8–2.4 mm, 1 ov. F 2.5 mm, 4 F 1.6–2.4 mm (SMF).—SAN128, 30 m, 26 September 1992: 1 M 1.8 mm (SMF).—SAN117, 14 m, 27 September 1992: 3 M 2.3–2.6 mm, 2 ov. F 2.2–2.6 mm, 2 F 2.0–2.2 mm (SMF).—SAN113, 30 m, 27 September 1992: 2 M 2.1–2.6 mm, 1 ov. F 2.5 mm, 1 F 2.0 mm (SMF).—SAN135, 10 m, 28 September 1992: 1 F 2.1 mm (SMF).—SAN111, 6 m, 29 September 1992: 1 M 1.8 mm (SMF).—SAN118, 12 m, 29 September 1992: 10 M 2.4–3.4 mm, 4 ov. F 3.1–3.5 mm, 2 F 2.5–2.6 mm (SMF).—SAN139, 30 m, 29 September 1992: 2 ov. F 2.3–2.4 mm (SMF).—SAN125, 14 m, 30 September 1992: 11 M 1.6–2.1 mm, 9 F 1.4–2.2 mm (SMF).—SAN144, 8 m, 1 October 1992: 3 M 2.1–2.6 mm, 2 F 2.0–2.3 mm (SMF).—SAN146, 6–10 m, 1 October 1992: 1 M 3.2 mm (SMF).—SAN105, 1 m, 2 October 1992: 5 M 2.1–2.5 mm, 1 ov. F 2.3 mm, 1 F 2.1 mm (SMF).—SAN110, 31 m, 2 October 1992: 2 M 2.0–2.2 mm, 1 ov. F 2.1 mm (SMF).—SAN124, 41 m, 2 October 1992: 1 ov. F 2.8 mm (SMF).—SAN106, 6–10 m, 3 October 1992: 2 M 3.0–3.2 mm, 2 ov. F 2.9–3.1 mm, 3 F 2.8–3.2 mm (SMF).—SAN47, no depth, 1991: 4 M 2.1–2.4 mm, 3 ov. F 2.5–2.8 mm, 4 F 2.0–2.3 mm (SMF). Port Sudan, Wingate Reef. SAN166, 5 m, 21 September 1992: 2 ov. F 2.3–2.5 mm (SMF).—SAN169, 4 m, 22 September 1992: 4 M 2.0–2.8 mm, 1 ov. F 2.4 mm, 1 F 2.2 mm (SMF). Red Sea. Djibouti. Gulf of Tadjoura, 11.5515°N, 42.7006°E, 1–8 m, 29 September 2012: 1 F 3.4 mm (UF32841). Red Sea. Saudi Arabia. Thuwai. Al-Fahal reef, 1–37 m, 8 October 2012: 1 F 2.1 mm (UF33083).—22.2741°N, 39.0512°E, 5 m, 10 October 2012: 2 M 1.7–2.2 mm (UF33063).—Shark reef, 22.4268°N, 38.9963°E, 18 March 2013: 1 M 1.9 mm (UF36029); 1 M 4.1 mm (UF36057); 1 ov. F 3.3 mm (UF37112); 2 M 1.7–2.8 mm (UF37130).—22.2227°N, 38.9677°E, exposed side of reef, 19 March 2013: 1 ov. F 2.8 mm (UF37135); 1 ov. F 2.5 mm (UF37136).—Abu Shosha Reef, 22.2044°N, 39.047°E, 7–8 m, 23 March 2013: 1 M 1.9 mm (UF37403). Farasan Banks, Pelican

Island, 18.6595°N, 40.827°E, 1–2 m, 5 March 2013: 1 ov. F 2.0 mm (UF36540); 1 M 2.2 mm (UF36551).—Farasan Banks, Dolphen Lagoon, 19.0053°N, 40.1482°E, 1–7 m, 4 March 2013: 1 ov. F 2.4 mm (UF36589); 1 ov. F 2.3 mm (UF36604). Shib Radib, 18.0731°N, 40.8859°E, 7–9 m, 8 March 2013: 1 F 3.3 mm (UF36735); 5 M 2.4–3.2 mm, 4 ov. F 2.6–3.9 mm, 1 F 1.8 mm (UF36821). Marca Is., 18.0731°N, 40.8859°E, 7–9 m, 8 March 2013: 1 M 2.7 mm (UF36820). Shi'b Ammar, 19.5707°N, 40.0088°E, 2–20 m, 3 March 2013: 1 M 3.1 mm (UF35961). Red Sea. Al Lith, 20°15.554'N, 39°56'E, 4–5 m, 8 March 2012: 4 M 2.3–3.2 mm, 1 ov. F 2.4 mm (SMF). Red Sea. Saudi Arabia, Al Wajh, 25.3919°N, 36.6839°N, 10–30 m, 25 September 2013: 1 ov. F 3.0 mm (UF36349), 2 M 2.7–3.6 mm, 1 ov. F 2.0 mm, 1 F 2.0 mm (UF36350), 1 ov. F 3.0 mm (UF36360). Jaz'air, 27.6384°N, 35.3062°E, 10 m, 27 September 2013: 1 M 2.7 mm, 1 ov. F 3.4 mm (UF36438). Gulf of Aqaba, 28.4039°N, 34.7407°E, 10 m, 29 September 2013: 1 ov. F 2.9 mm (UF38054), 1 ov. F 2.2 mm (UF38067).—28.4039°N, 34.7407°E, 20 m, 29 September 2013: 1 F 1.8 mm (UF38088).—28.4039°N, 34.7407°E, 20–25 m, 30 September 2013: 4 M 2.0–2.4 mm, 1 ov. F 2.2 mm, 3 F 1.8–2.0 mm (UF38101). Yanbu, 24.4427°N, 37.2477°E, 3–22 m, 4 October 2013: 1 ov. F 2.3 mm (UF38289).

Seychelles Islands. Aldabra Island. 42 m, 23 May 1954: 2 ov. F 2.5–2.7 mm (MNHN-Ga775, 771, MNHN-IU-2013-14277).

Comore Island. BENTHEDI, Stn 32R, 12°45.1'S, 45°17.9'E, 15–20 m, 25 March 1977: 3 M 1.7–2.1 mm, 3 F 1.6–2.0 mm (MNHN-IU-2013-13967). Mayotte Island, 12.7605°S, 45.068°E, 3 m, 30 May 2008: 1 ov. F 3.4 mm (UF13580).—12.8551°S, 45.2686°E, 6–9 m, 2 June 2008: 1 M 3.0 mm (UF13653).

Scattered Islands. Glorieuses, 11.5909°S, 47.2851°E, 7–14 m, 4 May 2009: 1 M 2.0 mm (UF21177); 1 ov. F 3.2 mm (UF21282).—11.5916°S, 47.2853°E, 17 m, 5 May 2009: 1 M 2.5 mm (UF21270).

La Reunion. Pierre au Prefet, 10–19 m, 21.0625°S, 55.2128°E, 15 August 2007: 1 M 3.0 mm (UF12841).

Maldives Islands. Dhign Reef, 3.0803°N, 72.9827°E, 5 m, 13 May 2014: 1 ov. F 2.9 mm (UF39661), 1 ov. F 2.2 mm (UF39662). Magoodhoo Island, 3.077°N, 72.969°E, 12 m, 14 May 2014: 2 F 2.5–3.2 mm (UF39677), 1 M 2.7 mm (UF39703).

Chagos Islands. Diego Garcia, 8–12 m, February 2012: 10 F 1.3–1.5 mm (OUMNH). Solomon, 8–12 m, February 2012: 4 M 1.8–3.5 mm, 3 ov F 2.4–4.2 mm, 15 F 1.4–2.5 mm (OUMNH). Peros Banhos, 8–12 m, February 2012: 15 M 1.3–3.7 mm, 5 ov F 1.5–2.7 mm, 7 F 1.3–2.8 mm (OUMNH). Great Chagos Bank, Brothers Island, 8–12 m, February 2012: 3 M 1.6–2.4 mm, 2 ov. F 3.3–3.6 mm, 4 F 1.2–2.3 mm (OUMNH). Great Chagos Bank, Eagle Island, 8–12 m, February 2012: 1 ov F 2.8 mm, 12 F 1.2–2.0 mm (OUMNH). Egmont Island, 8–12 m, February 2012: 6 M 1.5–3.6 mm, 8 F 1.3–1.5 mm (OUMNH).

Etymology. The name *Eulimene*, good haven, refers to one of the Nereids of Greek mythology. The name is considered as a substantive in apposition.

Description. *Carapace:* slightly broader than long; transverse ridges with dense very short setae, and a few scattered long plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with 5 transverse ridges: 1 epigastric ridge medially interrupted, with 2 median spines; 2 mesogastric ridges, anterior medially uninterrupted (interrupted in some paratypes), posterior ridge scale-like; 2 scale-like metagastric ridges. One or two small parahepatic spines, and one hepatic spine, near anterolateral spine, on each side. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 4 ridges, 2 of them uninterrupted. Lateral margins slightly convex, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second small, with spine ventral to between first and second spines; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. Small spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum 1.2 as long as broad, length 0.6 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 with 2 transverse uninterrupted ridges; somites 5 and 6 smooth; somite 6 with posteriomedian margin straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

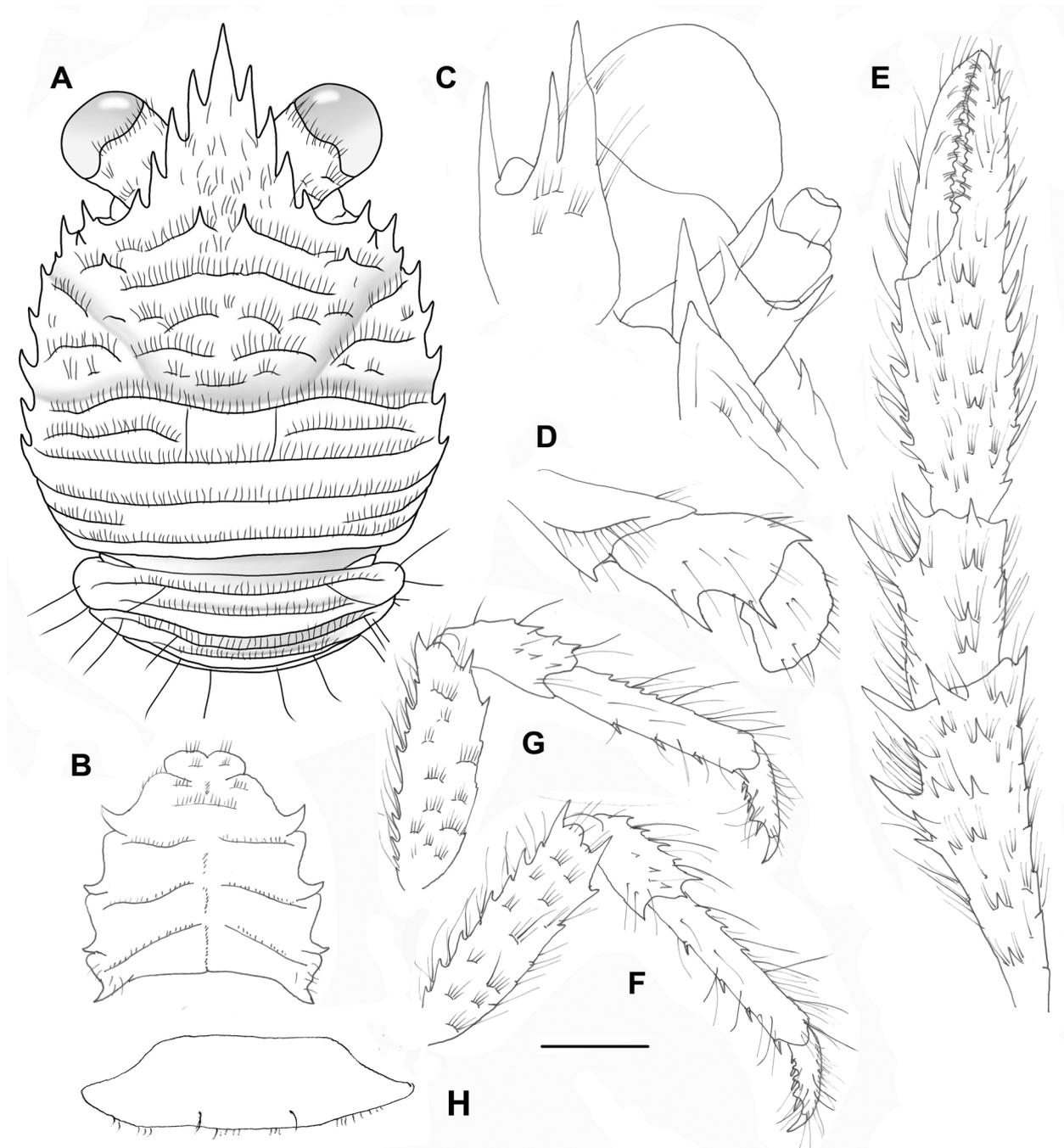


FIGURE 36. *Galathea eulimene* n. sp., holotype, male, 3.2 mm, Scattered Islands (UF21038). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, abdominal somite 6, dorsal view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Antenna: Article 1 with ventral distomesial spine exceeding distal margin of article 2. Article 2 with 2 subequal distal spines, reaching midlength of article 3. Article 3 with distomesial spine. Article 4 unarmed.

Mxp3: Ischium with small spine on flexor and extensor distal margins; crista dentata with 20 or 21 denticles. Merus as long as ischium; flexor margin with 2 subequal well-developed spines; extensor margin with distal spine and 0–2 small additional spines. Carpus with 0–3 acute granules or spines along dorsal extensor margin.

P1: 2.5–3.0 times carapace length, covered with finely setiferous scales, with scattered long simple setae. Merus as long as carapace, 1.7 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus as long as palm, twice longer than broad; dorsal and lateral surfaces with some spines; mesial margin with 5 spines (distal second strong). Palm twice longer than broad, lateral and mesial

margins subparallel; spines arranged roughly in dorsolateral and dorsomesial rows; dorsolateral row continuing along entire fixed finger; row of spines along dorsal side. Fingers as long as palm, each finger with two rows of teeth distally spooned; movable finger unarmed.

P2–4: moderately slender, with setose striae and sparse long plumose setae. *P2* 2.1 times carapace length. Meri successively shorter posteriorly (*P3* merus 0.9 length of *P3* merus, *P4* merus 0.8 length of *P2* merus); *P2* merus as long as carapace, 4.0 times as long as broad, 1.5 times longer than *P2* propodus; *P3* merus 3.2 times as long as broad, 1.3 times longer than *P3* propodus; *P4* merus 2.7 times as long as broad, as long as *P2* propodus. Extensor margin of *P2–3* meri with row of 8 or 9 proximally diminishing spines, 2 or 3 spines on *P4*; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several eminences; lateral sides unarmed. Carpi with 5 or 6 spines on extensor margin on *P2–3*, 0–3 spines on *P4*; lateral surface with 3 or 4 small spines or acute granules sub-parallel to extensor margin; flexor distal margin acute. *P2–4* propodi 5.0 times as long as broad; extensor margin with 3 or 4 proximal spines on *P2–4*; flexor margin with 4 slender movable spines (6 in *P2* in only one specimen). Dactyli distally ending in well-curved strong spine, length 0.5 that of propodi; flexor margin with 4 proximally diminishing teeth, terminal one prominent.

Epipods present only on *P1*.

Coloration. Translucent reddish brown or whitish overall. Numerous minute red spots on carapace and abdomen. Carapace sometimes, with one greenish spot on each side of mid-transverse ridge. Abdominal somites 2–4 each with some white spots. *P1* with reddish stripe on distal portion of merus, carpus, palm and proximal half of fingers; white stripe on median portion of palm and distal half of fingers; spines red. *P2–4* with reddish band on distal part of merus, carpus and median part of propodus; white band on distal part of fingers.

Remarks. The new species is very close to *G. algae* Baba, 1969. However, both species can be differentiated by the relative length of the articles of the walking legs. The *P2–4* propodi are 3–4 times longer than broad in *G. algae*, instead of five times longer than broad in *G. eulimene*.

Galathea eulimene also resembles *G. cephyra* n. sp. from New Caledonia and *G. spinosorostris* Dana, 1852 from Hawaii and French Polynesia (see also Remarks of these species).

Distribution. Red Sea, Seychelles Islands, Scattered Islands, Comore Island, La Reunion, Maldives Islands, Chagos Islands; 0–50 m, on *Pocillopora* spp., *Acropora* spp., *Stylophora* spp., rocks.

***Galathea eupompe* n.sp.**

(Fig. 37)

Material examined. *Holotype*: Australia. Queensland. Lizard Island, Washing Machine, 14.3902°S, 145.2737°E, 10–12 m, 12 February 2009: M 3.5 mm (QM W29207).

Paratypes: Australia. Queensland. Lizard Island, Washing Machine, 14.3902°S, 145.2737°E, 10–12 m, 12 February 2009: 1 ov. F 3.5 mm (UF16837), 1 M 3.0 mm (UF16842).

Australia. Queensland, Lizard Island, 1 M 2.4 mm, 1 ov. F 3.3 mm (UF16914).

Etymology. The name *Eupompe*, good voyage, refers to one of the Nereids of Greek mythology. The name is considered as a substantive in apposition.

Description. *Carapace*: As long as broad; transverse ridges with dense short setae, without long plumose setae; cervical groove slightly distinct, laterally bifurcated. Gastric region with 7 or 8 transverse ridges: 1 epigastric ridge with 2 spines, medially interrupted; 2 protogastric ridges, anterior uninterrupted, convex medially, with 1 parahepatic spine on each side, posterior ridge moderately short, sometimes with a few long setae; 2 mesogastric ridges, anterior uninterrupted, not extending laterally to anteriormost of branchial marginal spines, posterior ridge interrupted; 2 metogastric ridges, anterior uninterrupted and continuing along anterior branchial region, posterior ridge moderately short; sometimes 1 additional short metogastric ridge. Hepatic region unarmed. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges. Lateral margins convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second, small, slightly mesial to carapace margin, at midlength between anterolateral spine and anteriormost spine of branchial margin, with spine ventral to between first and second; 2 spines on anterior branchial region, last small, and 3 spines on posterior branchial margin, last small. Small spine on lateral limit of orbit; infraorbital margin with strong

spine. Rostrum 1.5 as long as broad, length 0.6 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous short uniramous setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, with spine on anterior surface, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 each with 3 or 4 uninterrupted transverse ridges on tergite, and some short scattered scale-like ridges; somite 4 with 2 uninterrupted and 2 interrupted ridges; somite 5 with 2 uninterrupted ridges; somite 6 with 2 medially interrupted ridges, posteriormedian margin slightly convex. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine smaller than others. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 with strong distomesial spine exceeding distal margin of article 2. Article 2 with 2 well-developed subequal distal spines, nearly reaching end of article 3. Article 3 with small distomesial spine, sometimes absent. Article 4 unarmed.

Mxp3: Ischium with flexor margin ending in strong spine, extensor margin ending in acute angle; crista dentata with 23 or 24 denticles. Merus slightly shorter than ischium; flexor margin with 2 strong subequal spines; extensor margin with small distal spine. Carpus rugose along extensor margin.

P1: 2.8 times carapace length, with numerous setiferous scales, and a few scattered long setae. Merus as long as carapace, 1.7 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.9 times length of palm, 1.6 times as long as broad; dorsal surface with some small spines; mesial margin with 4 spines, distal second strongest. Palm 1.6 times longer than broad, lateral and mesial margins slightly convex; spines arranged roughly in dorsolateral and dorsomesial rows, and some small spines on dorsal side; dorsolateral row continuing along fixed finger. Fingers 0.8 times palm length, each finger distally with two rows of teeth, spooned.

P2–4: Moderately long and slender, with some setose striae and sparse long plumose setae. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus). P2 1.7 times carapace length. P2 merus 0.6 carapace length, 3.1 times as long as broad, 1.4 times longer than P2 propodus; P3 merus 3.0 times longer than broad, 1.3 times longer than P3 propodus, P4 merus 2.8 times longer than broad, 1.2 times longer than P4 propodus. Extensor margin of P2–3 meri with row of 10 proximally diminishing spines, 1 distal spine on P4; ventral margins distally ending in strong spine followed proximally by 0–1 spines or several eminences; lateral sides unarmed on P2–3, and with 3 or 4 spines on P4. Carpi with 4 spines on extensor margin on P2–3, distalmost smaller than distal second, and sometimes absent, 1 small distal spine on P4; lateral surface with some small spines or acute granules sub-parallel to extensor margin on P2–4; flexor distal margin ending in acute angle. P2–4 propodi 2.8–3.2 times as long as broad; extensor margin with 2 proximal small spines on P2–3, unarmed on P4; flexor margin with 4 or 5 slender movable spine. Dactyli distally ending in well-curved strong spine, length 0.6 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods present only on P1.

Remarks. *Galathea eupompe* n. sp. belongs to the group of species having 2 epigastric spines, one small spine between the anterolateral and anteriormost branchial marginal spines, non-scale-like gastric ridges, three well-developed distal spines on the antennular basal article, one facial spine on the pterygostomian flap, and epipods only on P1. The closest relatives are *G. corallicola* Haswell, 1882 from Australia, *G. coralliophilus* Baba & Oh, 1990 from the Gulf of Thailand, Singapore, South China Sea, and Taiwan and *G. orientalis* Stimpson, 1858 from Japan to Australia.

Galathea eupompe is easily differentiated from *G. coralliophilus* by the following features:

- The carapace dorsal surface has scattered feathered setae in *G. coralliophilus*, but such setae are absent in *G. eupompe*.
- The carapace has one scale-like median ridge behind the protogastric ridge in *G. coralliophilus*, which is absent in *G. eupompe*.

Galathea eupompe is distinguished from *G. corallicola* and *G. orientalis* by the presence of parahepatic spines, which are absent in *G. corallicola* and *G. orientalis*.

The genetic divergences with *G. orientalis* is 12.9%, (COI) (Tab. 1).

Distribution. Australia, Queensland (Lizard Island), 10–12 m.

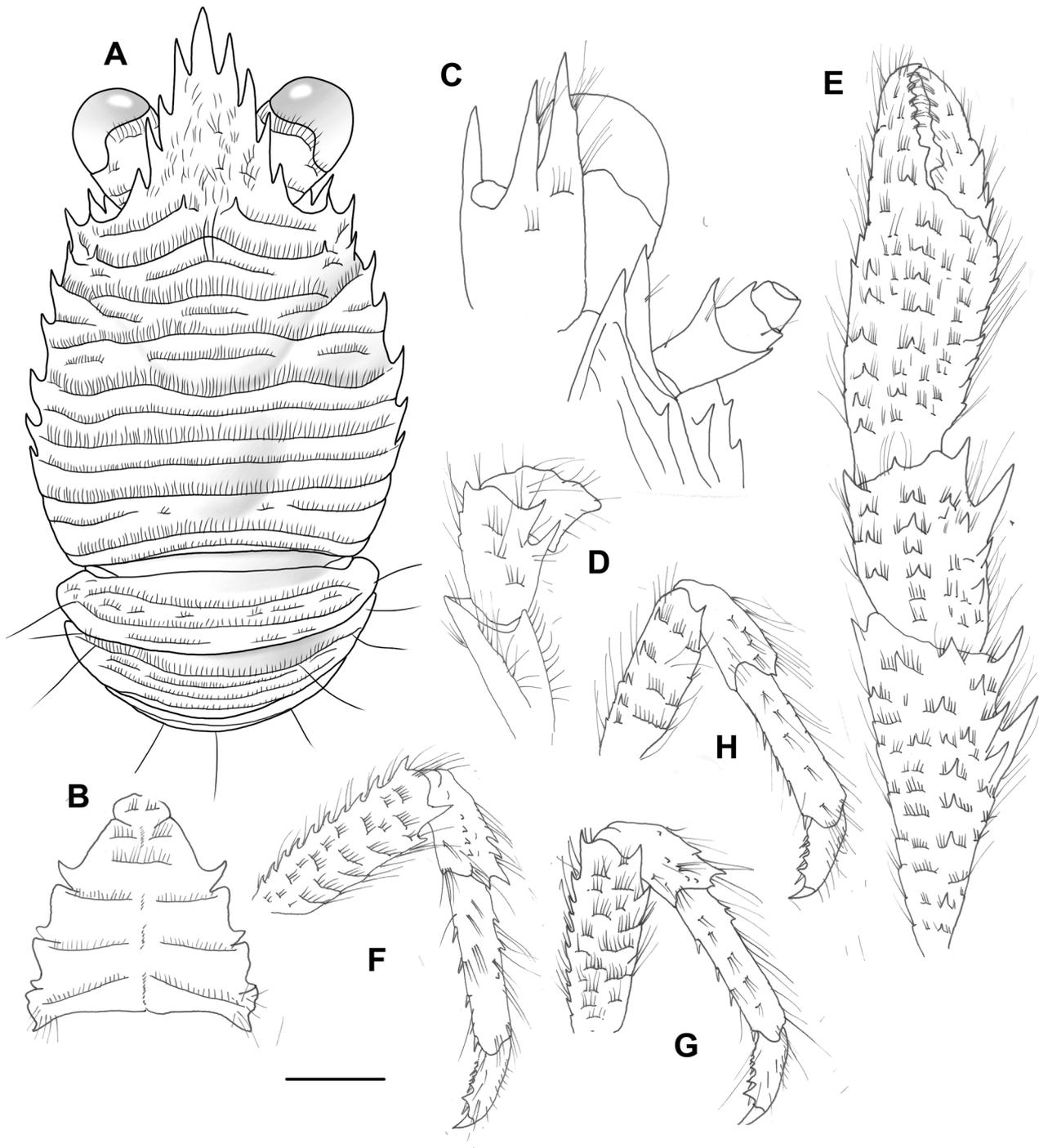


FIGURE 37. *Galathea eupompe* n. sp., holotype, male, 3.5 mm, Australia, Queensland (QM W29207). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

***Galathea formosa* De Man, 1902**

(Fig. 38)

Galathea formosa De Man, 1902: 717, pl. 23, figs 40, 40a–40f (Ternate, Indonesia).—Baba, 1977a: 249 (Obi major).—Baba, 1979b: 652 (Gorong Island, subtidal).—Baba *et al.*, 2008: 69 (compilation).

Material examined. *Holotype*: Indonesia, Moluccas, Ternate: ov. F 3.2 mm (SMF4559).

Indonesia. Gorong Island. Rumphius Expedition, 25 January 1975: 1 F 2.1–2.6 mm (MNHN-Ga1149, MNHN-IU-2013-14273).—27 January 1975: 1 M 2.6 mm (MNHN-Ga1150, MNHN-IU-2013-14274).

Taiwan. Houbihu, Pingtung County, July 2013: 1 ov. F 4.2 mm (NTOU).

Description. *Carapace*: As broad as long; transverse ridges with dense short setae, without long setae; cervical groove slightly distinct, laterally bifurcated. Gastric region with some transverse ridges: 1 epigastric ridge medially interrupted, unarmed; 1 protogastric ridge, interrupted (holotype) or uninterrupted, slightly convex medially, without parahepatic spines; 1 mesogastric ridge interrupted, not extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, anterior ridge medially interrupted, not continuing laterally to anteriorbranchial ridges, posterior ridge scale-like. Hepatic region with small spine on each side. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges before posterior ridge, 1 or 2 ridges uninterrupted. Lateral margins slightly convex medially, with 6 spines: 1 spine in front of and 5 spines behind anterior cervical groove; first anterolateral, well-developed, behind level of lateral limit of orbit, 1 spine ventral to between first and second spines; 2 spines on anterior branchial region, last small, and 3 spines on posterior branchial margin, last small. Front margin oblique, lateral limit of orbit with small spine; infraorbital margin with strong spine. Rostrum truncate, 0.8 times as long as broad, length 0.5 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.2 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous small scale-like setose ridges; lateral margin with 5 deeply incised teeth (4 in left margin of holotype).

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin ending in spine.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somite 2 with 2 uninterrupted ridges; somites 3–6 smooth, only with anterior ridge; posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.2 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine slightly smaller than others. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine barely reaching distal margin of article 2. Article 2 with 2 small distal spines, distolateral spine slightly longer than distomesial, reaching midlength of article 3. Article 3 unarmed or with small distolateral spine. Article 4 unarmed.

Mxp3: Ischium with flexor margin ending in small spine, extensor margin ending in acute point; crista dentata with 24 or 25 denticles. Merus slightly shorter than ischium; flexor margin with 2 small subequal spines; extensor margin unarmed. Carpus unarmed.

P1: 1.9 times carapace length, with numerous scales with numerous long setae, some of them iridescent. Merus 0.8 times carapace length, 1.9 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.7–0.9 length of palm, 1.8 times as long as broad; dorsal surface with some spines; mesial margin with row of strong spines. Palm 1.9 times as long as broad, lateral and mesial margins subparallel; spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers slightly shorter than palm, each finger distally with two rows of teeth, spooned; fixed finger with some spines along lateral margin; movable finger with 3 proximal spines.

P2–4: moderately long and slender, with some setose striae and sparse long setae. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus). P2 1.9 times carapace length. P2 merus 0.8 carapace length, 3.5 times as long as broad, 1.7–1.8 times longer than P2 propodus; P3 merus 3.0 times longer than broad, 1.4–1.5 times longer than P3 propodus, P4 merus 2.5–2.7 times longer than broad, 1.4 times longer than P4 propodus. Extensor margin of P2–3 meri with row of 7–9 proximally diminishing spines, 3 or 4 spines on P4; ventral margins distally ending in strong spine followed proximally by 0–1 spines or several eminences; lateral sides unarmed on P2–3, with 3 spines on P4. Carpi with 4 spines on extensor margin on P2–4; lateral surface with some spines or acute granules sub-parallel to extensor margin on P2–4; flexor distal margin ending in acute angle. P2–4 propodi 3.2 (P2), 4.0 (P3), 3.5 (P4) times as long as broad; extensor margin with 1–3 proximal spines on P2–4; flexor margin with 4 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods on P1.

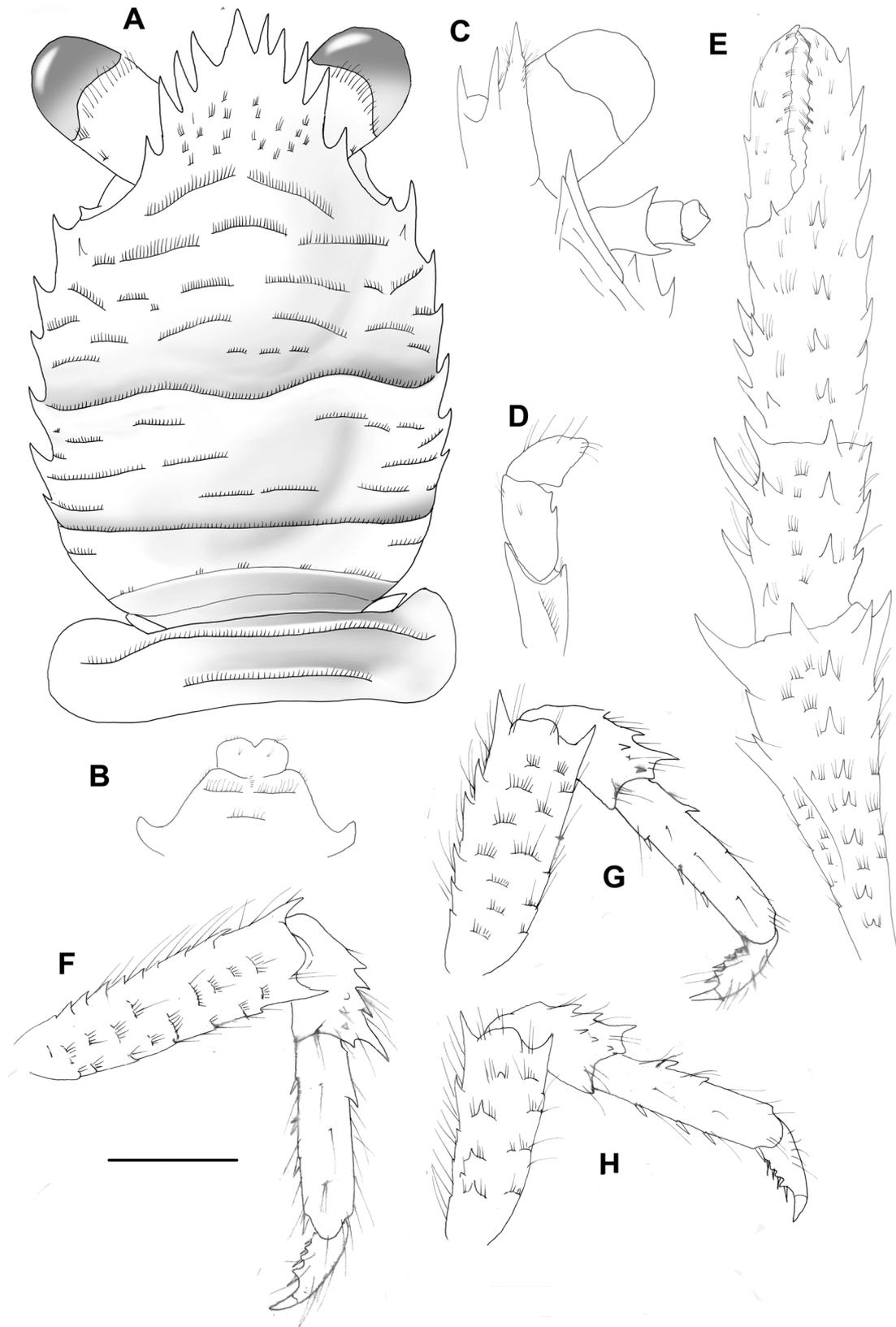


FIGURE 38. *Galathea formosa* De Man, 1902, A-E, holotype, ovigerous female, 3.2 mm, Indonesia, Moluccas (SMF4559); F-H, ovigerous female, 4.2 mm, Philippines (NTOU). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E-H = 1 mm; B-D = 0.5 mm.

Remarks. The specimens collected from Taiwan and Gorong Island (Indonesia) agree generally with the holotype. The protogastric ridge is interrupted in the holotype but uninterrupted in the other specimens. *Galathea formosa* appears closest to *G. maculiabdominalis* Baba, 1972 (see Remarks of the latter species). No genetic data are available for this species.

Distribution. Taiwan, Indonesia; on corals.

***Galathea furfurea* n. sp.**

(Fig. 39)

Material examined. *Holotype:* New Caledonia. Touho, 20°47'S, 165°13'E, 20 m, 18 September 1993: M 3.3 mm (MNHN-IU-2013-13318).

Paratypes: New Caledonia. Touho, 20°47'S, 165°13'E, 20 m, 18 September 1993: 3 M 2.2–3.4 mm, 3 ov. F 2.4–3.0 mm (MNHN-IU-2013-13320); 1 ov. F 2.4 mm (MNHN-IU-2013-13319). New Caledonia. Lifou Island, LIFOU, Stn 1452, 20°54.6'S, 167°02.1'E, 2–25 m, 22 November 2000: 1 F 2.3 mm (MNHN-IU-2013-9766).—Stn 1469, 20°54.2'S, 167°00.4'E, 70–130 m, 22–23 November 2000: 3 M 2.9–3.8 mm (MNHN-IU-2013-13317).

South China Sea. Macclesfield Bank, Stn 63, 15°37'2"N, 114°28'42"E, 63 m, 3 May 1893: 1 M 3.4 mm (NHMUK).

Etymology. From the Latin *furfur*, bran, scurf, in reference with the small scales on the carapace.

Description. *Carapace:* Slightly longer than broad; ridges with dense short setae, without long setae; cervical groove distinct, laterally bifurcated. Ridges on gastric, cardiac and branchial regions scale-like or in concentric arcs, with 4 epigastric spines, and 1 parahepatic spine on each side. Mid-transverse ridge interrupted, preceded by shallow cervical groove. Lateral margins slightly convex, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, behind level of lateral limit of orbit, second spine small, with spine ventral to between first and second spines; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. Small spine between lateral limit of orbit and anterolateral spine; infraorbital margin with strong spine. Rostrum 1.6 as long as broad, length 0.6 carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface concave medially, nearly horizontal in lateral view, with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somite 2 with 1 or 2 transverse uninterrupted ridges; somites 3–4 with anterior transverse ridge only; somites 5 and 6 smooth, posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine slightly smaller. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with distomesial spine reaching distal margin of article 2. Article 2 with distolateral spine slightly longer than distomesial, nearly reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with minute spine on flexor and extensor distal margins; crista dentata with 19–21 denticles. Merus shorter than ischium; flexor margin with 2 spines, proximal clearly longer than distal; extensor margin with small spine. Carpus unarmed.

P1: 2.9–3.0 times carapace length, covered with finely setiferous scales, with scattered long setae. Merus 0.9–1.1 times length of carapace, 1.2 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.8–0.9 length of palm, 1.8 times as long as broad; dorsal and lateral surfaces with some spines; mesial margin with some spines. Palm 1.5 times longer than broad, lateral and mesial margins subparallel; spines arranged roughly in dorsolateral and dorsomesial rows; dorsolateral spines continuing along proximal half of fixed finger. Fingers 0.7 length of palm, each finger with two rows of teeth distally spooned; movable finger unarmed.

P2–4: moderately slender, with setose striae and sparse long plumose setae. P2 1.9 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.9 length of P3 merus. P2 merus 0.7

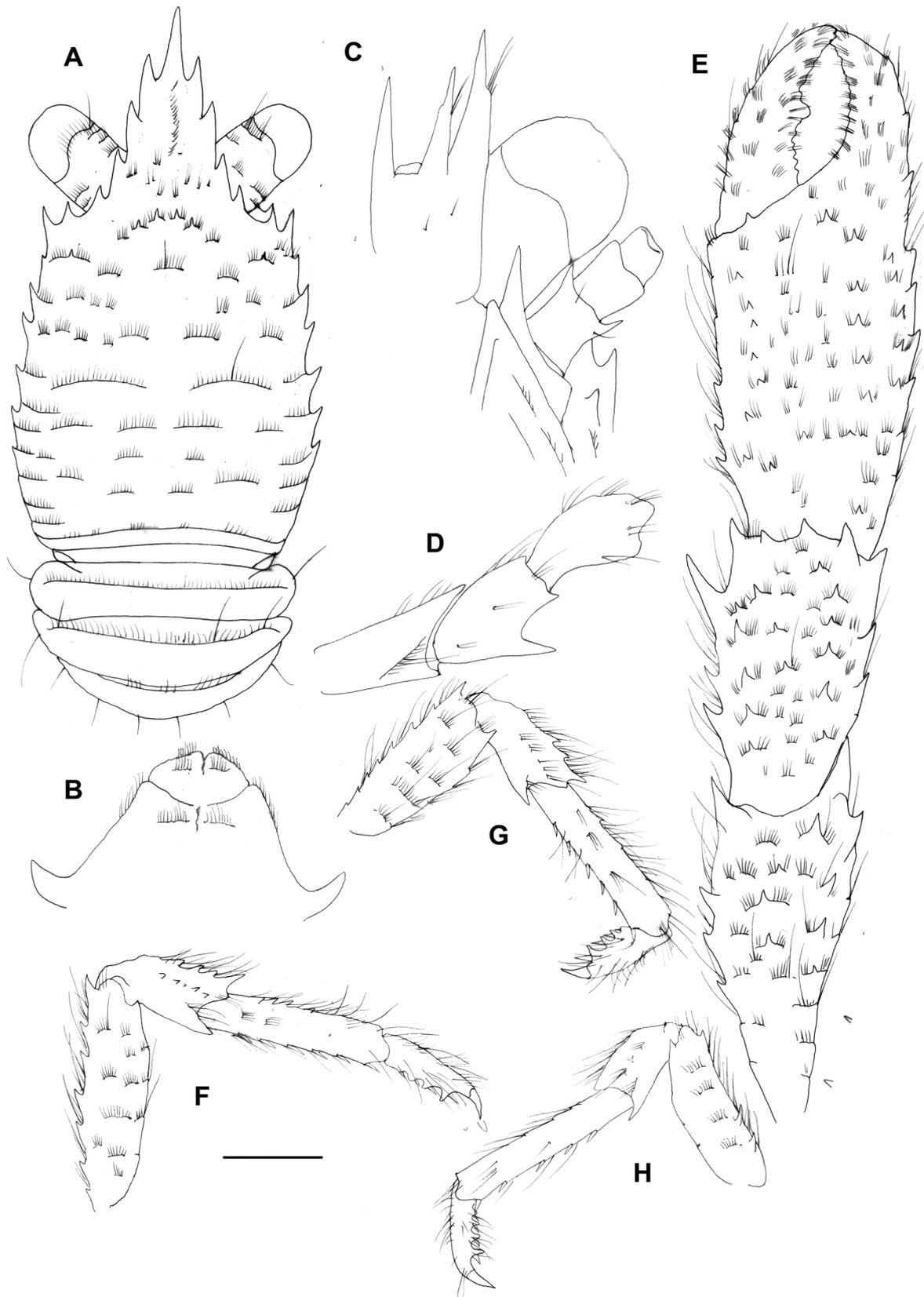


FIGURE 39. *Galathea furfurea* n. sp., holotype, male, 3.3 mm, New Caledonia (MNHN-IU-2013-13318). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, left P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

carapace length, 3.5 times as long as broad, 1.4 times longer than P2 propodus; P3 merus 2.9 times as long as broad, 1.2 times longer than P3 propodus; P4 merus 3.0 times as long as broad, 1.1 times longer than P4 propodus. Extensor margin of P2–3 meri with row of 7 or 8 proximally diminishing spines, 1 or 2 spines on P4; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several eminences; lateral sides unarmed on P2–3, with 2 spines on P4. Carpi with 3 or 4 spines on extensor margin on P2–3, 0–1 spines on P4; lateral surface with 3–5 spines or granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 4.0–5.0 times as long as broad; extensor margin with 0–4 proximal spines on P2–4; flexor margin with 5 or 6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 4 proximally diminishing teeth, terminal one prominent.

Epipods present on P1.

Remarks. The new species resembles *G. submagnifica* Laurie, 1926 from the southwestern Indian Ocean and *G. waïora* n. sp. from French Polynesia (see Remarks for these species).

Distribution. New Caledonia, Macclesfield Bank, 2–130 m.

***Galathea galene* n. sp.**

(Figs 40, 116H)

Material examined. *Holotype*: Vanuatu. SANTO, Stn AT69, 15°40.4'S, 167°17.3'E, 207–229 m, 5 October 2006: M 4.0 mm (MNHN-IU-2013-13963).

Paratypes: Vanuatu. SANTO, Stn AT69, 15°40.4'S, 167°17.3'E, 207–229 m, 5 October 2006: 1 ov. F 5.4 mm (MNHN-IU-2013-9878).

Etymology. The name *Galene*, calm, refers to one of the Nereids of Greek mythology. The name is considered as a substantive in apposition.

Description. *Carapace*: As long as broad; transverse ridges with dense short setae, and numerous long plumose iridescent setae; cervical groove distinct, laterally bifurcated. Gastric region with 5 transverse ridges: 1 epigastric ridge medially interrupted, with 2 spines, followed by some short scale-like ridges; 1 protogastric ridge medially interrupted, with 1 parahepatic spine on each side, and 1 median scale-like ridge with some long plumose setae; 1 mesogastric ridge, interrupted, not extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, anterior ridge uninterrupted, not fused with anterior branchial ridges, posterior ridge short. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 5 transverse ridges, 2 ridges uninterrupted. Lateral margins slightly convex medially, with 5 spines: 1 spine in front of and 4 spines behind anterior cervical groove; first, anterolateral, well-developed, behind level of lateral limit of orbit, no spine ventral to between first and anterior branch of cervical groove; 2 spines on anterior branchial region, and 2 spines on posterior branchial margin. Minute spine on limit of orbit; infraorbital margin with well-developed spine. Rostrum twice longer than broad, length 0.6 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface flatish, with numerous small setose scales; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 with 2 uninterrupted transverse ridges on tergite; somites 5–6 each with 2 interrupted ridges, posteriormedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad; maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger than others. Ultimate article with a few fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with strong distomesial spine not reaching distal margin of article 2. Article 2 with 2 distal spines, distolateral spine longer than distomesial and exceeding midlength of article 3. Article 3 with distomesial spine; article 4 unarmed.

Mxp3: Ischium with flexor margins ending in small spine, extensor margin ending in spine; crista dentata with 23 or 24 denticles. Merus slightly longer than ischium; flexor margin with 3 spines, proximal spine clearly longer than others; extensor margin with distal spine. Carpus unarmed, extensor margin with rugosities.

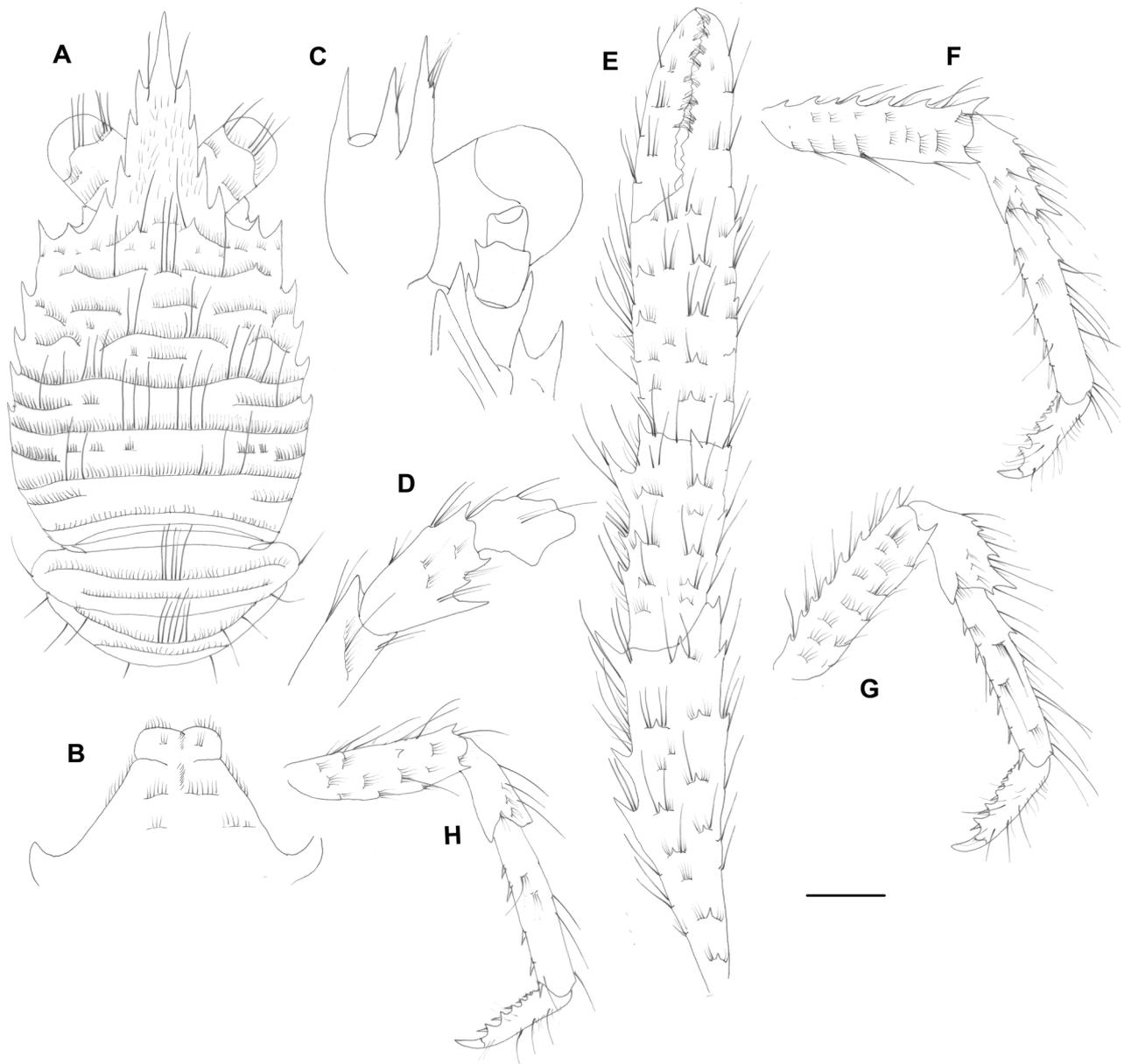


FIGURE 40. *Galathea galene* n. sp., holotype, male, 4.4 mm, Vanuatu (MNHN-IU-2013-13963). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

P1: 3 times carapace length, with setose scales and numerous long iridescent and plumose setae. Merus 1.2 times carapace length, 1.5 times as long as carpus, with spines arranged roughly in rows, dorsomesial and ventromesial spines stronger, distal spines prominent. Carpus as long as palm, 2.3 times as long as broad; dorsal surface with some small spines arranged roughly in rows; mesial margin with some well-developed spines. Palm twice longer than broad, lateral and mesial margins subparallel, with some dorsal, mesial and lateral spines. Fingers as long as palm, each finger distally with two rows of teeth, spooned; fingers unarmed.

P2–4: moderately long and slender, with some setose striae and numerous long plumose and non-plumose setae, some of them iridescent. P2 twice carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P3 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7 carapace length, 4.0 times as long as broad, as long as P2 propodus. P3 merus 3.8 times as long as broad, 1.2 times longer than P3 propodus. P4 merus 3.2 times as long as broad, as long as P4 propodus. Extensor margin with row of 7 or 8 proximally diminishing spines on P2–3, 1 or 2 spines on P4; ventral margins distally ending in strong spine, lateral sides unarmed on P2–3, 1 or 2

small spines on P4; ventromesial margins unarmed. Carpi with 4 or 5 spines on extensor margin on P2–3, 1 on P4; lateral surface with a few granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 4.6–5.2 times as long as broad; extensor margin unarmed; flexor margin with 5 or 6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 6 or 7 proximally diminishing teeth, terminal one prominent; each tooth with movable spines.

Epipods absent on pereopods.

Coloration. Translucent light brown overall. Long setae on carapace and abdomen reddish, those on pereopods whitish.

Remarks. *Galathea galene* n. sp. is closest to *G. raventosae* Macpherson, 2012 from the Philippines to New Caledonia but the two species can be easily distinguished by the following characters:

- The rostrum is twice as long as broad in *G. galene*, whereas it is less than twice in *G. raventosae*.
- The flexor margin of the Mxp3 meri has three spines, instead of two in *G. raventosae*.
- The genetic divergences between *G. galene* and *G. raventosae* were 12.2% (16S rRNA) and 13.5% (COI) (Tab. 1).

Galathea galene is also similar to *G. balssi*, but easily differentiated from the latter by the following features:

- The branchial regions of the carapace have six to eight ridges in *G. balssi*, whereas there are only five ridges in *G. galene*.
- The flexor margin of Mxp3 merus has a long median spine in *G. balssi*, whereas this spine is clearly smaller in *G. galene*.
- The genetic divergences between *G. galene* and *G. balssi* were 11.9% (16S rRNA) and 8.6% (COI) (Tab. 1).

Galathea galene is also close to *G. lingadua* n. sp. from Fiji (see Remarks of this species).

Distribution. Vanuatu, 207–229 m.

***Galathea ganindo* n. sp.**

(Fig. 41)

Material examined. *Holotype:* Solomon Islands. SALOMON 1, Stn CP1801, 9°25.0'S, 160°25.9'E, 264–273 m, 1 October 2001: M 5.1 mm (MNHN-IU-2013-8452).

Paratypes: Philippines. MUSORSTOM 1, Stn 72, 14°11.8'N, 120°28.7'E, 122–127 m, 28 March 1976: 1 ov. F 3.3 mm (MNHN-IU-2013-8458).—Stn 73, 14°15'N, 120°31'E, 70–76 m, 28 March 1976: 1 ov. F 3.4 mm (MNHN-IU-2013-13941).

Indonesia. Makassar Strait. CORINDON, Stn CH273, 1°56'S, 119°16'E, 180–220 m, 6 November 1980: 1 ov. F 5.5 mm (MNHN-IU-2013-8451).

Solomon Islands. SALOMON 1, Stn CP1801, 9°25.0'S, 160°25.9'E, 264–273 m, 1 October 2001: 1 ov. F 5.9 mm (MNHN-IU-2013-8455). SALOMON 2, Stn CP2284, 8°37.29'S, 157°21.94'E, 195–197 m, 6 November 2004: 1 M 4.3 mm (MNHN-IU-2013-8456).—Stn CP2286, 8°39.54'S, 157°23.18'E, 248–253 m, 8 November 2004: 1 M 4.7 mm, 2 ov. F 3.8–4.0 mm (MNHN-IU-2013-8457).

New Caledonia. BATHUS 1, Stn D700, 20°48'S, 165°19'E, 160–222 m, 14 March 1993: 1 M 3.9 mm (MNHN-IU-2013-8454).—Stn DW674, 20°48'S, 165°19'E, 105–110 m, 14 March 1993: 1 ov. F 3.8 mm (MNHN-IU-2013-8453).

Etymology. *Ganindo* was a warrior of the Solomon Islands, now an oracle-giving deity. The name is considered as a substantive in apposition.

Description. *Carapace:* 0.9 times as long as broad; transverse ridges with dense short setae, without long plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with 8 transverse ridges: 2 epigastric ridges, anterior one medially interrupted, with 2 spines (one broken in the holotype), posterior ridge medially interrupted; 2 protogastric ridges, anterior ridge uninterrupted not extending laterally to second lateral spines, convex medially, posterior ridge uninterrupted; 1 mesogastric ridge not extending laterally to anteriormost of

branchial marginal spines; 3 metagastric ridges not continuing laterally to anterior branchial ridges. One small hepatic spine near second marginal spine, sometimes absent. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 7 transverse ridges, 2 of them uninterrupted. Lateral margins well convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, behind level of lateral limit of orbit; second, very small, at midlength between anterolateral spine and anterior cervical groove, without accompanying spine ventral to between first and second; 2 spines on anterior branchial region, last small, and 3 spines on posterior branchial margin, last small. Small spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum elongate, 2.5 as long as broad, length 0.7 postorbital carapace length and breadth 0.2 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous setae and longitudinal groove along proximal 2/3; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin bluntly angular.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–5 each with 4 or 5 uninterrupted transverse ridges on tergite; somite 6 each with 2 uninterrupted or interrupted ridges, and some additional scale-like ridges. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 2 spines; well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine obsolescent. Ultimate article with a few short fine setae, not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine exceeding distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine slightly longer than distomesial and reaching midlength of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; extensor margin ending in acute angle; crista dentata with 22 or 23 denticles. Merus shorter than ischium; flexor margin with 1 strong spine at midlength, unarmed or with minute spine distally; extensor margin with distal spine, sometimes one median small spine. Carpus unarmed.

P1: 3.8 times carapace length, covered with finely setiferous scales, with scattered long setae. Merus 1.6 times length of carapace, 2.5 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.7 length of palm, 2.2 times as long as broad; dorsal surface with some small spines; mesial margin with 2 or 3 well-developed spines. Palm 2.7 times longer than broad, lateral and mesial margins subparallel; a few small spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side. Fingers 0.8 length of palm, unarmed; each finger distally with two rows of teeth, spooned.

P2–4: moderately slender, with setose striae and numerous long plumose setae. P2 2.2 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.8 carapace length, 4.7 times as long as broad, 1.3 times longer than P2 propodus; P3 merus 4.2 times longer than broad, 1.1 times longer than P3 propodus; P4 merus 3.4 times as long as broad, 1.0–1.1 length of P4 propodus. Extensor margin of P2–3 meri with row of 8 or 9 proximally diminishing spines, and 4 or 5 spines on P4; ventral margins distally ending in strong spine followed proximally by several tubercles or eminences; lateral sides unarmed. Carpi with 5–7 spines on extensor margin on P2–4, distalmost smaller than distal second; lateral surface with 3 or 4 acute granules sub-parallel to extensor margin on P2–4; flexor distal margin ending in acute angle. P2–4 propodi 6.0 (P2), 6.5 (P3), 5.0 (P4) times as long as broad; extensor margin unarmed; flexor margin with 6 or 7 slender movable spines on P2–4. Dactyli distally ending in well-curved strong spine, length 0.5–0.6 that of propodi; flexor margin with 6 proximally diminishing teeth, terminal one prominent.

Epipods absent on pereopods.

Remarks. The new species belongs to the group of species having a rostrum extremely narrow and the basal antennular article with 2 well developed spines only. The most closely related species are *G. inconspicua* Henderson, 1885, *G. perone* n. sp., *G. raphidia* n. sp. (see Remarks of *G. inconspicua*).

Distribution. Philippines, Indonesia (Makassar Strait), Solomon Islands, New Caledonia; 70–273 m.

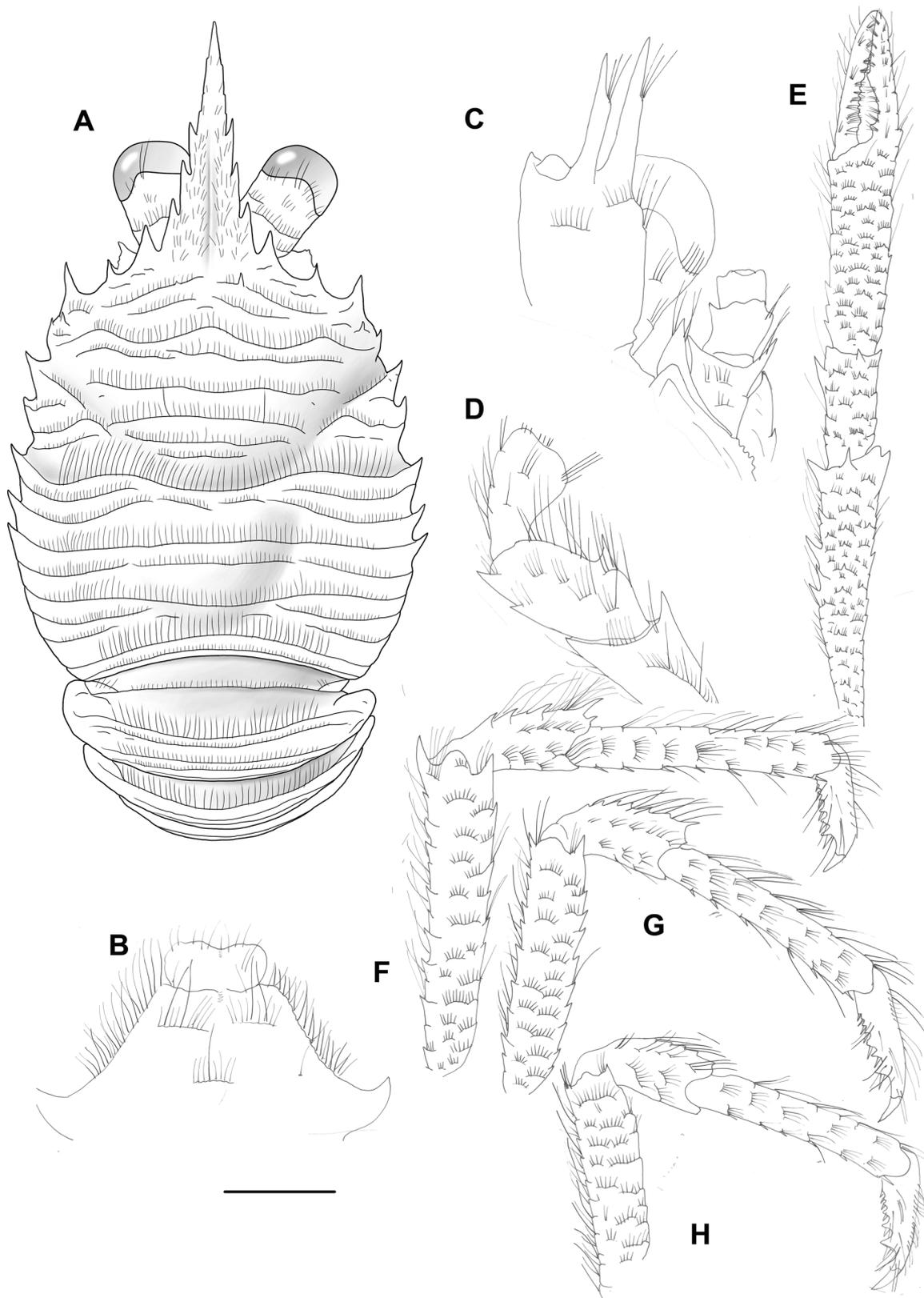


FIGURE 41. *Galathea ganindo* n. sp., holotype, male, 5.1 mm, Solomon Islands (MNHN-IU-2013-8452). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2.0 mm; B–D = 0.5 mm.

***Galathea genkai* Miyake & Baba, 1964**

Galathea genkai Miyake & Baba, 1964: 208, figs 3, 4 (coast of northern Kyushu, 10 m).—Lewinsohn, 1969: 120, fig. 23 (Red Sea, 20–35 m).—Haig, 1974: 447 (Western Australia).—Baba, 1988: 74 (Sibuyan Sea, Philippines, 68 m).—Davie, 2002: 61 (no record).—Baba *et al.*, 2008: 69 (compilation).—Baba *et al.*, 2009: 111, figs. 90–91 (Taiwan).—Poore *et al.*, 2011: 332, pl. 10G (color photo, Taiwan).

Material examined. South China Sea. Macclesfield Bank, Stn 24, 15°26'30"N, 114°14'E, 24–63 m, May 1892: 1 M 4.3 mm (NHMUK).

Madagascar. ATIMO VATAE, Stn CP3520, 24°51.2'S, 47°28.2'E, 80–86 m, 30 April 2010: 1 M 5.4 mm (MNHN-IU-2013-8433).—Stn DW3532, 24°39.4'S, 47°31.7'E, 86–87 m, 2 May 2010: 1 F 5.5 mm (MNHN-IU-2013-8432).—Stn DW3605, 24°54.5'S, 44°51.0'E, 56–57 m, 13 May 2010: 1 ov. F 5.5 mm (MNHN-IU-2013-8435).—Stn DW3606, 25°48.4'S, 44°51.1'E, 44–46 m, 13 May 2010: 1 ov. F 5.6 mm (MNHN-IU-2013-8431).

Remarks. The species is characterized by the scale-like ridges on the carapace and the absence of epigastric spines. The molecular analyses have shown the existence of a complex of species morphologically differentiated by the shape of the rostrum and the length of the walking legs. We have found three different species: *G. genkai* Miyake & Baba, 1964, *G. gladiola* n. sp. from Vanuatu, New Caledonia and Chesterfield Islands, and *G. machaera* n. sp. from the Solomon, Wallis and Futuna Islands (see Remarks of *G. machaera*).

Distribution. Japan, northern Kyushu, Philippines, Sibuyan Sea, Taiwan, South China Sea (Macclesfield Bank), Western Australia, Red Sea, Madagascar; 10–87 m.

***Galathea gladiola* n. sp.**

(Figs 42, 116I)

Galathea cf. *genkai*.—Poore *et al.*, 2011: 332, pl. 10H (color photo).

Material examined. *Holotype*: Vanuatu. SANTO, Stn DB20, 15°30.5'S, 167°01.4'E, 22–25 m, 15 September 2006: F 4.5 mm (MNHN-IU-2013-8436).

Paratypes: Vanuatu. SANTO, Stn FB43, 15°28.4'S, 167°14.9'E, 19 m, 30 September 2006: 1 F 1.8 mm (MNHN-IU-2013-8428).—Stn ZB6, 15°36.8'S, 167°01.3'E, 30 m, 28 September 2006: 1 F 6.0 mm (MNHN-IU-2013-8429).

New Caledonia. Chesterfield Islands. CHALCAL 84, Stn D1, 21°15.04'S, 162°15.41'E, 48 m, 13 July 1984: 1 F 2.8 mm (MNHN-IU-2013-8427).

Etymology. From the Latin, *gladiolus*, dim, in reference to the shape of the rostrum.

Description. *Carapace*: as long as broad; ridges with a few short setae, and some long simple setae; cervical groove distinct, laterally bifurcated. No complete, uninterrupted or scale-like ridges on anterior half of carapace. Epigastric spines absent; 2 or 3 small hepatic spines on each side. Anterior branchial region with distinct ridges. Mid-transverse ridge interrupted, preceded by shallow cervical groove, followed by 5 interrupted or scale-like transverse ridges, and 1 uninterrupted ridge anterior to posterior margin; shallow transverse groove before second ridge; 1 postcervical spine on each side. Lateral margins convex medially, with 8 spines: 3 spines in front of and 5 spines behind anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second and third, small, at midlength between anterolateral spine and anterior cervical groove, with 2 spines ventral to between first and second; 2 spines on anterior branchial region, last small, several additional spines ventral to marginal spines, and 3 spines on posterior branchial margin, last small. Small spine on lateral limit of orbit; infraorbital margin with 2 spines. Rostrum 2.7 times longer than broad, length 0.9 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with median longitudinal groove and numerous uniramous setae; lateral margins straight, with 4 deeply incised sharp teeth; ventral surface with longitudinal carina.

Pterygostomial flap rugose, with 1 spine on anterior portion, ridges with short setae, anterior margin acute.

Sternum: 0.8 times longer than broad, lateral extremities divergent posteriorly.

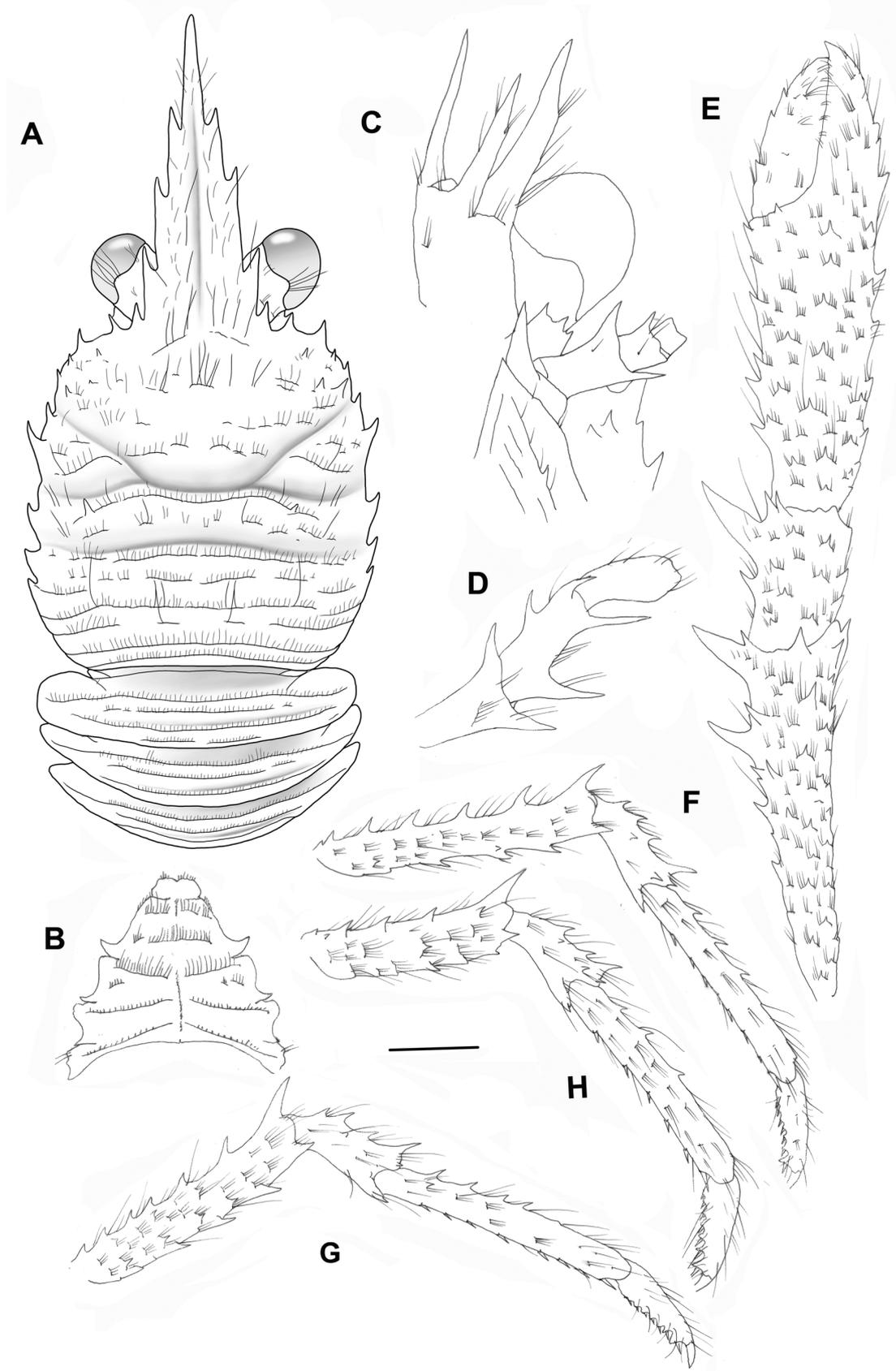


FIGURE 42. *Galathea gladiola* n. sp., holotype, female, 4.5 mm, Vanuatu (MNHN-IU-2013-8436). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Abdomen: Somites 2–4 each with 3 or 4 uninterrupted or interrupted transverse ridges on tergite; somites 5 and 6 each with 2 medially interrupted or uninterrupted ridges; posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distoventral spine slightly smaller than distomesial. Ultimate article with a few short fine setae, not in tuft, on distodorsal margin.

Antenna: Article 1 with strong distomesial spine not exceeding distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine larger than distomesial spine and nearly reaching end of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with flexor and extensor margins ending in strong spine; crista dentata with 11 strong denticles. Merus as long as ischium, with 2 strong flexor spines and 2 strong extensor spines. Carpus unarmed.

P1: 2.9 times carapace length, with numerous setiferous scales, and a few scattered long setae. Merus 1.1 times carapace length, 2.6 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.5 times length of palm, 1.4 times as long as broad; dorsal surface with some spines; mesial margin with 3 spines, median clearly largest than others. Palm 2.3 times longer than broad, lateral and mesial margins slightly convex; spines arranged roughly in dorsolateral and dorsomesial rows, and some small spines on dorsal side. Fingers 0.7 times palm length, each finger with one row of teeth, distally not spooned; fixed finger with lateral row of spines, movable finger with mesial row of spines.

P2–4: moderately long and slender, with some setose striae and sparse long plumose setae. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus). P2 2.4 times carapace length. P2 merus 0.9 carapace length, 6.5 times as long as broad, 1.3 times longer than P2 propodus; P3 merus 5.3 times longer than broad, 1.1 times longer than P3 propodus. Extensor margin of P2–3 meri with row of 7 proximally diminishing spines, 5 spines on P4; flexor margins with 5 proximally diminishing spines on P2–3 and 4 on P4; lateral sides unarmed on P2–3, with 1.2 small spines on P4. Carpi with 4 or 5 spines on extensor margin on P2–4; lateral surface with 1 or 2 spines sub-parallel to extensor margin on P2–4; flexor distal margin ending in small spine. P2–4 propodi equally broad on P2–4, 6.1 (P2), 7.1 (P3), and 6.3 (P4) times as long as broad; extensor margin 3–4 proximal spines; flexor margin with 7 or 8 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.5–0.6 that of propodi; flexor margin with 7 or 8 proximally diminishing teeth, terminal one prominent.

Epipods on P1–3.

Coloration. Base color translucent white. Rostrum whitish with median longitudinal dark brown stripe continued on to abdominal somite 6. Carapace with longitudinal rows of dark brown flecks along each lateral margin, continued on to abdominal somite 6. P1 whitish, with longitudinal dark brown stripe nearly reaching end of palm. P2–4 whitish, with a few brown spots.

Remarks. This new species is closely related to *G. genkai* from Japan to Australia, Red Sea and Madagascar, and to *G. machaera* n. sp. from Solomon, Wallis and Futuna Islands (see Remarks of *G. machaera*).

No genetic data for *G. gladiola* are available.

Distribution. Vanuatu, New Caledonia, Chesterfield Islands; 22–48 m.

***Galathea gnoma* n. sp.**

(Fig. 43)

Material examined. *Holotype:* Indonesia. Kei Islands. KARUBAR, Stn DW30, 05°39'S, 132°56'E, 111–118 m, 26 October 1991: M 2.7 mm (MNHN-IU-2013-13513).

Paratypes: Vanuatu. MUSORSTOM 8, Stn CP1131, 17°52.95'S, 168°33.11'E, 140–175 m, 29 September 1994: 1 M 3.5 mm (MNHN-IU-2013-13952); 1 ov. F 3.2 mm (MNHN-IU-2013-13953). SANTO, Stn EP36, 15°33.1–33.3'S, 167°12.4–12.7'E, 20–60 m, 15 October 2006: 2 M 2.4–2.6 mm, 2 F 2.4–2.5 mm (MNHN-IU-2013-13985).

Etymology. From the Latin *gnomus*, dwarf, in reference to the small size of the species.

Description. *Carapace:* Slightly longer than broad; transverse ridges with dense short setae, with scattered long non-iridescent setae; cervical groove distinct, laterally bifurcated. Gastric region with 5 transverse ridges: 1

epigastric ridge medially interrupted, with 2 spines; 2 protogastric ridges, anterior ridge medially interrupted (uninterrupted in paratypes), with posterior median arcuate scale-like ridge, and 1 small parahepatic spine on each side; 1 mesogastric ridge medially uninterrupted or medially interrupted, not continuing laterally with anteriormost branchial spines; 2 metogastric ridges, anterior ridge uninterrupted, not continuing laterally to anterior branchial ridges, posterior one short. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 4 ridges, 1 or 2 of them uninterrupted. Lateral margins slightly convex, with 6 spines: 2 spines in front of and 4 spines behind anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second very small, with spine ventral to between first and second spines; 2 spines on anterior branchial region, and 2 spines on posterior branchial margin. Lateral limit of orbit with small spine; infraorbital margin with strong spine. Rostrum narrowly triangular, 1.9–2.0 as long as broad, length 0.7 carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin bluntly produced.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 with 2 transverse uninterrupted ridges; somite 4 with anterior ridge only; somites 5–6 smooth; posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger than others. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching distal margin of article 2. Article 2 with distolateral spine longer than distomesial, reaching midlength of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with small spine on flexor distal margin, extensor margin ending in acute point; crista dentata with 19 denticles. Merus as long as ischium; flexor margin with 2 subequal well-developed spines; extensor margin with distinct spine. Carpus unarmed.

P1: 3.1 times carapace length, with numerous finely setiferous scales, and some scattered long setae; setae non-iridescent. Merus 1.2 times length of carapace, 1.9 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.8–1.0 length of palm, twice longer than broad; dorsal surfaces with a few spines; mesial margin with some well-developed spines. Palm twice longer than broad, lateral and mesial margins subparallel; spines arranged roughly in dorsolateral and dorsomesial rows. Fingers unarmed, as long as palm, each finger with two rows of teeth distally spooned.

P2–4: Moderately long and slender, with setose striae and long setae; setae non-iridescent. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.7 carapace length, 3.8 times as long as broad, 1.3 times longer than P2 propodus; P3 merus 2.8 times longer than broad, slightly longer than P3 propodus; P4 merus 2.7 times as long as broad, slightly longer than P4 propodus. Extensor margins of meri with row of 7 or 8 proximally diminishing spines on P2–3, 6 spines on P4; flexor margins distally ending in strong spine followed proximally by several tubercles or eminences; lateral sides unarmed. Carpi with 6 or 7 spines on extensor margin, distalmost smaller than distal second; lateral surface with 2 or 3 granules sub-parallel to extensor margin on P2–4; flexor margin bluntly produced. Propodi 3.5–4.0 times as long as broad; extensor margin with 3 or 4 small proximal spines on P2–4; flexor margin with 5 or 6 slender movable spines on P2–4. Dactyli distally ending in well-curved strong spine, length 0.7–0.8 that of propodi; flexor margin with 5 proximally diminishing teeth, terminal one prominent.

Epipods only on P1.

Remarks. *Galathea gnoma* n. sp. is most closely related to *G. denticulata* Macpherson & Cleva. 2010 from Mayotte Island. The two species can be distinguished by the following characters:

- The rostral lateral tooth are shallowly incised in *G. denticulata*, but deeply incised in *G. gnoma*.
- The carapace has one hepatic spine on each side but parahepatic spines are absent in *G. denticulata*, whereas the hepatic spines are absent but the parahepatic spines are present in *G. gnoma*.

The new species is also close to *G. parvula* (see under Remarks of this latter species).

No genetic data for *G. gnoma* are available.

Distribution. Indonesia (Kei Islands), Vanuatu; 20–175 m.

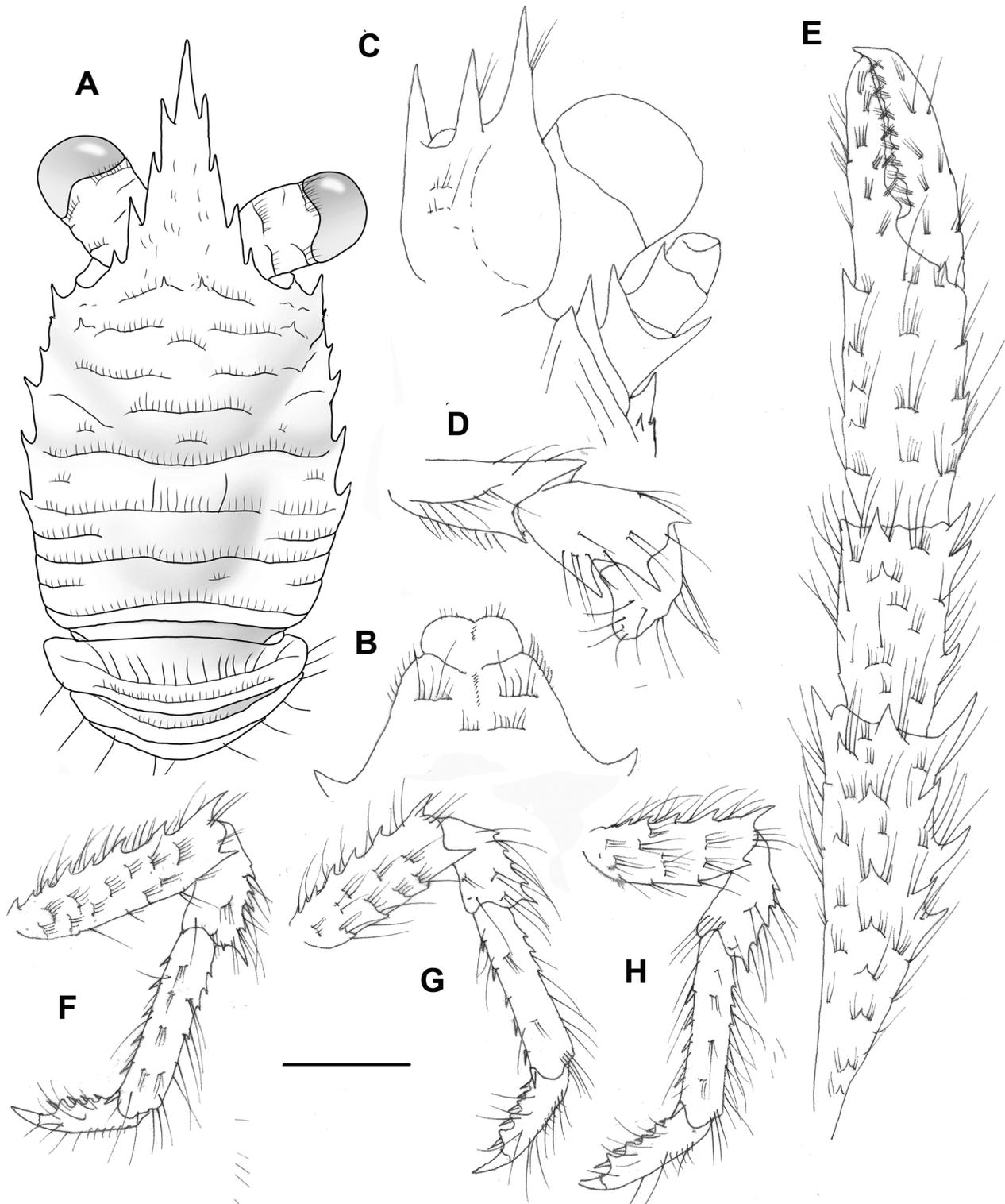


FIGURE 43. *Galathea gnoma* n. sp., holotype, male, 2.7 mm, Indonesia, Kei Islands (MNHN-IU-2013-13513). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

***Galathea gruis* n. sp.**

(Fig. 44)

Material examined. *Holotype*: Indonesia. Kei Islands. KARUBAR, Stn DW18, 05°18'S, 133°01'E, 205–212 m, 24 October 1991: M 3.6 mm (MNHN-IU-2013-8356).

Paratypes: Indonesia. Kei Islands. KARUBAR, Stn DW18, 05°18'S, 133°01'E, 205–212 m, 24 October 1991: 1 M 3.4 mm (MNHN-IU-2013-8357), 1 M 3.2 mm (MNHN-IU-2013-8364), 4 M 3.0–3.6 mm, 1 F 2.5 mm (MNHN-IU-2013-8358).

Philippines. MUSORSTOM 2, Stn CP41, 13°15'N, 122°46'E, 166–172 m, 25 November 1980: 1 M 3.3 mm (MNHN-IU-2013-8359), 1 M 4.1 mm (MNHN-IU-2013-8360), 1 M 3.0 mm (MNHN-IU-2013-8361), 1 M 2.8 mm (MNHN-IU-2013-8362), 3 M 3.0–4.1 mm (MNHN-IU-2013-8363).

Etymology. The name *Grus*, the crane, refers to one of the southern hemisphere constellations.

Description. *Carapace*: as long as broad; transverse ridges with dense short setae, without long iridescent setae; cervical groove distinct, laterally bifurcated. Gastric region with 6 transverse ridges: 1 epigastric ridge with 2 spines, medially interrupted, minute or absent in a few specimens; 2 protogastric ridges, anterior ridge medially interrupted, without parahepatic spines, posterior ridge short, arcuate; 1 mesogastric ridge medially interrupted, not extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, anterior ridge medially interrupted, not extending laterally to anterior branchial region, posterior ridge short. Hepatic region unarmed. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 transverse ridges. Lateral margins well convex medially, with 5 or 6 spines: 1 spine in front of and 4 or 5 spines behind anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, without spine ventral to between first and anterior end of cervical groove; 2 spines on anterior branchial region, last small, and 2 or 3 spines on posterior branchial margin, last small. Small spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum 1.7–1.9 as long as broad, length 0.6–0.7 postorbital carapace length and breadth 0.3–0.4 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous short uniramous setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 each with 2 uninterrupted transverse ridges on tergite; somites 4–6 smooth or with scattered scales. Telson incompletely subdivided. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7–0.8 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine smaller than others; small lateral spine at base of distodorsal spine. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with strong distomesial spine exceeding distal margin of article 3. Article 2 with 2 well-developed distal spines, distolateral spine larger than distomesial spine, nearly reaching end of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor margin ending in strong spine, extensor margin ending in acute angle; crista dentata with 20 or 21 denticles. Merus shorter than ischium; flexor margin with 2 spines, proximal clearly stronger than distal; extensor margin with minute distal spine.

P1: 2.4–3.5 times carapace length, with numerous setiferous scales, and a few scattered long setae. Merus 1.1–1.3 times carapace length, 1.7–1.9 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.8–1.1 times length of palm, 1.7–2.1 times as long as broad; dorsal surface with some small spines; mesial margin with 4 spines, distal second largest. Palm 1.7–1.9 times longer than broad, lateral and mesial margins slightly convex; spines arranged roughly in dorsolateral and dorsomesial rows, and some small spines on dorsal side. Fingers 0.9–1.1 times palm length, unarmed; each finger distally with two rows of teeth, spooned.

P2–4: moderately long and slender, with some setose striae and sparse long plumose setae. P2 1.7–2.0 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus). P2 merus 0.7 carapace length, 3.6–3.9 times as long as broad, 1.3–1.4 times longer than P2 propodus; P3 merus 3.2–3.5 times longer than broad, 1.3 times longer than P3 propodus; P4 merus 2.8–3.3 times as long as

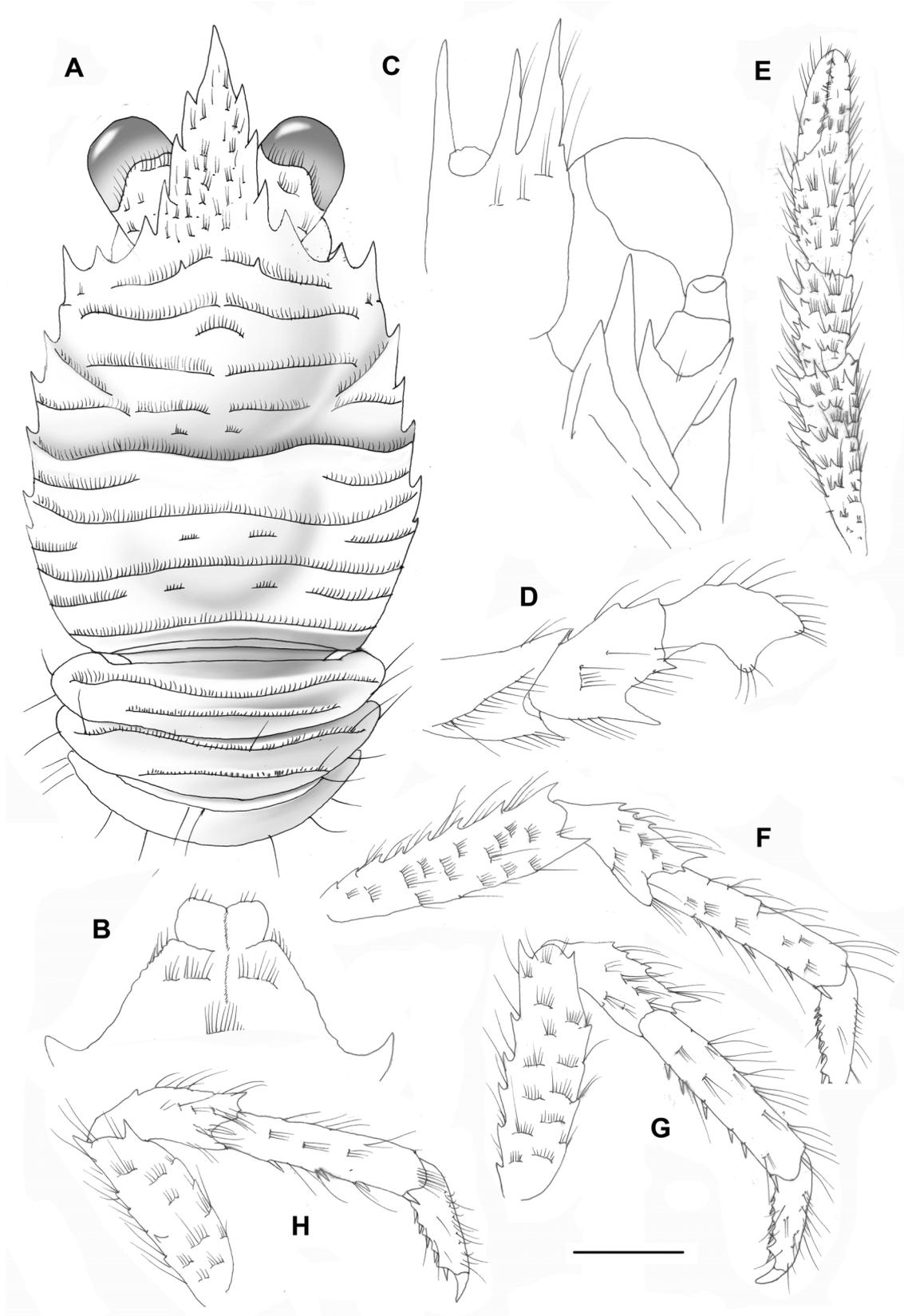


FIGURE 44. *Galathea gruis* n. sp., holotype, male, 3.6 mm, Indonesia, Kei Islands (MNHN-IU-2013-8356). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2.0 mm; B–D = 0.5 mm.

broad, 1.1 times longer than P4 propodus. Extensor margin of P2–3 meri with row of 6 or 7 proximally diminishing spines, 1 distal spine on P4; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several eminences; lateral sides unarmed on P2–4. Carpi with 4 or 5 spines on extensor margin on P2–4, distalmost smaller than distal second, sometimes absent; lateral surface with some acute granules sub-parallel to extensor margin on P2–4; flexor distal margin ending in acute angle. P2–4 propodi 3.6–4.5 times as long as broad; extensor margin unarmed; flexor margin with 4–6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.5–0.8 that of propodi; flexor margin with 4–6 proximally diminishing teeth, terminal one prominent.

Epipods absent on pereopods.

Remarks. *Galathea gruis* n. sp. belongs to the group of species having an interrupted transverse ridge between the anteriormost branchial marginal spines, the carapace with two epigastric spines, the lateral margin without a spine between the anterolateral spine and the anteriormost branchial marginal spine, and the absence of epipods on P1–3.

The new species is closely related to *G. anepipoda* Baba, 1990, from Madagascar (see above), but can be easily distinguished by the following characters:

- The palm is distinctly longer than the fingers in *G. anepipoda*, whereas the fingers are longer or as long as the palm in the new species.
- The distomesial spine of the antennal article 1 exceeds the antennal article 3 in *G. gruis*, rather than reaching the end of the antennal article 3 in *G. anepipoda*.

The genetic divergence between *G. gruis* and *G. anepipoda* are 10.1% (COI) (Tab. 1).

Distribution. Philippines, Indonesia (Kei Islands); 166–212 m.

***Galathea guttata* Osawa, 2004**

Galathea guttata Osawa, 2004: 93, fig. 3A, B (Ryukyu Islands and Izu Islands, 2–40 m).—Baba *et al.*, 2008: 69 (compilation).—Dong & Li, 2010: 11, fig. 6 (South China Sea, 1–54 m).

Galathea sp. B.—Kato & Okuno, 2001: 88, with unnumbered fig. (Izu Islands, 35 m).

Material examined. Papua New Guinea. PAPUA NIUGINI, Stn PB18, 05°06.3'S, 145°49.1'E, 26 m, 30 December 2012: 1 ov. F 3.6 mm (MNHN-IU-2013-8446).

New Caledonia. Surprises Atoll, Stn 462, 18°20'S, 162°59'E, 40 m, 1 March 1985: 1 M 5.3 mm (MNHN-IU-2013-8447).

Remarks. The specimens agree well with the description by Osawa (2004). The epipods are present only on P1 (New Caledonia) and on P1–2 (Papua New Guinea). No genetic data are available for this species.

Distribution. Japan, Ryukyu Islands and Izu Islands, South China Sea, Papua New Guinea, New Caledonia (Surprises Atoll); 1–54 m.

***Galathea halia* n. sp.**

(Figs 45, 117A, B)

?*Galathea whiteleggii*.—Dong & Li, 2010: 22, fig. 14 (South China Sea, 46–105 m) (not *G. whiteleggii* Grant & McCulloch, 1906).

Material examined. *Holotype*: Vanuatu. SANTO, Stn AT116, 15°32.9'S, 167°16.2'E, 153–196 m, 18 October 2006: ov. F 4.2 mm (MNHN-IU-2013-13515).

Paratypes: Philippines. MUSORSTOM 1, Stn CP18, 13°56'N, 120°16'E, 150–159 m, 21 March 1976: 1 M 2.2 mm (MNHN-IU-2013-13527).—Stn CP73, 14°15'N, 120°31'E, 70–76 m, 28 March 1976: 2 M 2.5–3.2 mm, 3 ov. F 2.5–2.7 mm (MNHN-IU-2013-13557). MUSORSTOM 2, Stn CP47, 13°33'N, 122°10'E, 81–84 m, 26 November 1980: 1 ov. F 3.1 mm (MNHN-IU-2013-13522); 2 M 2.3–2.4 mm, 2 ov. F 3.0–3.1 mm, 1 F 2.8 mm (MNHN-IU-2013-13523).

Indonesia. Makassar Strait. CORINDON, Stn DR258, 1°56.8'S, 119°17.3'E, 30 m, 6 November 1980: 1 M 3.9 mm (MNHN-IU-2013-13530).

Solomon Islands. SALOMON 2, Stn CP2296, 8°46.64'S, 157°30.62'E, 124–139 m, 7 November 2004: 1 M 3.4 mm (MNHN-IU-2013-13516).

Vanuatu. BOA 1, Stn CP2440, 15°07.14'S, 166°57.63'E, 100–215 m, 12 September 2005: 1 ov. F 4.1 mm (MNHN-IU-2013-13531). SANTO, Stn DB16Light, 15°35.5'S, 167°15.8'E, 32–40 m, 14 September 2006: 2 M 2.5–2.7 mm (MNHN-IU-2013-13532).—Stn AT4, 15°32.9–33.1'S, 167°13.3–13.7'E, 97–101 m, 15 September 2006: 1 ov. F 3.2 mm (MNHN-IU-2013-13517).—Stn AT14, 15°24'S, 167°13.5'E, 102–120 m, 19 September 2006: 1 M 4.2 mm (MNHN-IU-2013-13542).—Stn AT30, 15°36.7'S, 167°02.6'E, 83–120 m, 25 September 2006: 1 M 3.6 mm, 2 ov. F 3.4–4.0 mm (MNHN-IU-2013-13533).—Stn AT42, 15°37.5'S, 167°02.3'E, 112–148 m, 28 September 2006: 1 F 2.7 mm (MNHN-IU-2013-13518), 1 F 3.0 mm (MNHN-IU-2013-13519).—Stn AT44, 15°36.5'S, 167°02.7'E, 86–118 m, 29 September 2006: 1 ov. F 4.3 mm (MNHN-IU-2013-13528); 1 M 4.0 mm (MNHN-IU-2013-13545); 1 M 2.5 mm, 1 ov. F 3.1 mm (MNHN-IU-2013-13544).—Stn AT45, 15°37.5'S, 167°02.7'E, 148–188 m, 29 September 2006: 1 M 2.4 mm (MNHN-IU-2013-13536).—Stn AT50, 15°36.8'S, 167°14.1'E, 140–153 m, 30 September 2006: 1 M 4.1 mm (MNHN-IU-2013-13537).—Stn AT56, 15°36.1'S, 167°01.3'E, 98–105 m, 2 October 2006: 2 M 2.6–3.8 mm, 2 ov. F 2.8–3.4 mm (MNHN-IU-2013-13539).—Stn AT57, 15°36.3'S, 167°01.4'E, 106–126 m, 2 October 2006: 1 M 4.2 mm (MNHN-IU-2013-13529).—Stn FP50, 15°36.8'S, 167°08.7'E, 25 m, 4 October 2006: 3 M 2.5–3.1 mm, 3 F 2.2–2.6 mm (MNHN-IU-2013-13538). Stn ZR12, 15°36.7'S, 167°02.0'E, 2–30 m, 5 October 2006: 5 M 2.0–3.4 mm, 4 ov. F 2.5–3.1 mm (MNHN-IU-2013-13558).—Stn DB14, 15°30.9'S, 167°11'E, 10–14 m, 13 October 2006: 1 M 2.0 mm (MNHN-IU-2013-13543).—Stn EP32, 15°36.6'S, 167°02.0'E, 100 m, 14 October 2006: 4 M 2.5–3.6 mm, 1 ov. F 3.1 mm, 2 F 2.6–3.4 mm (MNHN-IU-2013-13534).—Stn EP35, 15°34.9–35.1'S, 167°13.9–14.1'E, 10–51 m, 15 October 2006: 3 M 2.4–2.6 mm, 1 F 2.0 mm (MNHN-IU-2013-13541).—Stn EP39, 15°33.6–33.7'S, 167°16.3–16.5'E, 75–80 m, 17 October 2006: 2 F 1.9–2.0 mm (MNHN-IU-2013-13535).—Stn NR64, 15°31.5'S, 167°14.1'E, 22 m, 18 October 2006: 1 M 2.1 mm (MNHN-IU-2013-13540).

New Caledonia, Touho, 20°47'S, 165°13'E, 52 m, 4 September 1993: 1 M 4.6 mm (MNHN-IU-2013-13521); 1 M 4.5 mm (MNHN-IU-2013-13520).—20°47'S, 165°13'E, 56 m, 7 September 1993: 1 ov. F 5.0 mm (MNHN-IU-2013-13526).—20°44'S, 165°14'E, no depth, 5 May 1993: 1 M 4.0 mm, 1 ov. F 3.6 mm (MNHN-IU-2013-13553). Lagon, Stn 745, 22°13.6'S, 167°02.8'E, 78–80 m, August 1986: 1 M 2.8 mm (MNHN-IU-2013-13551). Lagon East, Stn 652, 21°49.5'S, 166°35.2'E, 55–62 m, August 1986: 1 ov. F 3.4 mm (MNHN-IU-2013-13548).—Stn 741, 22°14.8'S, 167°02.8'E, 77–80 m, August 1986: 1 M 5.2 mm, 1 ov. F 4.2 mm (MNHN-IU-2013-13552).—Stn 742, 22°13.9'S, 167°02.8'E, 78 m, August 1986: 1 M 4.3 mm, 1 ov. F 4.7 mm (MNHN-IU-2013-13554).—Stn 836, 20°46.4'S, 165°15.75'E, 57 m, 11 January 1987: 1 M 5.2 mm, 2 ov. F 3.6–5.5 mm (MNHN-IU-2013-13549). Ouen Island, Stn 150, 22°30.1'S, 166°50.4'E, 62–68 m, August 1984: 2 M 4.0–5.2 mm, 2 ov. F 3.0–3.9 mm (MNHN-IU-2013-13550). South Reef, Stn 325, 22°26'S, 167°02'E, 75 m, 28 November 1984: 1 M 4.5 mm, 3 ov. F 4.4–5.2 mm (MNHN-IU-2013-13547).—Stn 328, 22°28'S, 167°03'E, 72 m, 28 November 1984: 1 M 4.2 mm, 1 ov. F 3.1 mm (MNHN-IU-2013-13546). BATHUS 1, Stn CP680, 20°48'S, 165°17'E, 86–92 m, 15 March 1993: 2 M 3.7–4.5 mm, 3 ov. F 3.0–6.4 mm (MNHN-IU-2013-13525); 1 ov. F 3.8 mm (MNHN-IU-2013-13524).

Australia. NW Australia, 19°47.22'S, 115°28.20'E, 90–108 m, 12 June 2007: 1 M 3.2 mm (J57272).

Etymology. The name *Halia* refers to one of the Nereids of Greek mythology. The name is considered as a substantive in apposition.

Description. *Carapace:* As long as broad; transverse ridges with dense short setae, and some scattered long plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with 6 transverse ridges: 1 epigastric ridge with 2–4 spines, medially convex and interrupted; 2 protogastric ridges, anterior one unarmed and uninterrupted, posterior ridge short, arcuate, with some long plumose setae; 1 mesogastric ridge uninterrupted and not extending laterally to anteriormost of branchial marginal spines; 2 metogastric ridges, anterior one uninterrupted and not continuing laterally to anterior branchial ridges, posterior ridge scale-like. Hepatic region with small spine. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 5 ridges, 2 of them uninterrupted. Lateral margins well convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, slightly behind of lateral limit of orbit, second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, with small spine ventral to between first and

second; 2 spines on anterior branchial region, last small, and 3 spines on posterior branchial margin. Small spine on limit of orbit; infraorbital margin with strong spine. Rostrum 1.5–1.7 times as long as broad, length 0.6 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous small scale-like setose ridges; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 each with 2 uninterrupted transverse ridges on tergite, sometimes with additional small scale-like ridges; somite 4 with 2 transverse ridges, posterior ridge medially interrupted; somites 5 and 6 each with medially interrupted ridge. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine slightly smaller than others. Ultimate article with some fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine not reaching distal margin of article 2. Article 2 with 2 distal spines, distolateral spine clearly longer than distomesial, and exceeding midlength of article 3. Article 3 unarmed or with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with flexor margins ending in spine, extensor margin ending in acute angle; crista dentata with 19–21 denticles. Merus shorter than ischium; flexor margin with 2 or 3 spines, distal and median (when present) spines smaller than proximal; extensor margin ending in small spine or acute angle. Carpus unarmed.

P1: 2.5–3.0 times carapace length, somewhat depressed on palm, more so on fingers, with numerous setiferous scales, and some scattered long setae. Merus 1.2 times carapace length, 1.8 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.7 length of palm, 2.1 times as long as broad; dorsal surface with some small spines; mesial margin with row of 3 or 4 spines, distal second stronger than others. Palm 2.0–2.2 times longer than broad, lateral and mesial margins subparallel; small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers 0.7 times palm length, each finger with two rows of teeth distally spooned; fingers unarmed.

P2–4: long and slender, with some setose striae and sparse long plumose setae. P2 2.0 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P3 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.8 carapace length, 3.9 times as long as broad, 1.4 times longer than P2 propodus. P3 merus 3.2 times as long as broad, slightly longer than P3 propodus. P4 merus 3.0 times as long as broad, as long as P4 propodus. Extensor margin with row of 8 proximally diminishing spines on P2–3, 1 distal spine on P4; ventral margins distally ending in strong spine, lateral sides unarmed on P2–3, with 2 spines on P4. Carpi with 4 spines on extensor margin on P2–3, 2 distal spine on P4; lateral surface with 3 or 4 small spines or acute granules sub-parallel to extensor margin; flexor distal margin with distal spine. Propodi 4.0–4.7 times as long as broad; extensor margin with 0–2 minute proximal spines; flexor margin with 5 or 6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 5 or 6 proximally diminishing teeth, terminal one prominent.

Epipods present on P1.

Coloration. Base color light brown. Carapace and abdomen, sometimes with a few scattered white spots. Long setae on carapace and abdomen reddish. P1 whitish or reddish brown, base of fingers whitish or light brown. P2–4 with whitish and reddish brown stripes.

Remarks. This new species closely resembles *G. lemaitrei* n. sp. from the Red Sea and *G. autahi* n. sp. from the French Polynesia, Vanuatu, New Caledonia, and New South Wales (see Remarks of *G. lemaitrei*). The specimens from the Philippines have a few long plumose setae and more small setae than in other localities. However, we have considered these differences as intraspecific variations. Dong & Li (2010) collected some material from South China Sea, identified as *G. whiteleggii*. The illustrations and data provided by these authors match quite well with *G. halia*, nevertheless a direct comparison with the specimens from Dong & Li would confirm their status.

Distribution. Philippines, South China Sea, Indonesia (Makassar Strait), Solomon Islands, NW Australia, Vanuatu, New Caledonia; 2–196 m.

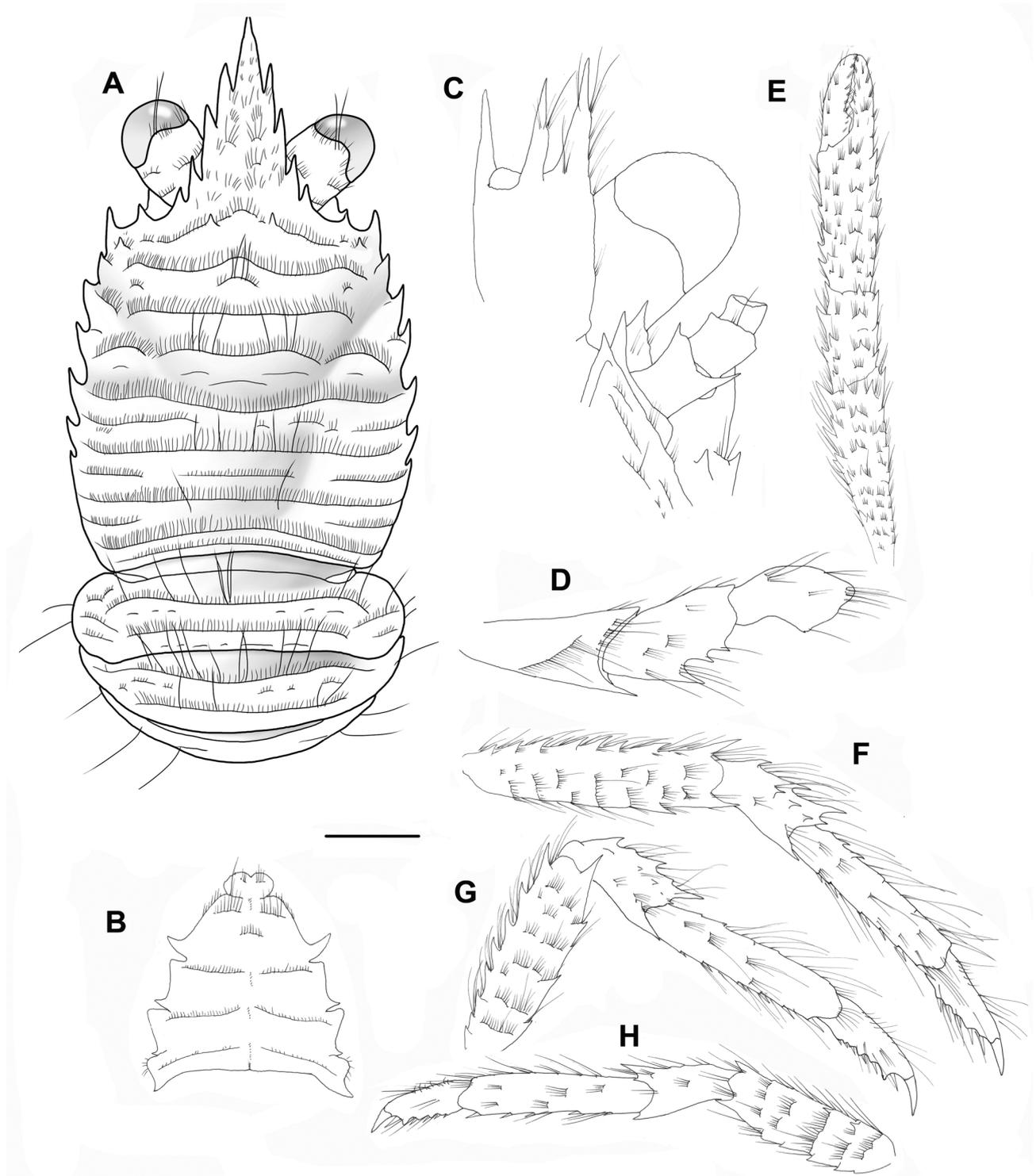


FIGURE 45. *Galathea halia* n. sp., holotype, ovigerous female, 4.2 mm, Vanuatu (MNHN-IU-2013-13515). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2.0 mm; B–D = 0.5 mm.

***Galathea hispida* Baba, 2005**

Galathea hispida Baba, 2005: 75, fig. 25, 243 (key, synonymies, Kei Islands, 233 m).—Baba *et al.*, 2008: 69 (compilation).

Material examined. Indonesia. Kei Islands. KARUBAR, Stn CP36, 06°05'S, 132°44'E, 210–268 m, 27 October 1991: 1 ov. F 3.0 mm, 1 F 3.1 mm (MNHN-IU-2013-8449).—Stn CP82, 09°32'S, 131°02'E, 215–219 m, 4 November 1991: 1 F 2.5 mm (MNHN-IU-2013-8450).

Remarks. The material examined agrees quite well with the original description and illustrations by Baba (2005). No genetic data are available.

Distribution. Indonesia, Kei Islands, 210–233 m.

***Galathea hispidissima* n. sp.**

(Fig. 46)

Material examined. *Holotype:* Solomon Islands. SALOMON 2, Stn CP2286, 08°39.54'S, 157°23.18'E, 248–253 m, 6 November 2004: M 4.5 mm (MNHN-IU-2013-15945).

Paratypes: Solomon Islands. SALOMON 2, Stn CP2286, 08°39.54'S, 157°23.18'E, 248–253 m, 6 November 2004: 1 ov. F 5.4 mm (MNHN-IU-2013-15946); 2 M 3.3–4.3 mm, 4 F 3.6–4.2 mm (MNHN-IU-2013-13982).

Etymology. From the Latin *hispidus*, hairy, bristly, in reference to the setose ridges on the body.

Description. *Carapace:* As long as broad; transverse ridges with dense short setae, without long setae; cervical groove distinct, laterally bifurcated; 6 or 7 uninterrupted transverse ridges on gastric region, and some scale-like ridges in epigastric region; epigastric region unarmed (paratype) or with 4 small spines (holotype); hepatic region unarmed (paratype) or with 3 or 4 small hepatic spines on each side (holotype); anterior branchial region with scale-like ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, with 1 small spine on each side (holotype), absent in paratypes; posterior branchial region with 10–12 transverse ridges. Lateral margins slightly convex medially, with 8 spines: 2 spines in front of and 6 spines behind anterior cervical groove; first anterolateral, small, at level of orbit, second very small but distinct, located at midlength between first spine and anteriormost spine of branchial margin, with small spine ventral to between first and second; 3 spines on anterior branchial margin, last small, and 3 spines on posterior branchial margin, last small. Outer orbital spine unarmed; infraorbital margin with some teeth; minute spine between orbit and first anterolateral spine. Rostrum widely triangular, 1.7–1.9 times as long as broad, length 0.7 that of, breadth 0.3–0.4 that of carapace; distance between distalmost lateral incisions 0.35 distance between proximalmost lateral incisions, dorsal surface nearly horizontal in lateral view, with some uniramous setae; lateral margin with 4 moderately incised sharp teeth.

Pterygostomial flap rugose, with sparse short setae, anterior margin bluntly angular.

Sternum: Longer than broad. Sternite 4 clearly broader than following sternites.

Abdomen: Somites 2–5 each with 4 or 5 uninterrupted or interrupted transverse ridges on tergite; somite 6 with 1 uninterrupted ridge and 1 medially interrupted ridge. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 2 well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine obsolescent; 0–2 small spines on lateral margin. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 with distomesial spine barely reaching end of article 2. Article 2 with 2 distal spines, distolateral spine longer than distomesial and reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; crista dentata with 18–20 denticles. Merus clearly shorter than ischium; flexor margin with 2 spines, proximal stronger than distal; extensor margin with 1 distinct distal spine. Carpus unarmed.

P1: 3.4–4.8 times carapace length, with numerous finely setiferous scales. Merus 1.4–2.0 times length of carapace, 1.7–1.9 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent, dorsal and lateral spines small. Carpus 0.9 length of palm, 3.1–3.4 times as long as broad; dorsal surface with small spines arranged roughly in longitudinal rows; mesial spines longer than others. Palm 3.1–3.4 times longer than broad, dorsal side, lateral and mesial margins with minute spines. Fingers 0.7–0.9 length of palm, each finger distally with two rows of teeth, spooned; mesial margin of movable finger and lateral margin of fixed finger unarmed.

P2–4: Moderately long and slender, with setose striae and long setae. P2 1.6 times carapace length. Meri successively shorter posteriorly (P3 merus 0.7–0.8 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.6–0.7 carapace length, 3.6–3.7 times as long as broad, 1.6–1.7 times longer than P2 propodus; P3 merus 2.5–2.7

times longer than broad, 1.1–1.4 times longer than P3 propodus; P4 merus 2.1–2.6 times as long as broad, 0.9–1.1 length of P4 propodus. Extensor margins of meri with row of 9 or 10 proximally diminishing spines on P2–3, 6 spines on P4; flexor margins distally ending in strong spine followed proximally by 1 or 2 small spines and several tubercles or eminences; lateral sides unarmed or with 1–3 small spines on P4. Carpi with 5 or 6 spines on extensor margin, distalmost longer than distal second; lateral surface with 4 or 5 small spines or acute granules sub-parallel to extensor margin on P2–4; flexor margin with distal spine. Propodi 3.0–3.4 times as long as broad; extensor margin with 1 or 2 small proximal spines on P2–3; flexor margin with 4 or 5 slender movable spines on P2–4. Dactyli distally ending in well-curved strong spine, length 0.6–0.9 that of propodi; flexor margin with 5 or 6 proximally diminishing teeth, terminal one prominent.

Epipods on P1.

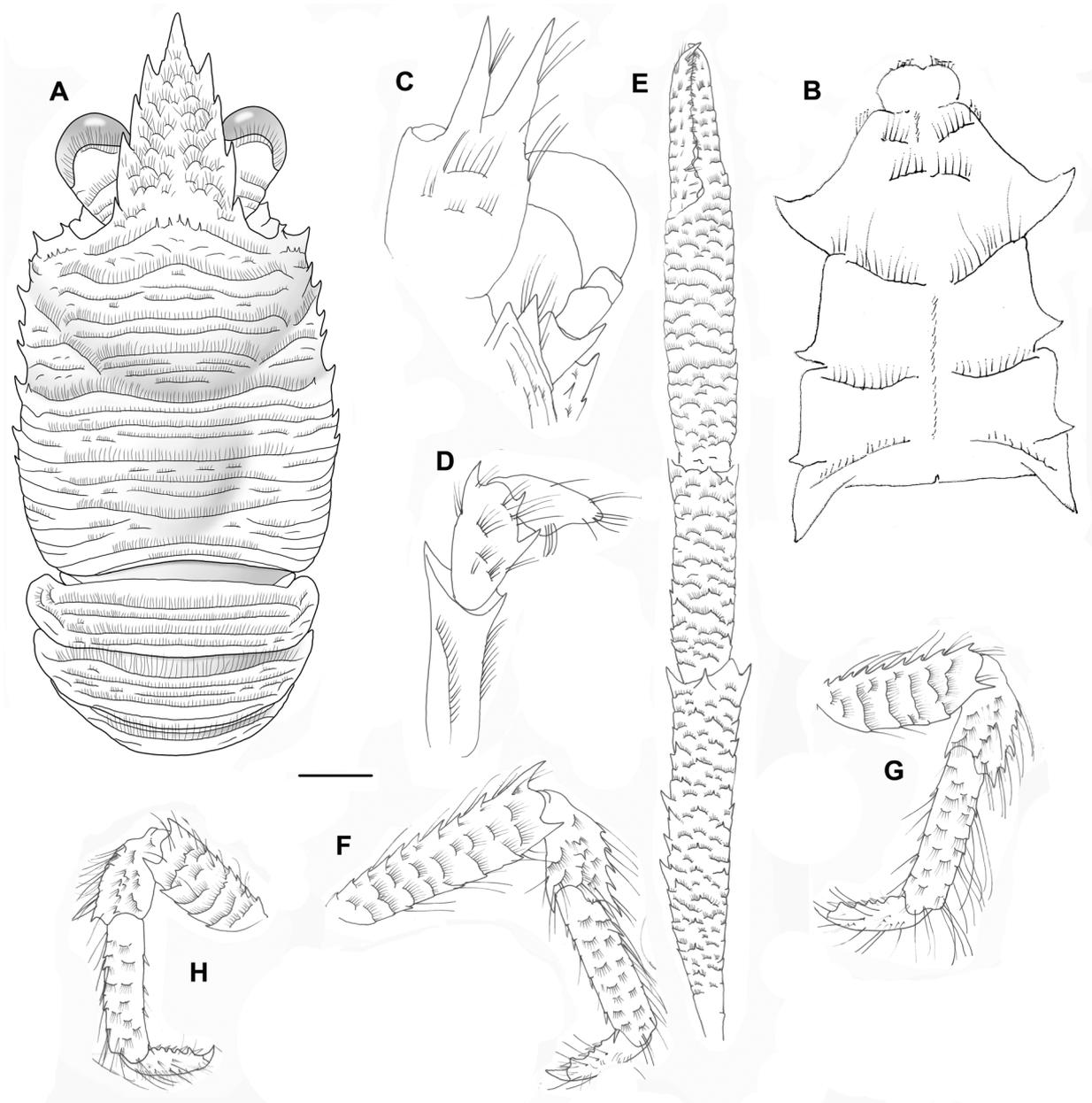


FIGURE 46. *Galathea hispidissima* n. sp., holotype, male, 4.5 mm, Solomon Islands (MNHN-IU-2013-15945). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, left P4, lateral view. Scale: A, F–H = 1 mm; E = 2.0 mm; B–D = 0.5 mm.

Remarks. *Galathea hispidissima* is characterized by the uninterrupted main gastric ridges on the carapace, the carapace lateral margin armed with one small but distinct spine between the anterolateral spine and the anteriormost branchial marginal spine, and the antennular basal article only with two well-developed terminal spines. These characters are shared with *G. albatrossae* Baba, 1988, *G. hispida* Baba, 2005, *G. inconspicua* Henderson, 1885, *G. pubescens* Stimpson, 1858 and related species. However, *G. hispidissima* is easily distinguished by the shape of the sternites 4 and 5. The sternite 4 is distinctly broader than the sternite 5 in the new species. In the other species, the sternite 4 is clearly narrower than the sternite 5.

No genetic data are available for this species.

Distribution. Solomon Islands, 248–253 m.

***Galathea homologa* n. sp.**

(Fig. 47)

Material examined. *Holotype:* Vanuatu. SANTO, Stn DB1, 15°33.1'S, 167°17.8'E, 15–25 m, 10 September 2006: F 3.0 mm (MNHN- IU-2013-8050).

Etymology. From the Greek *homologos*, agreeing, in reference to the close relationship with the *G. aegyptiaca* species group.

Description. *Carapace:* Slightly broader than long; anterior cervical groove indistinct. Five ridges on gastric region: 1 epigastric ridge with 2 median epigastric spines, medially interrupted; 1 protogastric ridge strongly convex medially, uninterrupted, with 1 parahepatic spine at each side; 1 mesogastric ridge uninterruptedly extending laterally to anteriormost of branchial marginal spines; 2 uninterrupted metagastric ridges, anterior ridge sometimes fused with anterior branchial ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, usually followed by 5 ridges. Lateral margins medially convex, with 7 spines: 2 spines in front of, and 5 spines behind, indistinct anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit; second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, accompanying another spine ventral to between first and second; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. External limit of orbit ending in small spine; infra-orbital margin with strong spine. Rostrum broad triangular, 1.3 times as long as broad, length 0.6 that of, breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions, dorsal surface nearly horizontal in lateral view, with some thick long plumose setae; lateral margin with 4 sharp spines. Ridges with numerous uniramous setae, and some thick long plumose setae between epigastric spines and on median convexity of second gastric ridge.

Pterygostomial flap rugose, anterior margin ending in well-developed spine.

Sternum: As long as broad, lateral limits divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somite 5 and 6 each with 2 medially interrupted ridges, posteriomedian margin of somite 6 slightly convex.

Eyes: Ocular peduncles 1.1 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule. Article 1 with 3 well-developed distal spines, distodorsal larger. Ultimate article short, twice longer than broad, with tuft of setae on distodorsal margin.

Antenna. Article 1 with depressed ventral distomesial process slightly exceeding distal margin of peduncle. Article 2 with distomesial spine as long as distolateral, exceeding midlength of article 3. Articles 3 and 4 unarmed.

Mxp3. Ischium with well-developed distal spine on flexor margin; extensor margin unarmed; crista dentata with 22 denticles. Merus slightly shorter than ischium, with 2 strong spines of subequal size on flexor margin, proximal one located at midlength, distal one at terminal end; extensor margin with distal spine. Carpus spineless.

P1: missing.

P2–4: Relatively slender, moderately setose, with long plumose setae on all articles. P2 1.7 times carapace length. P2–3 meri subequal in length, P4 merus 0.9 length of P3 merus, equally broad on P2–4. P2 merus 0.7 carapace length, 3.3 times as long as broad, 1.5 times longer than P2 propodus; P3 merus 3 times as long as broad, 1.3 times length of P3 propodus; P4 merus 3 times as long as broad, 1.2 length of P4 propodus. Extensor margins with row of 8 or 9 proximally diminishing spines on P2–3, only distal spine on P4; lateral surface unarmed on P2–3, row of 4 spines on P4; flexor margins with strong terminal spine; ventromesial margin with terminal spine on P2–3. Carpi with 3 or 4 spines on extensor margin; lateral surface with row of 2–4 small spines paralleling extensor

row; flexor distal margins with small spine. Propodi subequal in length on P2 and P4, slightly longer on P3, equally broad on P2–4, each about 4 times as long as broad; extensor margin with 2 or 3 proximal spines on P2–4; flexor margin with 4 slender movable spines on P2–4; lateral side unarmed on P2–4. Dactyli subequal in length, 0.5–0.6 length of propodi, ending in incurved, strong, sharp spine; flexor margin with prominent triangular terminal tooth preceded by obsolescent 4 teeth.

Epipods present only on P1.

Remarks. The species is close to *G. aegyptiaca* and *G. corbariae* **n. sp.** (see Remarks for these species).

Distribution. Vanuatu, 15–25 m.

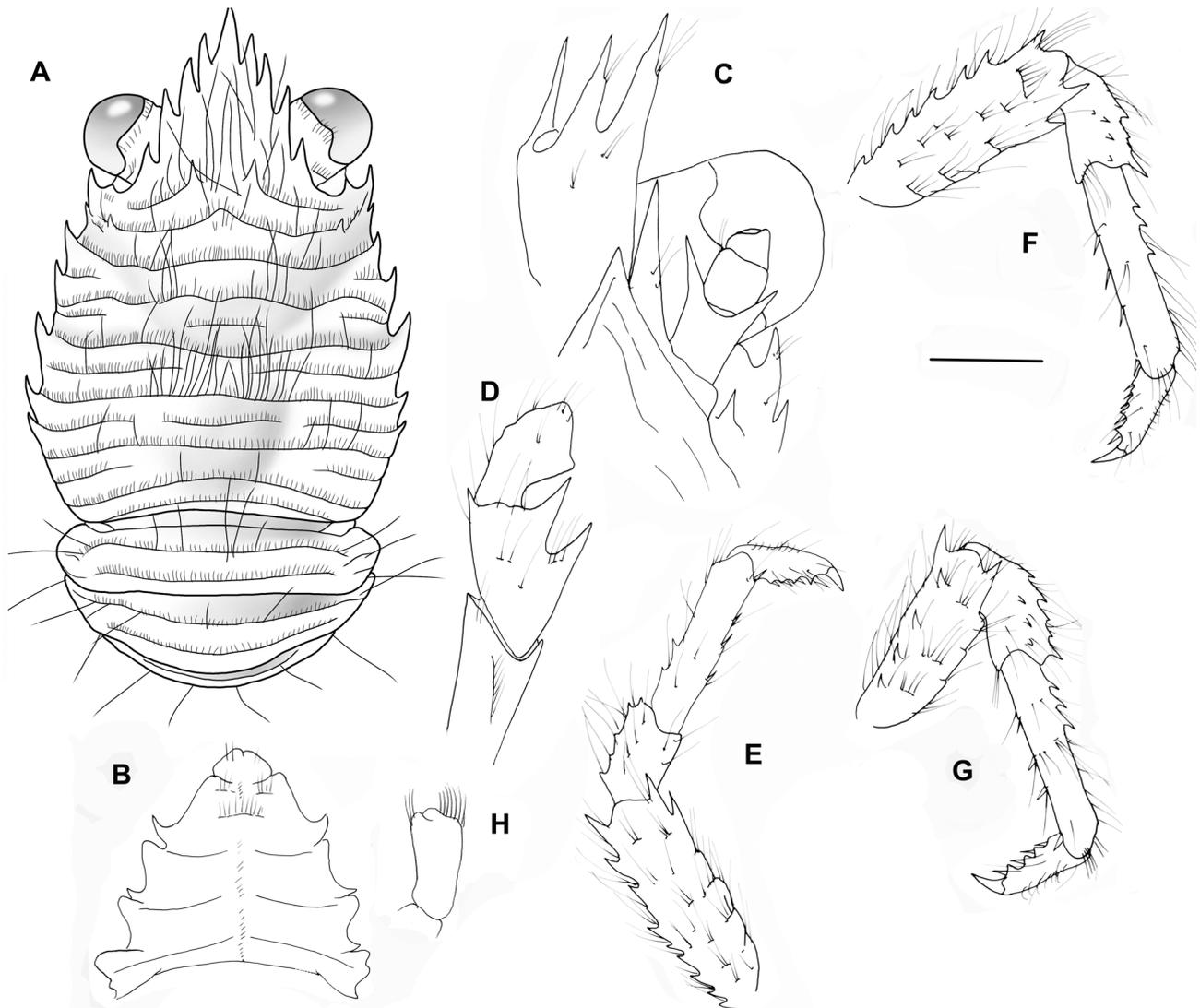


FIGURE 47. *Galathea homologa* **n. sp.**, holotype, female, 3.0 mm, Vanuatu (MNHN-MNHN-IU-2013-8050). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P2, lateral view; F, right P3, lateral view; G, right P4, lateral view; H, ultimate article of antennular peduncle. Scale: A, E, F, G = 1 mm; B–D = 0.5 mm.

Galathea hydrae* **n. sp.*

(Fig. 48)

Galathea dispersa.—Barnard, 1950: 486, figs 91f–h (False Bay and Agulhas Bank to Natal and Zululand, 24–113 m).—Kensley, 1981a: 34 (list).—Tirmizi & Javed, 1993: 67, fig. 29 (western Indian Ocean between S. Mozambique and South Africa (24–29°S), 69–165 m) (not *G. dispersa* Spence Bate, 1859).

Material examined. *Holotype*: Mozambique. MAINBAZA, Stn CC3159, 23°53.80'S, 35°37.58'E, 148–152 m, 15 Abril 2009: F 3.5 mm (MNHN-IU-2013-8308).

Paratypes: Mozambique. MAINBAZA, Stn CP3132, 25°11.24'S, 35°01.51'E, 101–102 m, 10 Abril 2009: 1 M 4.1 mm (MNHN-IU 2008-10230).—Stn CC3159, 23°53.80'S, 35°37.58'E, 148–152 m, 15 Abril 2009: 2 F 2.0–3.0 mm (MNHN-IU-2013-8309).

Etymology. The name *Hydra*, the Sea Serpent, refers to one of the southern hemisphere constellations.

Description. *Carapace*: slightly longer than broad; transverse ridges with dense short setae, and some scattered long non-plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with some transverse ridges: 1 epigastric ridge medially interrupted, with 3 pairs of epigastric spines; 2 protogastric ridges, anterior ridge between second lateral spines, laterally interrupted, convex medially and with 1 parahepatic spine on each side, posterior ridge scale-like, median scale convex, with some long non-plumose setae; some scales between epigastric and anterior protogastric ridges; 2 mesogastric ridges, anterior ridge uninterrupted but not extending laterally to anteriormost of branchial marginal spines, posterior ridge scale-like; 2 metagastric ridges, uninterrupted, with some scales between them, and not continuing laterally with anterior branchial region. One-two small hepatic spines near first marginal spine (anterolateral). Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 5 transverse ridges, 2 ridges uninterrupted. Lateral margins well convex medially, with 8 spines: 2 spines in front of and 6 spines behind anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit; second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, with spine ventral to between first and second; 3 spines on anterior branchial region, last small, and 3 spines on posterior branchial margin, last small. Small frontal spine between lateral limit of orbit and anterolateral spine; infraorbital margin with 4 or 5 minute spines. Rostrum 1.6 as long as broad, length 0.6 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin bluntly angular.

Sternum: 0.9 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 each with 2 uninterrupted transverse ridges on tergite; somite 4 with 2 ridges, posterior ridge medially interrupted; somites 5 and 6 each with 2 medially interrupted ridges, posteromedian margin of somite 6 slightly convex. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine slightly larger than distomesial and nearly reaching end of article 3. Article 3 with distomesial spine. Article 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; extensor margin with small distal spine; crista dentata with 23–24 denticles. Merus as long as ischium; flexor margin with 2 or 3 spines, proximal clearly stronger than other spines; extensor margin with small distal spine. Carpus unarmed.

P1: 2.5 times carapace length, covered with finely setiferous scales, with scattered long setae. Merus as long as carapace, 3.5 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.5 length of palm, twice longer than broad; dorsal and lateral surfaces with some spines; mesial margin with 3 or 4 spines (distal second strong). Palm 1.8 times longer than broad, lateral and mesial margins slightly convex; spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side; dorsolateral row continuing along entire fixed finger. Fingers as long as palm, each finger distally with two rows of teeth, spooned; mesial margin of movable finger with proximal spines.

P2–4: moderately slender, with setose striae and sparse long plumose setae. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 missing); P2 merus 0.7 carapace length, 4.8 times as long as broad, 1.5 times longer than P2 propodus; P3 merus 3.8 times longer than broad, 1.4 times longer than P3 propodus; distoflexor angle of P2–4 with 2 spines. Extensor margin of P2–3 meri with row of 7–9 proximally diminishing spines; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several eminences; lateral sides unarmed on P2–3. Carpi with 5 spines on extensor margin on P2–3; lateral surface with 2 or 3 small spines sub-parallel to extensor margin on P2–3; flexor distal margin with spine. P2–3

propodi 4.7–5.1 times as long as broad; extensor margin unarmed; flexor margin with 4 or 5 slender movable spines. P2 dactylus (P3–4 dactyli missing) distally ending in well-curved strong spine, length 0.7 that of propodus; flexor margin with 4 proximally diminishing teeth, terminal one prominent. Epipods present on P1–3.

Remarks. The new species is easily differentiated from the other closely related species, *G. pascualae* n. sp. from Indonesia, Vanuatu, New Caledonia, Loyalty and Chesterfield Islands and *G. pubipes* n. sp. from New Caledonia, by the following features:

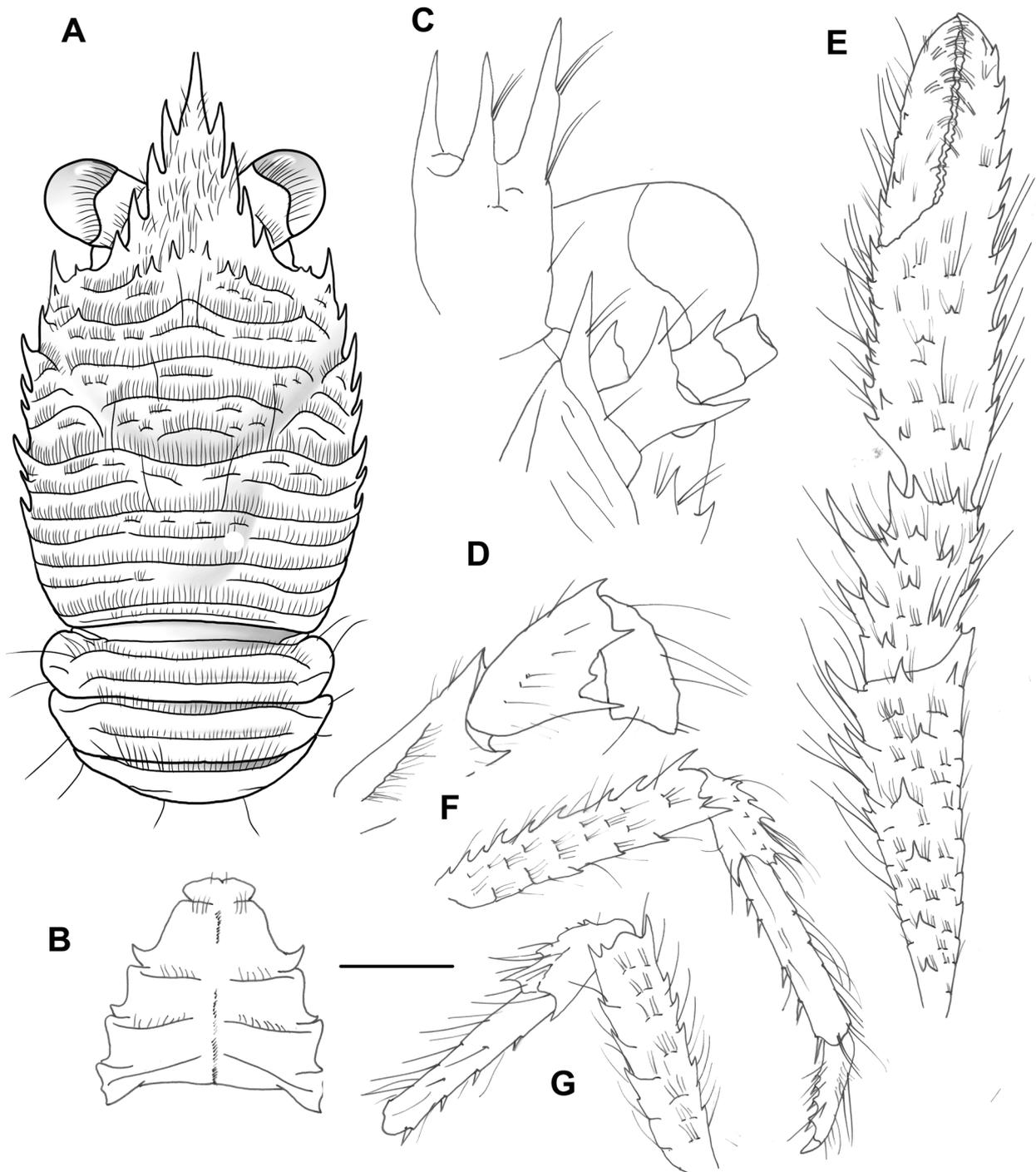


FIGURE 48. *Galathea hydrae* n. sp., holotype, female, 3.5 mm, Mozambique (MNHN-IU-2013-8308). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view. Scale: A, E, F, G = 1 mm; B–D = 0.5 mm.

- The epipods are present on P1–3 in *G. hydrae*, whereas they are present only on P1 in the latter two species.
- The distal angle of the flexor margin of the P2–4 meri has two spines in *G. hydrae*, instead of one spine only in the other species.

The genetic divergences with these species are always higher than 13.4% (16S rRNA) (Tab. 2).

The new species is also close to *G. brevimana* Paul'son, 1875 and *G. micra* n. sp. (see respective Remarks of these species).

This new species was previously identified with *G. dispersa* Bate, 1859, by Barnard (1950) and Tirmizi & Javed (1993). *Galathea dispersa* is a common species distributed from the north-east Atlantic and the Mediterranean Sea, and it can be distinguished from *G. hydrae* by the number of transverse ridges on the carapace and abdomen, more numerous in *G. dispersa* than in *G. hydrae*. Furthermore, *G. hydrae* has one parahepatic spine on each side, which is absent in *G. dispersa*.

Distribution. Mozambique, 101–152 m.

Galathea imitata n. sp.

(Figs 49, 117C, D)

Material examined. *Holotype:* Australia. Western Australia, Ningaloo Reef, 22.7415°S, 113.6836°E, 2–3 m, 15 May 2009: M 3.4 mm (QM W29208).

Paratypes: Australia. Western Australia, Ningaloo Reef, 22.7415°S, 113.6836°E, 2–3 m, 15 May 2009: 1 M 4.0 mm (UF21503); 1 ov. F 3.0 mm (UF21520).—22.581°S, 113.7618°E, 10 m, 1 May 2009: 1 M 2.3 mm (UF21900); 1 ov. F 3.2 mm (UF21915); 1 M 2.5 mm (UF22012); 1 F 2.2 mm (UF22055).—22.6232°S, 113.6532°E, 6–7 m, 1 May 2009: 1 M 3.6 mm (UF22483); 8 M 2.0–3.4 mm, 4 ov. F 2.8–3.7 mm (UF23071).—22.7691°S, 113.7046°E, 10 m, 1 May 2009: 1 F 1.9 mm (UF22557); 1 M 3.8 mm (UF28002); 1 M 3.3 mm, 1 ov. F 3.5 mm (UF28017).—22.7415°S, 113.6836°E, 2–3 m, 2 July 2009: 1 ov. F 3.3 mm (UF23442).—22.7691°S, 113.7046°E, 12 m, 20 May 2010: 1 ov. F 4.2 mm (UF27825); 1 M 3.4 mm (UF27826); 2 M 4.3–4.4 mm, 3 ov. F 3.5–4.3 mm (UF27835); 1 ov. F 4.5 mm (UF27895).—22.6704°S, 113.6496°E, 2–3 m, 23 May 2010: 2 ov. F 3.2–3.4 mm (UF27729); 1 ov. F 3.2 mm (UF27744).

Etymology. From the Latin, *imitatus*, copy, mimic, in reference to the similarity with species of the *G. aegyptiaca* complex.

Description. *Carapace:* Slightly broader than long; anterior cervical groove indistinct. Five ridges on gastric region: 1 epigastric ridge, medially interrupted, with 2 spines; 1 protogastric ridge strongly convex medially, uninterrupted, with 1 parahepatic spine at each side; 1 mesogastric ridge, uninterruptedly extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, anterior ridge uninterrupted and continuing laterally with anterior branchial ridges, posterior uninterrupted. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 5 transverse, 3 ridges uninterrupted; second ridge with numerous long median plumose setae. Lateral margins medially convex, with 7 spines: 2 spines in front of, and 5 spines behind, indistinct anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit; second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, accompanying another spine ventral to between first and second; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. External limit of orbit ending in small spine; infra-orbital margin with spine. Rostrum broad triangular, 1.3–1.5 times as long as broad, length 0.5 that of, breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions dorsal surface nearly horizontal in lateral view, with some thick long plumose setae; lateral margin with 4 sharp spines. Ridges with numerous uniramous setae; some thick long plumose setae more dense on dorsal rostrum surface, between epigastric spines, and on median portion of protogastric.

Pterygostomial flap rugose, anterior margin ending in well-developed spine.

Sternum: As long as broad, lateral limits divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somite 5 and 6 each with 2 medially interrupted ridges, posteriormedian margin of somite 6 slightly convex. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.6 rostrum width.

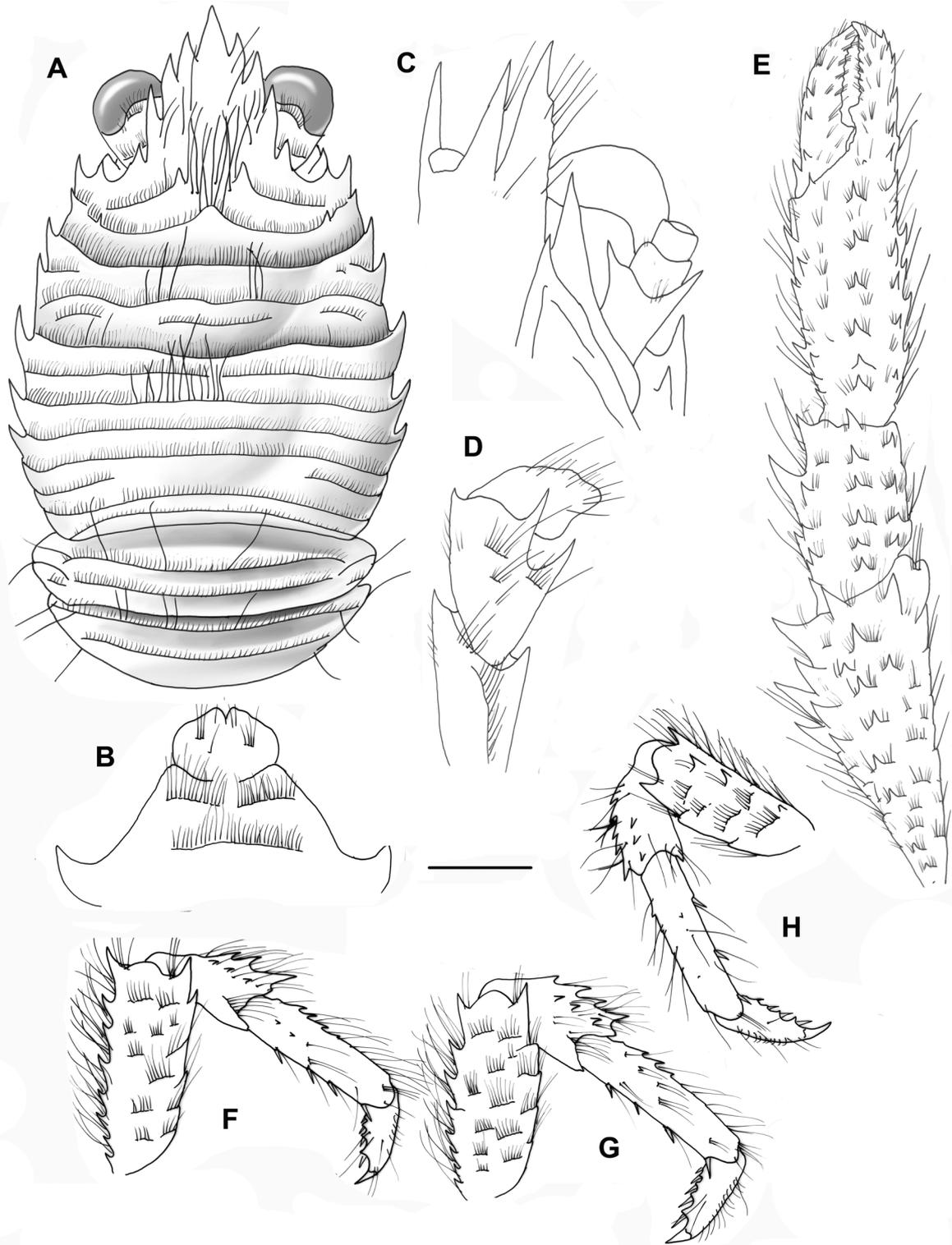


FIGURE 49. *Galathea imitata* n. sp., holotype, male, 3.4 mm, Western Australia (QM W29208). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, left P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger. Ultimate article less than twice longer than broad, with a few short setae not in tuft on distodorsal margin.

Antenna: Article 1 with depressed ventral distomesial process slightly exceeding distal margin of peduncle. Article 2 with distomesial spine as long as distolateral, reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor margin unarmed; crista dentata with 21–23 denticles. Merus subequal in length to ischium, with 2 strong spines of subequal size on flexor margin, proximal one located at midlength, distal one at terminal end; extensor margin with small distal spine. Carpus spineless.

P1: 2.4 times carapace length, relatively slender, subcylindrical, with numerous short setae and some scattered long plumose setae on dorsal surface and along lateral and mesial margins of all articles. Merus 0.9 times length of carapace, 1.6 times as long as carpus, with rows of spines, mesial and distal spines strong. Carpus 0.8 length of palm, 1.8 times longer than broad, lateral and mesial margins subparallel, dorsal surface with small spines in longitudinal row; mesial surface with row of well-developed spines; and row of small spines along lateral margin. Palm 2.0–2.2 times longer than broad, lateral and mesial margins slightly divergent; spines roughly in rows on dorsal, mesial and lateral; lateral row continued on to whole lateral margin of fixed finger. Fingers 0.8 as long as palm, each finger distally with two rows of teeth, spooned; mesial margin of movable finger with some spines.

P2–4: Relatively slender, moderately setose, sparsely with long non-plumose and plumose setae on all articles. P2 1.6 times carapace length. P2–3 meri subequal in length, P4 merus 0.8 length of P3 merus. P2 merus 0.6 carapace length, 2.5 times as long as broad, 1.5 times longer than P2 propodus; P3 merus 2.5 times as long as broad, 1.3 times length of P3 propodus; P4 merus 2.4 times as long as broad, 1.3 length of P4 propodus. Extensor margins with row of 8 or 9 proximally diminishing spines on P2–3, only distal spine on P4; lateral surface unarmed on P2–3, row of 2–4 spines on P4; flexolateral and flexomesial margins with strong terminal spine on P2–4; additional flexolateral spine on P2 only. Carpi with 4 or 5 spines on extensor margin; lateral surface with row of 2 or 3 small spines paralleling extensor row; flexor distal margins with small spine. Propodi subequal in length on P3 and P4, slightly shorter on P2, each 3.5–3.8 times as long as broad; extensor margin with 1–3 proximal spines on P2–4; flexor margin with 4 slender movable spine on P2–4; 1 proximal spine on lateral side of P4, unarmed on P2–3. Dactyli subequal in length, 0.6–0.7 length of propodi, ending in incurved, strong, sharp spine; flexor margin with prominent triangular terminal tooth preceded by obsolescent 5 teeth.

Epipods present only on P1.

Coloration. Base color light brown. Rostrum and anterior portion of carapace reddish or light brown. Long plumose setae on carapace reddish, those on abdominal somites whitish. Abdominal somites with some whitish spots. P1 with whitish and brownish bands, base of fingers bluish. P2–4 with whitish and brownish bands, each merus with orange distal spot.

Remarks. *Galathea imitata* n. sp. resembles *G. aegyptiaca* Paul'son, 1875 (see Remarks for *G. aegyptiaca*), *G. corbariae* n. sp. and *G. homologa* n. sp. *G. imitata* is easily differentiated from *G. corbariae* and *G. homologa* by the shape of the P2–3 meri. These meri are 2.5 times longer than broad in *G. imitata*, instead of being equal or more than 3 times longer than broad in *G. corbariae* and *G. homologa*.

The genetic divergences between *G. imitata* and the other related species are quite large (13.1–16.6% COI, 6.1–7.6% 16S rRNA, see Tab. 1).

Distribution. Western Australia (Ningaloo Reef), 2–10 m, associated with *Pocillopora* sp.

***Galathea inconspicua* Henderson, 1885**

(Figs 50, 51 A–C, 117E)

Galathea inconspicua Henderson, 1885: 408 (off Banda Island, 659 m).—Henderson, 1888: 122, pl. 12, fig. 2 (off Banda Island, 659 m).—Baba, 1994: 4, fig. 2 (off Central Queensland, 296–303 m).—Davie, 2002: 61 (list).—Baba, 2005: 244 (key, synonymies).—Baba *et al.*, 2008: 69 (compilation).

Not *Galathea inconspicua*.—Dong & Li, 2010: 12, fig. 7 (South China Sea, 158–220 m) (= *Galathea perone* n. sp.). Dubious identification.

Galathea inconspicua.—Poore *et al.*, 2011: 332, pl. 101 (color photo, Philippines).

Material examined. Vanuatu. MUSORSTOM 8, Stn CP1017, 17°52.80'S, 168°26.20'E, 294–295 m, 27 September 1994: 2 ov. F 3.7–4.3 mm (MNHN-IU-2013-9700).—Stn CP1087, 15°10.18'S, 167°14.07'E, 394–421 m, 6 October 1994: 1 ov. F 6.2 mm (MNHN-IU-2013-9699). BOA 0, Stn CP2318, 15°05.66'S, 166°54.765'E, 415–475 m, 16 November 2004: 1 F 3.9 mm (MNHN-IU-2013-9702). SANTO, Stn AT1, 15°32.4–33.8'S, 167°16.4–19.5'E, 167–367 m, 14 September 2006: 1 M 4.8 mm, 2 ov. F 4.4–5.0 mm (MNHN-IU-2013-15866), 1

M 3.6 mm (MNHN-IU-2013-9705) 1 M 5.5 mm (MNHN-IU-2013-8504), 1 M 5.6 mm (MNHN-IU-2013-9706).—Stn AT8, 15°40.5'S, 167°01.5'E, 366–389 m, 17 September 2006: 1 M 5.1 mm (MNHN-IU-2013-8507).—Stn AT9, 15°41.5'S, 167°01.3'E, 481 m, 17 September 2006: 2 M 4.7–4.9 mm (MNHN-IU-2013-8508).—Stn AT58, 15°33.0'S, 167°19.3'E, 364–390 m, 3 October 2006: 1 ov. F 4.8 mm (MNHN-IU-2013-13949), 1 M 5.0 mm (MNHN-IU-2013-8506).—Stn AT64, 15°39.6'S, 167°01.9'E, 249–252 m, 4 October 2006: 2 F 3.1–3.9 mm (MNHN-IU-2013-9704).

New Caledonia. BIOCAL, Stn CP108, 22°02.55'S, 167°05.68'E, 335 m, 9 September 1985: 1 M 4.1 mm, 1 ov. F 3.7 mm (MNHN-IU-2013-15863). MUSORSTOM 4, Stn CP170, 18°57.00'S, 163°12.60'E, 17 September 1985: 1 ov. F 5.9 mm (MNHN-IU-2013-13961).—Stn CP241, 22°09.00'S, 167°12.20'E, 470–480 m, 3 October 1985: 1 M 2.4 mm (MNHN-IU-2013-15864). BATHUS 1, Stn DE693, 20°35'S, 164°59'E, 308–324 m, 17 March 1993: 1 F 5.9 mm (MNHN-IU-2013-9703).—Stn CP710, 21°43'S, 166°36'E, 320–385 m, 19 March 1993: 7 M 3.7–5.6 mm, 1 F 5.0 mm (MNHN-IU-2013-9701).—Stn CP711, 21°43'S, 166°35'E, 315–327 m, 19 March 1993: 4 M 4.5–5.1 mm, 5 ov. F 3.7–4.4 mm, 1 F 4.9 mm (MNHN-IU-2013-15862). HALIPRO 1, Stn CP851, 21°43.32'S, 166°37.43'E, 314–364 m, 19 March 1994: 10 M 4.5–5.5 mm, 3 ov. F 5.0–5.3 mm, 1 F 4.3 mm (MNHN-IU-2013-15861).—Stn CC856, 21°44.02'S, 166°37.76'E, 311–365 m, 20 March 1994: 1 M 4.0 mm (MNHN-IU-2013-13948). BATHUS 4, Stn CP889, 21°00.83'S, 164°27.34'E, 416–433 m, 2 August 1994: 1 M 5.8 mm (MNHN-IU-2013-15865). TERRASES, Stn CP3807, 22°11'S, 167°12'E, 380–400 m, 25 October 2008: 2 ov. F 4.2–5.3 mm, 1 F 4.9 mm (MNHN-IU-2011-4570).

New Caledonia. Chesterfield Islands. EBISCO, Stn CP2571, 20°26.15'S, 158°45.06'E, 298–309 m, 14 October 2005: 1 M 4.4 mm (MNHN-IU-2013-8505).

Description. *Carapace*: Slightly longer than broad; transverse ridges with dense short setae, without long setae; cervical groove distinct, laterally bifurcated. Gastric region with some transverse ridges: 1 epigastric ridge, scale-like, with 6 or 7 small spines; 2 protogastric ridges, anterior ridge uninterrupted, medially convex, with 1 parahepatic spine on each side, posterior uninterrupted, with 1 or 2 lateral scales; 2 mesogastric ridges, anterior ridge uninterrupted and not extending laterally to anteriormost of branchial marginal spines, posterior ridge scale-like; 2 metogastric ridges, anterior ridge uninterrupted, not continuing laterally to anteriorbranchial ridge, posterior ridge short. Hepatic region with 1 small spine near first marginal (anterolateral) spine. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 6 transverse ridges, 2 or 3 ridges uninterrupted. Lateral margins subparallel, with 7 or 8 spines: 2 or 3 spines in front of and 5 spines behind anterior cervical groove; first anterolateral, well-developed, slightly behind level of lateral limit of orbit, 1 or 2 small spines at midlength between anterolateral spine and anteriormost spine of branchial margin, with small spine ventral to between first and second; 2 or 3 spines on anterior branchial region, last small, and 2 or 3 spines on posterior branchial margin. Small spine on lateral limit of orbit, 1 small frontal spine between orbit and first anterolateral spine; infraorbital margin with some small spines. Rostrum narrow, 2.5 times as long as broad, length 0.7 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous small scale-like setose ridges; lateral margin with 4 deeply incised teeth, distal pair well-developed and slightly smaller than previous pair.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute; upper margin, near linea anomurica, with numerous small teeth.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted and 1 or 2 interrupted transverse ridges on tergite; somite 6 with 2 medially interrupted ridges. Males with G1 and G2.

Eyes: Ocular peduncles 1.7 times longer than broad, maximum corneal diameter 0.9 rostrum width.

Antennule: Article 1 with 2 well-developed distal spines, distodorsal larger, distomesial obsolescent; 2 small spines along lateral margin. Ultimate article with tuft of long fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine not reaching midlength of article 2. Article 2 with 2 distal spines, distolateral spine longer than distomesial, and reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor margins ending in small spine, extensor margin ending in acute angle; crista dentata with 20–21 denticles. Merus as long as ischium; flexor margin with 3 spines, proximal spine clearly longer than others, median spine smaller than distal; extensor margin ending in small spine. Carpus unarmed.

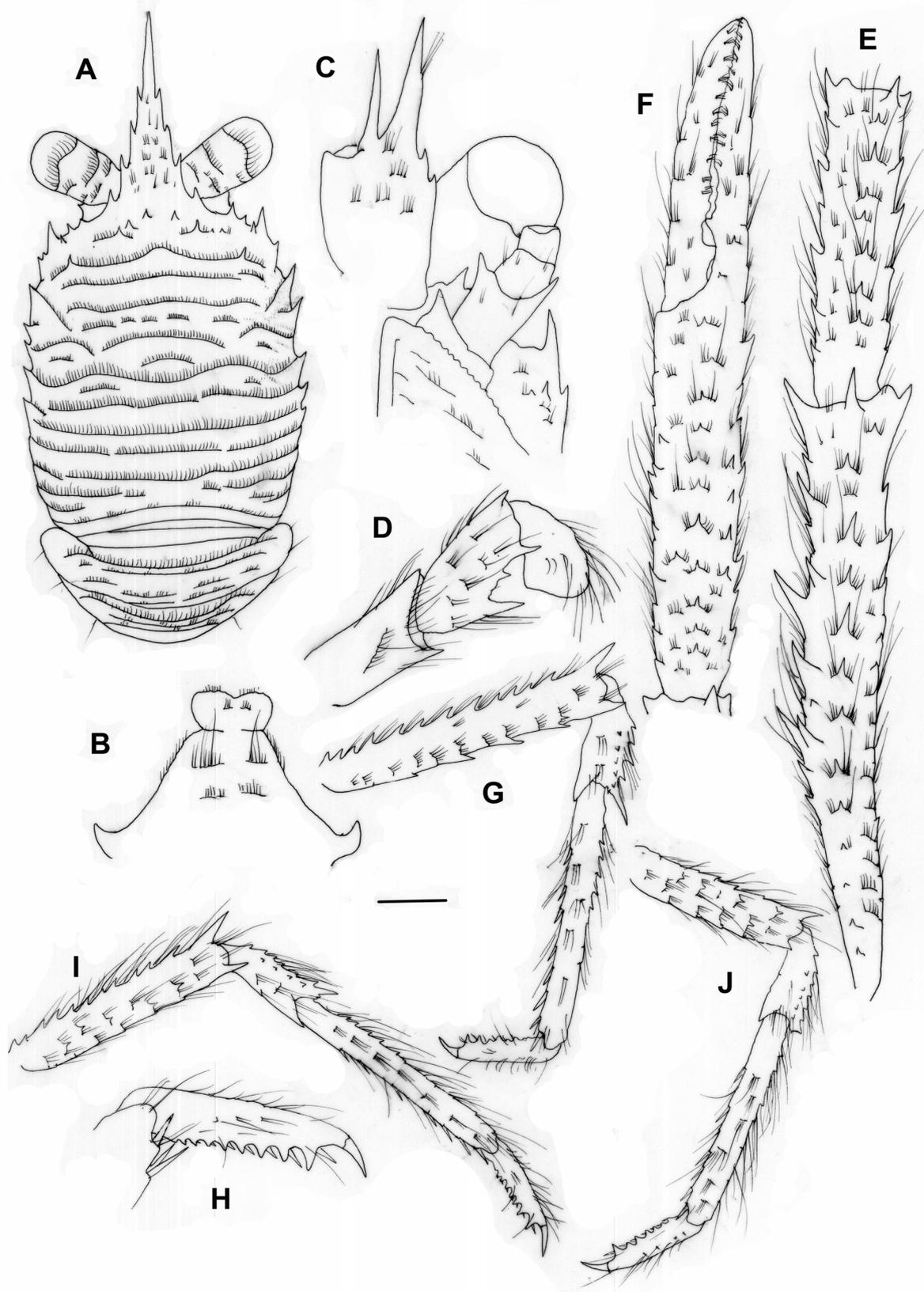


FIGURE 50. *Galathea inconspicua* Henderson, 1885, male, 5.6 mm, Vanuatu (MNHN-IU-2013-9706). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1 merus and carpus, dorsal view; F, right P1 palm and fingers, dorsal view; G, right P2, lateral view; H, right P2 dactylus, lateral view; I, right P3, lateral view; J, right P4, lateral view. Scale: A, E, F, G, I, J = 1 mm; B–D, H = 0.5 mm.

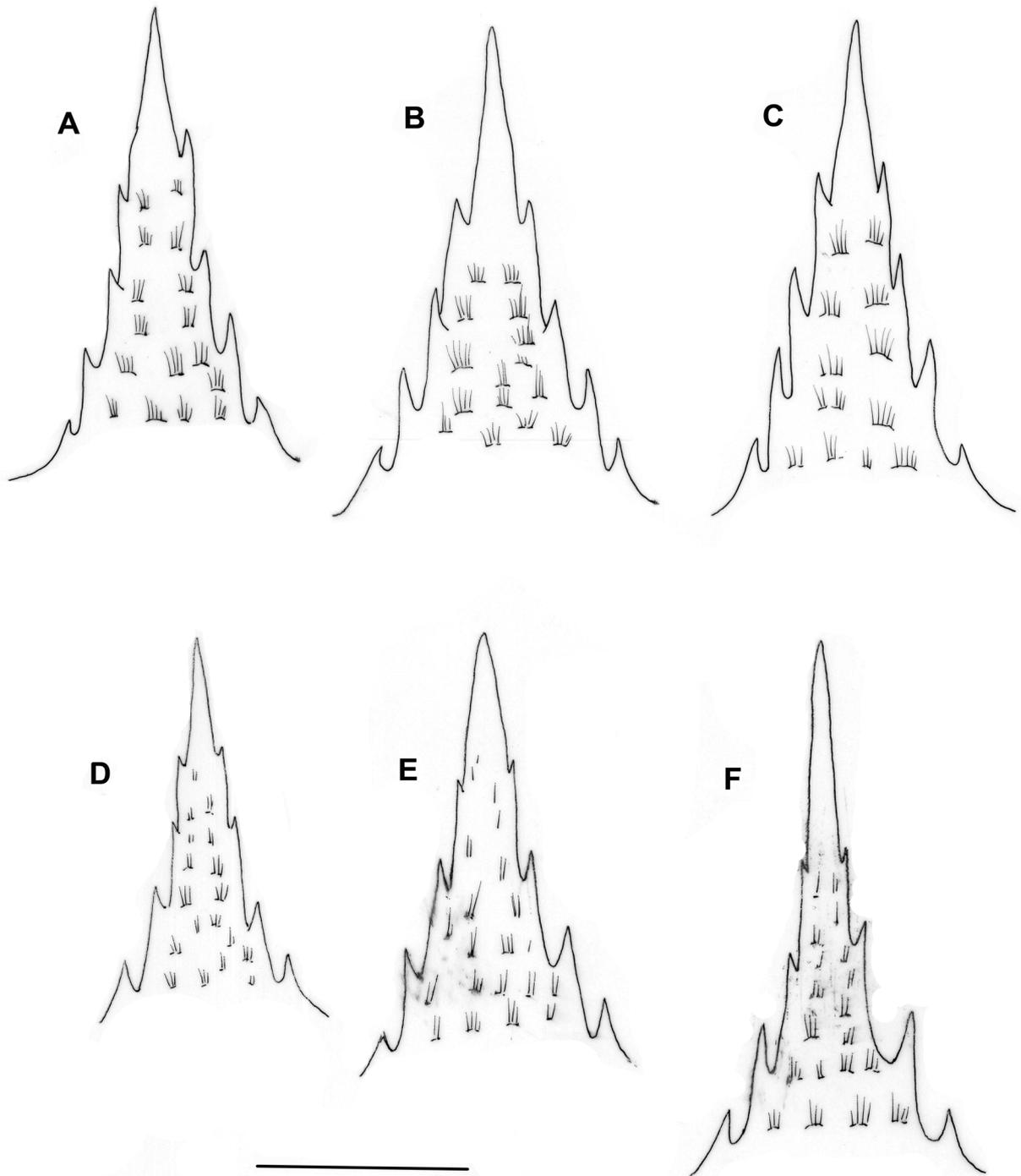


FIGURE 51. Rostrum, dorsal view. *Galathea inconspicua* Henderson, 1885: A, Chesterfield Islands, male, 4.4 mm (MNHN-IU-2013-8505); B, Vanuatu, ovigerous female, 4.8 mm (MNHN-IU-2013-13949); C, Vanuatu, male, 5.5 mm (MNHN-IU-2013-8504). *Galathea tribulosa* n. sp.: D, Solomon Islands, male, 3.8 mm (MNHN-IU-2013-15859); E, Solomon Islands, ovigerous female, 5.8 mm (MNHN-IU-2013-15858); F, Solomon Islands, ovigerous female, 6.2 mm (MNHN-IU-2013-15860). Scale = 1 mm.

P1: 8.8 times carapace length, with numerous setiferous small scales, and some scattered long setae. Merus 3.8 times carapace length, 1.9 times as long as carpus, with numerous spines, dorsomesial and distal spines stronger than others. Carpus 0.8 length of palm, 4.3 times as long as broad; dorsal surface with some small spines; mesial margin with row of spines. Palm 4.2 times longer than broad, lateral and mesial margins subparallel; small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers unarmed, 0.8 times palm length, each finger distally with two rows of teeth, spooned.

P2–4: long and slender, with some setose striae and sparse long setae. P2 1.9 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 1.9 carapace length, 6.4 times as long as broad, 1.1 times longer than P2 propodus. P3 merus 5.6 times as long as broad, 1.0 times longer than P3 propodus. P4 merus 4.0 times as long as broad, 0.8 times longer than P4 propodus. Extensor margin with row of 12 or 13 proximally diminishing spines on P2–3, 4 or 5 spines on P4; ventral margins distally ending in strong spine, lateral sides with row of small spines on P2–4. Carpi with 5–7 spines on extensor margin on P2–4; lateral surface with 4 or 5 small spines sub-parallel to extensor margin; flexor distal margin acute. Propodi 7.7–8.7 times as long as broad; extensor margin with 5–7 small proximal spines; flexor margin with 6 or 7 slender movable spines, distal two spines with another smaller spine mesial to them. Dactyli distally ending in well-curved strong spine, length 0.4–0.5 that of propodi; flexor margin with 8 or 9 proximally diminishing teeth, terminal one prominent and larger than penultimate.

Epipods present only on P1.

Coloration. Overall light brown or orange.

Remarks. *Galathea inconspicua* was originally described by Henderson (1885) on the basis of one male specimen from Banda Island. The holotype is now broken, without pereopods and then it is difficult to assess diagnostic characters. Furthermore, the illustrations given by Henderson are not accurate (Baba 1994) and the description is very short. Therefore, the differences among *G. inconspicua* and the closely related species are not easy to establish. Unfortunately, we have no specimens from the type locality, and sometimes more than one closely related species is found in samples from same stations. For these reasons, we have considered the description and illustrations by Baba (1994) representing the true *G. inconspicua*.

Galathea inconspicua belongs to the group of species with uninterrupted gastric ridges on the carapace, the carapace lateral margin armed with one small but distinct spine between the anterolateral spine and the anteriormost branchial marginal spine, the antennular basal article only with two well-developed terminal spines and the extremely narrow rostrum (2.5–3.5 times longer than broad). This group contains six closely related species, including five new species: *G. ganindo* n. sp. from the Philippines to New Caledonia, *G. inconspicua* from Indonesia to New Caledonia, *G. perone* n. sp. from the Philippines, *G. rhapsidia* n. sp. from Fiji and Tonga, *G. scolopia* n. sp. from Papua New Guinea and Vanuatu, *G. tribulosa* n. sp. from the Solomon Islands. These species can be distinguished from one another by the following characters:

Galathea ganindo n. sp. can be distinguished from the other species by the presence of two epigastric spines only on the carapace, rather than four or more spines in the other species.

Galathea perone n. sp. is easily recognized by the absence of hepatic spines, which are always present in the other species.

Galathea rhapsidia n. sp. closely resembles *G. scolopia*, *G. inconspicua* and *G. tribulosa*. They can be differentiated by the number of ridges on the abdominal somites 2–3, i.e., having two uninterrupted ridges in *G. rhapsidia*, instead of 4 in the other species. *Galathea rhapsidia* further differs from *G. inconspicua* and *G. tribulosa* by the interrupted, scale-like anterior protogastric ridge, rather than being not interrupted in the latter two species.

Galathea inconspicua is closest to *G. tribulosa*, but the two can be distinguished by the following characters:

- The rostrum has the distal pair of spines minute, clearly smaller than the second pair in *G. tribulosa*, whereas these distal spines are well-developed, and slightly smaller than the second pair in *G. inconspicua*.
- The ratio between the distance between the sinus of the distal pair of lateral spines of the rostrum and the distance between the sinus of the proximal pair is less than 0.25 in *G. tribulosa*, rather than more than 0.25 in *G. inconspicua*.

The smallest genetic distances among species pairs are observed between *G. ganindo* and *G. perone* (8.8% COI) and between *G. tribulosa* and *G. rhapsidia* (9.6% COI). The other pairwise comparisons are larger (Tab. 2).

Distribution. Previous records from Indonesia (Banda Island) and central Queensland, 296–659 m. Newly recorded from Vanuatu, New Caledonia, Chesterfield Islands, 167–480 m.

***Galathea inermis* n. sp.**

(Fig. 52)

Material examined. *Holotype*: Solomon Islands. SALOMON 1, Stn CP1802, 9°31.1'S, 160°35.0'E, 245–269 m, 2 October 2001: M 5.3 mm (MNHN-IU-2013-8316).

Paratypes: Solomon Islands. SALOMON 1, Stn CP1801, 9°25.0'S, 160°25.9'E, 264–273 m, 1 October 2001: 2 M 5.7–5.8 mm, 1 ov. F 4.8 mm (MNHN-IU-2013-8320).—Stn CP1802, 9°31.1'S, 160°35.0'E, 245–269 m, 2 October 2001: 1 M 4.2 mm (MNHN-IU-2013-8322); 1 M 4.8 mm (MNHN-IU-2013-8323); 1 ov. F 5.2 mm (MNHN-IU-2013-8321).—Stn CP1860, 9°22'S, 160°31'E, 620 m, 7 October 2001: 1 F 3.5 mm (MNHN-IU-2013-8318). SALOMON 2, Stn CP2284, 8°37.29'S, 157°21.94'E, 195–197 m, 6 November 2004: 3 M 3.4–4.5 mm (MNHN-IU-2013-8317).—Stn CP2286, 8°39.54'S, 157°23.18'E, 248–253 m, 8 November 2004: 1 M 4.5 mm (MNHN-IU-2013-8319).

Etymology. From the Latin, *inermis*, unarmed, defenseless, in reference to the absence of spines on the dorsal carapace surface.

Description. *Carapace*: As long as broad. Cervical groove distinct, laterally bifurcated. Ridges with dense short setae, without long setae. Gastric region with 7 transverse ridges: 1 epigastric ridge medially interrupted, with 2 submedian spines; 2 protogastric ridges, anterior one medially interrupted, posterior ridge scale-like; third scale-like; 2 mesogastric ridges, anterior ridge uninterrupted, laterally not continuous to anteriormost branchial marginal spine; posterior ridge scale-like; 2 metogastric ridges successively shorter posteriorly, uninterrupted and not continuing with anterior branchial ridges. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by cervical groove. Posterior branchial region with 6–8 transverse ridges, 2 or 3 of them uninterrupted; some additional scattered scales among ridges. Lateral margins subparallel, with 9 spines: 2 spines in front of and 7 spines behind anterior cervical groove; first anterolateral, well-developed, situated in frontal margin, second very small, accompanying another small spine ventral to between first and second; 3 spines on anterior branchial margin, and 4 spines on posterior branchial margin. External limit of orbit unarmed or ending in minute spine; infraorbital margin denticulate. Rostrum triangular, 1.8 times as long as broad, length 0.6 postorbital carapace length and breadth 0.3 that of carapace; dorsal surface nearly horizontal in lateral view, with small setiferous ridges; lateral margin with 5 relatively small (rarely 6), shallowly incised teeth.

Pterygostomial flap spineless on surface, with sparse short setae, anterior margin bluntly angular.

Sternun: Plastron about as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted and 2 interrupted transverse ridges on tergite, anterior ridge more distinctly elevated than posterior ridge; somites 5 and 6 with 2 medially interrupted ridges, posterior margin of somite 6 with distinct median lobe. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennula: Article 1 with 2 spines; well-developed distodorsal and distolateral spines; distomesial spine obsolescent. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 hardly visible in dorsal view, with ventral distomesial spine exceeding distal margin of article 2. Article 2 with 2 subequal distal spines, not reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with small spine on flexor distal margin; extensor margin with small but distinct distal spine; crista dentata with 20–21 denticles. Merus shorter than ischium; flexor margin with 2 strong subequal spines; extensor margin with distal spine. Carpus unarmed.

P1: 4.0 times carapace length, with setose scales and numerous long simple setae. Merus 1.8 times as long as carapace, 2.4 times as long as carpus, with small spines arranged roughly in rows, dorsomesial and ventromesial spines stronger, distal spines prominent. Carpus 0.7 length of palm, 3.0 times as long as broad; dorsal surface with some small spines arranged roughly in rows; mesial margin with 3 or 4 well-developed spines. Palm 3.8 times longer than broad, lateral and mesial margins subparallel; small spines arranged roughly in dorsolateral and dorsomesial rows. Fingers 0.8 length of palm each finger distally with two rows of teeth, spooned; opposable margins with blunt serration; fingers unarmed.

P2–4: moderately slender, with setose striae, and numerous long simple setae. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.8 length of P3 merus; P2 merus 0.9 carapace length, 6.2 times as long as broad, 1.8 times longer than P2 propodus; P3 merus 4.4 times longer than broad, 1.6 times longer than P3 propodus; P4 merus 3.5 times as long as broad, 1.4 length of P4 propodus. Extensor

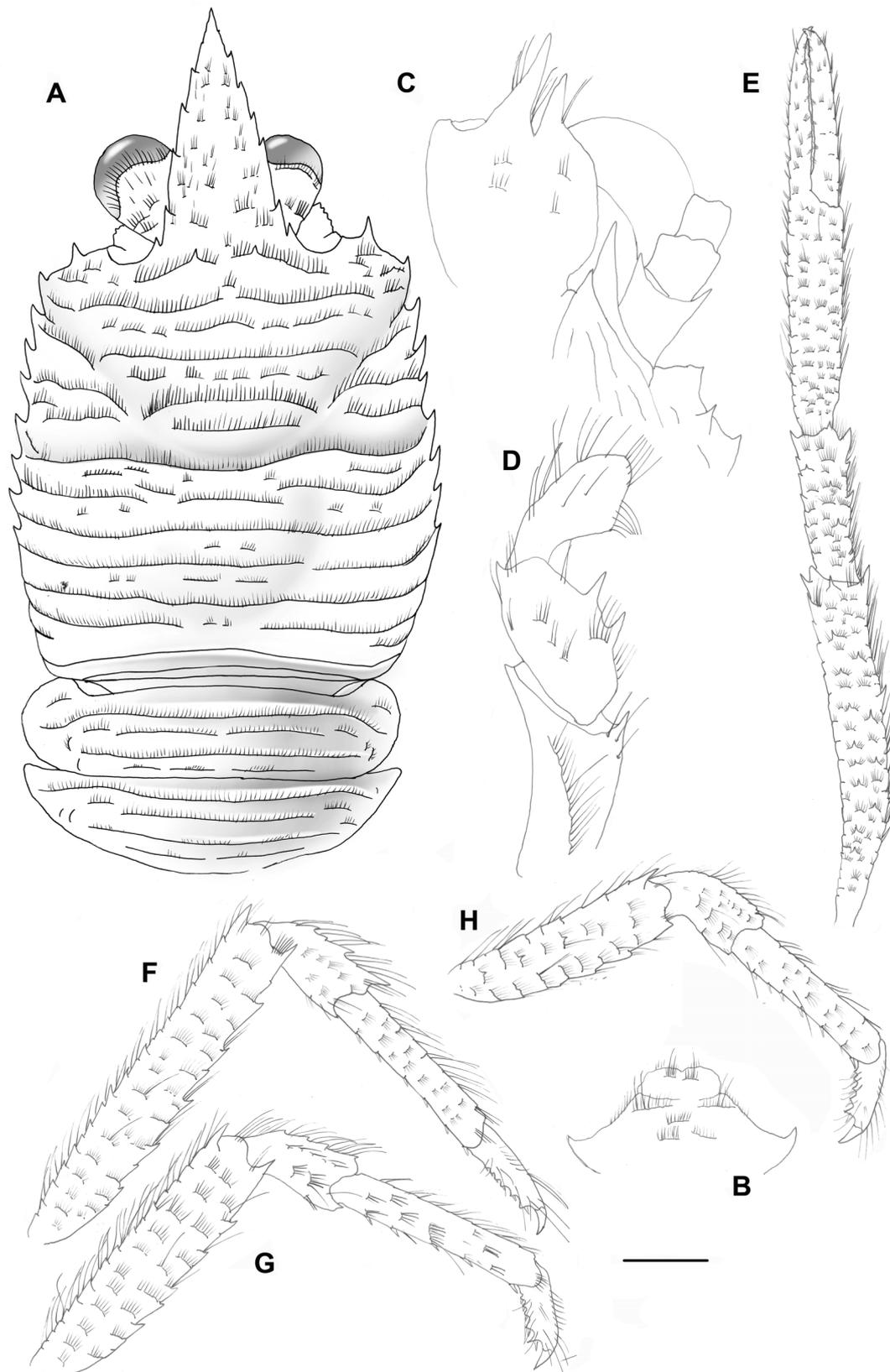


FIGURE 52. *Galathea inermis* n. sp., holotype, male, 5.3 mm, Solomon Islands (MNHN-IU-2013-8316). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

margins with row of 14–17 proximally diminishing small spines on P2–3, 2 or 3 spines only on P4; lateral surface with 2 or 3 small spines on P4; flexolateral margin distally ending in strong spine followed proximally by several prominences. Carpi with 3 or 4 small spines on extensor margin on P2–3, 1 or 2 minute spines on P4; lateral surface with granules sub-parallel to extensor margin on P2–4; flexor distal margin with small distal spine. Propodi 5.0 (P2), 4.8 (P3), 4.0 (P4) times as long as broad; extensor margin unarmed; flexor margin with 5–6 slender movable spines on P2–4. Dactyli distally ending in well-curved strong spine, 0.5 length of propodi; flexor margin with 5 or 6 successively diminishing teeth, terminal one prominent.

Epipods on P1.

Remarks. *Galathea inermis* n. sp. is easily differentiated from the other closely related species, *G. paulae* n. sp. from Fiji and Tonga, and *G. sanctae* Macpherson, 2012, from Vanuatu and New Caledonia, by the different number of transverse ridges on the posterior branchial region, six to eight in *G. inermis*, instead of four or five in the latter two species.

The genetic divergences among *G. inermis* and the other two species are higher than 17.4% (*G. paulae*) (COI) and 7.0% (*G. paulae*), 3.4% (*G. sanctae*) (16S rRNA) (Tab. 3).

Distribution. Solomon Islands, 195–620 m.

***Galathea inflata* Potts, 1915**

(Fig. 117F)

Galathea inflata Potts, 1915: 85, pl. 1, fig. 7 (Torres Strait, on *Comanthus timorensis*).—Baba, 1979b: 649, fig. 2 (Banda Island, Gorong Island and Marsegu Island, subtidal).—Wu *et al.*, 1998: 92, figs 10, 12G (Taiwan).—Fujita & Baba, 1999: 115, fig. 2 (Okinawa Island, Ryukyu Islands, 4.4–28 m, associated with crinoids).—Fujita *et al.*, 2001: 112, figs 1–12 (larvae) (Okinawa Island, Ryukyu Islands, subtidal, associated with *Comaster schlegeli*).—Kato & Okuno, 2001: 87, with fig. (Hachijo Island, Izu Islands, Japan, 10 m).—Davie, 2002: 61 (no record).—Kawamoto & Okuno, 2003: 95, unnumbered fig. (Kume Island, Ryukyu Islands, 8 m, on crinoid).—Kawamoto & Okuno, 2006: 95, unnumbered fig. (Kume Island, Ryukyu Islands, 8 m, associated with crinoid).—Baba & Fujita, 2008: 52, fig. 5 (Ryukyu Islands, 6.7–8.0 m).—Baba *et al.*, 2008: 70 (compilation).—Baba *et al.*, 2009: 113, figs. 92–93 (Taiwan).

Dubious identification:

Galathea inflata.—Baba, 1969c: 33, figs 1–2 (Amami-oshima Island, Ryukyu Islands, subtidal).

Material examined. Philippines. Dumaran Channel, NE Palawan, 2–3 m, 1 May 1985: 1 M 3.6 mm, 1 ov. F 3.9 mm (MNHN-IU-2013-8341).

Papua New Guinea. PAPUA NIUGINI, Stn PR43, 05°15.5'S, 145°49.1'E, 0 m, 16 November 2012: 1 ov. F 6.3 mm (MNHN-IU-2013-509).—Stn PR97, 05°12.4'S, 145°49'E, 0 m, 24 November 2012: 1 F 2.8 mm (MNHN-IU-2013-831).—Stn PB16, 05°04.7'S, 145°48.8'E, 5 m, 30 December 2012: 1 M 2.0 mm, 1 ov. F 2.6 mm (MNHN-IU-2013-660).

New Caledonia. Lifou Island. LIFOU, Stn 1432, 20°53.5'S, 167°02.7'E, 12–32 m, 04/07/21 November 2000: 1 ov. F 5.0 mm (MNHN-IU-2013-8342).

Remarks. The specimens agree quite well the descriptions and illustrations of previous authors (see synonymy). In a few specimens the epipods are present on P1 and P2 only (usually on P1–3).

The genetic divergences among *G. inflata* and other species are higher than 13.1% (*G. ternatensis* De Man, 1902) (COI), and 10.6% (*G. pubescens* Stimpson, 1858) (16S rRNA) (Tab. 2).

Distribution. Previous records from Japan (Ryukyu Islands), Taiwan, Indonesia (Banda, Gorong and Marsegu Island), and Torres Strait; subtidal to 10 m). Present material from the Philippines and Papua New Guinea and New Caledonia (Lifou Island); 0–32 m.

***Galathea kuboi* Miyake & Baba, 1967**

Galathea kuboi Miyake & Baba, 1967a: 205, fig. 2 (off Daiozaki, Mie Prefecture, Japan).—Baba, 1988: 75 (off N Mindanao and South China Sea off SW Luzon, Philippines, 366–392 m).—Komai, 2000: 352 (list).—Baba, 2005: 77, fig. 26, 244 (key, synonymies, Kei Islands, Indonesia, 290 m).—Baba *et al.*, 2008: 71 (compilation).

Material examined. Philippines. MUSORSTOM 2, Stn CP49, 13°38'N, 121°44'E, 416–425 m, 26 November 1980: 1 M 5.1 mm (MNHN-IU-2013-8336), 1 ov. F 6.2 mm (MNHN-IU-2013-8337), 1 ov. F 7.7 mm (MNHN-IU-2013-8335).

Remarks. The specimens from the Philippines agree quite well with the original description and other studies. *Galathea kuboi* is closely related to *G. nuda* n. sp. from French Polynesia and Chesterfield Islands, and *G. setigera* n. sp. from Indonesia (see Remarks of *G. setigera*). No genetic data are available for *G. kuboi*.

Distribution. Japan, Philippines, Indonesia (Kei Islands), 290–425 m.

***Galathea labidolepta* Stimpson, 1858**

(Fig. 53)

Galathea labidolepta Stimpson, 1858: 89 (Simons Bay, Cape of Good Hope, 22 m).—Stimpson, 1907: 231, Simons Bay, Cape of Good Hope, 22 m).—Doflein & Balss, 1913: 140, fig. 6 (South Africa near East London, 80–102 m).—Lenz & Strunk, 1914: 287, fig. 1.—Baba *et al.*, 2008: 71 (compilation).

Galathea intermedia.—Barnard, 1946: 378 (South African waters).—Barnard, 1950: 483, figs 91, a–e (Simon's Bay, Agulhas Bank, Algoa Bay, and East London, 37–77 m).—Tirmizi & Javed, 1993: 69, fig. 30 (western Indian Ocean off South Africa, 68–70 m) (not *Galathea intermedia* Liljeborg, 1851).

Material examined. South Africa. Port Elizabeth, White Island, 18–20 m, 18 February 1999: 1 M 4.2 mm (UF6885).

South Africa, Agulhas Cape, R/S Valdivia, Stn 96, 35°2'S, 19°58'E, 80 m, 27 October 1898: 1 ov. F 5.9 mm (SMF 4570).

Description. *Carapace*: as long as broad; transverse ridges with dense short setae, without long setae; cervical groove distinct, laterally bifurcated. Gastric region with 8 transverse ridges: 2 epigastric ridges, anterior ridge medially interrupted, with 2 median spines, posterior ridge scale-like; 2 protogastric ridges, anterior one uninterrupted, without parahepatic spines, posterior ridge scale-like; 1 mesogastric ridge uninterrupted, not extending laterally to anteriormost of branchial marginal spines; 3 metogastric ridges, anterior ridge uninterrupted and extending laterally to anterior branchial ridges. Hepatic region unarmed or with 1 small hepatic spine in one side near first anterolateral spine (only in one specimen). Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 6 ridges, 4 uninterrupted. Lateral margins well convex medially, with 7 spines: 1 spine in front of and 6 spines behind anterior cervical groove; first anterolateral, well-developed, slightly posterior to level of lateral limit of orbit, without spine ventral to between first and anteriormost spine of branchial margin; 3 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. Small spine on lateral limit of orbit, with 1 small frontal spine; infraorbital margin with 2 spines. Rostrum 1.9 as long as broad, length 0.6 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.4 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some setose scales; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, with 7 or 8 distinct spines on upper margin near linea anomurica, ridges with short setae, anterior margin blunt.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somites 5 and 6 each with 2 medially interrupted ridges; posteromedian margin of somite 6 slightly convex. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 2 well-developed distal spines, distodorsal larger, distomesial spine obsolescent. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine exceeding distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine slightly longer than distomesial, reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Merus more than twice ischium length, with 1 or 2 small spines on flexor distal margin, 1 distal spine on extensor margin; crista dentata with 17–20 denticles. Merus with flexor margin with 2 subequal spines in distal half; extensor margin with 1 small distal spine, and 0–3 small spines along extensor border. Carpus unarmed; propodus elongate.

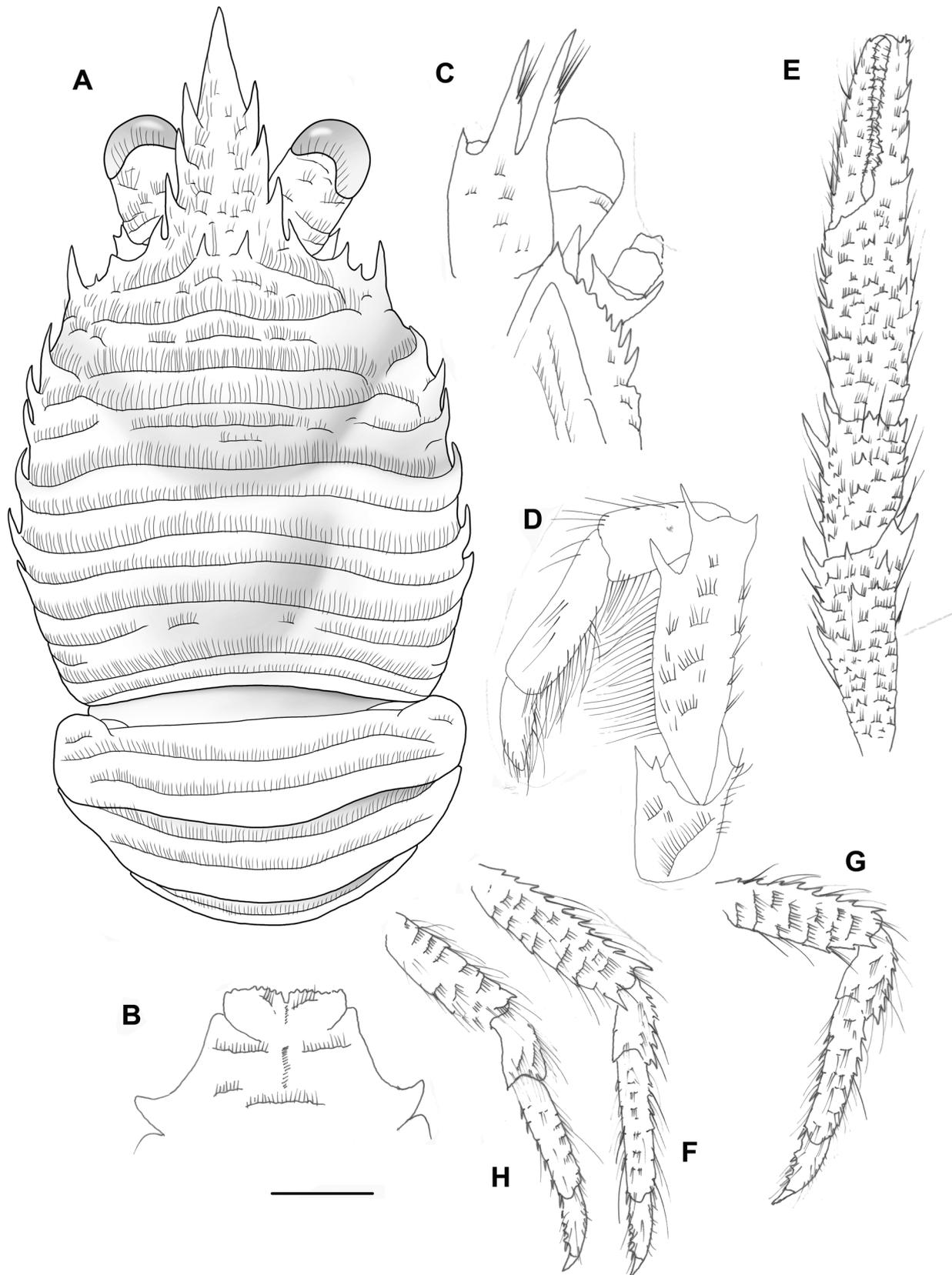


FIGURE 53. *Galathea labidolepta* Stimpson, 1858, A-C, E-H, male, 4.2 mm, South Africa (UF6885); D, ovigerous female 5.9 mm, South Africa (SMF 4570). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, left Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, F-H = 1 mm; E = 2 mm; B-D = 0.5 mm.

P1: 2.7 times carapace length, covered with finely setiferous scales, with scattered long setae; setae non-iridescent. Merus 0.9 times carapace length, 1.4 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.8 length of palm, 1.9 times as long as broad; dorsal and lateral surfaces with some spines; mesial margin with 3 or 4 spines (distal second strong). Palm 2.2 times longer than broad, lateral and mesial margins slightly convex; spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side, dorsolateral row continuing along fixed finger. Fingers slightly shorter than palm, distally not spooned; movable finger unarmed.

P2–4: moderately slender, with setose striae and sparse long setae; setae non-iridescent. *P2* 1.8 times carapace length. Meri successively shorter posteriorly (*P3* merus 0.9 length of *P3* merus, *P4* merus 0.9 length of *P3* merus); *P2* merus 0.7 carapace length, 3.4 times as long as broad, 1.4 times longer than *P2* propodus. Extensor margin with row of 8–12 proximally diminishing spines on *P2–3*, only distal spine on *P4*; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several eminences, lateral sides unarmed. Carpi with 6 or 7 spines on extensor margin on *P2–3*, unarmed on *P4*; lateral surface with 2 or 3 acute granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 3.5–4.0 times as long as broad; extensor margin with 3 or 4 proximal spines on *P2–3*, unarmed on *P4*; flexor margin with 5 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods on *P1*.

Remarks. *Galathea labidolepta* was described by Stimpson (1858) on the basis of specimens collected from the Cape of Good Hope, South Africa. Later, Doflein & Balss (1913), and Lenz & Strunk (1914) illustrated the species after some specimens collected from the South African coast. *Galathea labidolepta* is characteristic by the presence of a row of spines along the upper margin of the pterygostomial flap adjacent to the linea anomurica. Furthermore, the *Mxp3* merus is more than twice as long as the ischium. These characters are not observed in other species known from the Pacific and Indian Oceans, while being closer to *G. intermedia* Liljeborg, 1851 from the Eastern Atlantic (Norway to Angola). The taxonomy of this species, together with other European species of *Galathea* is now under revision. Therefore, further studies on this species and other closely related taxa, e.g. *G. bolivari* Zariquiey-Alvarez, 1950, *G. cenarroi* Zariquiey-Alvarez, 1968, and *G. labidolepta*, are needed in order to establish the specific identities (see also Udekem D'Acoz 1999).

No genetic data are available for *G. labidolepta*.

Distribution. South Africa, from Cape of Good Hope to Port Elizabeth and East London, 18–102 m.

***Galathea latirostris* Dana, 1852**

(Fig. 54)

Galathea latirostris Dana, 1852: 480 (Fiji Islands, from coral rock).—Dana, 1855: pl. 30, fig. 8.—Baba *et al.*, 2008: 71 (in part, compilation).

Dubious identifications.

Galathea latirostris Lenz, 1902: 742 (Juan Fernandez Island).—Yokoya, 1933: 57 (Vicinity of Tanabe, E of Kagoshima, coast of Miyazaki, near Omae-zaki, S coast of Atsumi, and between Iki and Goto Islands, 18–190 m).—Boone, 1935: 50, pl. 12 (Ingram Island (Queensland), Samoa, Tahiti (Society Islands), Raiatea Island (Society Islands)).—Poupin, 1996: 20 (compilation of French Polynesia records).—Davie, 2002: 61 (no record).

?*Galathea cf. latirostris*.—Jones & Morgan, 2002: 132, color figure (no record).

Material examined. Fiji. 16°45'S, 179°06'W, 14 May 1965: 1 ov. F 2.7 mm, 1 F 1.6 mm (ZMUC CRU-11222).

Description. *Carapace*: Slightly broader than long; transverse ridges with dense very short setae, without long setae; cervical groove barely distinct. Gastric region with 4 transverse ridges: 1 epigastric ridge medially interrupted, medially convex, unarmed; 1 protogastric uninterrupted ridge, without parahepatic spines; 1 mesogastric ridge uninterrupted and extending laterally to anteriormost of branchial marginal spines; 1 metagastric ridge uninterrupted, not continuing laterally to anteriorbranchial ridges. Hepatic region unarmed. Anterior branchial region with a few distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 5 transverse ridges, 2 ridges uninterrupted. Lateral margins slightly convex, with 5 spines: 1 spine in front of and 4 spines behind anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, with spine ventral to between first and second spines; 2 spines on anterior

branchial region, and 2 spines on posterior branchial margin, last small. Small spine between lateral limit of orbit and anterolateral spine; infraorbital margin with strong spine. Rostrum as long as broad, length 0.6 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some short setae; lateral margin with 4 shallowly incised sharp teeth.

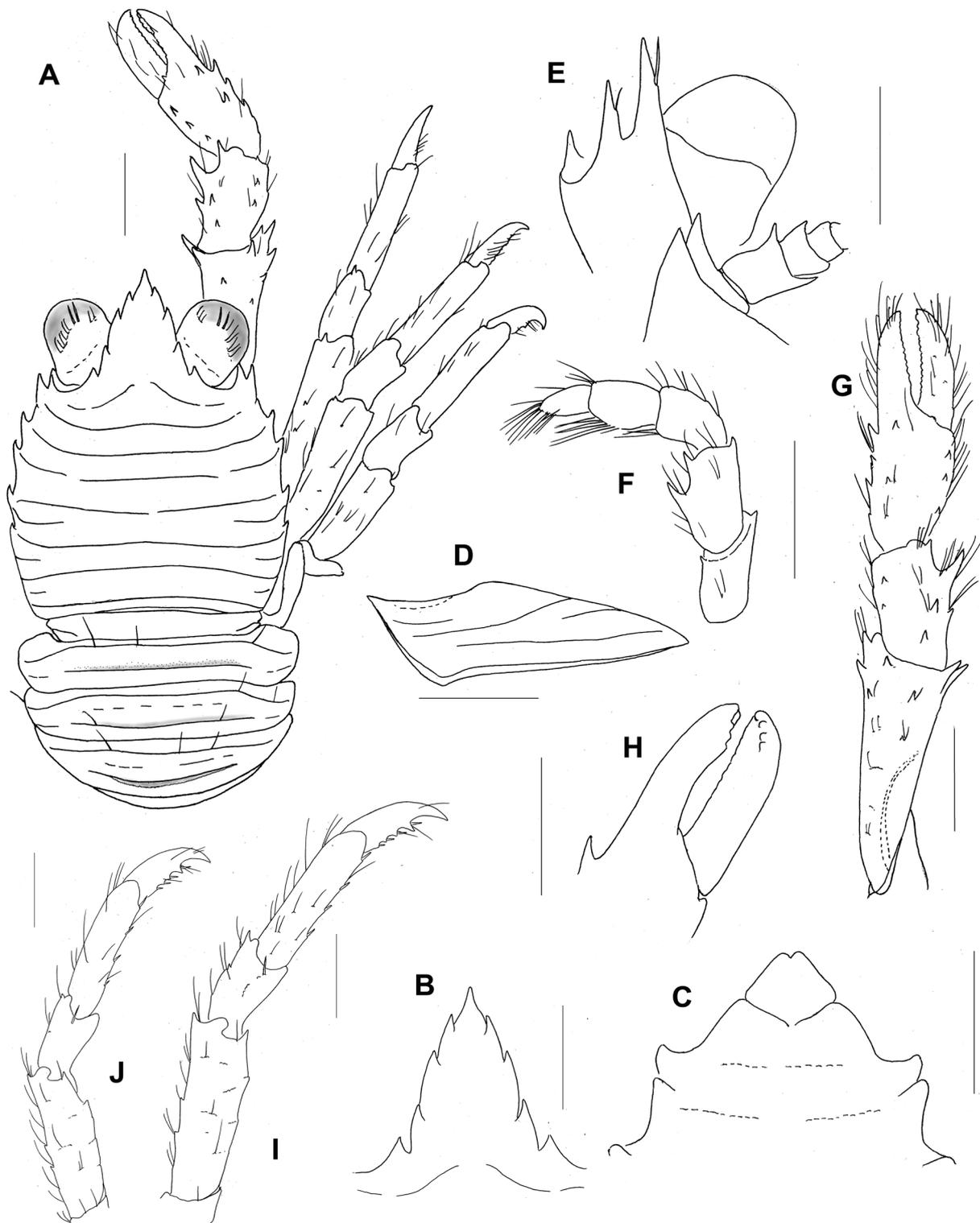


FIGURE 54. *Galathea latirostris* Dana, 1852, female, 1.6 mm, Fiji (ZMUC CRU-11222). A, carapace, abdomen, and pereiopods, dorsal view; B, rostrum, dorsal view; C, thoracic sternites 3, 4, and 5; D, left pterygostomian region; E, left part of cephalothorax, showing antennular and antennal peduncles; F, left Mxp3, lateral view; G, left P1, dorsal view; H, P1 fingers, ventral view; I, right P3, lateral view; J, right P4, lateral view. Scales = 1 mm.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 with 2 uninterrupted ridges; somites 5 and 6 smooth.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3, distodorsal larger, distomesial spine clearly smaller than others. Ultimate article a few fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine barely reaching distal margin of article 2. Article 2 with 2 subequal distal spines, reaching midlength of article 3. Article 3 with distomesial spine; article 4 unarmed.

Mxp3: Merus as long as ischium; flexor margin with 2 well-developed spines, distal spine smaller than proximal spine; extensor margin with small distal spine. Carpus unarmed.

P1: 1.7 times carapace length, somewhat depressed on palm, more so on fingers, covered with finely setiferous scales, with scattered long setae. Merus 0.8 times length of carapace, 1.8 times as long as carpus, with some spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 1.1 length of palm, 1.9 times as long as broad; dorsal and lateral surfaces with some spines; mesial margin with 3 spines (second strong). Palm 1.5 times longer than broad, lateral and mesial margins slightly convex; spines arranged roughly in dorsolateral and dorsomesial rows, dorsal side with some scattered spines. Fingers slightly longer than palm, unarmed; each finger distally with two rows of teeth, spooned.

P2–4: moderately slender, with setose striae and sparse long plumose setae. P2 2.6 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus as long as P3 merus); P2 merus 0.7 carapace length, 3.1 times as long as broad, 1.2 times longer than P2 propodus; P3 merus 3.0 times as long as broad, 1.2 times longer than P3 propodus; P4 merus 3.0 times as long as broad, 1.1 times longer than P4 propodus. Extensor margin of P2–3 meri with row of 4 proximally diminishing spines, 3 spines on P4; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several eminences; lateral sides unarmed. Carpi with 2 spines on extensor margin on P2–3, 1 distal spine on P4; lateral surface with 2 small spines or granules sub-parallel to extensor margin; flexor distal margin blunt. P2–4 propodi 3.5–3.7 times as long as broad; extensor margin unarmed; flexor margin with 4 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 4 proximally diminishing teeth, terminal one prominent.

Epipods present on P1.

Remarks. The type material of *Galathea latirostris* was collected from Fiji, but unfortunately it is no longer extant (destroyed by the Great Chicago Fire in 1871, see also Evans 1967). The present two female specimens from Fiji agree quite well with the short description and illustrations provided by Dana (1852, 1855). The closest relative is *G. spinimanus* Borradaile, 1900 from Lifou, New Caledonia. Unfortunately, additional material of *G. spinimanus* Borradaile, 1900 was not available for study, and thus sufficient comparison between the two species is not easy. After the illustrations of both species, however, the two species can be easily distinguished by the size of the lateral teeth of the rostrum. These teeth are shallowly incised in *G. latirostris*, whereas they are deeply incised in *G. spinimanus*.

No genetic data are available for *G. latirostris*.

Distribution. Fiji Islands, shallow waters.

***Galathea lemaitrei* n. sp.**

(Fig. 55)

Material examined. *Holotype*: Red Sea. Sudan, Al Bahr al Ahmar. Sanganeb, SAN107, 10 m, 1 October 1992: ov. F 2.9 mm (SMF).

Paratypes: Red Sea. Sudan, Al Bahr al Ahmar. Sanganeb, SAN107, 10 m, 1 October 1992: 4 M 2.5–2.8 mm, 3 ov. F 2.3–2.9 mm, 2 F 1.8–2.0 mm (SMF).—SAN124, 42 m, 2 October 1992: 2 M 2.5–2.9 mm, 2 ov. F 2.5–2.8 mm, 1 F 2.5 mm (SMF). Saudi Arabia, Farasan Banks, Dolphen Lagoon, 19.0053°N, 40.1482°E, 1–7 m, 4 March 2013: 1 M 2.5 mm (UF36560).

Etymology. Named for Rafael Lemaitre, for his major contributions to anomuran systematics.

Description. *Carapace*: As long as broad; transverse ridges with dense short setae; cervical groove distinct, laterally bifurcated. Gastric region with 5 transverse ridges: 1 epigastric medially interrupted, with 2 spines; 1 protogastric ridge uninterrupted, 1 parahepatic spine on each side; 1 mesogastric scale-like ridge; 2 metagastric

ridges, anterior one medially interrupted, posterior ridge short. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 4 transverse ridges, 2 of them uninterrupted. Lateral margins slightly convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, slightly behind level of lateral limit of orbit, second spine small, 1 spine ventral to between first and second spine; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin. Small spine on limit of orbit; infraorbital margin with well-developed spine. Rostrum 1.6 times as long as broad, length 0.6 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.2 distance between proximalmost lateral incisions; dorsal surface longitudinally concave, with some small setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somite 2 with 2 uninterrupted transverse ridges on tergite; somites 3–4 with anterior ridge only; somites 5–6 smooth, or with some scales, posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.4 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger than others. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 with strong distomesial spine reaching or exceeding antennal peduncle. Article 2 with 2 subequal distal spines, reaching end of article 3. Article 3 with distomesial spine; article 4 unarmed.

Mxp3: Ischium with flexor and extensor margins ending in blunt point; crista dentata with 21–24 denticles. Merus as long as ischium; flexor margin with 2 spines, proximal spine larger than distal; extensor margin unarmed. Carpus unarmed.

P1: 2.4 times carapace length, somewhat depressed on palm, more so on fingers, with some setiferous scales, and some scattered long iridescent setae. Merus as long as carapace, 1.6–1.7 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus as long or slightly larger than palm, 2.4–2.5 times as long as broad; dorsal surface with some small spines; mesial margin with 2 or 3 well-developed spines, distal second much stronger than others. Palm 1.9–2.5 times longer than broad, lateral and mesial margins subparallel; well-developed spines arranged roughly in dorsal, dorsolateral and dorsomesial rows; dorsolateral row continuing along proximal part of fixed finger. Fingers as long as palm, each finger with two rows of teeth distally spooned; movable finger with some small proximal spines.

P2–4: moderately long and slender, with some setose striae and some long setae; setae non-iridescent. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P3 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7 carapace length, 4.5 times as long as broad, 1.4 times longer than P2 propodus. P3 merus 3.7 times as long as broad, 1.2 times longer than P3 propodus. P4 merus 3.1 times as long as broad, slightly longer than P4 propodus. Extensor margin with row of 8 proximally diminishing spines on P2–3; 1 distal spine on P4; ventral margins distally ending in strong spine, lateral side with 2 spines on P4; ventromesial margin with terminal spine on P2. Carpi with 2–4 spines on extensor margin on P2–3, 1 or 2 on P4; lateral surface with 3 or 4 small spines or acute granules sub-parallel to extensor margin; flexor distal margin with minute spine. Propodi 4.0–5.0 times as long as broad; extensor margin with 1–3 proximal spines; flexor margin with 4 or 5 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6 that of propodi; flexor margin with 5 or 6 proximally diminishing teeth, terminal one prominent.

Epipods present on P1 and P2.

Coloration. Base color translucent light orange, with numerous minute red spots on carapace and abdomen. Carapace with some whitish large spots on each branchial region. P1 with reddish band on distal part of merus, carpus, palm and proximal part of fingers; spines reddish. P2–4 each with red and whitish bands, white band on distal part of propodus and proximal part of dactylus.

Remarks. *Galathea lemaitrei* n. sp. is very close to *G. autahi* n. sp. from the French Polynesia, Vanuatu, New Caledonia, and New South Wales. The two species can be easily distinguished by the following characters:

- The epipods are present on P1 and P2 in *G. lemaitrei*, instead of only on P1 in *G. autahi*.
- The P1 palm has rows of well-developed spines in *G. autahi*, whereas these spines are minute and scattered on the dorsal surface and margins in *G. lemaitrei*.
- The Mxp3 merus is unarmed on the extensor margin in *G. lemaitrei*, while armed with a distal spine in *G. autahi*.

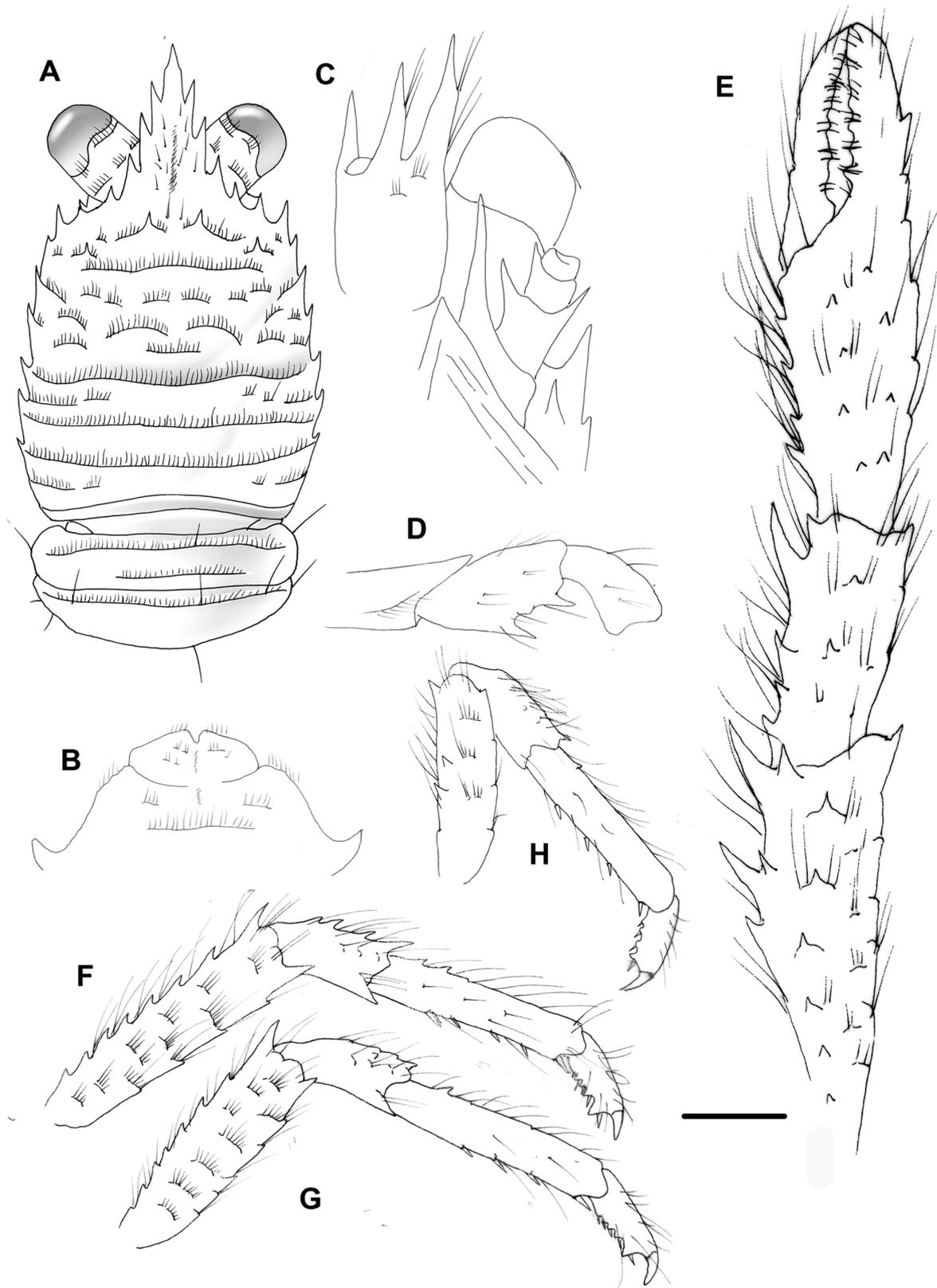


FIGURE 55. *Galathea lemaitrei* n. sp., A–D, holotype, ovigerous female, 2.9 mm, Red Sea (SMF); E–H, paratype, male, 2.5 mm, Saudi Arabia, (UF36560). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

On the other hand, *G. lemaitrei* and *G. autahi* also resemble *G. halia* **n. sp.** from the Philippines to northwestern Australia, Vanuatu and New Caledonia. Nevertheless, *G. halia* differs from *G. lemaitrei* and *G. autahi* in having a pair of hepatic spine on the carapace (absent in the latter two species) and the shorter distomesial spine of the antennal article 1 (far falling short of the end of the antennal article 3 in *G. halia*, instead of reaching or overreaching it in the latter two species). Furthermore, the living color patterns of *G. halia* and *G. autahi* are different. The carapace and abdomen of *G. halia* is light brown, whereas the color is red in *G. autahi*.

The genetic divergences between *G. autahi* and *G. halia* were 17.3% (COI) and 7.4% (16S rRNA) (Tab. 2). No genetic data are available for *G. lemaitrei*.

Distribution. Red Sea, 10–42 m.

***Galathea lemniscata* n. sp.**

(Figs 56, 117G)

Material examined. *Holotype:* New Caledonia. Chesterfield Islands. MUSORSTOM 5, Stn DW348, 19°36.00'S, 158°31.70'E, 260 m, 17 October 1986: F 4.8 mm (MNHN-IU-2013-15873).

Paratypes: Vanuatu. MUSORSTOM 8, Stn DW966, 20°18.80'S, 169°51.91'E, 128–150 m, 21 September 1994: 1 F 7.6 mm (MNHN-IU-2013-15876).

New Caledonia. Chesterfield Islands. CHALCAL 84, Stn D35, 19°44.84'S, 158°25.83'E, 210 m, 21 July 1984: 1 ov. F 6.9 mm (MNHN-IU-2013-15875). MUSORSTOM 5, Stn DC377, 19°48.60'S, 158°29.10'E, 260–270 m, 20 October 1986: 1 F 4.8 mm (MNHN-IU-2013-15878).

New Caledonia. SMIB 5, Stn DW75, 23°40.90'S, 168°00.80'E, 270 m, 7 September 1989: 1 M 5.4 mm (MNHN-IU-2013-15874). HALIPRO 1, Stn CP851, 21°43.32'S, 166°37.43'E, 314–364 m, 19 March 1994: 1 F 9.3 mm (MNHN-IU-2013-15877).

New Caledonia. Lifou Island. LIFOU, Stn 1462, 20°47.1'S, 167°03.2'E, 70–120 m, 21 November 2000: 1 ov. F 5.2 mm (MNHN-IU-2013-9714).

Etymology. From the Latin *lemniscatus*, adorned with ribbons, in reference to the whitish bands in the body.

Description. *Carapace:* 0.9 times as long as broad; ridges with short fine setae, with a few scattered long simple setae; cervical groove slightly distinct, laterally bifurcated; gastric and anterior branchial regions only with scale-like or in concentric arcs; dorsal surface unarmed; mid-transverse ridge interrupted or uninterrupted, preceded by shallow cervical groove, followed by 5 ridges, 1 or 2 uninterrupted. Lateral margins convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral; second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, accompanying another spine ventral to between first and second; 2 spines on anterior branchial margin, and 3 spines on posterior branchial margin. External limit of orbit with small spine; infraorbital margin with 2 or 3 small spines. Rostrum broad triangular, 1.6 times as long as broad, length 0.6 postorbital carapace length and breadth 0.3 that of carapace, nearly horizontal in lateral view; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface with a few small scale-like setiferous ridges; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, unarmed, with sparse short setae, anterior margin blunt.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 with 2 transverse ridges, anterior ridge more distinctly elevated than posterior ridge; somites 5 and 6 with 2 medially interrupted ridges, posteromedian margin nearly transversal with setiferous ridge. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed spines, distodorsal larger; distomesial spine slightly smaller than distoventral. Ultimate article with a few short fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching midlength of article 2. Article 2 with 2 subequal distal spines, reaching end of article 3. Article 3 with distinct distomesial spine. Article 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor and flexor margins ending in spine; crista dentata with 13 or 14 denticles. Merus equally long as ischium; flexor margin with 2 strong subequal spines, proximal one located at midlength, distal one at terminal end; extensor margin with distal spine. Carpus unarmed.

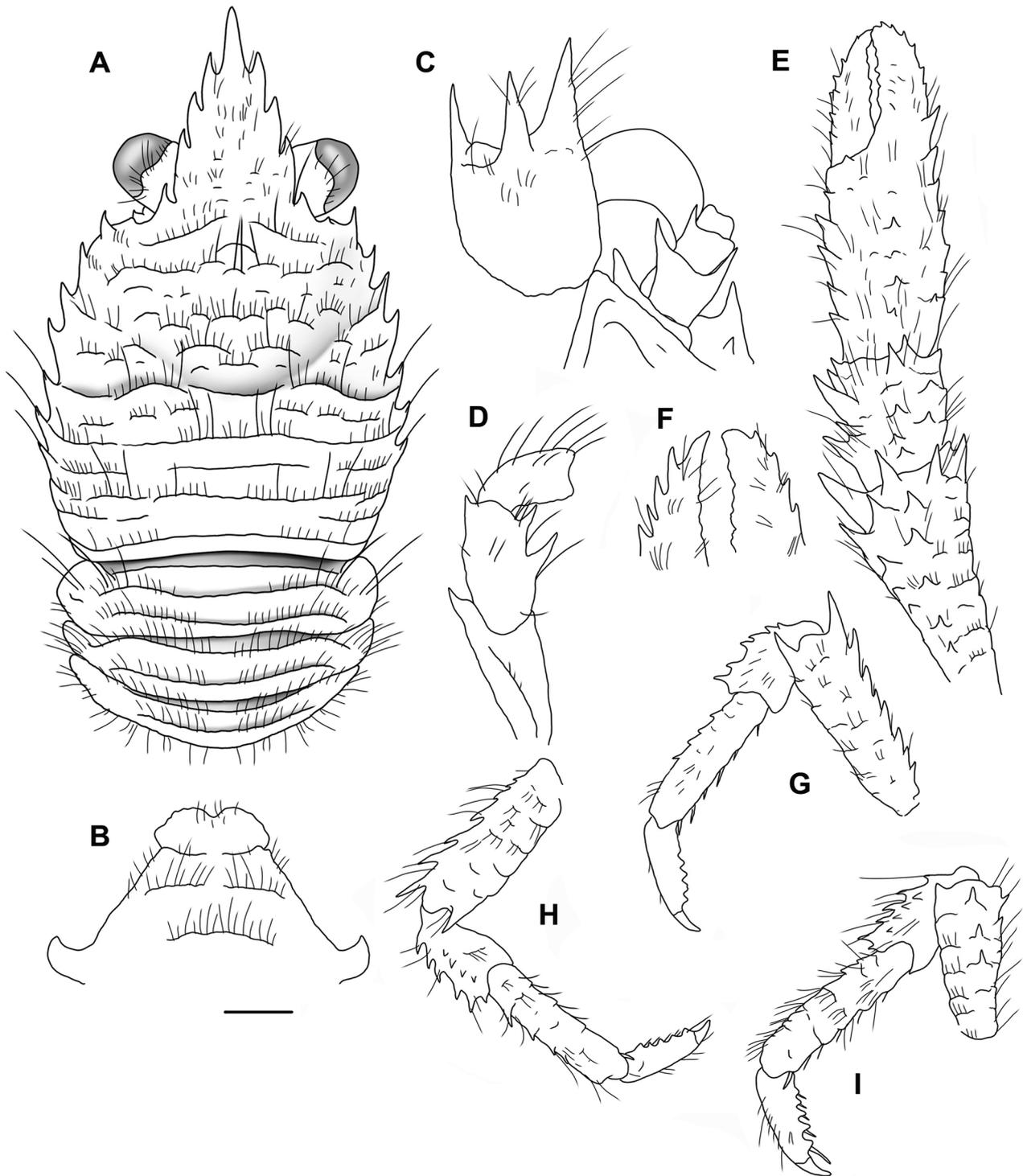


FIGURE 56. *Galathea lemniscata* n. sp., holotype, female, 4.8 mm, New Caledonia, Chesterfield Islands (MNHN-IU-2013-15873). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P1 fingers, ventral view; G, right P2, lateral view; H, right P3, lateral view; I, right P4, lateral view. Scale: A, E, G, H, I = 1 mm; B–D, F = 0.5 mm.

P1: 2.1 times postorbital carapace length, relatively slender, somewhat depressed on palm, more so on fingers. Merus 0.7 times length of carapace, 1.7 times as long as carpus, with spines arranged roughly in rows, distal spines prominent. Carpus 0.7 length of palm, 1.3 times as long as broad; dorsal surface with small spines arranged roughly in longitudinal rows; mesial margin with 3 or 4 strong spines, distal second largest. Palm 1.6 times longer than

broad, lateral and mesial margins subparallel; spines arranged roughly in rows; dorsolateral row continuing on to lateral margin of fixed finger; dorsomesial row continuing on to mesial margin of movable finger. Fingers 0.8 length of palm, distally not spooned, with 1 row of teeth, opposable margins nearly straight, with blunt serration.

P2–4: moderately slender, with setose striae and sparse long plumose setae. P2 1.6 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P3 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.6 carapace length, 2.7 times as long as broad, 1.3 times longer than P2 propodus. Extensor margin with row of 7 or 8 proximally diminishing spines on P2–3, 2 spines on P4; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several eminences, lateral sides with 3 spines on P4. Carpi with 6–7 spines on extensor margin on P2–4; lateral surface with 3 or 4 spines or acute granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 3.5–3.7 times as long as broad; extensor margin with 2–4 proximal spines; flexor margin with 6 or 7 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.7–0.8 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods only on P1.

Coloration. Body color brown, with median longitudinal whitish broad stripe, from base of rostrum to abdominal somite 5; median protogastric-mesogastric regions brown; one whitish or light brown lateral fleck on each branchial region. P1–4 brown or with diffuse brown and whitish bands.

Remarks. *Galathea lemniscata* n. sp. is characterized by the presence of scale-like ridges on the gastric region and the cutting edges of the cheliped fingers distally not spooned, with one row of teeth only. The closest relative is *G. chura* Osawa & Higashiji, 2012 from Okinawa Island, Ryukyu Islands, Japan. These two species can be distinguished only by the living coloration. In *G. lemniscata*, the carapace is brown, sometimes with a broad median longitudinal whitish stripe, extending from the base of the rostrum to the abdominal somite 5 in the new species, whereas in *G. chura*, the carapace is generally white, with numerous large red spots. Furthermore, the P1–4 are brown in *G. lemniscata* n. sp., whereas banded with white and red in *G. chura*.

The genetic divergences between *G. lemniscata* and other species are always higher than 18.6% (*G. bimaculata* n. sp.) (COI) and 4.5% (*G. ploto* n. sp.) (16S rRNA) (Tab. 3).

Distribution. Vanuatu, New Caledonia, Chesterfield Islands; 70–364 m.

***Galathea lepidota* n. sp.**

(Fig. 57)

Material examined. *Holotype:* Philippines. MUSORSTOM 3, Stn CP142, 11°47'N, 123°01'E, 26–27 m, 6 June 1985: ov. F 4.3 mm (MNHN-IU-2013-13321).

Paratypes: Palau. 34 m, 25 May 1995: 5 M 2.5–3.6 mm, 5 ov. F 2.8–4.2 mm (UF5213).—Koror, Lighthouse basin, 48 m, 4 August 1995: 1 M 2.3 mm, 1 ov. F 2.5 mm (UF5220).—54 m, 5 August 1995: 3 M 1.7–2.8 mm, 1 F 2.2 mm (UF5230).—Koror, Ngerduais channel, 24 m, 14 September 1995: 1 M 4.0 mm (UF5073).—Palau. 33 m, 20 June 1995: 1 ov. F 3.3 mm, 1 F 2.3 mm (UF5209).—Palau, no date: 4 M 2.2–4.3 mm, 4 ov. F 3.3–4.6 mm, 1 F 2.1 mm (UF5218).

Philippines. MUSORSTOM 3, Stn CP142, 11°47'N, 123°01'E, 26–27 m, 6 June 1985: 1 M 3.6 mm (MNHN-IU-2013-13323); 1 ov. F 4.0 mm (MNHN-IU-2013-13324); 29 M 2.5–4.5 mm, 9 ov. F 3.5–4.6 mm, 2 F 2.4–2.5 mm (MNHN-IU-2013-13325).

Indonesia. Makassar Strait. CORINDON, Stn CH294, 2°38.3'S, 117°50.4'E, 46–57 m, 10 November 1980: 1 M 4.1 mm (MNHN-IU-2013-13322).

Papua New Guinea. Bismark Archipel, NE side Baluam Island, 2.6975°S, 147.5533°E, 3–42 m, 22 June 2003: 1 M 3.3 mm (UF8693).

Solomon Islands. SALOMON 1, Stn CP1810, 9°47.684'S, 160°50.525'E, 53 m, 3 October 2001: 1 M 3.9 mm, 1 F 2.2 mm (MNHN-IU-2013-13326).

Etymology. From the Greek *lepidotos*, scaly, in reference to the scaly gastric region.

Description. *Carapace:* 0.9 times as long as broad; ridges with dense short setae, without long plumose setae; cervical groove nearly indistinct, laterally bifurcated; ridges on gastric and anterior branchial regions scale-like or in concentric arcs; epigastric region with 2 median spines; median protogastric scale-ridge unarmed (rarely with 1 or 2 minute spines); 1 parahepatic and 1 anterior branchial spine on each side. Mid-transverse ridge laterally

interrupted, preceded by shallow cervical groove, followed by 6 ridges, 2 of them uninterrupted. Lateral margins slightly convex medially, with 8 spines: 2 spines in front of and 6 spines behind anterior cervical groove; first anterolateral, second small, located at midlength between first spine and anteriormost spine of branchial margin; additional spine ventral to between first and second lateral spine; 3 spines on anterior branchial margin, and 3 spines on posterior branchial margin, last smaller than others. External limit of orbit ending in small spine; infraorbital margin with 1 strong spine and a few spinules. Rostrum moderately elongate, 1.6–1.7 times as long as broad, 0.7 carapace length and breadth 0.3 that of carapace, nearly horizontal in lateral view; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface with small setiferous ridges; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, with sparse short setae, anterior margin sharply angular.

Sternum: Plastron about as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 each with 4 transverse ridges on tergite, anterior ridge more distinctly elevated than posterior ridge; tergite of somite 4 with 2 transverse ridges; somites 5 and 6 with 2 uninterrupted or medially interrupted ridges, posteromedian margin of somite 6 nearly straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed spines, distodorsal larger; distomesial spine somewhat smaller and more slender than distolateral. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine longer than distomesial and overreaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with small distal spine on flexor margin; extensor margin with small but distinct distal spine; crista dentata with 18–20 denticles. Merus shorter than ischium; flexor margin with 2 strong spines of subequal size, proximal one located at midlength, distal one at terminal end; extensor margin with 2 spines. Carpus unarmed.

P1: 2.7–3.5 times carapace length, with numerous short uniramous setae and some long plumose setae. Merus 1.1–1.3 times length of carapace, 1.8 times as long as carpus, with spines arranged roughly in rows, mesial and distal spines prominent. Carpus 0.9 length of palm, 2.3 times as long as broad; dorsal surface with spines arranged roughly in longitudinal rows; mesial margin with 3 or 4 strong spines, distal second largest. Palm 2.8–3.0 times longer than broad, lateral and mesial margins subparallel; spines arranged roughly in rows, dorsolateral row of spines continued on to whole lateral margin of fixed finger. Fingers 1.3 length of palm, each finger with two rows of teeth distally spooned; fingers with row of small spines on dorsal side.

P2–4: Moderately slender, with long sparse plumose setae. P2 2.0–2.1 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.7 length of P3 merus); P2 merus 0.8 carapace length, 4.4 times as long as broad, 1.4 times longer than P2 propodus; P3 merus 3.4 times longer than broad, 1.3 times longer than P3 propodus; P4 merus 2.5 times as long as broad, as long as P4 propodus. Extensor margins with row of 8 or 9 proximally diminishing spines on P2–3, 3 on P4; lateral surface with 1–2 small spines on P2–3, 5 or 6 on P4; flexor margin distally ending in 2 spines, sometimes absent in small specimens, followed proximally by small spines and several tubercles or eminences. Carpi with 5 or 6 spines on extensor margin on P2–3, 0–1 spines on P4; lateral surface with 4 or 5 spines sub-parallel to extensor margin on P2–4; flexor distal margin with very small distal spine. Propodi 4.1–5.3 times as long as broad; extensor margin with 4–6 spines on proximal half on P2 and P3, with 1 or 2 proximal spines on P4; flexor margin with 4–6 slender movable spines. Dactyli distally ending in well-curved strong spine, 0.5–0.6 length of propodi; flexor margin with 4 or 5 proximally diminishing teeth.

Epipods on P1–3.

Remarks. *Galathea lepidota* n. sp. is characterized by the presence of scale-like ridges on the gastric area, the carapace with at least one branchial dorsal spine and two epigastric spines, and epipods on P1–3. The new species is closely related to the *G. subsquamata* Stimpson, 1858. However, *G. lepidota* can be easily distinguished from this species by the following aspects:

- The P2–4 meri have two spines on the distal angle of the flexor margin in *G. lepidota*, instead of only one spine in *G. subsquamata*.
- The carapace lateral margin has one spine between the anterolateral spine and the anteriormost branchial marginal spine in *G. lepidota*, but this spine is absent in *G. subsquamata*.

- The genetic divergences between *G. lepidota* and *G. subsquamata* are 20.0% (COI) and 7.1% (16S rRNA).

Distribution. Philippines, Palau, Indonesia (Makassar Strait), Papua New Guinea, Solomon Islands; 3–57 m.

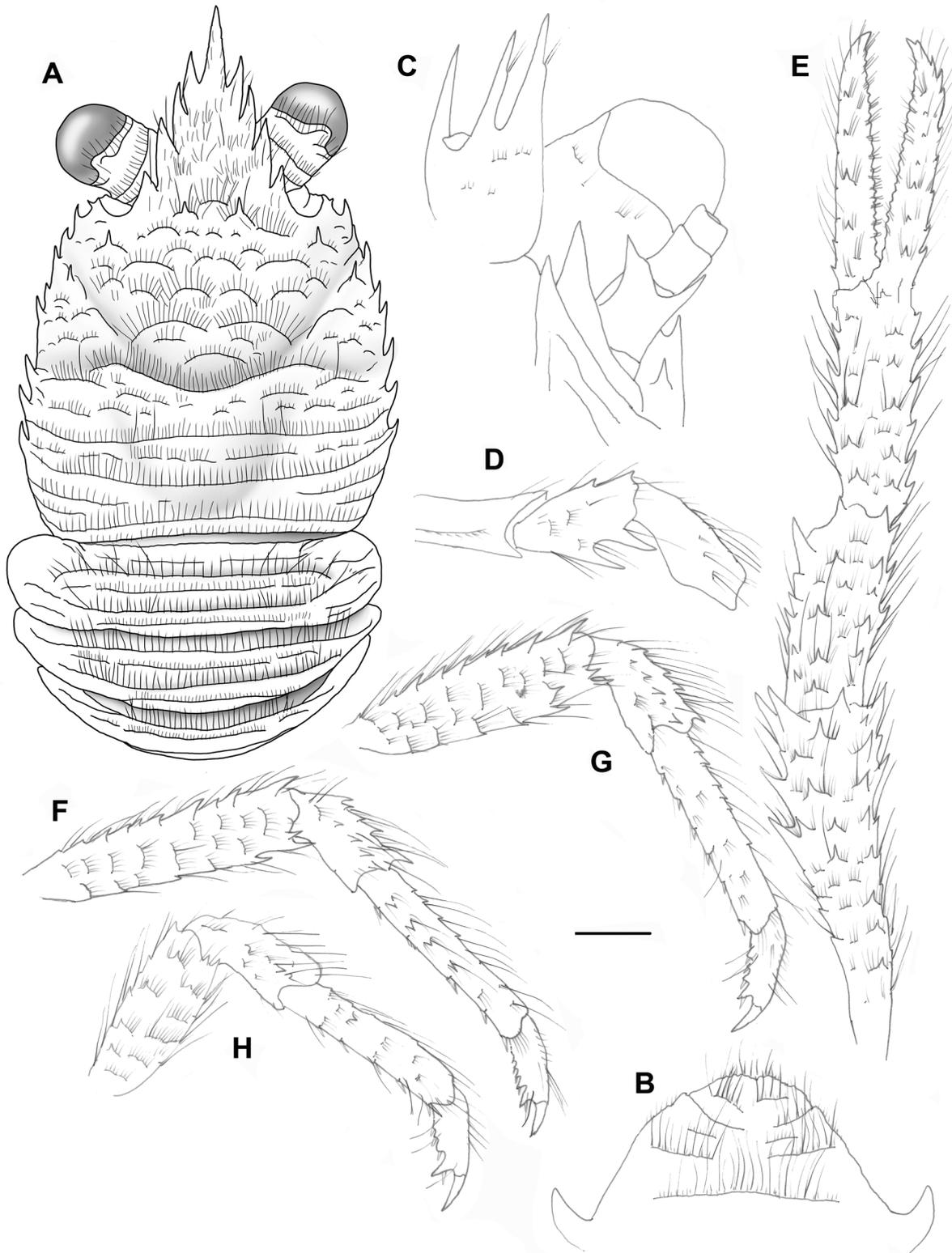


FIGURE 57. *Galathea lepidota* n. sp., holotype, ovigerous female, 4.3 mm, Philippines (MNHN-IU-2013-13321). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

***Galathea leporis* n. sp.**

(Figs 58, 117H)

Galathea algae.—Baba, 1979b: 646 (Gorong Island and Marsegu Island, Moluccas, subtidal) (not *G. algae* Baba, 1969)

Material examined. *Holotype*: Vanuatu. SANTO, Stn FB92, 15°33.6'S, 167°16.6'E, 2–4 m, 14 October 2006: M 2.4 mm (MNHN-IU-2013-15985).

Paratypes: Indonesia. Gorong Island, 26 January 1975: 2 M 2.8–3.4 mm, 1 ov. F 3.8 mm, 1 F 3.5 mm (MNHN-Ga1146).

Papua New Guinea. PAPUA NIUGINI, Stn PR4, 05°10.1'S, 145°50.5'E, 30 m, 7 November 2012: 1 M 2.3 mm (MNHN-IU-2013-771).—Stn PB11, 05°17.9'S, 145°46.7'E, 10 m, 30 December 2012: 4 ov. F 2.9–3.2 mm, 1 F 2.1 mm (MNHN-IU-2013-15997); 1 ov. F 2.2 mm, 1 F 1.9 mm (MNHN-IU-2013-15995); 1 M 3.0 mm (MNHN-IU-2013-370); 1 ov. F 2.3 mm (MNHN-IU-2013-371).—Stn PB16, 05°04.7'S, 145°48.8'E, 5 m, 30 December 2012: 1 M 3.2 mm, 1 ov. F 2.7 mm (MNHN-IU-2013-16000).—Stn PB21, 05°01.4'S, 145°48'E, 5 m, 30 December 2012: 1 ov. F 2.1 mm (MNHN-IU-2013-723); 8 M 1.8–3.0 mm, 2 ov. F 3.0–3.3 mm, 1 F 1.6 mm (MNHN-IU-2013-15998).—Stn PB28, 05°11.9'S, 145°49.6'E, 10 m, 30 December 2012: 7 M 2.3–3.3 mm, 1 ov. F 2.5 mm, 2 F 2.0–2.4 mm (MNHN-IU-2013-15999).—Stn PB29, 05°18'S, 145°46.1'E, 17 m, 30 December 2012: 1 ov. F 2.9 mm (MNHN-IU-2013-9765).—Stn PD32, 05°08'S, 145°49.5'E, 31 m, 30 December 2012: 1 M 2.0 mm (MNHN-IU-2013-15996).—Stn no number: 3 M 1.5–2.2 mm, 2 ov. F 2.3–2.5 mm, 6 F 1.4–2.0 mm (MNHN-IU-2013-774). Kranket Island, 5.2025°S, 145.8218°E, 17 m, 6 November 2102: 3 M 1.5–2.8 mm, 2 ov. F 2.7–2.9 mm (UF36157).

Vanuatu. SANTO. Stn EP1, 15°32.5'S, 167°09.0'E, 46–47 m, 10 September 2006: 2 juv. 1.0–1.1 mm (MNHN-IU-2013-15983).—Stn DB29, 15°38.9'S, 167°05.1'E, 15 m, 17 September 2006: 2 ov. F 2.6–3.3 mm (MNHN-IU-2013-15982).—Stn DB48, 15°38.7'S, 167°5.2'E, 10–17 m, 21 September 2006: 1 M 3.4 mm (MNHN-IU-2013-15984).

New Caledonia. Chesterfield Islands. CORAIL 2, Stn DW88, 19°06'S, 158°56'E, 32 m, 26 July 1988: 2 F 2.4–2.5 mm (MNHN-IU-2013-15986).

New Caledonia. South Reef, Stn 327, 22°26'S, 167°04'E, 60 m, November 1984: 2 M 3.8–4.0 mm (MNHN-IU-2013-9762). Touho, 20°47'S, 165°13'E, 10 m, 6 September 1993: 1 ov. F 3.3 mm (MNHN-IU-2013-9761). Koumac, 12 m, 7 October 1993: 1 M 2.4 mm (MNHN-IU-2013-15987).

New Caledonia. Lifou Island. LIFOU, Stn 1454, 20°56.65'S, 167°02.0'E, 15–18 m, 4 November 2000: 1 M 3.2 mm (MNHN-IU-2013-15992).—Stn 1457, 20°46.8'S, 167°02.75'E, 5–10 m, 4 November 2000: 1 M 3.5 mm, 1 ov. F 3.3 mm (MNHN-IU-2013-13996).—Stn 1458, 20°46.7'S, 167°03.1'E, 17–24 m, 4 November 2000: 1 ov. F 3.6 mm, 1 F 2.5 mm (MNHN-IU-2013-15994).—Stn 1435, 20°55.2'S, 167°00.7'E, 5–30 m, 8 November 2000: 1 M 3.2 mm, 2 ov. F 2.3–2.4 mm, 1 F 2.0 mm (MNHN-IU-2013-15990).—Stn 1459, 20°47.0'S, 167°03.0'E, 55–80 m, 5 November 2000: 2 ov. F 3.0–3.3 mm (MNHN-IU-2013-15989).—Stn 1465, 20°47.7'S, 167°07.0'E, 35–45 m, 16 November 2000: 6 M 2.3–3.2 mm, 4 ov. F 2.1–3.3 mm, 6 F 1.9–2.2 mm (MNHN-IU-2013-15991).—Stn 1448, 20°45.8'S, 167°01.65'E, 20 m, 17 November 2000: 1 M 2.4 mm, 1 ov. F 2.7 mm (MNHN-IU-2013-9764).—Stn 1451, 20°47.3'S, 167°06.8'E, 10–21 m, 19 November 2000: 2 M 3.0–3.6 mm (MNHN-IU-2013-15993).—Stn 1455, 20°56.8'S, 167°02.7'E, 15–20 m, 25 November 2000: 1 M 2.0 mm, 1 F 1.8 mm (MNHN-IU-2013-15988).—Stn 1410, 20°56.7'S, 167°03.1'E, 2–4 m, 25 November 2000: 2 M 1.6–1.7 mm, 1 ov. F 3.0 mm, 2 F 1.5–1.7 mm (MNHN-IU-2013-9763).

Etymology. From *Lepus*, the Hare, one of the Southern Hemisphere constellations.

Description. *Carapace*: slightly broader than long; transverse ridges with dense short setae, and a few moderately long simple setae; cervical groove distinct, laterally bifurcated. Gastric region with 5 transverse ridges: 1 epigastric ridge medially interrupted, with 2 spines; 2 mesogastric ridges, anterior one medially interrupted by 1 arcuate scale, posterior ridge scale-like; 2 metagastric scale-like ridges. One small parahepatic spine, and one hepatic spine, near anterolateral spine, on each side. Anterior branchial region with distinct scale-like ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 4 transverse ridges, 2 of them uninterrupted. Lateral margins slightly convex, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second small, with spine ventral to between first and second spines; 2 spines on anterior branchial region, and 3 spines on

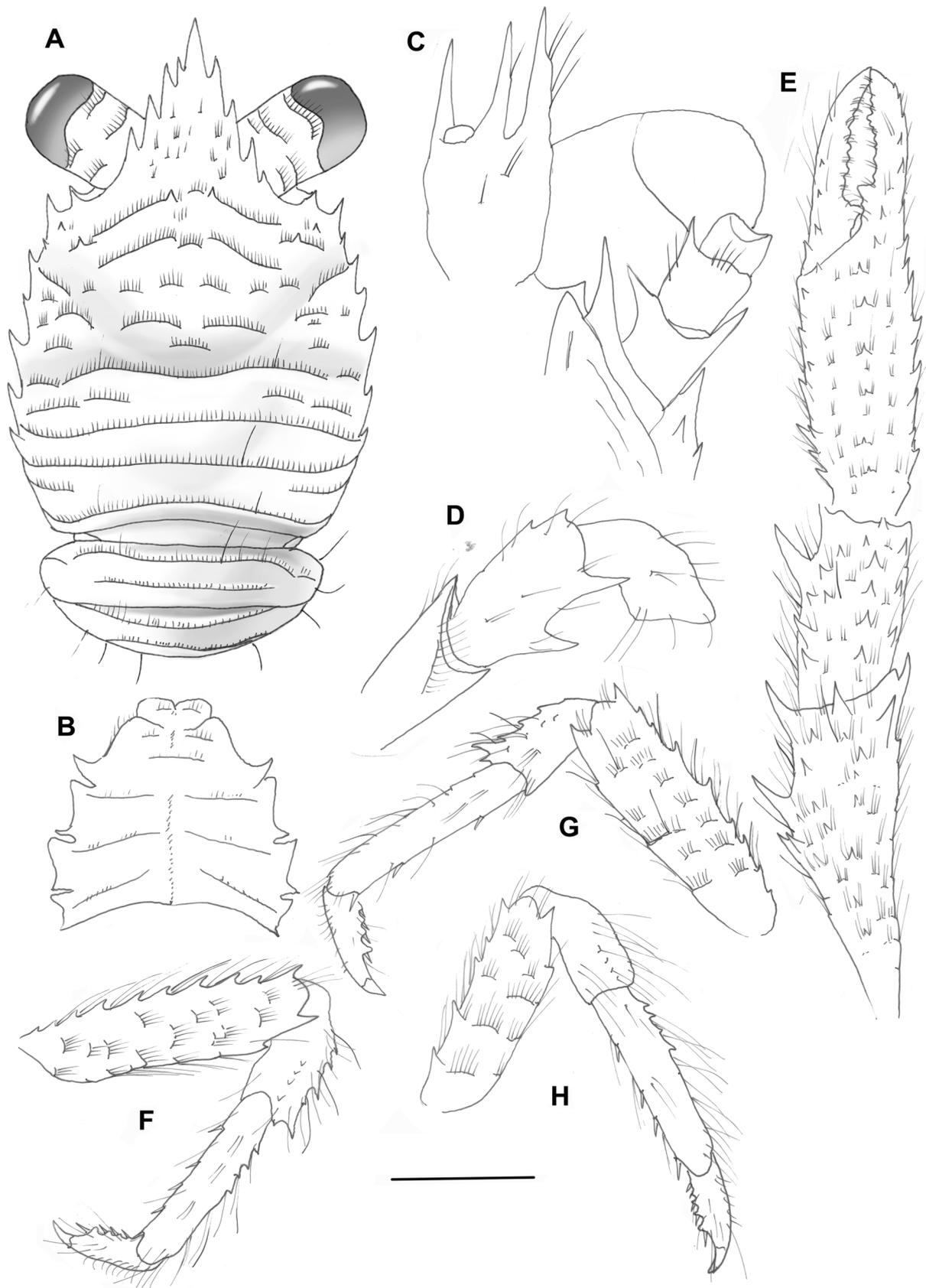


FIGURE 58. *Galathea leporis* n. sp., holotype, male, 2.4 mm, Vanuatu (MNHN-IU-2013-15985). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, left P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

posterior branchial margin, last small. Spine on lateral limit of orbit, 1 small spine between orbital and anterolateral spine in some specimens; infraorbital margin with strong spine. Rostrum 1.7 as long as broad, length 0.6 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: 0.8 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 with 2 transverse uninterrupted ridges; somites 4–6 smooth; somite 6 with posteriomedian margin straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.4 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine smaller. Ultimate article with a few short fine setae, not in tuft, on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine exceeding distal margin of article 2. Article 2 with 2 subequal distal spines, barely reaching midlength of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with small spine on flexor and extensor distal margins; crista dentata with 21–24 denticles. Merus as long as ischium; flexor margin with 2 subequal well-developed spines; extensor margin with 2 spines. Carpus smooth or with 1 or 2 granules along extensor margin.

P1: 2.5–3.0 times carapace length, covered with finely setiferous scales, with numerous long simple setae. Merus as long as carapace, 1.7–1.8 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.9 length of palm, twice longer than broad; dorsal and lateral surfaces with some spines; mesial margin with 2 or 3 spines (distal second strong). Palm twice longer than broad, lateral and mesial margins subparallel; spines arranged roughly in dorsolateral and dorsomesial rows, continuing along fixed and movable fingers, respectively; a few small spines scattered on dorsal side. Fingers as long as palm, each finger with with 2 rows of teeth distally spooned.

P2–4: moderately slender, with setose striae and sparse long plumose setae. P2 2.1–2.2 carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P3 merus, P4 merus 0.8 length of P2 merus); P2 merus as long as carapace, 4.0 times as long as broad, 1.7 times longer than P2 propodus; P3 merus 3.5 times as long as broad, 1.4 times longer than P3 propodus; P4 merus 3.1 times as long as broad, 1.2 times longer than P2 propodus. Extensor margin of P2–3 meri with row of 10 proximally diminishing spines, 5 spines on P4; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several eminences; lateral sides unarmed. Carpi with 4–6 spines on extensor margin on P2–3, 0–2 spines on P4; lateral surface with 2–4 small spines or acute granules sub-parallel to extensor margin; flexor distal margin acute. P2–4 propodi 4.0–5.0 times as long as broad; extensor margin with 3–5 proximal spines on P2–4; flexor margin with 4 or 5 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.5 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods present only on P1.

Coloration. Base color translucent white. Anterior part of carapace light orange. P1 whitish, with distal part of merus, carpus and palm orange or brownish, fingers brownish with whitish tips. P2–4 whitish, with brownish distal stripes on each merus, carpus and propodus.

Remarks. *Galathea leporis* **n. sp.** resembles *G. tongi* **n. sp.** from Mariana Islands, Kiribati and French Polynesia (see Remarks of this latter species).

Distribution. Indonesia (Gorong Island), Papua New Guinea, Vanuatu, and New Caledonia; 2–80 m.

***Galathea lingadua* n. sp.**

(Fig. 59)

Material examined. *Holotype*: Fiji. MUSORSTOM 10, Stn CP1349, 17°31.07'S, 178°38.79'E, 244–252 m, 11 August 1998: F 5.1 mm (MNHN-IU-2013-13962).

Etymology. *Lingadua* is a Fijian god of the drums; used as a noun in apposition.

Description. *Carapace*: Slightly longer than broad; transverse ridges with dense short setae, and some scattered long plumose and iridescent setae; cervical groove distinct, laterally bifurcated. Gastric region with 5

transverse ridges: 1 epigastric ridge medially interrupted, with 2 spines; 1 protogastric ridge, uninterrupted, with small parahepatic spine on each side (minute on right side); 1 mesogastric ridge, interrupted, not extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, anterior ridge, not fused with anterior branchial ridges, posterior ridge scale-like. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 5 transverse ridges, 2 ridges uninterrupted. Lateral margins slightly convex medially, with 5 spines: 1 spine in front of and 4 spines behind anterior cervical groove; first, anterolateral, well-developed, behind level of lateral limit of orbit, no spine ventral to between first and anterior branch of cervical groove; 2 spines on anterior branchial region, and 2 spines on posterior branchial margin. Minute spine on limit of orbit; infraorbital margin with well-developed spine. Rostrum twice as long as broad, length 0.6 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.35 distance between proximalmost lateral incisions; dorsal surface flatish, with numerous small setose scales; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: 0.8 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somite 2 with 2 uninterrupted transverse ridges on tergite; somite 3–4 with 2 ridges, posterior medially interrupted ridge; somites 5–6 smooth, posteriormedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger than others. Ultimate article with a few fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with strong distomesial spine reaching distal margin of article 2. Article 2 with 2 subequal distal spines, reaching midlength of article 3. Article 3 with distomesial spine; article 4 unarmed.

Mxp3: Ischium with flexor margins ending in small spine, extensor margin ending in acute angle; crista dentata with 23 denticles. Merus shorter than ischium; flexor margin with strong proximal spine, and 2 (median and distal) minute spines; extensor margin unarmed, with median tubercle. Carpus unarmed.

P1: 3 times carapace length, relatively slender, with setose scales and numerous long iridescent and non-iridescent setae. Merus 1.3 times as long as carapace, 1.8 times as long as carpus, with spines arranged roughly in rows, dorsomesial and ventromesial spines stronger, distal spines prominent. Carpus as long as palm, 2.2 times as long as broad; dorsal surface with some small spines arranged roughly in rows; mesial margin with 2 well-developed spines. Palm 2.3 times longer than broad, lateral and mesial margins subparallel; small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers 0.9 length of palm, each finger distally with two rows of teeth, spooned; fingers unarmed.

P2–4: moderately long and slender, with some setose striae and numerous long plumose and non-plumose setae, some of them iridescent. P2 2.0 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P3 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.7 carapace length, 3.8 times as long as broad, as long as P2 propodus. P3 merus 3.0 times as long as broad, as long as P3 propodus. P4 merus 3.5 times as long as broad, as long as P4 propodus. Extensor margin with row of 7 or 8 proximally diminishing spines on P2–3, 2 or 3 spines on P4; ventral margins distally ending in strong spine, lateral sides unarmed on P2–3, 1 or 2 spines on P4; ventromesial margins unarmed. Carpi with 4 or 5 spines on extensor margin on P2–3, 2 on P4; lateral surface with 4 or 5 granules sub-parallel to extensor margin; flexor distal margin bluntly produced. Propodi 5.2–6.0 times as long as broad; extensor margin with 0–2 proximal spines; flexor margin with 4 or 5 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 6 or 7 proximally diminishing teeth, terminal one prominent.

Epipods present on P1.

Remarks. *Galathea lingadua* n. sp. is easily differentiated from the two most closely related species, *G. galene* n. sp. and *G. raventosae* Macpherson, 2012, by the different structure of the anterior protogastric ridge on the carapace. This ridge is uninterrupted in *G. lingadua*, instead of interrupted and usually with one median scale-like ridge in the other two species.

No genetic data are available for *G. lingadua*.

Distribution. Fiji, 244–252 m.

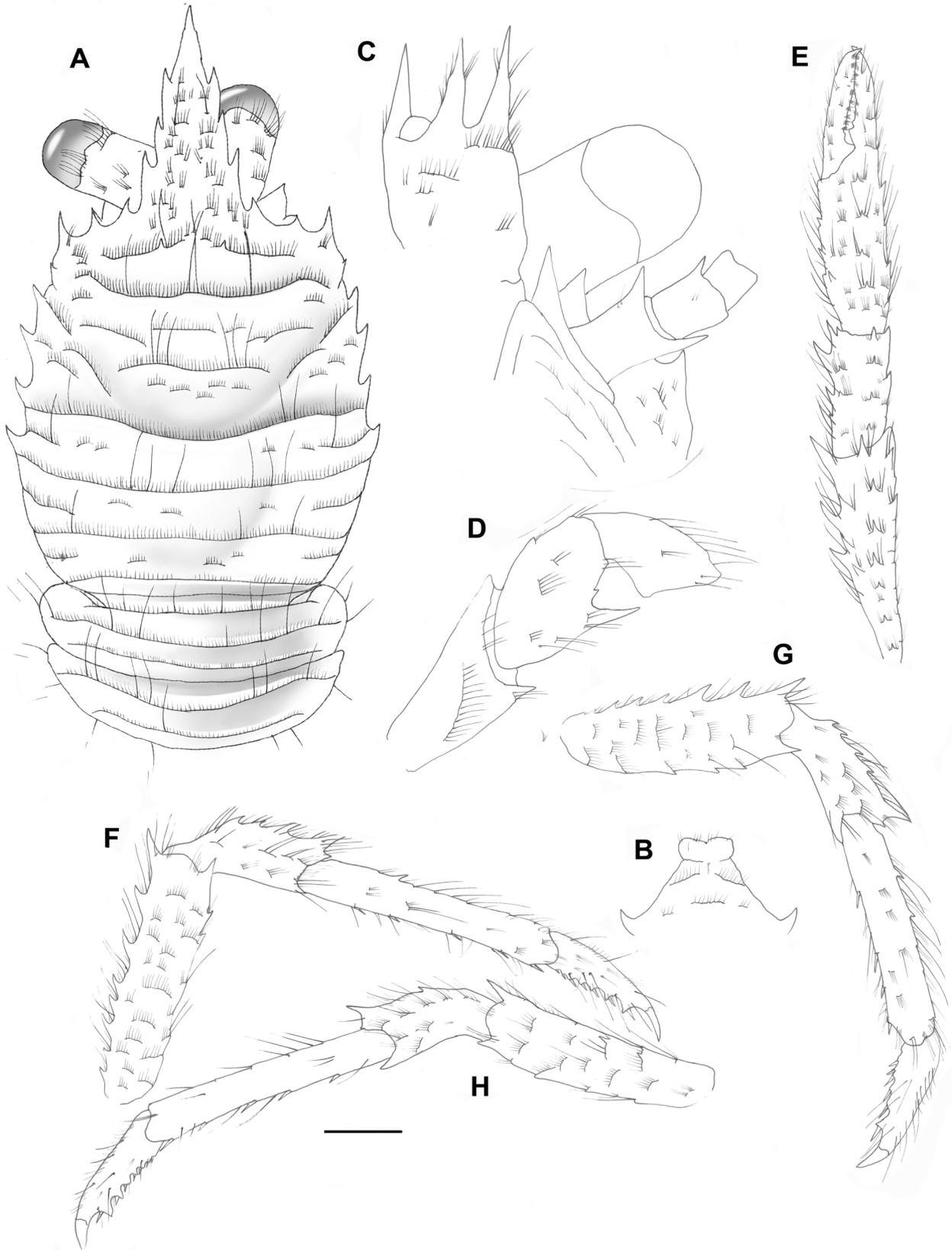


FIGURE 59. *Galathea lingadua* n. sp., holotype, female, 5.1 mm, Fiji (MNHN-IU-2013-13962). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, left P4, lateral view. Scale: A, F–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

***Galathea longimana* Paul'son, 1875**

(Fig. 60)

Galathea longimana Paul'son, 1875: 94, pl. 12, figs 2, 2a (Red Sea, Sinai, Ras Muhammad).—Benedict, 1902: 302 (list).—Nobili, 1906: 128 (Red Sea).—Doflein & Balss, 1913: 169 (no record).—Gurney, 1938: 82, pl. 6, figs 58–68 (Ghardaqa, Egypt).—Lewinsohn, 1967: 175.—Baba *et al.*, 2008: 72 (in part, compilation).

Galathea australiensis.—Balss, 1915: 2 (Red Sea).

Not *Galathea longimana*.—Lewinsohn, 1969: 107, fig. 20 (Red Sea, 0–3 m) (= *G. eulimene* n. sp.).

Material examined. Red Sea. Suez Gulf. Stn 5, 8 December 1928: 1 M 2.7 mm (MNHN-Ga758, MNHN-IU-2013-9686), 1 M 2.5 mm (MNHN-Ga759, MNHN-IU-2013-9687).—Stn 10, 8 December 1928: 2 M 2.1–2.3 mm, 2 ov. F 2.0–2.4 mm (MNHN-Ga756, MNHN-IU-2013-9676).—Stn 11, 8 December 1928: 1 M 2.2 mm, 2 ov. F 3.0–3.1 mm (MNHN-Ga757, MNHN-IU-2013-9688), 1 M 2.3 mm 3 ov. F 2.2–3.3 mm (MNHN-Ga755, MNHN-IU-2013-9690), 2 M 3.0 mm (MNHN-Ga760, MNHN-IU-2013-9689), 1 M 4.1 mm (MNHN-IU-2013-14171).—Stn 12, 9 December 1928: 1 F 2.6 mm (MNHN-Ga754, MNHN-IU-2013-9691).

Description. *Carapace*: As long as broad; ridges with dense short setae, without long setae; cervical groove laterally bifurcated; ridges on gastric and anterior branchial regions scale-like or in concentric arcs; epigastric and protogastric regions with 2 median spines; 1 parahepatic and 1 lateral protogastric on each side; 2 median protogastric spines and 1 anterior branchial spine on each side. Mid-transverse ridge laterally interrupted, preceded by shallow cervical groove, followed by 5 transverse ridges, 2 ridges uninterrupted. Lateral margins slightly convex medially, with 8 spines: 2 spines in front of and 6 spines behind anterior cervical groove; anterolateral spine well-developed, second spine small, located at midlength between anterolateral spine and anteriormost spine of branchial margin; additional spine ventral to between first and second lateral spine; 3 spines on anterior branchial margin, and 3 spines on posterior branchial margin, last smaller than others. External limit of orbit acute; infraorbital margin with 1 strong spine. Rostrum moderately elongate, triangular, 1.6–1.9 times as long as broad, 0.6 carapace length and breadth 0.4 that of carapace, nearly horizontal in lateral view; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface with small setiferous ridges; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, with sparse short setae, anterior margin sharply angular.

Sternum: Plastron about as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 transverse ridges on tergite, anterior ridge more distinctly elevated than posterior ridge; somites 5 and 6 with 2 medially interrupted ridges, posteromedian margin of somite 6 distinct, nearly straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed spines, distodorsal larger; distomesial spine somewhat smaller and more slender than distolateral. Ultimate article with a few setae, not in tuft, on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine exceeding distal margin of article 2. Article 2 with 2 subequal well-developed distal spines, overreaching midlength of article 3. Article 3 with minute distomesial spine. Article 4 unarmed.

Mxp3: Ischium with small distal spine on flexor margin; extensor margin with small but distinct distal spine; crista dentata with 21–23 denticles. Merus as long as ischium; flexor margin with 2 strong spines of subequal size; extensor margin with 2 minute spines. Carpus unarmed.

P1: 3.0–4.0 times carapace length, relatively slender, and spinose, with numerous short and long setae. Merus as long as carapace, 1.3 times as long as carpus, with spines arranged roughly in rows, mesial and distal spines strong. Carpus 0.7 length of palm, 2.6 times as long as broad (breadth measured at midlength); dorsal surface with spines arranged roughly in longitudinal rows; mesial margin with 2–4 well-developed spines (distal second largest). Palm 2.5–2.9 times longer than broad, lateral and mesial margins subparallel; spines arranged roughly in rows, dorsolateral row of spines continued on to whole lateral margin of fixed finger. Fingers 0.7 length of palm, distally crossing when closed, 2 terminal spines of fixed finger accommodating opposing distal spine of movable finger between, each finger distally with two rows of teeth, spooned; opposable margins nearly straight; fixed finger with row of small spines along mesial margin.

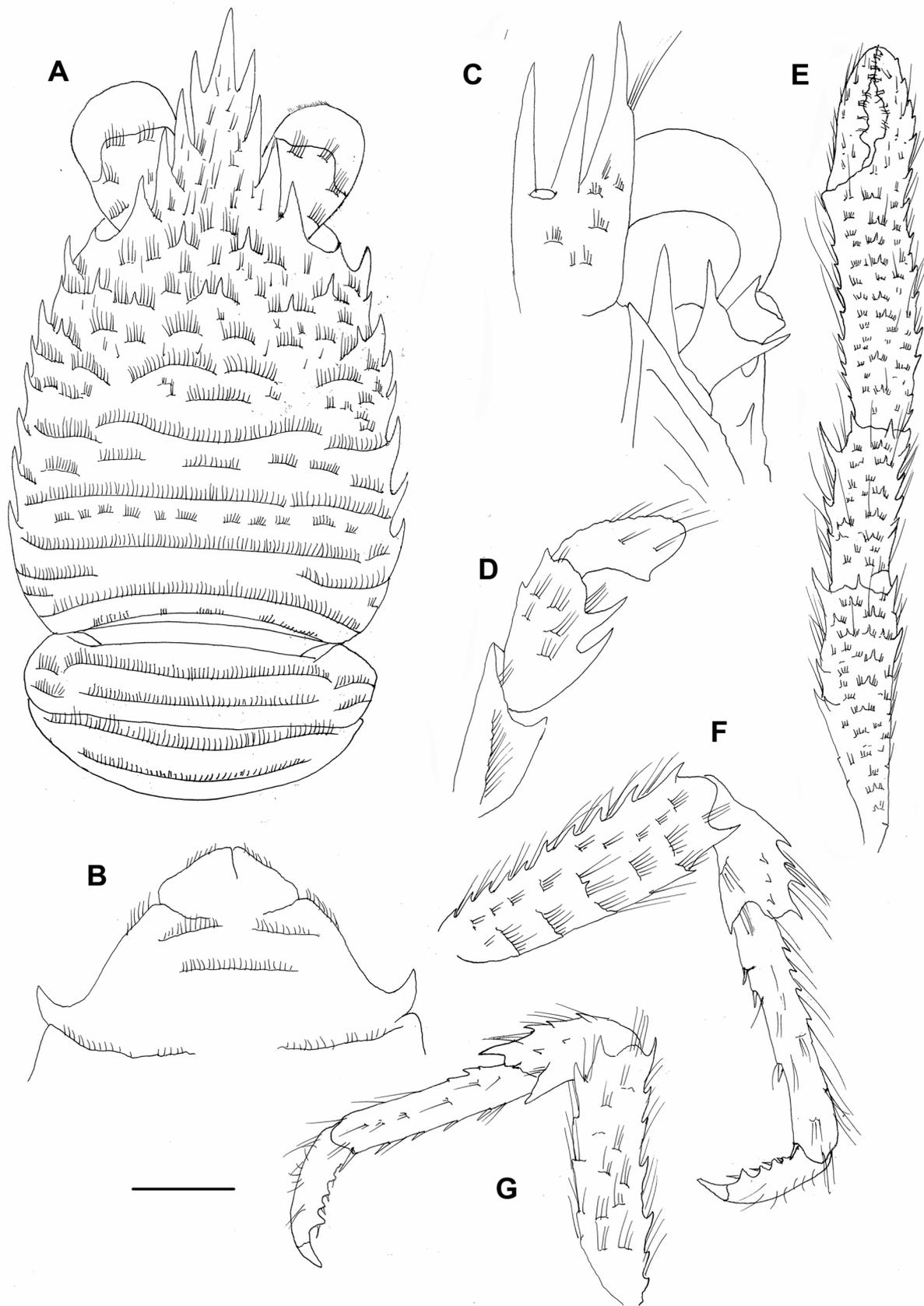


FIGURE 60. *Galathea longimana* Paul'son, 1875, male, 4.1 mm, Red Sea (MNHN-IU-2013-14171). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, left P4, lateral view. Scale: A, F, G = 1 mm; E = 2 mm; B–D = 0.5 mm.

P2–4: Moderately slender, with numerous long setae. P2 twice carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.7 length of P3 merus); P2 merus 0.8 carapace length, 3.5 times as long as broad, 1.2–1.5 times longer than P2 propodus; P3 merus 3.2 times longer than broad, 1.5 times longer than P3 propodus; P4 merus 3.5 times as long as broad, 1.2–1.5 length of P4 propodus. Extensor margins with row of 9–11 proximally diminishing spines on P2–3, 6 or 7 on P4; flexolateral margin distally ending in 1 spine followed proximally by 1 or 2 spines and several tubercles or eminences. Carpi with 4 or 5 spines on extensor margin on P2–4; lateral surface with 3 or 4 spines sub-parallel to extensor margin on P2–4; flexor distal margin with small distal spine. Propodi 5.0 (P2), 4.5 (P3) and 4.2 (P4) times longer than broad; extensor margin with 3 or 4 spines on proximal half on P2–4; flexor margin with 4–6 slender articulating setae. Dactyli distally ending in well-curved strong spine, 0.5–0.6 length of propodi; flexor margin with 5 proximally diminishing teeth.

Epipods only on P1.

Remarks. Paul'son (1875) described *G. longimana* based on one male and one female collected from Ras Muhammad, Red Sea. Unfortunately the types are no longer extant. The present specimens collected in the Gulf of Suez agree quite well with the figure and the description provided in the original description. The number of spines on the carapace surface, as well as the length of the rostrum and P1 articles, closely fit the original description and illustrations by Paul'son. Therefore, we feel little hesitation to refer our specimens to *G. longimana*.

Galathea longimana resembles *G. acerata* n. sp. from the Western Australia (see Remarks of the latter species).

No genetic data are available for *G. longimana*.

Distribution. Red Sea, shallow waters (no depth recorded).

***Galathea longimanoides* Johnson, 1970**

(Fig. 61)

Galathea longimanoides Johnson, 1970: 6, figs 1c–h (Johore Shoals, Singapore, 18 m).—Komai, 2000: 353 (list).—Baba *et al.*, 2008: 72 (compilation).

Material examined. Th. Mortensen, Thailand, N of Koh Chuen Island, 28 m, 5 February 1900: 1 M 6.9 mm, 1 ov. F 4.7 mm (ZMUC CRU-11233).

Vietnam. No exact locality, 12–24 m, 26 May 2012: 1 ov F 3.6 mm (OIRAS).

Description. *Carapace:* As long as broad; transverse ridges with numerous short fine setae, without long setae; cervical groove distinct, laterally bifurcated. Gastric region with 8 ridges; 2 epigastric ridges, anterior ridge with 2 median spines, posterior ridge scale-like; 2 protogastric uninterrupted ridges, 1 small parahepatic spine on each side of anterior ridge; 2 mesogastric uninterrupted ridges, anterior one not continuing laterally with anterior branchial ridges; 2 metagastric ridges, uninterrupted, anterior ridge extending laterally with anterior branchial ridges (not very clear in specimen figured). Hepatic region with 1 small spine on each side. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges, 3 of them uninterrupted. Lateral margins slightly convex medially, with 7 spines: first anterolateral, well-developed, second very small but distinct, located at midlength between first spine and anteriormost spine of branchial margin, with small spine ventral to between first and second; 2 spines on anterior branchial margin, and 3 spines on posterior branchial margin. Small outer orbital spine; infraorbital margin with 1 strong spine. Rostrum triangular, twice as long as broad, length 0.5 that of, breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions, dorsal surface nearly horizontal in lateral view, with some thick long plumose setae; lateral margin with 4 shallowly incised spines.

Pterygostomian flap rugose, with sparse short setae, anterior margin bluntly angular.

Sternum: About as long as broad, lateral limits divergent posteriorly.

Abdomen: Somites 2–4 each with 4 uninterrupted transverse ridges on tergite, anterior ridge more elevated than posterior ridge; somites 5 and 6 each with 2 medially interrupted ridges, posteromedian margin of somite 6 slightly convex.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.9 rostrum width.

Antennule: Article 1 with 3 spines; well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine slightly smaller than distodorsal; lateral margin unarmed. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with distomesial spine reaching distal margin of article 2. Article 2 with distolateral spine longer than distomesial and exceeding midlength of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

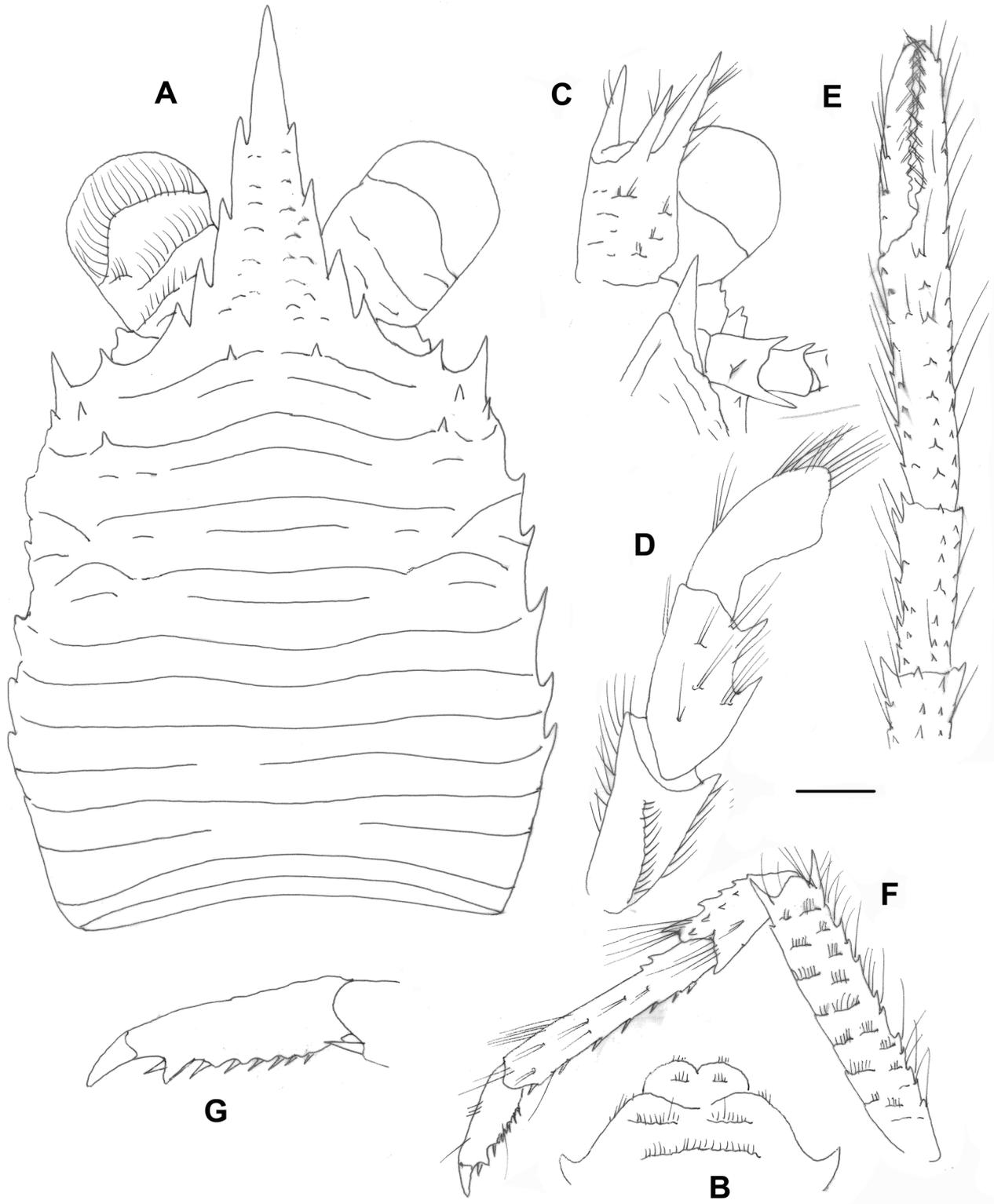


FIGURE 61. *Galathea longimanoides* Johnson, 1970. A, E, male 6.9 mm; B-D, F-G, ov. F 4.7 mm, Thailand (ZMUC CRU-11233). A, carapace, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1 carpus, palm and fingers, dorsal view; F, right P2, lateral view; G, right P2 dactylus, lateral view. Scale: A, F = 1 mm; E = 2 mm; B-D, G = 0.5 mm.

Mxp3: Basis with several denticles on mesial ridge, distalmost larger. Ischium with well-developed spine on flexor distal margin; crista dentata with 24 or 25 denticles. Merus slightly longer than ischium; flexor margin with 2 subequal spines, sometimes 1 minute spine between them; extensor margin with minute distal spine. Carpus unarmed.

P1: 3.5–4.0 times carapace length, with numerous finely setiferous scales, with scattered long thick setae. Merus 1.2 times length of carapace, twice as long as carpus, with spines arranged roughly in rows, dorsomesial and ventromesial spines stronger; distal spines prominent. Carpus 0.7 length of palm, 3 times as long as broad; dorsal surface with small spines arranged roughly in longitudinal rows; mesial spines slightly stronger than dorsal spines. Palm 3.5–3.8 times longer than broad, lateral and mesial margins with minute spines arranged roughly in dorsolateral and dorsomesial rows, some minute spines scattered on dorsal side. Fingers as long as palm, each finger distally ending in two rows of incurved teeth to cross each other when closed, mesial margin of movable finger and lateral margin of fixed finger unarmed.

P2–4: Moderately long and slender, with setose striae and long setae. P2 twice carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7 carapace length, 5 times as long as broad, 1.3 times longer than P2 propodus; P3 merus 5 times longer than broad, 1.2 times longer than P3 propodus; P4 merus 4 times as long as broad, as long as P4 propodus. Extensor margins of P2–3 meri with row of 10 or 11 proximally diminishing spines, P4 merus with 2–4 minute spines and 2 small dorsal spines; flexor margins distally ending in strong spine followed proximally by 1 or 2 small spines and several tubercles or eminences. P2–3 carpi with 5 small spines on extensor margin, 3 or 4 minute spines on P4; lateral surface with some small spines and acute granules sub-parallel to extensor margin on P2–4; flexor distal margin sometimes with small spine. P2–4 propodi 5.5 times as long as broad, respectively; extensor margin with 2 or 3 proximal spines; flexor margin with 4–7 slender movable spines on P2–4. Dactyli subequal in length, distally ending in well-curved strong spine, length half of propodi; flexor margin with 4–6 proximally diminishing teeth, terminal one prominent.

Epipods absent on pereopods.

Remarks. *Galathea longimanoides* was described on the basis of one male and one ovigerous female from Johore Shoals, Singapore. The original description is short, accompanied by a few illustrations. The types were lost (P.F. Clark, NHMUK, personal communication) and we failed to obtain topotypic material. Therefore, our identification is considered to be still provisional until topotypic material becomes available. The present material, however, closely agrees well with the original description by Johnson (1970). If our identification is correct, *G. longimanoides* most closely resembles *G. ceti* n. sp. from Papua New Guinea and New Caledonia, and *G. minutiae* n. sp. from New Caledonia. These three species can be differentiated by the different structure of P1 fingers. The P1 fingers distally end in incurved spines to cross each other when closed in *G. longimanoides*, whereas they are distally spooned and not cross distally in the latter two species.

No genetic data are available for this species.

Distribution. The type locality is Johore Shoals, Singapore, 18 m, associated with crinoids. Present records from Thailand and Vietnam, 12–28 m.

***Galathea longioculata* n. sp.**

(Figs 62, 117I)

Material examined. *Holotype*: Vanuatu. SANTO, Stn AT41, 15°36.7–37.0'S, 167°02.7–02.8'E, 88–118 m, 28 September 2006: F 4.8 mm (MNHN-IU-2013-15979).

Paratypes: Vanuatu. SANTO, Stn EP35, 15°34.9–35.1'S, 167°13.9–14.1'E, 10–51 m, 15 October 2006: 2 M 2.1–2.2 mm, 4 ov. F 1.6–2.0 mm (MNHN-IU-2013-15977).

Vanuatu. SANTO. Stn AT41. 1 F 4.8 mm, holotype.

Etymology. From the Latin *longus*, long, and *oculus*, eye, in reference to the long eyes.

Description. *Carapace*: as long as broad; dorsal surface with some short, scale-like transverse ridges with short setae, and some thick and long plumose setae; cervical groove clearly distinct, laterally bifurcated. Epigastric region with 4 small spines and acute tubercles; 2 small parahepatic spines on each side; One strong postcervical spine on each side, 3 well-developed spines on transverse cardiac ridge. Lateral margins slightly convex, with 5

spines: 2 spines in front of and 3 spines behind anterior cervical groove; first anterolateral, well-developed, behind level of lateral limit of orbit; second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, with spine ventral to between first and second; 3 strong spines on branchial region. Lateral limit of orbit unarmed; infraorbital margin with strong spine. Rostrum 1.6 as long as broad, length 0.5 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous scale-like setose ridges; lateral margin with 4 shallowly incised teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin bluntly angular.

Sternum: 1.3 times as long as broad. Sternite 4 broader than sternite 3, and other sternites.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somite 5–6 with 2 scale-like ridges, posteromedian lobe indistinct, straight.

Eyes: Ocular peduncles 2.7 times longer than broad; eyestalk (other than cornea) with lateral margin slightly concave, dorsally with some long plumose setae; cornea not dilated, as broad as the peduncle.

Antennule: Article 1 with 2 well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine very small; 2 well-developed spines on lateral margin. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with distomesial spine nearly reaching distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine larger than distomesial and nearly reaching end of article 3. Article 3 with small distomesial spine; article 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; extensor margin unarmed; crista dentata with 18 denticles. Merus as long as ischium; flexor margin with 3 blunt protuberances; extensor margin with distal protuberance. Carpus unarmed.

P1 (right missing): 3.6 times carapace length, somewhat depressed on palm, more so on fingers, covered with finely setiferous scales, with numerous long plumose setae. Merus 1.4 times length of carapace, 2.4 times as long as carpus, with some mesial, dorsal and lateral spines, mesial spines stronger; distal spines more prominent. Carpus 0.9 length of palm, 2.4 times as long as broad; dorsal surface with a few small spines, mesial and lateral margins with some spines. Palm 2.8 times as long as broad, lateral and mesial margins slightly divergent; mesial and lateral margins with some prominent ridges. Fingers 0.8 length of palm, each finger distally with two rows of teeth, spooned; fingers unarmed.

P2–4: moderately slender, with setose striae and numerous long thick plumose setae. P2 1.7 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7 carapace length, 3.4 times as long as broad, 1.5 times longer than P2 propodus; P3 merus 2.4 times longer than broad, 1.2 times longer than P3 propodus; P4 merus 2.3 times as long as broad, as long as P4 propodus. Extensor margin of P2–3 meri with row of 5 or 6 proximally diminishing spines, and 5 spines on P4; flexor margins distally ending in strong spine followed proximally by 2 or 3 spines and several eminences; lateral sides unarmed on P2–3, and with 1 well-developed spine on P4. Carpi with 3 or 4 spines on extensor margin on P2–4; lateral surface with 2 small spines sub-parallel to extensor margin on P2–4; flexor distal margin acute. P2–4 propodi 3.3–4.0 times as long as broad; extensor margin with 3 or 4 proximal spines on P2–4; flexor margin with 4 slender movable spines on P2–4. Dactyli subequal in length, distally ending in well-curved strong spine, length 0.5–0.6 that of propodi; flexor margin with 4 proximally diminishing teeth, terminal one strong.

Epipods absent on pereopods.

Coloration. Overall translucent whitish, with some scattered red spots on carapace, abdomen and pereopods. Plumose setae on carapace and abdomen reddish; those on pereopods whitish.

Remarks. *Galathea longiocularata* n. sp. is closely related to *G. patae* Osawa, 2006, from Ryukyu Islands, Japan. The new species, however, has some strong postcervical and cardiac spines that are absent in *G. patae*. Furthermore, the spines on the antennal articles are stronger in the new species; and the P2–4 meri are clearly more stouter in the new species than in *G. patae*, e.g. the P2 merus is 3.4 times as long as broad in *G. longiocularata* versus 5.0 times longer than broad in *G. patae*.

No genetic data are available for *G. longiocularata*.

Distribution. Vanuatu, 10–118 m.

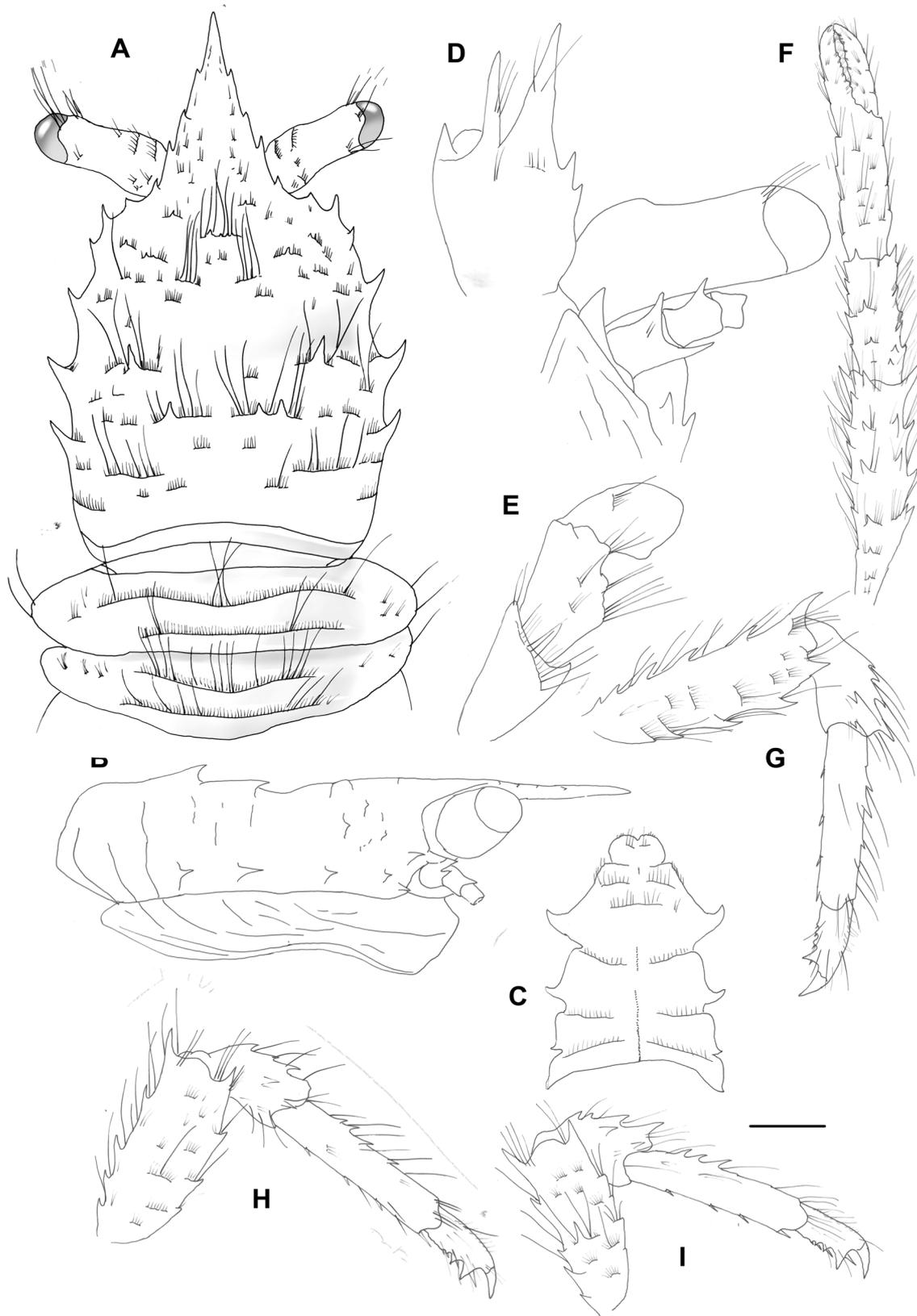


FIGURE 62. *Galathea longioculata* n. sp., holotype, female, 4.8 mm, Vanuatu (MNHN-IU-2013-15979). A, carapace and abdomen, dorsal view; B, carapace, lateral view; C, sternal plastron; D, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; E, ischium, merus and carpus of right Mxp3, lateral view; F, left P1, dorsal view; G, right P2, lateral view; H, right P3, lateral view; I, right P4, lateral view. Scale: A, B, G, H, I = 1 mm; F = 2 mm; C, D, E = 0.5 mm.

***Galathea lumaria* Baba, 2005**

Galathea lumaria Baba, 2005: 78 (off Durban, 412 m), fig. 27, 29a, 244 (key, synonymies).—Baba *et al.*, 2008: 72 (compilation).

Material examined. Madagascar. ATIMO VATAE, Stn CP3527, 24°23'S, 47°32'E, 305–313 m, 1 May 2010: 1 M 4.0 mm (MNHN-IU-2013-8406).

Mozambique. MAINBAZA, Stn CP3134, 25°10.14'S, 35°14.78'E, 303–403 m, 10 April 2009: 1 M 3.0 mm (MNHN-IU-2008-10227).—Stn CC3150, 19°30.58'S, 36°46.72'E, 261–264 m, 13 April 2009: 1 ov. F 3.0 mm (MNHN-IU-2013-8404).—Stn CC3151, 19°32'80"S, 36°45'96"E, 352–357 m, 13 April 2009: 1 M 3.1 mm, 2 ov. F 3.2–3.4 mm (MNHN-IU-2013-8405).—Stn CC3160, 23°57'70"S, 35°39'59"E, 206–210 m, 15 April 2009: 1 M 3.2 mm, 1 ov. F 3.4 mm (MNHN-IU-2013-8407).

Remarks. The material examined agrees quite well with the original description. No genetic data are available for this species.

Distribution. South Africa (off Durban, 412 m), Madagascar (206–403 m).

***Galathea machaera* n. sp.**

(Fig. 63)

Material examined. *Holotype*: Wallis and Futuna Islands. MUSORSTOM 7, Stn CP498, 14°18.9'S, 178°03.1'W, 105–160 m, 10 May 1992: ov. F 4.4 mm (MNHN-IU-2013-8437).

Paratypes: Wallis and Futuna Islands. MUSORSTOM 7, Stn CP498, 14°18.9'S, 178°03.1'W, 105–160 m, 10 May 1992: 1 M 5.5 mm, 1 ov. F 4.8 mm (MNHN-IU-2013-8430).

Solomon Islands. SALOMON 1, Stn DW1840, 10°17.0'S, 161°43.0'E, 97–223 m, 6 October 2001: 1 M 3.5 mm (MNHN-IU-2013-8434).

Etymology. From the Latin, *machaera*, sword, in reference to the shape of the rostrum.

Description. *Carapace*: as long as broad; ridges with a few short setae, and some long simple setae; cervical groove distinct, laterally bifurcated. No complete, uninterrupted or scale-like ridges on anterior half of carapace. Epigastric spines absent; 3 or 4 small hepatic spines on each side. Anterior branchial region with distinct ridges. Mid-transverse ridge interrupted, preceded by shallow cervical groove, followed by 5 interrupted or scale-like transverse ridges, and 1 uninterrupted ridge anterior to posterior margin; shallow transverse groove before second ridge; 1 postcervical spine on each side. Lateral margins convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, with 1 or 2 spines ventral to between first and second; 2 spines on anterior branchial region, with several small spines ventral to marginal spines, and 3 spines on posterior branchial margin, last small. Small spine on lateral limit of orbit; infraorbital margin with 2 spines. Rostrum 2.6 times longer than broad, length 0.9 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with median longitudinal groove and numerous uniramous setae; lateral margins straight, with 4 deeply incised sharp teeth; ventral surface with longitudinal carina.

Pterygostomial flap rugose, with 1 spine on anterior portion, ridges with short setae, anterior margin acute.

Sternum: 0.7 times longer than broad, lateral extremities divergent posteriorly.

Abdomen: Somites 2–4 each with 3 or 4 uninterrupted or interrupted transverse ridges on tergite; somites 5 and 6 each with 2 uninterrupted ridges; posteromedian margin of somite 6 slightly convex. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 long distal spines, distodorsal larger. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with strong distomesial spine exceeding distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine larger than distomesial spine and nearly reaching end of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

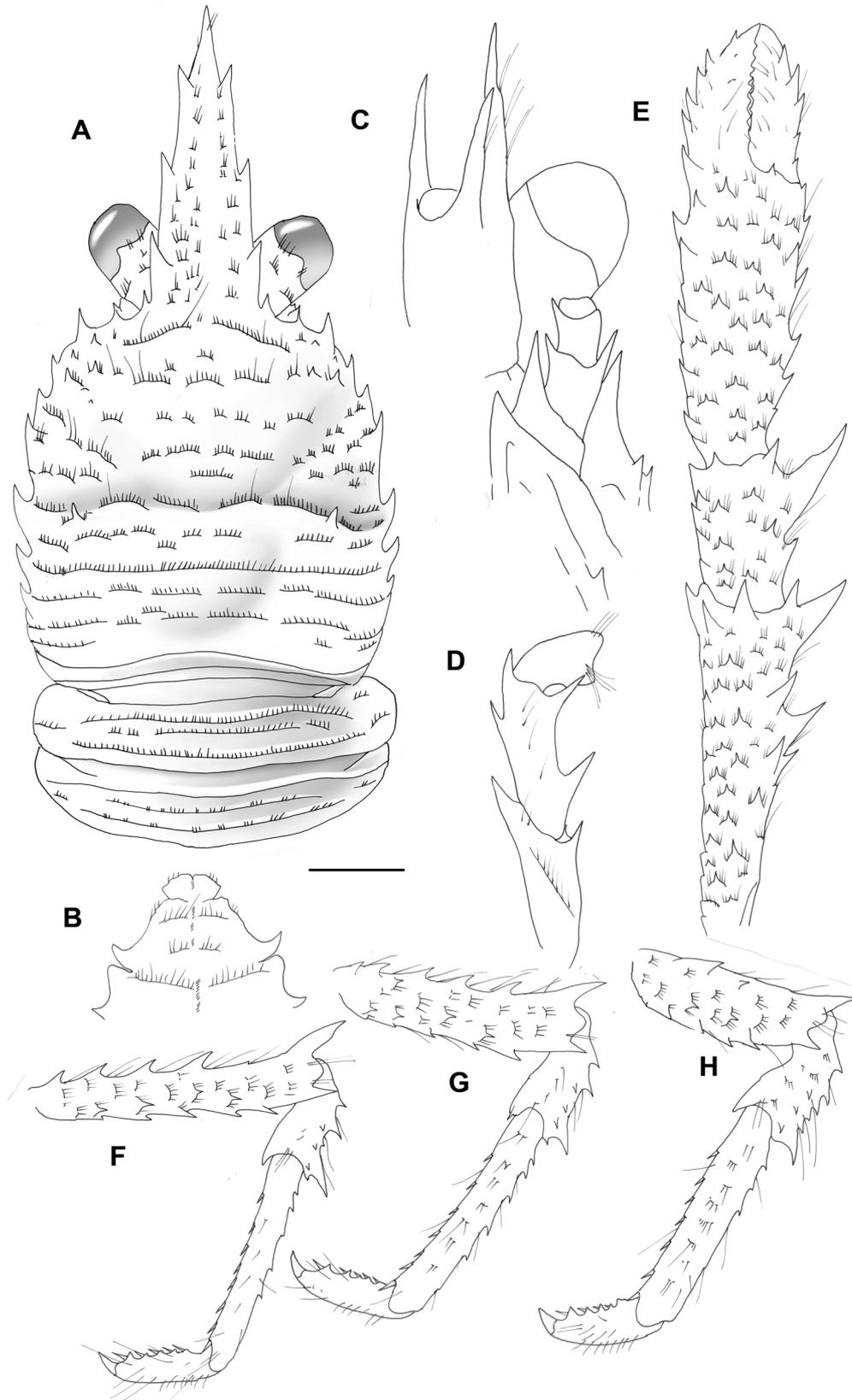


FIGURE 63. *Galathea machaera* n. sp., holotype, ovigerous female, 4.4 mm, Wallis and Futuna (MNHN-IU-2013-8437). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Mxp3: Ischium with flexor and extensor margins ending in strong spine; crista dentata with 8 or 9 strong denticles. Merus as long as ischium, with 2 strong flexor spines and 2 strong extensor spines. Carpus unarmed.

P1: 2.4 times carapace length, with numerous setiferous scales, and a few scattered long setae. Merus 0.9 times carapace length, 2.2 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.6 times length of palm, 1.6 times as long as broad; dorsal surface with some small spines; mesial margin with 3 spines, median clearly largest than others. Palm 2.4 times longer than broad, lateral and mesial margins slightly divergent; spines arranged roughly in dorsolateral and dorsomesial rows, and some small spines on dorsal side. Fingers 0.6 times palm length, each finger with one row of teeth, distally not spooned, fixed finger with lateral row of spines, movable finger with mesial row of spines.

P2–4: moderately long and slender, with some setose striae and sparse long simple setae. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.8 length of P3 merus). P2 2.0 times carapace length. P2 merus 0.8 carapace length, 5.5 times as long as broad, 1.3 times longer than P2 propodus; P3 merus 4.0 times longer than broad, 1.1 times longer than P3 propodus; P4 merus 3.0 times longer than broad, 0.9–1.0 times longer than P4 propodus. Extensor margin of P2–3 meri with row of 6 or 7 proximally diminishing spines, 3 spines on P4; flexor margin with 5 or 6 proximally diminishing spines on P2–3 and 3 or 4 on P4; lateral sides with 3 or 4 small spines on P2–4. Carpi with 4 or 5 spines on extensor margin on P2–4; lateral surface with 3 or 4 small spines sub-parallel to extensor margin on P2–4; flexor distal margin ending in small spine. P2, P3 and P4 propodi 7.5, 6.0 and 4.5 times, respectively, as long as broad; extensor margin 4 or 5 proximal spines; flexor margin with 7 or 8 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.5–0.6 that of propodi; flexor margin with 5–7 proximally diminishing teeth, terminal one prominent.

Epipods on P1–3.

Remarks. *Galathea machaera* n. sp. is most closely related to *G. genkai* Miyake & Baba, 1964 from Japan to Australia, Red Sea and Madagascar, and *G. gladiola* n. sp. from Vanuatu, New Caledonia and Chesterfield Islands. These three species are differentiated as follows:

- *Galathea genkai* has the rostrum being equal to or slightly more than 2.0 times as long as broad, versus more than 2.5 times as long in *G. machaera* and *G. gladiola*.
- *Galathea gladiola* has the walking legs being longer and more slender than *G. machaera*. For example, the P2 is more than twice the carapace length and its merus is more than 6 times longer than broad in *G. gladiola*, whereas the P2 is less than twice the carapace length and the its merus is less than 6 times longer than broad in *G. machaera*.

The genetic divergences with *G. genkai* are 14.9%, (COI) and 9.3% (16S rRNA) (Tab. 3). We have observed some intraspecific divergences between localities. For instance, in *G. machaera* the specimens from the Solomon Islands and Wallis-Futuna have a divergence of 4.4% (COI), that recommend further analyses with additional material. Furthermore, the genetic data of *G. genkai* are from specimens collected in Madagascar. It would be interesting to compare with material from the type area (Japan) in order to confirm the existence of one widely distributed species or additional species.

Distribution. Wallis and Futuna Islands, Solomon Islands; 97–223 m.

***Galathea machordomae* n. sp.**

(Fig. 64)

Material examined. *Holotype*: New Caledonia. CHALCAL 2, Stn CP18, 24°47.00'S, 168°09.43'E, 274 m, 27 October 1986: ov. F 4.1 mm (MNHN-IU-2013-13555).

Paratypes: New Caledonia. CHALCAL 2, Stn CP18, 24°47.00'S, 168°09.43'E, 274 m, 27 October 1986: 1 M 3.7 mm (MNHN-IU-2013-13556).

Etymology. This species is dedicated to Annie Machordom of the Museo Nacional de Ciencias Naturales, Madrid, for her support to crustacean taxonomy.

Description. *Carapace*: as long as broad; transverse ridges with dense short setae, and some scattered long non-plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with 4 transverse ridges: 1

epigastric ridge with 2 spines, medially interrupted; 1 protogastric ridge interrupted, with 1 small parahepatic spine on each side; 1 mesogastric ridge medially interrupted, not extending laterally to anteriormost branchial spines; 1 metagastric ridge interrupted and short. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 4 transverse ridges, 1 of them uninterrupted. Lateral margins slightly convex medially, with 5 spines: 1 spine in front of and 4 spines behind anterior cervical groove; first anterolateral, well-developed, slightly behind level of lateral limit of orbit, 1 spine ventral to between first and anterior branch of cervical groove; 2 spines on anterior branchial region, and 2 spines on posterior branchial margin. Small spine on limit of orbit; infraorbital margin with well-developed spine. Rostrum 1.6–1.7 times as long as broad, length 0.7 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface longitudinally concave, with numerous some small setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: 0.8 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somite 2 with 2 uninterrupted transverse ridges on tergite; somites 3–4 with anterior ridge only, and some scattered scales; somites 5–6 smooth. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger than others. Ultimate article with a few fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with strong distomesial spine reaching distal margin of article 2. Article 2 with 2 distal spines, distolateral spine slightly longer than distomesial, and barely reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor margins ending in small spine, extensor margin ending in acute angle; crista dentata with 24 denticles. Merus shorter than ischium; flexor margin with 3 well-developed spines, proximal spine larger than others; extensor margin bluntly produced. Carpus unarmed.

P1: 2.7 times carapace length, somewhat depressed on palm, more so on fingers, with numerous setiferous scales, and some scattered long plumose and some non-plumose setae. Merus slightly longer than carapace, 1.9 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.9–1.0 length of palm, 1.7 times as long as broad; dorsal surface with some small spines; mesial margin with row of spines, distal second much stronger than others. Palm 1.8 times longer than broad, lateral and mesial margins subparallel; well-developed spines arranged roughly in dorsal, lateral and dorsomesial rows; dorsolateral row continuing along entire fixed finger. Fingers as long as palm, each finger with two rows of teeth distally spooned; movable finger unarmed.

P2–4: long and slender, with some setose striae and sparse long plumose setae. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P3 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7 carapace length, 3.0 times as long as broad, 1.4 times longer than P2 propodus. P3 merus 2.5 times as long as broad, slightly longer than P3 propodus. P4 merus 2.3 times as long as broad, slightly longer than P4 propodus. Extensor margin with row of 8 or 9 proximally diminishing spines on P2–4; ventral margins distally ending in strong spine, lateral sides unarmed; ventromesial margin with terminal spine on P2–4. Carpi with 5–7 spines on extensor margin on P2–4; lateral surface with 3 or 4 small spines or acute granules sub-parallel to extensor margin; flexor distal margin with small spine. Propodi 3.5–4.0 times as long as broad; extensor margin with 6 or 7 proximal spines; flexor margin with 4 or 5 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 5 or 6 proximally diminishing teeth, terminal one prominent.

Epipods present on P1.

Remarks. *Galathea machordomae* belongs to the group of species having non-scale-like, complete gastric ridges, the carapace lateral margin without a spine between the anterolateral spine and the anteriormost branchial marginal spine, the absence of parahepatic spines and the presence of epipod only on the P1. The closest relatives are *G. formosa* De Man, 1902 from Taiwan and Indonesia and *G. maculiabdominalis* Baba, 1972 from Japan, Palau, the Philippines, Vanuatu, New Caledonia, and Fiji. The new species is easily differentiated from the other two species by the presence of two epigastric spines, which are absent in the other species. No genetic data were obtained from *G. machordomae*.

Distribution. New Caledonia, 274 m.

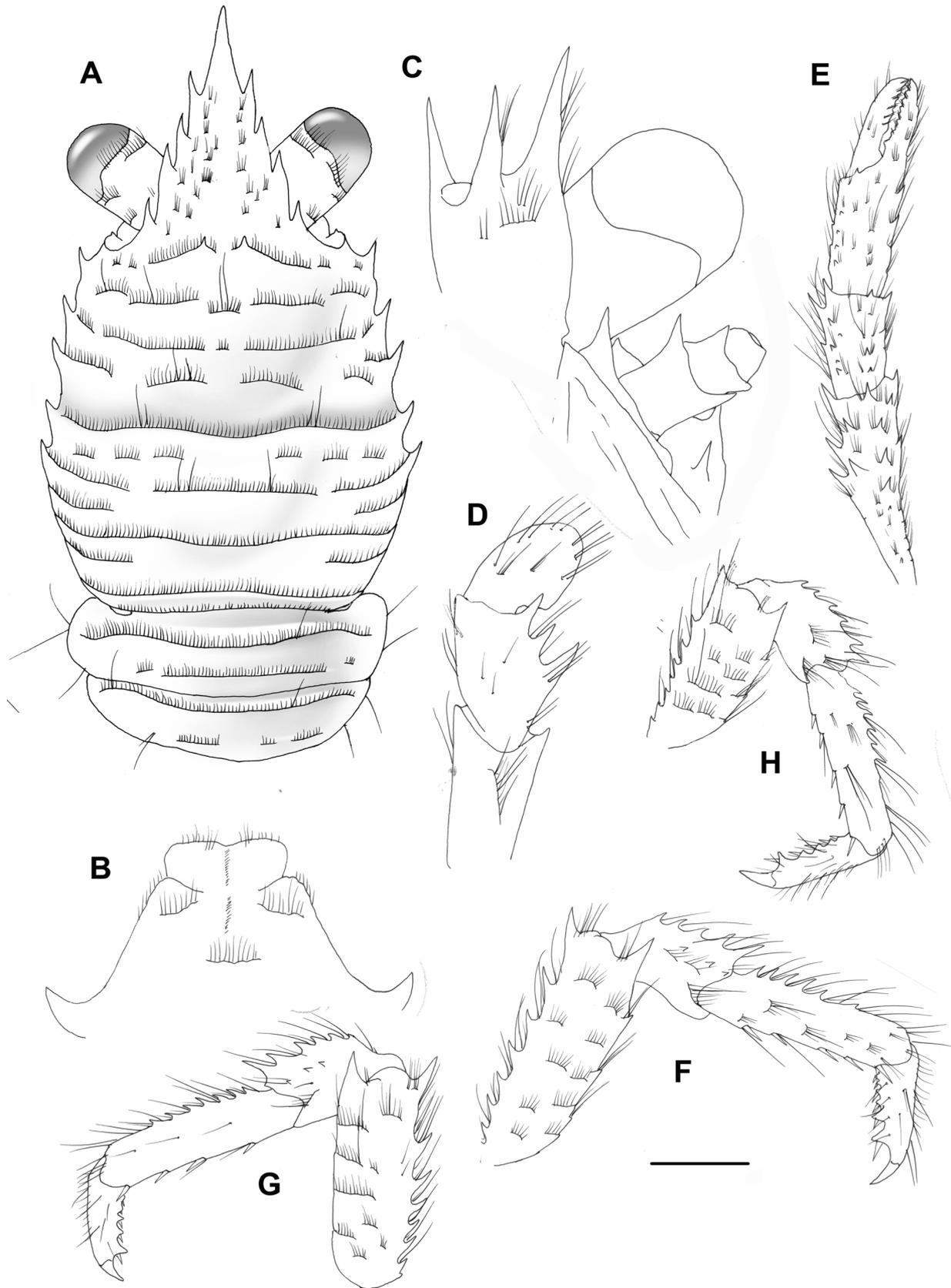


FIGURE 64. *Galathea machordomae* n. sp., holotype, ovigerous female, 4.1 mm, New Caledonia (MNHN-IU-2013-13555). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, left P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

***Galathea maculiabdominalis* Baba, 1972**

(Fig. 118A)

Galathea maculiabdominalis Baba, 1972: 86, fig. 1 (Ishigaki Island, Yaeyama Islands, Ryukyu Islands, 10 m).—Baba, 1982: 60 (Palau, subtidal).—Baba *et al.*, 2008: 72 (compilation).—Poore *et al.*, 2011: 333, pl. 11A (color photo, Vanuatu).

Material examined. Vanuatu. SANTO, Stn DB61, 15°32.3'S, 167°16.9'E, 41 m, 25 September 2006: 1 M 2.4 mm (MNHN-IU-2013-8344).

New Caledonia. Lifou Island. LIFOU, Stn 1460, 20°52.4'S, 167°08.0'E, 40–60 m, 6 November 2000: 2 M 1.7–2.6 mm, 3 ov. F 2.1–2.3 mm (MNHN-IU-2013-8346).—Stn 1463, 20°55.05'S, 167°03.35'S, 20–30 m, 10 November 2000: 3 M 2.2–2.5 mm, 1 ov. F 3.0 mm (MNHN-IU-2013-8347).—Stn 1474, 20°54.8'S, 167°16.1'E, 0–3 m, 11 November 2000: 3 M 1.5–3.0 mm, 2 ov. F 2.0–2.3 mm (MNHN-IU-2013-8343).—Stn 1464, 20°54.5'S, 167°05.9'E, 35–50 m, 14 November 2000, 2 M 2.5–3.6 mm, 2 F 2.3–2.4 mm (MNHN-IU-2013-83489).—Stn 1446, 20°50.8'S, 167°09.7'E, 36–40 m, 16 November 2000: 1 M 3.1 mm (MNHN-IU-2013-8345).—Stn 1465, 20°47.7'S, 167°07.0'E, 35–45 m, 16 November 2000: 2 M 1.8–3.1 mm, 1 ov. F 2.6 mm (MNHN-IU-2013-8351), 1 M 2.6 mm (MNHN-IU-2013-8352), 1 M 2.5 mm (MNHN-IU-2013-8353).—Stn 1466, 20°46.5'S, 167°06.2'E, 25–45 m, 17 November 2000: 2 M 3.3–3.4 mm (MNHN-IU-2013-8349).—Stn 1468, 20°46.5'S, 167°05.7'E, 30–80 m, 20 November 2000: 1 ov. F 2.6 mm (MNHN-IU-2013-8350).

Fiji. SUVA 4, Stn DW12, 18°21.4'S, 178°09.6'E, 39 m, 24 September 1999: 1 M 3.3 mm (MNHN-IU-2013-8408).

Philippines. Panglao Island. Alona Reef, PANGLAO, Stn B2, 9°33.00'N, 123°46.5'E, 5 m, 31 May 2004: 1 F 2.0 mm (NTOU).—Stn B5, 9°35.2'N, 123°50.4'E, 4 m, 2 June 2004: 1 F 2.5 mm (NTOU).

Remarks. The material examined agrees with the original description by Baba (1972). The genetic divergences with other closely related species are always larger than 16.1% (COI, the closest is *G. mauritiana*), and 5.8% (16S rRNA, the closest is *G. aegyptiaca*) (Tab. 1). *Galathea maculiabdominalis* is morphologically closest to *G. formosa* De Man, 1902 but the two can be easily distinguished from one another by the following characters:

- The rostrum is longer than broad in *G. maculiabdominalis* instead of broader than long in *G. formosa*.
- The anterior protogastric ridge is uninterrupted and reaches or nearly reaches the carapace lateral margins in *G. maculiabdominalis*, whereas this ridge is interrupted and does not reach the carapace lateral margins in *G. formosa*.
- The color patterns are very different. *G. formosa* has a whitish broad longitudinal stripe on the carapace (De Man 1902; Baba 1977c), that is absent in *G. maculiabdominalis* (Baba 1972; Poore *et al.* 2011).

G. maculiabdominalis is also close to *G. machordomae* n. sp. (see Remarks of the latter species).

Distribution. Japan (Ryukyus), Palau Islands, Philippines, Vanuatu, New Caledonia, and Fiji; 0–80 m.

***Galathea magnifica* Haswell, 1882**

(Fig. 65)

Galathea magnifica Haswell, 1882a: 761 (off Broughton's Islands near Port Stephens, 46 m).—Haswell, 1882b: 162 (no record).—Grant & McCulloch, 1906: 47, pl. 4, figs 3, 3a (Port Curtis and off Mast Head Island, Queensland, 13–31 m).—Balss, 1921: 23 (Cape Jaubert, North Western Australia, 20–22 m).—Hale, 1927: 79, fig. 75 (no record).—Haig, 1973: 280 (between Port Stephens and Newcastle, New South Wales and Spencer Gulf, South Australia, 29–110 m).—Haig, 1974: 446 (no record).—Davie, 2002: 62 (no record).—Poore, 2004: 232, fig. 63g, pl. 13e (compilation).—Baba *et al.*, 2008: 73 (compilation).—Poore *et al.*, 2011: 333, pl. 11B (color photo, eastern Australia).

Material examined. *Syntypes*: Australia. New South Wales. Broughton Islands, 32.62°S, 152.32°E, 46 m: 5 M 2.0–3.3 mm, 2 ov. F 3.6–3.7 mm, 5 F 3.3–4.5 mm (AM-P271).

Australia. New South Wales. Diamond Reef, SE Hallidays Point, 32.09067°S, 152.551500°E, 18 m, 21 March 2003: 1 M 2.8 mm (AM-P75445).

Description. *Carapace*: 0.9 times as long as broad; dorsal surface nearly horizontal from anterior to posterior;

transverse ridges with short fine setae and some scattered long plumose setae (not figured); cervical groove distinct, laterally bifurcated; gastric and anterior branchial regions only with scale-like or in concentric arcs; hepatic region with small spine near anterolateral spine; epigastric region with 2 median spines; branchial regions unarmed; mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by some interrupted transverse ridges, being scale-like on branchial regions. Lateral margins well convex medially, with 6 spines: 1 spine in front of and 5 spines behind anterior cervical groove; first anterolateral; 2 spines on anterior branchial margin, and 3 spines on posterior branchial margin; additional spine ventral to between first lateral spine and anteriormost spine of branchial margin. External limit of orbit with small spine; infraorbital margin with 1 spine. Rostrum broad triangular, 1.3 times as long as broad, length 0.5 postorbital carapace length and breadth 0.3 that of carapace, nearly horizontal in lateral view; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface with small scale-like setiferous ridges; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, unarmed, with sparse short setae, anterior margin spiniform.

Sternum: as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 transverse ridges on tergite, without additional interrupted ridges between, anterior ridge more distinctly elevated than posterior ridge; somite 5 with 2 medially interrupted ridges; tergite of somite 6 with some scale-like ridges, posteromedian margin nearly straight with setiferous ridge, all these ridges with posteriorly directed fine setae. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed spines, distodorsal larger; distomesial spine subequal in length to but somewhat more slender than distoventral. Ultimate article without short fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine exceeding distal margin of article 2. Article 2 with 2 distal spines, distomesial spine slightly longer than distolateral, not reaching end of article 3. Article 3 with distinct distomesial spine. Article 4 unarmed.

Mxp3: ischium with well-developed distal spine on flexor margin; extensor margin with small but distinct distal spine; crista dentata with 20–24 denticles. Merus equally long as ischium; flexor margin with 2 strong subequal spines, proximal one located at midlength, distal one at terminal end; extensor margin with obsolescent distal spine. Carpus unarmed.

P1: 2.5 (females), 3.5 (male) times carapace length, relatively slender, subcylindrical, somewhat depressed on palm, more so on fingers. Merus 0.9 times length of carapace, 1.3 times as long as carpus, with spines arranged roughly in rows, distal spines prominent. Carpus 0.8 length of palm, 1.7 times as long as broad (breadth measured at midlength); dorsal surface with small spines arranged roughly in longitudinal rows; mesial margin with 3 strong spines (distal second largest). Palm 1.8 times longer than broad, lateral and mesial margins subparallel; spines arranged roughly in rows; dorsolateral row of larger spines not continued on to lateral margin of fixed finger. Fingers 0.9 length of palm, each finger distally with two rows of teeth, spooned; mesial margin of movable finger unarmed.

P2–4 (mostly detached): moderately slender, with long sparse setae. P2 merus 0.7 carapace length, 3.0 times as long as broad, 1.4 times longer than P2 propodus; flexor margin with row of 7 or 8 proximally diminishing spines; distoflexor angle ending in 2 spines. Carpus with 5 spines on extensor margin; lateral surface with 2 or 3 spines sub-parallel to extensor margin. P2–4 propodi 3 or 4 times as long as broad; extensor margin unarmed; flexor margin with 6 slender movable spines. Dactyli distally ending in well-curved strong spine, 0.8 length of propodus slightly less than that of propodi; flexor margin with 5 proximally diminishing teeth.

Epipods only on P1.

Remarks. *Galathea magnifica* belongs to the group of species characterized by the presence of scale-like ridges on the gastric region of the carapace, the absence of dorsal spines on the gastric region, and the possession of pereopodal epipod only on the P1. It can be easily differentiated from other species of the group, e.g. *G. bracteosa* n. sp. from French Polynesia and *G. ploto* n. sp. New Caledonia and Chesterfield Islands, by the presence of two spines on the distal flexor angle of P2–3 meri, instead of only one spine in the latter two species.

Galathea magnifica is also close to *G. poupini* n. sp. (see Remarks of the latter species).

No genetic data are available for *G. magnifica*.

Distribution. Australia, from North Western Australia, Queensland to New South Wales and south Australia, 13–110 m.

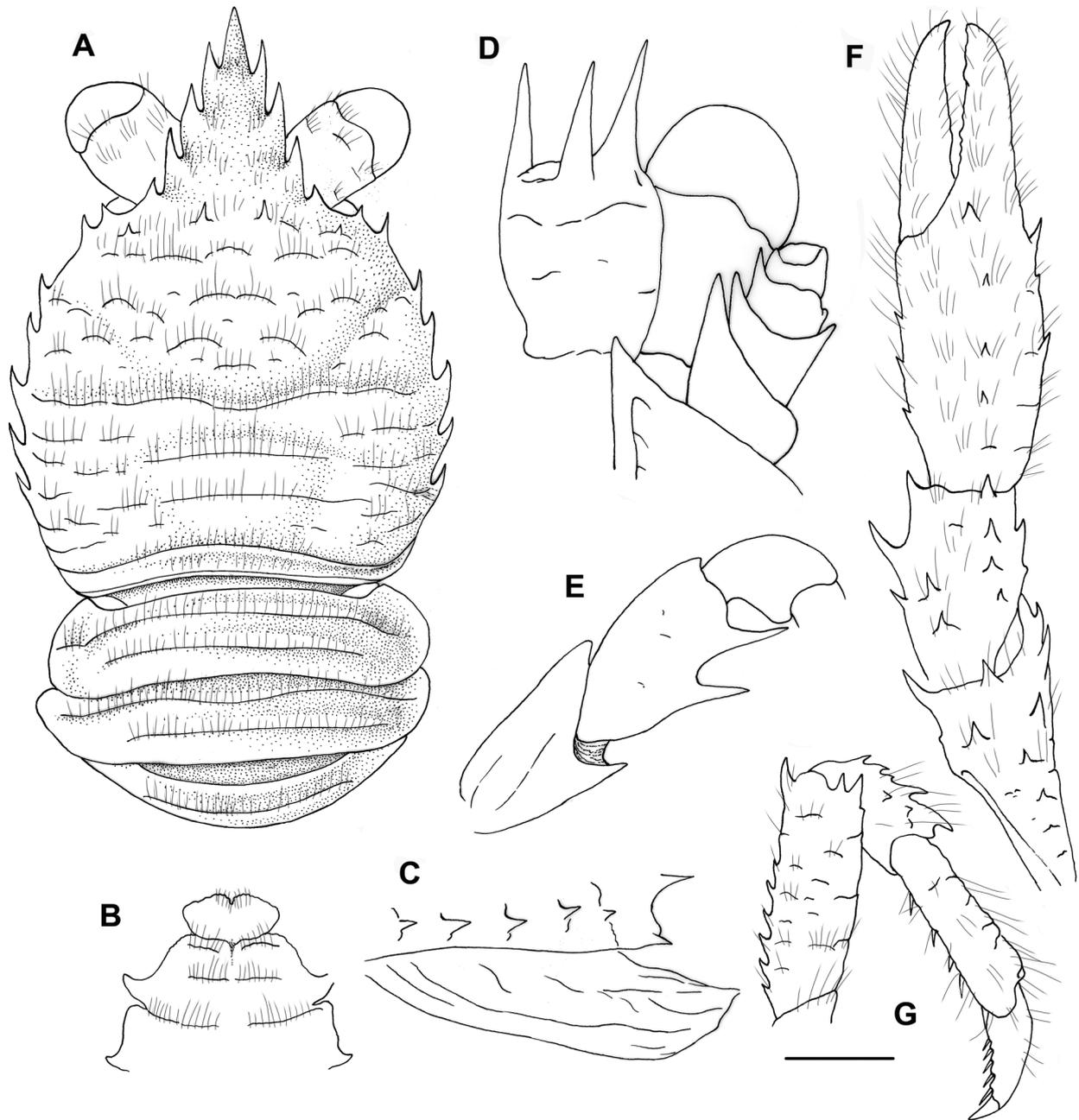


FIGURE 65. *Galathea magnifica* Haswell, 1882, syntype, female, 3.4 mm, Australia, New South Wales (P271). A, carapace and abdomen, dorsal view; B, thoracic sternites 3, 4 and 5; C, right pterygostomian region, lateral view; D, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; E, ischium, merus and carpus of right Mxp3, lateral view; F, right P1, dorsal view; G, probably right P2 (all P2-4 detached), lateral view. Scale: A, C, F, G = 1 mm; B, D, E = 0.5 mm.

***Galathea mariae* n. sp.**

(Figs 66, 118B)

Material examined. *Holotype*: French Polynesia. Society Islands. Moorea Island, 17.4848°S, 149.9172°W, 14 October 2008: M 3.5 mm (UF15522).

Paratypes: French Polynesia. Society Islands. Moorea Island, fore reef between Cook's and Opunohu Bay, 17.4756°S, 149.8344°W, 10–15 m, 19 July 2006: 1 M 2.3 mm (UF9951). Moorea Island, 17.4848°S, 149.9172°W, 14 October 2008: 1 ov. F 3.0 mm (UF15523).—17.4575°S, 149.8328°W, 10–20 m, 21 October 2009: 1 ov. F 2.5

mm (UF23540).—17.484°S, 149.9164°W, 19–20 m, 3 November 2009: 1 M 2.9 mm (UF23878).—17.4856°S, 149.9194°W, 32 m, 10 November 2009: 1 ov. F 2.5 mm (UF23973).—17.4756°S, 149.8425°W, 13–17 m, 5 December 2009: 1 ov. F 2.1 mm (UF24181). Tuamotu Archipelago. Tenarunga Atoll, 21.3518°S, 136.561°W, 31.8 m, 25 January 2012: 1 M 2.4 mm (UF35380). Gambier Islands. Off Mangareva Island, 23.0566°S, 134.9989°W, 30.1 m, 30 January 2013: 1 M 2.0 mm (UF35418).—23.0776°S, 134.8884°W, 22.5 m, 6 February 2013: 1 F 1.9 mm (UF35478). Austral Islands. Rapa, Stn 32, 27°35.8'S, 144°23.0'W, 15–20 m, 18 November 2002: 2 M 2.0–2.3 mm, 1 ov. F 2.4 mm, 1 F 2.2 mm (MNHN-IU-2013-8444).—Stn 33, 27°34.8'S, 144°20.8'W, 30 m, 19 November 2002: 1 ov. F 2.2 mm, 1 F 2.1 mm (MNHN-IU-2013-8445).

Kiribati. Line Islands, Vostok Island, 10.059°S, 152.314°W, 10 m, 24 October 2013: 1 ov. F 2.7 mm (UF38737).

New Caledonia, Maitre Island, 25 m, 19 September 1978: 1 M 1.7 mm, 3 ov. F 1.9–2.2 mm, 3 F 1.7–1.8 mm (MNHN-IU-2013-8440). Lifou Island. LIFOU, Stn 1430, 20°47.5'S, 167°07.1'E, 20–25 m, 9 November 2000: 1 F 2.2 mm (MNHN-IU-2013-8442), 2 M 2.1–2.3 mm, 4 F 2.2–2.7 mm (MNHN-IU-2013-8443).—Stn 1455, 20°56.8'S, 167°02.7'E, 15–20 m, 25 November 2000: 4 M 1.8–2.1 mm, 9 ov. F 2.0–3.0 mm (MNHN-IU-2013-8438).—Stn 1421, 20°52.4'S, 167°08.5'E, 4 m, 26 November 2000: 3 M 2.0–3.1 mm, 1 ov. F 1.9 mm, 2 F 2.3–2.7 mm (MNHN-IU-2013-8441), 1 M 2.2 mm (MNHN-IU-2013-8439).

Maldives Islands, Dharanboodhoo Island, 3.0613°N, 72.9311°E, 10–30 m, 12 May 2014: 1 M 2.3 mm, 1 ov. F 1.8 mm (UF39637).

Etymology. Named to Maria García of the Centre d'Estudis Avançats de Blanes (CEAB-CSIC), for her support to marine research.

Description. *Carapace:* As long than broad; transverse ridges with dense short setae, without long setae; cervical groove distinct, laterally bifurcated. Gastric region with some transverse ridges: 1 epigastric ridge, scale-like, with 2 median spines; 2 protogastric ridges, anterior ridge uninterrupted, medially convex, posterior scale-like or absent; 2 mesogastric ridges, anterior ridge medially interrupted, and not extending (holotype) or extending (most paratypes) laterally to anteriormost of branchial marginal spines, posterior ridge scale-like or absent; 2 metagastric ridges, anterior ridge medially interrupted, not continuing laterally to anteriorbranchial ridge, posterior ridge short. Hepatic region unarmed. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 4 transverse ridges, 2 ridges uninterrupted. Lateral margins slightly convex, with 7 or 8 spines: 2 or 3 spines in front of and 5 spines behind anterior cervical groove; first anterolateral, well-developed, at level of lateral limit of orbit, 1 small spine at midlength between anterolateral spine and anteriormost spine of branchial margin, with well-developed spine ventral to between first and second; 2 small spines on anterior branchial region, and 3 spines on posterior branchial margin. Spine slightly below lateral limit of orbit; infraorbital margin with strong spine. Rostrum moderately short, 1.5 times as long as broad, length 0.5–0.6 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.35 distance between proximalmost lateral incisions; dorsal surface slightly concave medially, with numerous small setae; lateral margin with 4 shallowly incised teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute; upper margin, near linea anomurica, unarmed.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 each with 2 uninterrupted ridges; somites 4–6 smooth; posteriormedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial smaller than others. Ultimate article with a few long fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching end of article 2. Article 2 with 2 subequal distal spines, barely reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor and extensor margins ending in acute angle; crista dentata with 29 or 30 denticles. Merus slightly longer than ischium; flexor margin with 2 well-developed spines, proximal spine slightly longer than distal; extensor margin ending in 1 spine. Carpus unarmed.

PI: 3.4–3.5 times carapace length, with numerous setiferous small scales, some scattered long simple setae and some plumose ones. Merus 1.3 times carapace length, 1.5 times as long as carpus, with numerous spines,

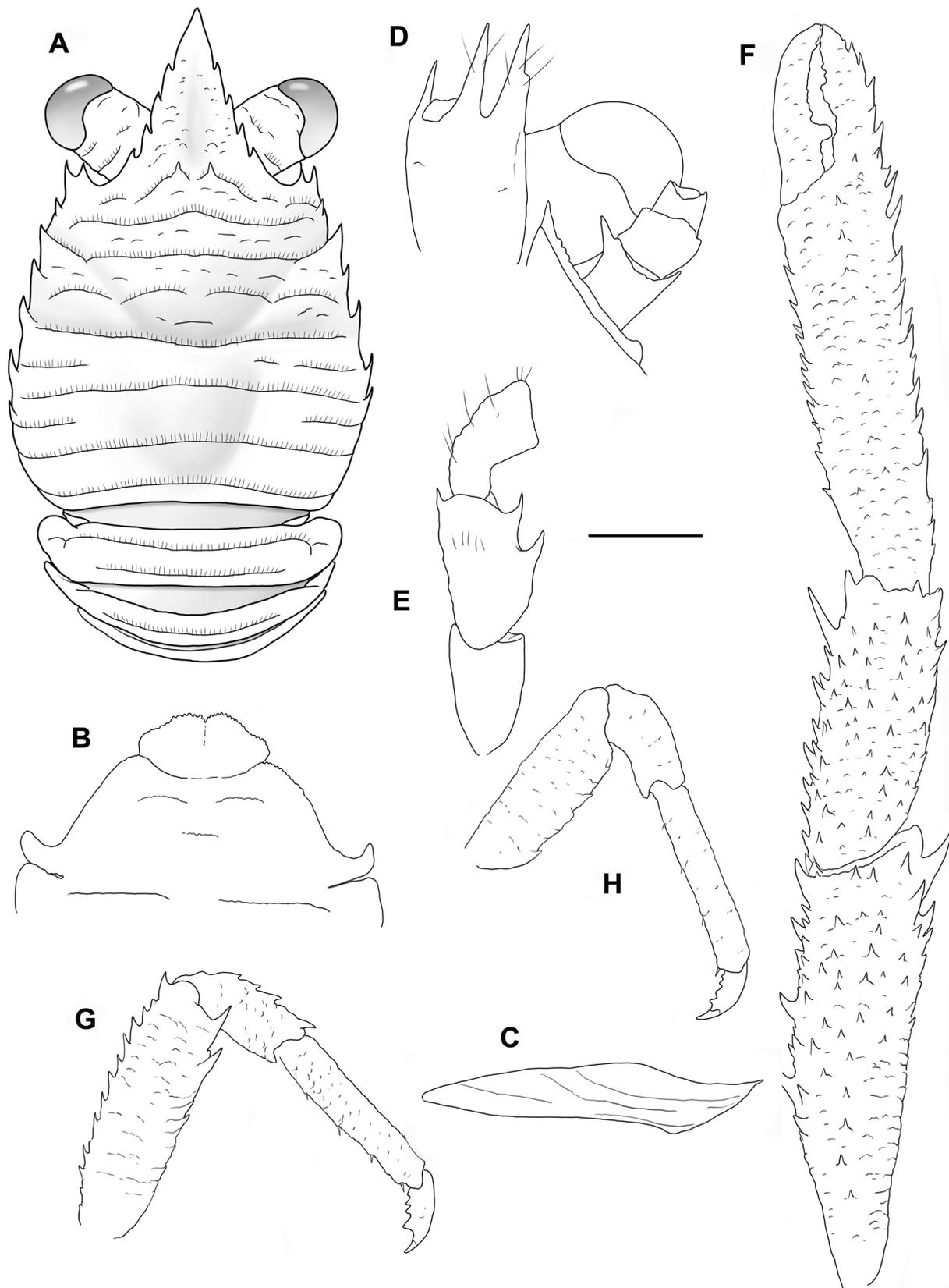


FIGURE 66. *Galathea mariae* n. sp., holotype, male, 3.5 mm, French Polynesia (UF15522). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, right pterygostomian region, lateral view; D, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; E, ischium, merus and carpus of right Mxp3, lateral view; F, right P1, dorsal view; G, right P2, lateral view; H, right P4, lateral view (setae on pereiopods not figured). Scale: A, C, F–H = 1 mm; B, D, E = 0.5 mm.

dorsomesial and distal spines stronger than others. Carpus 0.7 length of palm, 2.6 times as long as broad; dorsal surface with numerous small spines; mesial margin with row of spines. Palm 3.4 times longer than broad, lateral and mesial margins subparallel; numerous small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows; dorsomesial row continuing along fixed finger. Fingers 0.4 times palm length, each finger distally with two rows of teeth, spooned; movable finger unarmed.

P2–4: long and slender, with some setose striae, sparse long simple and plumose setae. P2 1.9 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.8 times carapace length, 3.0 times as long as broad, 1.5 times longer than P2 propodus; P3 merus 3.2 times as long as broad, 1.5 times longer than P3 propodus; P4 merus 3.0 times as long as broad, 1.2–1.3 times longer than P4 propodus. Extensor margin with row of 11 or 12 proximally diminishing spines on P2–3, 0–2 small spines on P4; ventral margins distally ending in strong spine, lateral sides unarmed. Carpi with 4 or 5 spines on extensor margin on P2–3, unarmed on P4; lateral surface with some granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 4.0–5.0 times as long as broad; extensor margin unarmed; flexor margin with 4 or 5 slender movable spines, distal two spines with another smaller spine mesial them. Dactyli distally ending in well-curved strong spine, length 0.4–0.5 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth.

Epipods present on P1.

Coloration. Base color whitish, with large reddish or brownish flecks covering median portions of carapace and abdomen. Base of rostrum whitish. P1 translucent whitish, with some red bands, one white large spot on distal part of palm. P2–4 translucent whitish, with red stripes.

Remarks. *Galathea mariae* closely resembles *G. atua* **n. sp.** from the French Polynesia and *G. eridani* **n. sp.** from Mozambique and New Caledonia. It can be easily distinguished from the latter two new species by the rostral lateral teeth shallowly incised in *G. mariae*, rather than deeply incised in the other species. Furthermore, *G. mariae* is also close to *G. denticulata* Macpherson & Cleva, 2010 from the southwestern Indian Ocean, but the two can be easily distinguished for one another by the following characters:

- One small hepatic spine is present on each side in *G. denticulata*, whereas this spine is absent in the new species.
- The Mxp3 merus has one distal spine on the extensor margin of merus in *G. mariae*, rather than unarmed in *G. denticulata*.
- The base color is light orange, and the anterior part of the carapace is bluish in *G. denticulata*, whereas the base color is red, with some whitish large spots on the carapace and abdomen in the new species.

The new species is also close to *G. whiteleggii* Grant & McCulloch, 1906 from Australia (see Remarks of the latter species).

The genetic divergences with other species are always higher than 9.2% (COI, the closest is *G. villosa* **n. sp.**) and 8.5% (16S rRNA, the closest is *G. eione* **n. sp.** (Tab. 2).

Distribution. French Polynesia (Society, Austral, Gambier Islands, Line Islands), New Caledonia, and Maldive Islands, 4–32 m, associated with sponges.

***Galathea mauritiana* Bouvier, 1914**

(Figs 67, 118C)

Galathea mauritiana Bouvier, 1914: 5 (Mauritius Islands).—Bouvier, 1915: 200, figs 10, 11 (Mauritius Islands).—Laurie, 1926: 125 (in part, Farquhar, Coetivy, Saya De Malha, 48 m).—Collins, 1995: 61 (replacement name for *Galathea affinis* Ortmann, 1892, preoccupied by the fossil *Galathea affinis* Ristori, 1886).—Baba *et al.*, 2008: 73 (compilation).—Baba *et al.*, 2009: 115, figs. 94–96 (Taiwan).—Macpherson & Cleva, 2010: 59, color figs. C, D (Mayotte and Madagascar, 1–13 m).—Poupin, 2013a: 14, fig. 6d (color) (Mayotte, 0–22 m).—Poupin *et al.*, 2013b: 6 (Europa island, Mozambique Channel).

Galathea affinis.—Baba, 1990: 953 (Comoro Islands, 20 m).—Tirmizi & Javed, 1993: 45, fig. 20 (Madagascar and Mozambique Channel, 1–35 m).

Not *Galathea mauritiana*.—Poore *et al.*, 2011: 333, pl. 11C (color photo, Taiwan) = (*G. senta* Macpherson & Robainas-Barcia, 2014).

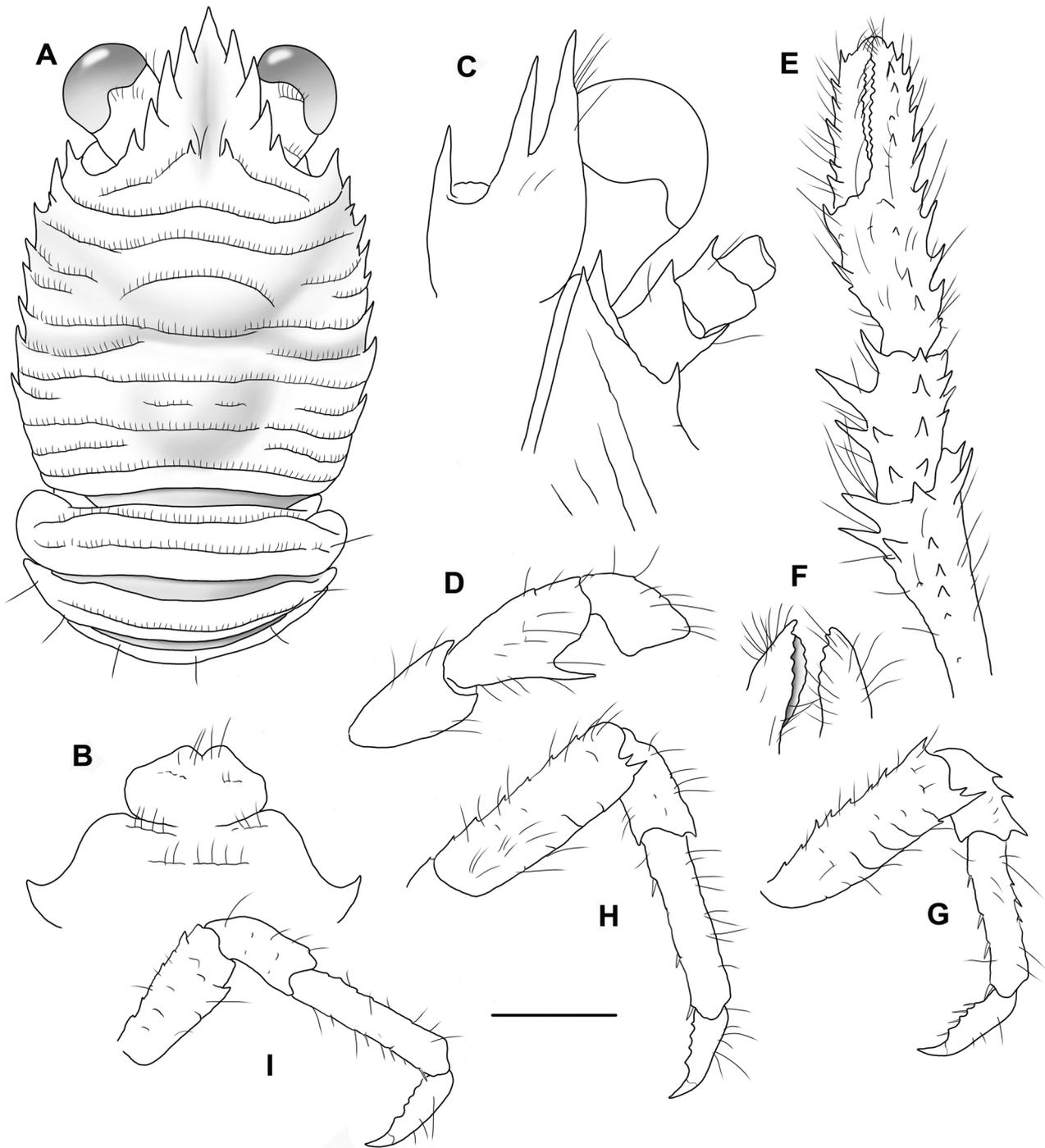


FIGURE 67. *Galathea mauritiana* Bouvier, 1914, female, 2.5 mm, Madagascar (MNHN-IU-2013-9740). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P1 fingers, ventral view; G, right P2, lateral view; H, right P3, lateral view; I, right P4, lateral view. Scale: A, E, G, H, I = 1 mm; B–D, F = 0.5 mm.

Material examined. *Holotype*: Mauritius Island. Le Chaland. M 2.7 mm (MNHN Ga810, MNHN-IU-2013-9696). Mayotte Island. 12.7605°S, 45.068°E, 2–3 m, 30 May 2008: 1 ov. F 2.8 mm (UF13556).

Madagascar. Nosy Be, off Lokobe reserve, 13.4139°S, 48.3056°E, 1–3 m, 16 May 2008: 1 ov. F 3.6 mm (UF14334). Fort Dauphin, no depth, 1 M 2.1 mm, 1 ov. F 3.3 mm (MNHN Ga809, MNHN-IU-2013-9695). ATIMO VATAE. Stn TB07, 25°02.5'S, 46°59.7'E, 4–5 m, 9 May 2010: 1 F 2.5 mm (MNHN-IU-2013-9740), 2 M 1.7–2.4 mm, 3 ov. F 2.2–3.3 mm (MNHN-IU-2010-2741, MNHN-IU-2013-9741).— Stn TS21, 25°01.5'S,

47°00.0'E, 2–4 m, 11 May 2010: 1 F 1.8 mm (MNHN-IU-2010-2725).— Stn TB12, 25°01.5'S, 47°00.0'E, 4–5 m, 12 May 2010: 1 M 3.2 mm (MNHN-IU-2010-2748), 1 M 2.1 mm, 4 ov. F 2.5–3.3 mm (MNHN-IU-2010-2728).

La Réunion. MD32, Stn PL53, 20°55.5'S, 55°17.6'E, 10 m, 21 August 1982: 1 ov. F 2.3 mm, 1 F 2.6 mm (MNHN-IU-2013-13916).

Description. *Carapace.* As long as broad; anterior cervical groove indistinct. Ridges with dense short setae, and a few scattered long and thick setae. Gastric region with 4 or 5 transverse ridges: 1 epigastric ridge with 2 median spines, medially interrupted; 1 protogastric ridge, slightly convex medially, usually uninterrupted and extending laterally to first marginal spine, laterally interrupted in some specimens; 1 mesogastric ridge uninterrupted extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, anterior one convex and uninterrupted, posterior ridge short, sometimes absent. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges, 1 or 2 of them uninterrupted. Lateral margins medially convex, with 8 spines: 2 spines in front of and 6 spines behind indistinct anterior cervical groove; first anterolateral, well-developed, at level of lateral limit of orbit; second minute, 1 spine ventral to between first and second; 3 spines on anterior branchial region and 3 spines on posterior branchial margin, last small. External limit of orbit unarmed, with well-developed spine between orbit and first anterolateral spine, infra-orbital margin with strong acute process. Rostrum broad triangular, 1.2–1.5 times as long as broad, length 0.5 that of, breadth 0.3–0.4 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions, dorsal surface slightly concave medially; lateral margin with 4 sharp teeth.

Pterygostomian flap rugose, 1 distinct spine on upper margin near linea anomurica, anterior margin ending in well-developed spine.

Sternum: Slightly longer than broad, lateral limits divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somites 5–6 each with 2 ridges, medially interrupted. Males with G1 and G2.

Eyes: Ocular peduncles 1.1 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger; distomesial smaller than others. Ultimate article with a few short setae not in tuft on distodorsal margin.

Antenna: Article 1 with depressed ventral distomesial process not reaching distal margin of article 2. Article 2 with subequal distal spines, nearly reaching midlength of article 3. Article 3 with distinct distomesial spine. Article 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor margin unarmed; crista dentata with 23 or 24 denticles. Merus subequal in length to ischium, with strong proximal spine on flexor margin, located at midlength, and clearly not reaching distal margin of merus; 1 or 2 small or obsolescent distal spines; extensor margin with distal spine. Carpus spineless.

P1: 1.8–2.5 times carapace length, relatively slender, subcylindrical, with numerous short setae and some long setae on dorsal surface and along lateral and mesial margins of all articles. Merus 0.6–0.9 length of carapace, 1.4–1.5 times as long as carpus, with rows of spines, mesial and distal spines strong. Carpus as long as palm, 1.7–2.0 times longer than broad, lateral and mesial margins subparallel, dorsal surface with small spines; mesial surface with row of 3 or 4 well-developed spines; and row of small spines along lateral margin. Palm 1.6–1.7 times longer than broad; spines roughly in rows on dorsal, mesial and lateral; lateral row continued on to whole lateral margin of fixed finger; mesial row continuing along mesial margin of movable finger. Fingers 0.8–1.1 times longer than palm, each finger distally with two rows of teeth, spooned.

P2–4: Relatively slender, somewhat compressed, moderately setose, sparsely with long setae on all articles. P2 1.7 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.7 length of P3 merus); P2 merus 0.6 carapace length, 3.0 times as long as broad, 1.6 times longer than P2 propodus; P3 merus 3.0 times as long as broad, 1.2 times length of P3 propodus; P4 merus 2.4 times as long as broad, as long as P4 propodus. Extensor margins with row of 8 or 9 proximally diminishing spines on P2–3, 1 or 2 spines on P4; lateral surface unarmed on P2–4; 2 well-developed spines on terminal flexolateral margin, sometimes obsolescent in P4; flexomesial margin with terminal spine on P2 only. Carpi with 3 or 4 spines on extensor margin of P2–3, 1 minute spine on P4; lateral surface with row of 2 or 3 acute granules paralleling extensor row; flexor distal margin ending in acute angle. P2–4 propodi 4.0 times as long as broad; extensor margin with 3 proximal spines on P2, unarmed on P3–4; flexor margin with 4 slender movable spines on P2–4. Dactyli 0.6–0.7 length of propodi, ending

in incurved, strong, sharp spine; flexor margin with prominent triangular terminal tooth preceded by 4 obsolescent teeth.

Epipods absent on pereopods.

Coloration. Ground color of carapace, abdominal somites 2–4 and pereopods greenish or brownish, with darker transverse ridges; some whitish patches scattered on carapace and abdomen surface; each branchial region with one small black spot near cervical groove. Distal part of P1 palm and proximal portion of P1 fingers whitish; one distinct black spot, encircled by yellow, on distal part of P1 palm. P2–4 with some brownish transverse stripes.

Remarks. *Galathea mauritiana* was originally described on the basis of one male specimen collected in Mauritius Island. It belongs to the group of species characterized by the pterygostomial flap with one or two spines on the upper margin near the linea anomurica, and an uninterrupted mesogastric ridge between the anteriormost branchial marginal spines. This group contains the following four species other than *G. mauritiana*: *G. acis* **n. sp.** from Japan to Australia and New Caledonia, *G. aequata* **n. sp.** from French Polynesia, *G. ahyongi* **n. sp.** from the Red Sea, and *G. senta* **n. sp.** from French Polynesia to Vanuatu and Taiwan.

Galathea mauritiana further differs from *G. aequata* and *G. acis* by the more slender walking legs (P2–4). For instance, the P2 propodus is 4 times longer than broad in *G. mauritiana*, whereas this propodus is 3.0–3.5 times in the other two species.

The genetic divergences among *G. mauritiana* and the other four related species are large: 12.7–16.6% (COI) (only data for 16S rRNA in *G. acis* and *G. senta*, 14.0%) (Tab. 1), although the morphological differences are very subtle.

The synonymy of *Galathea mauritiana* needs revision after the discovery of several closely related new species. The species was described from Mauritius Island by Bouvier (1914). Previously, the species was named as *G. affinis* Ortmann, 1892 and cited from numerous localities in the Indian and Pacific oceans (see synonymies under *G. acis*, *G. aequata*, and *G. ahyongi*). However, the name is preoccupied by the fossil *Galathea affinis* Ristori, 1886, and the name *G. mauritiana* has been used in the recent years (e.g. Baba et al. 2008, 2009). We have revised a small part of the material identified as *G. mauritiana* or *G. affinis* and collected by other authors, (e.g. Baba 1979, 1990). However, a more complete study of the material from the different localities will confirm their identity providing the range of the different species.

Distribution. Mauritius, Mayotte, La Réunion Islands, Mozambique Channel and Madagascar, 0–35 m. *Galathea mauritiana* seems to be restricted to the SW Indian Ocean, so previous records from other localities of the Indian and Pacific Oceans probably belong to other species, and should be revised.

***Galathea melobosis* n. sp.**

(Fig. 68)

Material examined. *Holotype*: New Caledonia. Chesterfield Islands. CHALCAL 84, Stn CP12, 20°34.30'S, 158°47.40'E, 67 m, 23 July 1984: M 3.9 mm (MNHN-IU-2013-13617).

Paratypes: Mariana Islands. Guam, Hospital point, 100–106 m, 13.5021°N, 144.7682°E, 18 March 2008: 1 ov. F 3.0 mm (UF13824).

Solomon Islands. SALOMON 1, Stn CP1809, 9°48.385'S, 160°51.193'E, 39–53 m, 3 October 2001: 1 M 2.9 mm (MNHN-IU-2013-13625). Stn DW1811, 9°46.3'S, 160°51.3'E, 182–203 m, 3 October 2001: 1 M 2.9 mm (MNHN-IU-2013-13623). Stn DW1840, 10°17.0'S, 161°43.0'E, 97–223 m, 6 October 2001: 1 M 3.6 mm (MNHN-IU-2013-13624).

Vanuatu. SANTO, Stn EP1, 15°32.5'S, 167°09.0'E, 46–47 m, 10 September 2006: 4 M 2.4–3.7 mm, 2 ov. F 2.5–2.8 mm, 1 F 2.9 mm (MNHN-IU-2013-13647).—Stn DB16 Light, 15°35.5'S, 167°15.8'E, 32–40 m, 14 September 2006: 1 ov. F 2.4 mm (MNHN-IU-2013-13654).—Stn EP10, 15°38.0'S, 167°13.6'E, 45–101 m, 15 September 2006: 2 M 2.7–3.2 mm, 2 ov. F 2.8–3.1 mm, 1 F 1.5 mm (MNHN-IU-2013-13648).—Stn AT14, 15°24'S, 167°13.5'E, 102–120 m, 19 September 2006: 1 ov. F 2.8 mm (MNHN-IU-2013-13653).—Stn AT53, 15°31.8'S, 167°13.6'E, 62–71 m, 2 October 2006: 1 ov. F 4.5 mm (MNHN-IU-2013-13618).—Stn AT56, 15°36.1'S, 167°01.3'E, 98–105 m, 2 October 2006: 1 F 2.4 mm (MNHN-IU-2013-13950).—Stn FP50, 15°36.8'S, 167°08.7'E, 25 m, 4 October 2006: 1 M 2.8 mm (MNHN-IU-2013-13652).—Stn EP30, 15°37.6'S, 167°05.4'E, 103–120 m, 12 October 2006: 1 F 3.7 mm (MNHN-IU-2013-13649).—Stn FB80, 15°33.1'S, 167°09.6'E, 2 m, 14

October 2006: 1 F 3.3 mm (MNHN-IU-2013-13650).—Stn FB90, 15°35'S, 167°07.7'E, 36–39 m, 16 October 2006: 1 M 2.9 mm, 1 ov. F 3.0 mm (MNHN-IU-2013-13651).

New Caledonia. Chesterfield Islands. CHALCAL 84, Stn DC10, 20°36.09'S, 161°05.82'E, 87 m, 15 July 1984: 2 M 3.4–3.8 mm, 3 ov. F 3.0–3.2 mm, 1 F 2.6 mm (MNHN-IU-2013-13635).—Stn CP12, 20°34.30'S, 158°47.40'E, 67 m, 23 July 1984: 22 M 3.4–4.0 mm, 33 ov. F 3.0–4.2 mm, 7 F 2.8–3.2 mm (MNHN-IU-2013-13633).—Stn D41, 20°34.80'S, 158°47.30'E, 67 m, 23 July 1984: 1 M 3.9 mm (MNHN-IU-2013-13621); 1 ov. F 4.0 mm (MNHN-IU-2013-13622).—Stn D42, 20°38.00'S, 158°43.10'E, 67 m, 23 July 1984: 5 M 2.8–3.7 mm, 2 ov. F 3.3–3.4 mm (MNHN-IU-2013-13642).—Stn D43, 20°41.50'S, 158°38.40'E, 78 m, 23 July 1984: 1 M 3.4 mm (MNHN-IU-2013-13643).—Stn D52, 21°13.40'S, 158°49.20'E, 69 m, 24 July 1984: 1 ov. F 2.7 mm (MNHN-IU-2013-13644).—Stn D53, 21°19.50'S, 158°55.30'E, 60 m, 24 July 1984: 1 M 3.7 mm, 2 ov. F 3.0–3.5 mm (MNHN-IU-2013-13645).—Stn CP14, 21°13.50'S, 158°50.20'E, 66 m, 24 July 1984: 8 M 2.9–4.0 mm, 5 ov. F 3.7–3.9 mm, 2 F 3.8 mm (MNHN-IU-2013-13634).—Stn CP15, 21°24.90'S, 159°09.30'E, 60 m, 25 July 1984: 1 M 3.7 mm (MNHN-IU-2013-13636).—Stn CP16, 21°41.67'S, 159°21.92'E, 53 m, 25 July 1984: 3 M 3.4–4.7 mm (MNHN-IU-2013-13637). CORAIL 2, Stn CP22, 20°33'S, 161°01'E, 85–88 m, 22 July 1988: 2 M 3.0–3.8 mm, 2 ov. F 4.2–4.3 mm (MNHN-IU-2013-13638).—Stn CP23, 20°31'S, 161°04'E, 80–83 m, 22 July 1988: 1 M 2.4 mm (MNHN-IU-2013-13639).—Stn CP25, 20°25'S, 161°05'E, 67–70 m, 22 July 1988: 2 M 2.3–3.0 mm, 1 ov. F 3.0 mm (MNHN-IU-2013-13640).—Stn CP29, 20°31'S, 160°53'E, 79–84 m, 22 July 1988: 1 M 2.4 mm, 1 ov. F 3.4 mm (MNHN-IU-2013-13641).—Stn CP127, 19°28'S, 158°27'E, 44–45 m, 29 July 1988: 1 ov. F 4.5 mm (MNHN-IU-2013-13646). Belona Island. CORAIL 1, August 1988: 14 M 2.7–3.6 mm, 5 ov. F 3.2–3.9 mm (MNHN-IU-2013-13632). South Reef, Stn 400, 22°34'S, 167°14'E, 64 m, 23 January 1985: 1 ov. F 3.6 mm, 1 F 4.0 mm (MNHN-IU-2013-13631).—Stn 561, 22°42'S, 166°59'E, 48 m, 16 July 1985: 1 ov. F 3.5 mm (MNHN-IU-2013-13630). BATHUS 2, Stn DW714, 22°37'S, 167°09'E, 124 m, 10 May 1993: 1 ov. F 2.8 mm (MNHN-IU-2013-13629).

Fiji. MUSORSTOM 10, Stn CP1364, 18°11.95'S, 178°34.50'E, 80–86 m, 15 August 1998: 1 M 3.2 mm (MNHN-IU-2013-13620); 1 M 2.7 mm (MNHN-IU-2013-8294); 1 ov. F 3.6 mm (MNHN-IU-2013-13619). SUVA 2, Stn CP48, 17°56.2'S, 177°14.3'E, 16 m, 19 October 1998: 7 M 3.0–5.7 mm, 4 ov. F 3.1–5.7 mm (MNHN-IU-2013-13628).—Stn DW50, 17°44.9'S, 177°13.8'E, 36 m, 20 October 1998: 1 M 4.0 mm (MNHN-IU-2013-13626).—Stn CP66, 17°45.1'S, 177°13.7'E, 37 m, 21 October 1998: 5 M 3.2–4.1 mm, 4 ov. F 4.0–4.2 mm (MNHN-IU-2013-13627).

Etymology. *Melobosis* is one of the children of the Ocean in Greek mythology. Considered as a substantive in apposition.

Description. *Carapace:* As long as broad; transverse ridges with dense short setae, and some scattered moderately long non plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with some transverse ridges: 1 epigastric ridge unarmed, uninterrupted, medially convex; 2 protogastric ridges, anterior one uninterrupted, medially convex, with minute parahepatic spine on each side, sometimes absent, posterior ridge short, scale-like; 1 mesogastric ridge usually medially interrupted but not extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, anterior one uninterrupted, continuing laterally to anteriorbranchial ridges, sometimes medially interrupted, posterior ridge short. Hepatic region with small spine near first marginal (anterolateral) spine. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges, 1 of them uninterrupted. Lateral margins well convex medially, with 6 or 7 spines: 2 spines in front of and 4 or 5 spines behind anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, with small spine ventral to between first and second; 2 spines on anterior branchial region, last small, and 2 or 3 spines on posterior branchial margin, last small and obsolescent in some specimens. Small spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum 1.5–1.6 times as long as broad, length 0.5–0.6 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.30–0.35 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous small scale-like setose ridges; lateral margin with 4 deeply incised teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

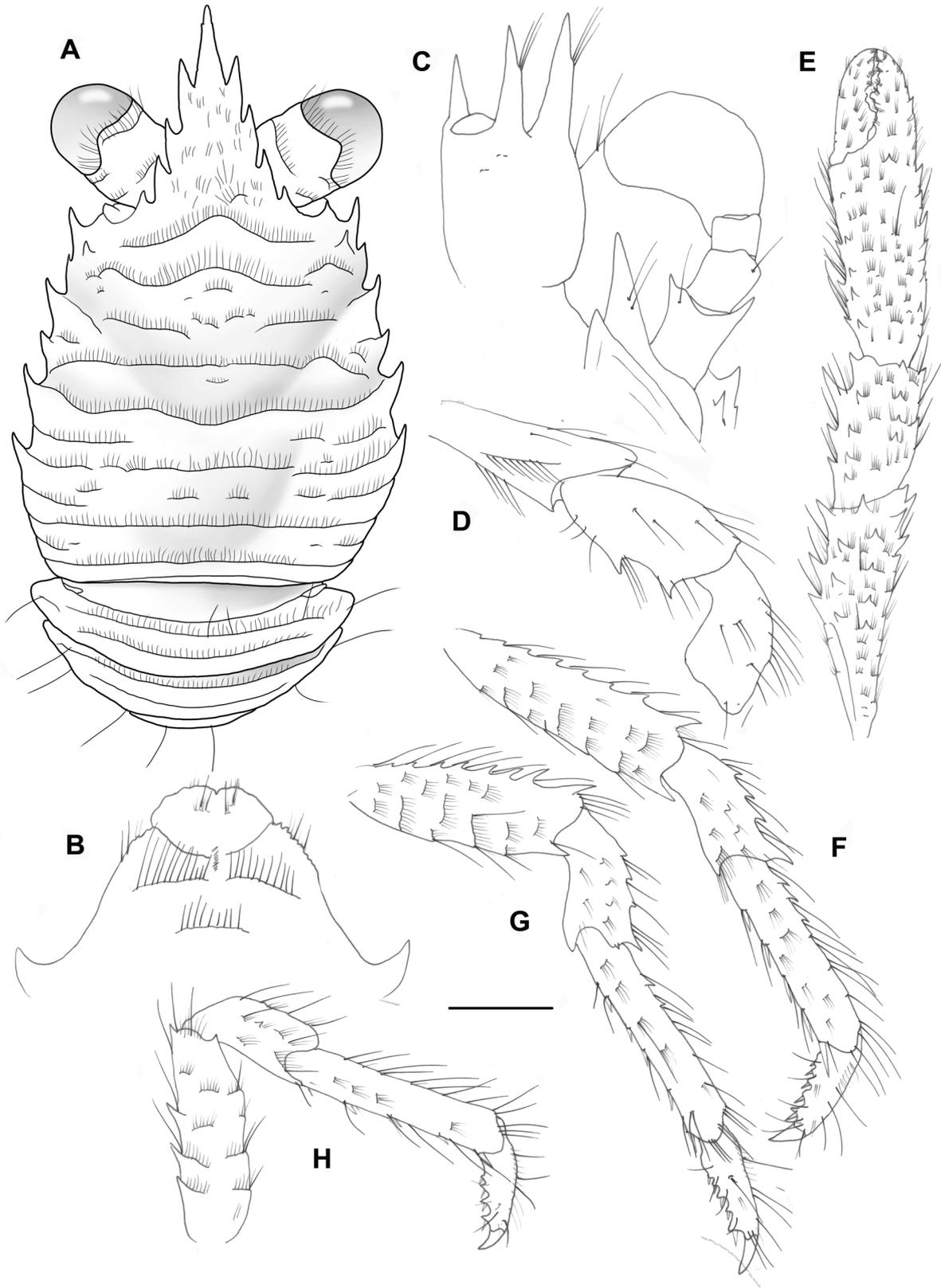


FIGURE 68. *Galathea melobosis* n. sp., holotype, male, 3.9 mm, New Caledonia, Chesterfield Islands (MNHN-IU-2013-13617). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somites 5 and 6 each with 2 medially interrupted ridges. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine slightly smaller than others. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching distal margin of article 2. Article 2 with 2 distal spines, distolateral spine longer than distomesial, and reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor and extensor margins ending in blunt angle or with small spine; crista dentata with 20 or 21 denticles. Merus as long as ischium; flexor margin with 2 subequal spines; extensor margin unarmed. Carpus unarmed.

P1: 3.4 times carapace length, with numerous setiferous scales, and some scattered long setae. Merus 1.2–1.4 times carapace length, 1.6–2.0 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.7–0.8 length of palm, 1.5–2.0 times as long as broad; dorsal surface with some small spines; mesial margin with row of spines, distal slightly stronger than others. Palm 1.6–2.1 times longer than broad, lateral and mesial margins slightly divergent; small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers 0.6–0.7 times palm length, each finger with two rows of teeth distally spooned; fixed finger with some proximal spines along lateral margin; movable finger unarmed.

P2–4: long and slender, with some setose striae and sparse long plumose setae. P2 1.9–2.0 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8–0.9 length of P2 merus, P4 merus 0.8–0.9 length of P3 merus); P2 merus 0.7–0.8 carapace length, 3.6–4.2 times as long as broad, 1.4 times longer than P2 propodus. Extensor margin with row of 7 or 8 proximally diminishing spines on P2–3, 1 distal spine on P4; ventral margins distally ending in strong spine, lateral sides with 0–2 small spines on P4. Carpi with 3–5 spines on extensor margin on P2–3, 0–1 distal spine on P4, distalmost smaller than distal second, sometimes absent; lateral surface with 3 or 4 small spines or acute granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 3.8–4.7 times as long as broad; extensor margin with 0–3 minute proximal spines; flexor margin with 4–6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one moderately prominent.

Epipods present only on P1.

Remarks. The closest relative of *Galathea melobosis* n. sp. is *G. ternatensis* De Man, 1902 from Indonesia (Moluccas, Ternate), Philippines, Papua New Guinea and the Solomon Islands (see Remarks of *G. ternatensis*).

Distribution. Mariana Islands, Solomon Islands, Vanuatu, New Caledonia, Chesterfield Islands, Fiji; 2–223 m.

***Galathea micra* n. sp.**

(Fig. 69)

Material examined. *Holotype*: New Caledonia. Lagon East. Stn 872, 20°37.1'S, 165°58.10'E, 105 m, 13 January 1987: ov. F 3.7 mm (MNHN-IU-2013-8106).

Paratype: New Caledonia. Lagon East. Stn 830, 20°48.9'S, 165°19.3'E, 105–110 m, 10 January 1987: 1 ov. F 2.5 mm (MNHN-IU-2013-8108).

Etymology. From the Greek *mikros*, small, in reference to the small size of the species.

Description. *Carapace*: As long as broad; transverse ridges with numerous short fine setae, without long setae; cervical groove distinct, laterally bifurcated. Gastric region with 8 ridges; 2 epigastric ridges, anterior ridge with 4 median spines, posterior ridge scale-like; 2 protogastric uninterrupted ridges, 1 small parahepatic spine lateral to anterior ridge; 1 mesogastric uninterrupted ridge, not continuing laterally with anterior branchial ridges; 3 metogastric ridges, medially uninterrupted and not continuing laterally with anterior branchial ridges. Hepatic region unarmed. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges, 2 or 3 uninterrupted. Lateral margins slightly convex medially, with 7 spines: first anterolateral, well-developed, second very small but distinct, located at midlength between first spine and anteriormost spine of branchial margin, without small spine ventral to between first and second; 2 spines on anterior branchial margin, and 3 spines on posterior branchial margin. Small outer orbital spine; infraorbital margin with 1 strong spine. Rostrum triangular, twice as long as broad, length 0.5 that of, breadth 0.3 that of carapace; distance between distalmost lateral incisions

0.3 distance between proximalmost lateral incisions, dorsal surface nearly horizontal in lateral view, with some thick long plumose setae; lateral margin with 4 shallowly incised spines.

Pterygostomial flap rugose, with sparse short setae, anterior margin bluntly angular.

Sternum: About as long as broad, lateral limits divergent posteriorly.

Abdomen: Somites 2–3 each with 3 or 4 uninterrupted transverse ridges on tergite, anterior ridge more elevated than posterior ridge; somite 4 with 4 ridges; somites 5 and 6 each with 2 medially interrupted ridges, posteromedian margin of somite 6 straight.

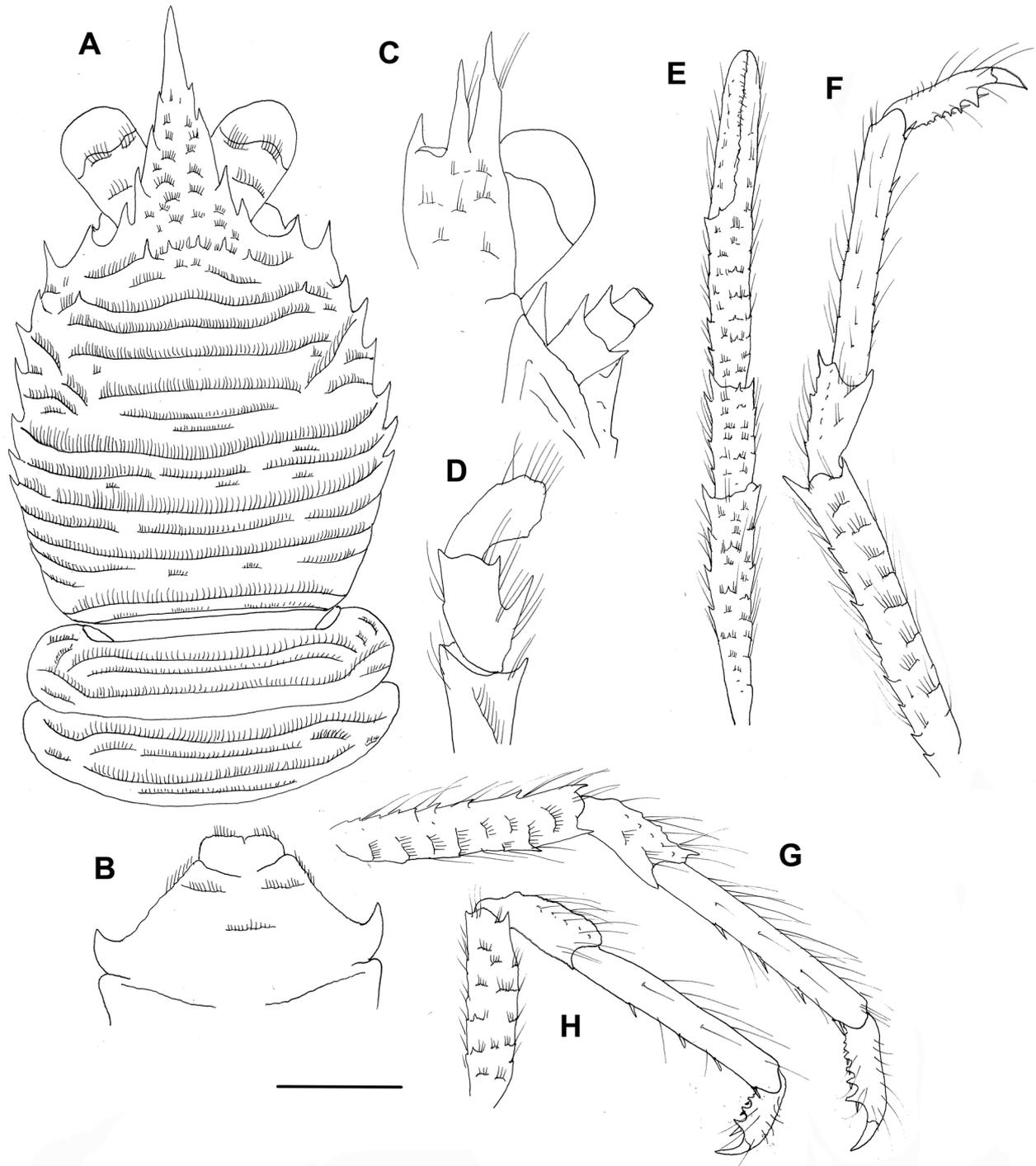


FIGURE 69. *Galathea micra* n. sp., holotype, ovigerous female, 3.7 mm, New Caledonia (MNHN-IU-2013-8106). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 spines; well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine small; lateral margin unarmed. Ultimate article nearly 2.5 times longer than broad, with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with distomesial spine reaching distal margin of article 2. Article 2 with 2 subequal distal spines, reaching midlength of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

Mxp3: Basis with several denticles on mesial ridge, distalmost larger. Ischium with well-developed spine on flexor distal margin; crista dentata with 24 or 25 denticles. Merus as long as ischium; flexor margin with 2 spines, proximal clearly stronger than distal; extensor margin with small distal spine. Carpus unarmed.

P1: 4.4 times carapace length, with numerous finely setiferous scales, with scattered long thick setae. Merus 1.2 times length of carapace, twice as long as carpus, with spines arranged roughly in rows, dorsomesial and ventromesial spines stronger; distal spines prominent. Carpus 0.7 length of palm, 2.7 times as long as broad; dorsal surface with small spines arranged roughly in longitudinal rows; mesial spines slightly stronger than dorsal spines. Palm 3.8 times longer than broad, lateral and mesial margins with minute spines arranged roughly in dorsolateral and dorsomesial rows, some minute spines scattered on dorsal side. Fingers as long as palm, each finger distally with two rows of teeth, ending in incurved teeth to cross each other when closed, mesial margin of movable finger and lateral margin of fixed finger unarmed.

P2–4: Moderately long and slender, with setose striae and long setae. P2 twice carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.8 carapace length, 6 times as long as broad, 1.3 times longer than P2 propodus; P3 merus 5 times longer than broad, 1.2 times longer than P3 propodus; P4 merus 3.8 times as long as broad, as long as P4 propodus. Extensor margins of P2–3 meri with row of 8–10 proximally diminishing spines, P4 merus with 2–4 minute spines and 2 small dorsal spines; flexor margins distally ending in strong spine followed proximally by 1 or 2 small spines and several tubercles or eminences. P2–3 carpi with 5 small spines on extensor margin, 0–1 on P4; lateral surface with some small spines and acute granules sub-parallel to extensor margin on P2–4; flexor distal margin sometimes with small spine. P2, P3 and P4 propodi 6.5, 6.0 and 5.5 times as long as broad, respectively; extensor margin unarmed; flexor margin with 4 or 5 slender movable spines on P2–4. Dactyli subequal in length, distally ending in well-curved strong spine, length half of propodi; flexor margin with 4–6 proximally diminishing teeth, terminal one prominent.

Epipods absent on pereopods.

Remarks. *Galathea micra* n. sp. is characterized by the presence of one small but distinct spine between the anterolateral spine and the anteriormost branchial marginal spine on the carapace, with more than four epigastric spines, and the antennular basal article with three well-developed terminal spines. The new species resembles *G. hydrae* n. sp. from Mozambique, from which it can be distinguished by the absence of epipods on P1–3 in *G. micra*, whereas these epipods are always present on P1–3 in *G. hydrae*.

No genetic data are available for *G. micra*.

Distribution. New Caledonia, 105–110 m.

***Galathea minima* n. sp.**

(Figs 70, 118D, E)

Material examined. *Holotype:* Papua New Guinea. PAPUA NIUGINI, Stn PD19, 05°05.4'S, 145°48.5'E, 3–10 m, 13 November 2012: ov. F 2.4 mm (MNHN-IU-2013-15980).

Paratypes: Papua New Guinea. PAPUA NIUGINI, Stn PD19, 05°05.4'S, 145°48.5'E, 3–10 m, 13 November 2012: 2 M 2.1–2.4 mm, 6 ov. F 2.2–2.8 mm (MNHN-IU-2013-704).—Stn PD31, 05°05.3'S, 145°48.1'E, 1–6 m, 12–13 December 2012: 1 ov. F 2.4 mm (MNHN-IU-2013-9760).—Stn PS15, 05°05.79'S, 145°48.194'E, 12 m, 30 December 2012: 1 M 2.2 mm, 1 ov. F 2.5 mm (MNHN-IU-2013-9759).—Stn PB19, 05°05.1'S, 145°48.6'E, 10 m, 30 December 2012: 1 ov. F 2.5 mm (MNHN-IU-2013-654).

Etymology. From the Latin *minimus*, very small, in reference to the small size of the species.

Description. *Carapace:* As long as broad; anterior cervical groove indistinct; ridges with dense short setae, a few median long iridescent setae on proto gastric ridge. Gastric region with some transverse ridges: 1 epigastric

ridge, medially interrupted, with 2 small spines, absent in some individuals; 1 protogastric ridge, medially convex, uninterrupted, extending laterally to carapace margin, without parahepatic spines; 1 mesogastric ridge uninterrupted and not extending (extending in a few specimens) laterally to first branchial spine; 2 metagastric ridges, anterior ridge uninterrupted, continuing laterally to anteriorbranchial ridge, posterior ridge short. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 5 transverse ridges, 2 or 3 ridges uninterrupted. Lateral margins medially convex, with 6 or 7 spines: 1 spine in front of and 5 or 6 spines behind indistinct anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, accompanying another spine ventral to between first and cervical groove; 3 spines on anterior branchial region, last small, and 2 or 3 spines on posterior branchial margin, last small. External limit of orbit ending in small spine; infra-orbital margin with strong spine. Rostrum broad triangular, 1.1 times as long as broad, length 0.6 that of, breadth 0.4–0.5 that of carapace; distance between distalmost lateral incisions 0.20–0.25 distance between proximalmost lateral incisions, dorsal surface nearly horizontal in lateral view, with few scales; lateral margin with 4 sharp teeth.

Pterygostomian flap rugose, with spine on anterior ridge, anterior margin ending in well-developed spine.

Sternum: Slightly broader than long, lateral limits divergent posteriorly.

Abdomen: Somite 2 with 2 uninterrupted transverse ridges on tergite; somites 3–6 smooth, each with anterior ridge only; posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles as long as broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distomesial clearly smaller than others. Ultimate article with long tuft of setae on distodorsal margin.

Antenna: Article 1 with depressed ventral distomesial process reaching distal margin of article 2. Article 2 with distomesial spine longer than or as long as distolateral, exceeding midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor margin unarmed; crista dentata with 17 or 18 denticles. Merus shorter than ischium, with 2 spines on flexor margin, proximal one located at midlength, slightly longer than or as long as distal spine; extensor margin with small distal spine. Carpus unarmed.

P1: 1.8–1.9 times carapace length, with numerous short setae and some scattered long plumose setae. Merus 0.6–0.7 times carapace length, 1.2–1.3 times as long as carpus, with rows of spines, mesial and distal spines strong. Carpus 1.1–1.3 length of palm, 2.1–2.2 times longer than broad, lateral and mesial margins subparallel, dorsal surface with some small spines; mesial surface with row of spines, with one strong spine; and row of small spines along lateral margin. Palm 1.6–1.7 times longer than broad, lateral and mesial margins subparallel and with row of spines; small spines roughly in rows on dorsal side; lateral row continued on to lateral margin of fixed finger; mesial row not continuing on the mesial margin of movable finger. Fingers 1.1–1.2 times palm length, each finger distally with two rows of teeth, spooned.

P2–4: Relatively slender, moderately setose, sparsely with long setae on all articles. P2 1.6–1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.6–0.7 carapace length, 3.1–3.4 times as long as broad, 1.4–1.5 times longer than P2 propodus; P3 merus 3.0 times as long as broad, 1.2–1.3 times length of P3 propodus; P4 merus 2.8–3.1 times as long as broad, 1.1–1.3 length of P4 propodus. Extensor margin of merus with row of 8 or 9 proximally diminishing spines on P2–3, unarmed on P4; flexolateral surface unarmed on P2–3, 1 or 2 minute spines on P4, margins with strong terminal spine and 1 or 2 additional spines on terminal half; flexomesial margins unarmed. Carpi with 4 or 5 spines on extensor margin on P2–3, 0–1 spines on P4; lateral surface with row of 2–4 small spines or acute granules paralleling extensor row; flexor distal margins with spine. Propodi 4 times as long as broad; extensor margin unarmed; flexor margin with 3 or 4 slender movable spines. Dactyli subequal in length, 0.6 length of propodi, ending in incurved, strong, sharp spine; flexor margin with prominent triangular terminal tooth preceded by 4 obsolescent teeth.

Epipods present on P1–3.

Coloration. Variable color pattern. Ground color orange or greenish. Rostrum whitish. Some whitish flecks on carapace and abdomen of greenish specimens. P1–4 translucent whitish, with some reddish diffuse bands.

Remarks. *Galathea minima* n. sp. resembles *G. rubripina* n. sp. from Papua New Guinea (see Remarks for the latter species).

No genetic data are available for *G. minima*.

Distribution. Papua New Guinea, 3–13 m.

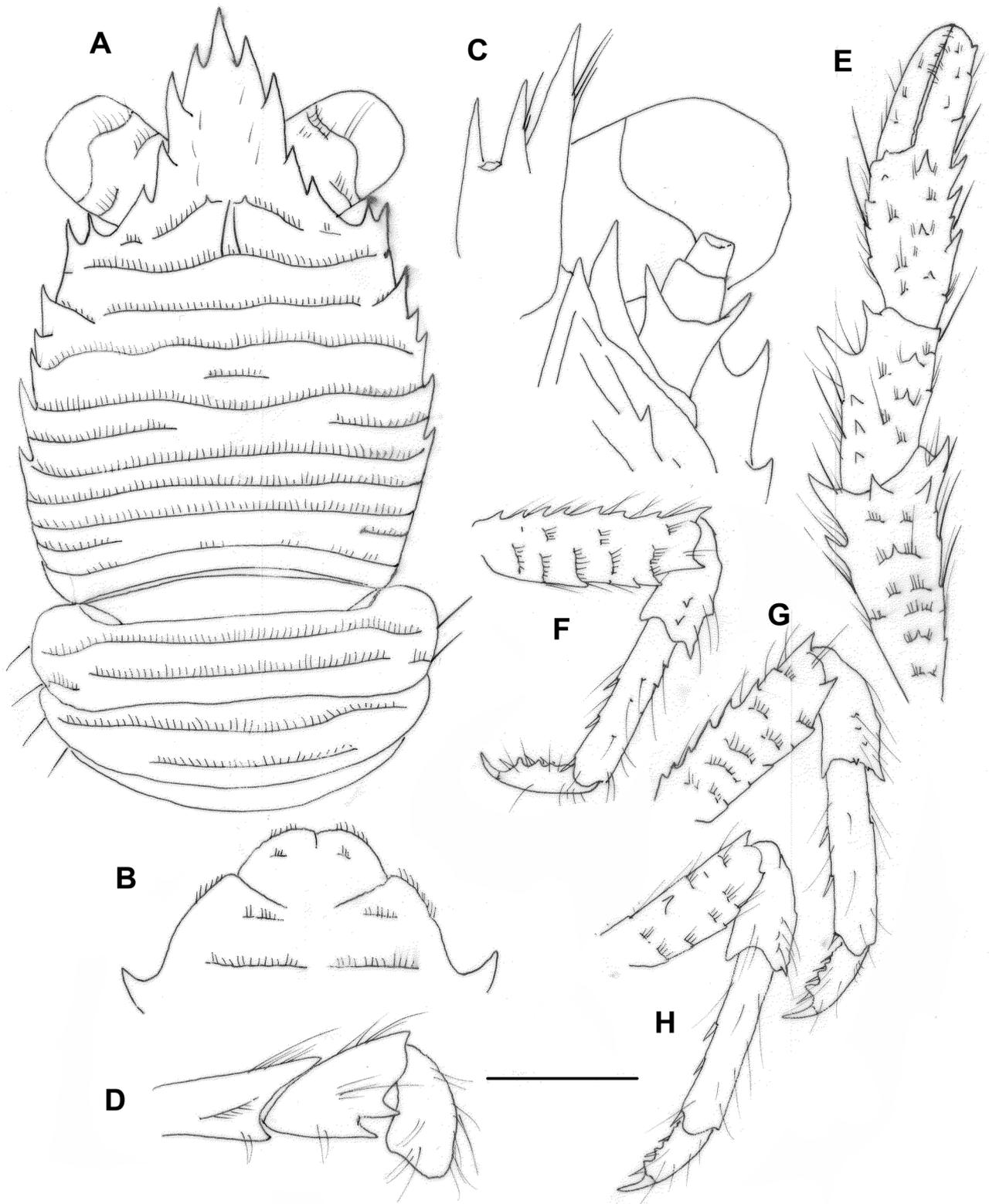


FIGURE 70. *Galathea minima* n. sp., holotype, ovigerous female, 2.4 mm, Papua New Guinea (MNHN-IU-2013-15980). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

***Galathea minutiae* n.sp.**

(Fig. 71)

Material examined. *Holotype*: New Caledonia. CALSUB, Stn 18, 22°46'S, 167°20'E, 301–700 m, 09 March 1989: F 2.0 mm (MNHN-IU-2013-8355).

Etymology. From the Latin, *minutus*, small, in referente to the small size of the species.

Description. *Carapace*: as long as broad; transverse ridges with dense short setae, and some scattered long plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with 6 transverse ridges: 1 epigastric ridge with 2 spines, medially interrupted; 2 protogastric ridges, anterior uninterrupted and with 1 parahepatic spine on each side, posterior ridge short; 1 mesogastric ridge uninterrupted but not extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, anterior uninterrupted, posterior short. Hepatic region with 1 small spine. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges. Lateral margins well convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, with small spine ventral to between first and second; 2 spines on anterior branchial region, last small, and 3 spines on posterior branchial margin, last small. Minute spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum 1.8 as long as broad, length 0.6 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous short uniramous setae; lateral margin with 4 shallowly incised teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somites 5 and 6 each with uninterrupted anterior ridge and 1 posterior medially interrupted ridge.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine clearly smaller than others; additional small spine on lateral margin. Ultimate article without setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching distal margin of article 2. Article 2 with 2 well-developed subequal distal spines reaching midlength of article 3. Article 3 with minute distomesial spine. Article 4 unarmed.

Mxp3: Ischium with flexor and extensor margins ending in blunt angle; crista dentata with 16 denticles. Merus as long as ischium; flexor margin with 3 spines, proximal stronger than others; extensor margin unarmed.

P1: 4.0 times carapace length, with numerous setiferous scales, and some scattered long setae. Merus 1.8 times carapace length, 2.0 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.9 length of palm, 3.5 times as long as broad; dorsal surface with some small spines; mesial margin with row of spines, distal slightly stronger than others. Palm 4 times longer than broad, lateral and mesial margins subparallel; small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers 0.8 times palm length, unarmed; each finger distally with two rows of teeth, spooned.

P2–4: long and slender, with some setose striae and sparse long plumose setae. P2 2.3 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P3 merus, P4 merus 0.7 length of P3 merus); P2 merus as long as carapace, 6 times as long as broad, 1.3 times longer than P2 propodus. Extensor margin with row of 6 or 7 proximally diminishing spines on P2–3, 1 distal spine on P4; ventral margins distally ending in strong spine, lateral sides unarmed. Carpi with 4–6 spines on extensor margin on P2–3, 4 on P4; lateral surface with 3 or 4 acute granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 5.8–6.3 times as long as broad; extensor margin with 3 or 4 minute proximal spines; flexor margin with 5 or 6 movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 5 or 6 proximally diminishing teeth, terminal one prominent.

Epipods absent on pereopods.

Remarks. *Galathea minutiae* n. sp. resembles *G. consobrina* De Man, 1902. The new species is easily differentiated from *G. consobrina* by having the lateral rostral teeth shallowly incised and the P2–4 meri elongate. The P2 merus is more than 5 times longer than broad in *G. minutiae*, being less than 5 times longer than broad in *G. consobrina*. Furthermore, the rostral teeth are deeply incised in *G. consobrina*, being shallowly incised in *G. minutiae*.

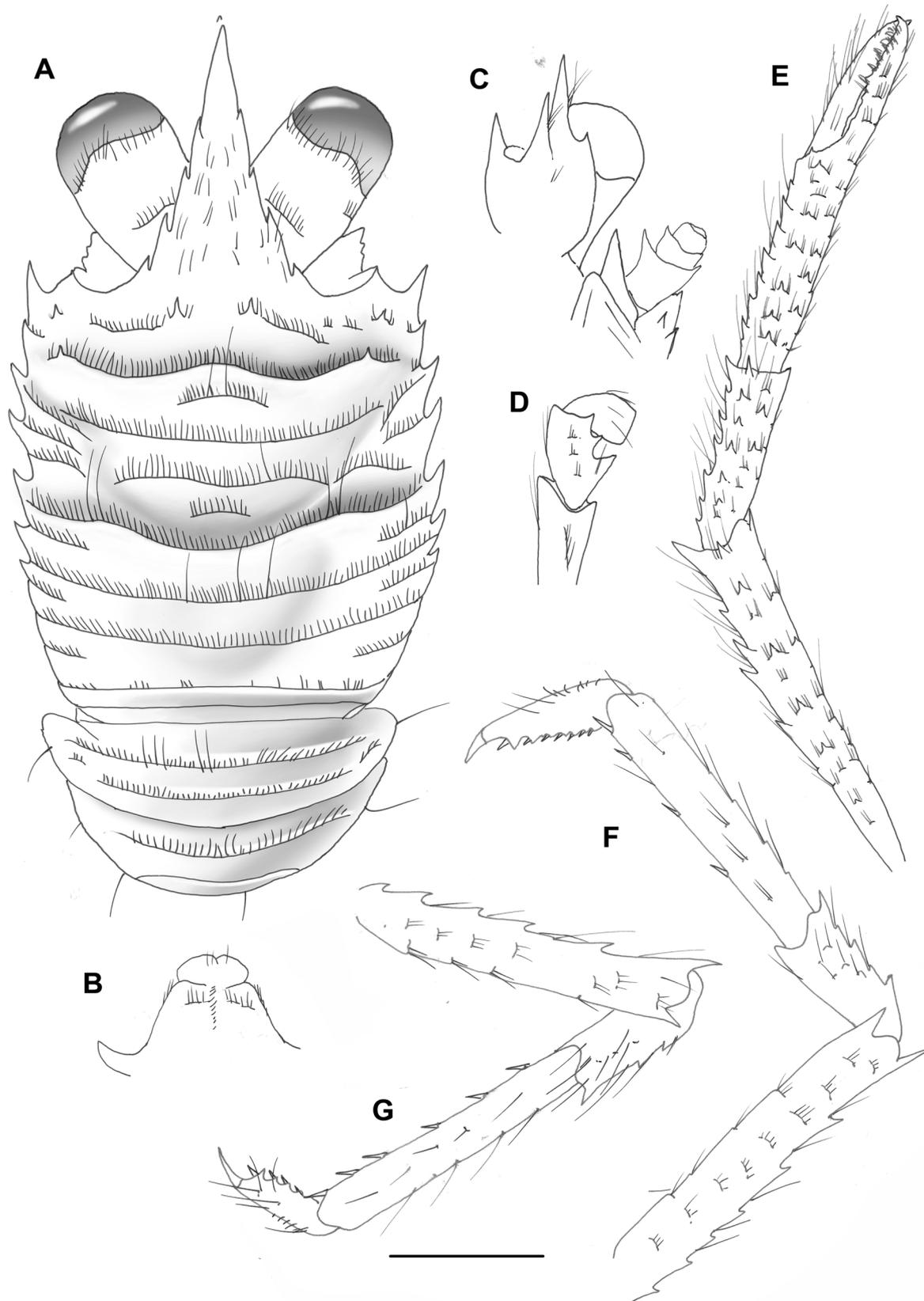


FIGURE 71. *Galathea minutiae* n. sp., holotype, female, 2.0 mm, New Caledonia (MNHN-IU-2013-8355). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, left P2, lateral view; G, right P3, lateral view. Scale: A, F, G = 1 mm; E = 2 mm; B–D = 0.5 mm.

The new species is also close to *G. longimanoides* Johnson, 1970 (see under Remarks of this species).

No genetic data are available for *G. minutiae*.

Distribution. New Caledonia, 301–700 m.

***Galathea multicristata* n. sp.**

(Fig. 72)

Material examined. *Holotype*: New Caledonia. BATHUS 4, Stn CP889, 21°00.83'S, 164°27.34'E, 416–433 m, 2 August 1994: M 7.4 mm (MNHN-IU-2013-8324).

Etymology. From the Latin, *multi*, numerous, and *crista*, ridge, crest, in reference to the numerous ridges on the dorsal surface of the carapace.

Description. *Carapace*: as long as broad; transverse ridges with dense short setae, and a few scattered long plumose setae; cervical groove distinct, laterally bifurcated. Dorsal surface with numerous interrupted and scale-like ridges, and only mid-transverse and posterior ridge uninterrupted. Three pairs of small epigastric spines; 2 or 3 small hepatic spines on each side. Lateral margins well convex medially, with 10 spines: 2 spines in front of and 8 spines behind anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit; second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, with spine ventral to between first and second; 4 spines on anterior branchial region, second larger than others, and 4 spines on posterior branchial margin, last small. Small frontal spine between lateral limit of orbit and first anterolateral spine; infraorbital margin with 3 spines. Rostrum 2.3 times as long as broad, triangular, length 0.7 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous scale-like setose ridges; lateral margin with 5 deeply incised sharp teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin bluntly angular.

Sternum: 0.8 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 3 or 4 uninterrupted or medially interrupted transverse ridges on tergite; somite 5 with 2 uninterrupted ridges; somite 6 with 2 medially interrupted ridges, posteromedian margin slightly convex. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine well-developed, smaller than others. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine nearly reaching distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine slightly larger than distomesial and reaching end of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; extensor margin unarmed; crista dentata with 27 denticles. Merus shorter than ischium; flexor margin with 2 spines, proximal clearly longer than distal; extensor margin with distal spine. Carpus unarmed.

P1: 3.8 times carapace length, somewhat depressed on palm, more so on fingers, covered with finely setiferous scales, with numerous long plumose and non-plumose setae. Merus 1.3 times length of carapace, 2.0 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.7 length of palm, 1.6 times as long as broad; dorsal surface with some small spines; mesial margin with 4 spines (distal second strong). Palm 1.7 times as long as broad, lateral and mesial margins slightly divergent; small spines arranged roughly in dorsolateral and dorsomesial rows. Fingers 0.8 length of palm, each finger distally with two rows of teeth, spooned; fingers unarmed.

P2–4: moderately slender, with setose striae and numerous long plumose and non-plumose setae. P2 twice carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.7 length of P3 merus); P2 merus 0.8 carapace length, 4.5 times as long as broad, 1.4 times longer than P2 propodus; P3 merus 4.1 times longer than broad, 1.2 times longer than P3 propodus; P4 merus 2.8 times as long as broad, 0.9 length of P4 propodus. Extensor margin of P2–3 meri with row of 11–13 proximally diminishing spines, and 5 spines on P4; flexor margins distally ending in strong spine followed proximally by 0–1 spines and several eminences; distoflexor angle of P2–4 with one small and one well-developed spines; lateral sides unarmed on P2–3, and with 5

or 6 small spines on P4. Carpi with 5 or 6 spines on extensor margin on P2–4; lateral surface with 2 or 3 small spines or acute granules sub-parallel to extensor margin on P2–4; flexor distal margin with spine. P2–4 propodi 4.6–5.0 times as long as broad; extensor margin with 2–4 proximal spines on P2–4; flexor margin with 5 or 6 slender movable spines on P2–4. Dactyli subequal in length, distally ending in well-curved strong spine, length 0.5 that of propodi; flexor margin with 5 or 6 proximally diminishing teeth, terminal one prominent.

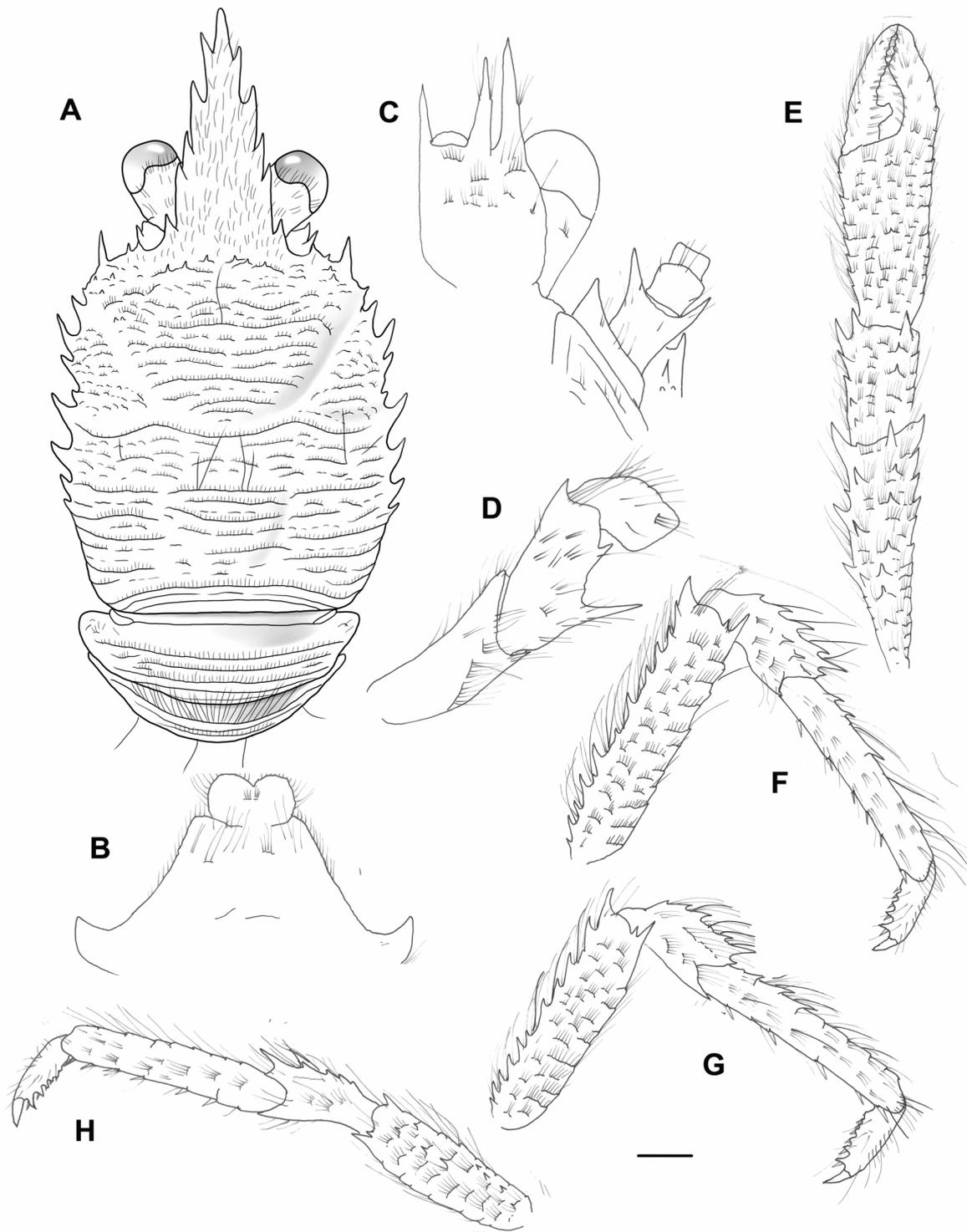


FIGURE 72. *Galathea multicristata* n. sp., holotype, male, 7.4 mm, New Caledonia (MNHN-IU-2013-8324). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, left P4, lateral view. Scale: A, F–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

Epipods present on P1.

Remarks. *Galathea multicristata* n. sp. is closely related to *G. ciliosa* n. sp. from Vanuatu from which it can be distinguished by the following characters:

- The hepatic region has two or three spines in *G. multicristata*, being unarmed in *G. ciliosa*.
- The carapace surface has numerous scale-like ridges in *G. multicristata*, but only a few ones are present in *G. ciliosa*.
- The proximal spine on the flexor margin of the Mxp3 merus is clearly larger than the distal spine in *G. multicristata*, and subequal in *G. ciliosa*.

No genetic data are available for *G. multicristata*.

Distribution. New Caledonia, 416–433 m.

***Galathea multilineata* Balss, 1913**

Galathea multilineata Balss, 1913b: 9, figs 6–8 (Sagami Bay, Japan, 120 m).—Yokoya, 1933: 56 (W of Muroto-zaki, 210 m).—Miyake & Baba, 1967c: 231, fig. 4 (East China Sea, 196 m).—Baba, 1988: 76 (E of Mindanao, Sulu Archipelago, E coast of Mindoro, and South China Sea off SW Luzon, 198–393 m).—Wu *et al.*, 1998: 93, figs 11, 12H (Taiwan).—Komai, 2000: 353 (list).—Baba, 2005: 244 (key, synonymies).—Baba *et al.*, 2008: 73 (compilation).—Baba *et al.*, 2009: 118, figs. 97–99 (Taiwan, 300 m).—Poore *et al.*, 2011: 333, pl. 11D (color photo, Philippines).

Material examined. Philippines. MUSORSTOM 1, Stn CP25, 14°03'N, 120°20'E, 191–200 m, 22 March 1976: 1 ov. F 5.6 mm, 1 F 3.5 mm (MNHN-IU-2013-8416).—Stn CP27, 14°00'N, 120°19'E, 188–192 m, 22 March 1976: 1 M 3.7 mm (MNHN-IU-2013-84139).—Stn 64, 14°00'N, 120°16'E, 195 m, 27 March 1976: 1 M 4.7 mm (MNHN-IU-2013-8415).—Stn 65, 14°00'N, 120°19'E, 194 m, 27 March 1976: 1 M 4.6 mm (MNHN-IU-2013-8418). MUSORSTOM 2, Stn CP67, 14°00'N, 120°18'E, 193–199 m, 29 November 1980: 2 ov. F 4.9–5.7 mm (MNHN-IU-2013-8419).—Stn CP68, 14°02'N, 120°19'E, 195–199 m, 29 November 1980: 1 M 5.8 mm (MNHN-IU-2013-8412). MUSORSTOM 3, Stn CP97, 14°01'N, 120°19'E, 189–194 m, 1 June 1985: 1 ov. F 4.0 mm (MNHN-IU-2013-8414).—Stn CP120, 12°06'N, 121°16'E, 219–220 m, 3 June 1985: 1 F 5.6 mm (MNHN-IU-2013-8417).

Remarks. The specimens examined agree quite well with previous descriptions and illustrations (Balss 1913; Miyake & Baba 1967; Baba *et al.* 2009). No genetic data are available for this species.

Distribution. Japan, East and South China Sea, Taiwan, Philippines, 120–433 m.

***Galathea nuda* n.sp.**

(Fig. 73)

Material examined. *Holotype*: French Polynesia. Austral Islands. BENTHAUS, Stn DW1985, 23°26.35'S, 150°44.22'W, 100–107 m, 21 November 2002: ov. F 3.0 mm (MNHN-IU-2013-8329).

Paratypes: French Polynesia. Austral Islands. BENTHAUS, Stn DW1927, 24°39.03'S, 146°01.58'W, 95–105 m, 13 November 2002: 1 M 3.1 mm (MNHN-IU-2013-8328).—Stn DW1947, 23°48.51'S, 147°53.47'W, 120–150 m, 17 November 2002: 1 M 3.9 mm, 1 larvae (MNHN-IU-2013-8330).—Stn DW1985, 23°26.35'S, 150°44.22'W, 100–107 m, 21 November 2002: 1 ov. F 2.7 mm (MNHN-IU-2013-8331), 1 ov. F 2.7 mm (MNHN-IU-2013-8332), 1 F 2.5 mm (MNHN-IU-2013-8333).

New Caledonia. Chesterfield Islands. CHALCAL 84, Stn D3, 21°14.00'S, 162°16.40'E, 120–150 m, 13 July 1984: 1 ov. F 2.7 mm (MNHN-IU-2013-8327).

Etymology. From the Latin, *nudus*, bare, in reference to the smooth carapace surface.

Description. *Carapace*: 1.1 times longer than broad. Dorsal surface lacking distinct long transverse ridges, except a few scattered scale-like and short ridges, uninterrupted mid-transverse and posterior ridges. Mid-transverse ridge preceded by shallow cervical groove; ridges with numerous short setae, and a few long setae. Epigastric region with 2 or 3 pairs of spines. Anterior branch of cervical groove nearly indistinct. Lateral margins

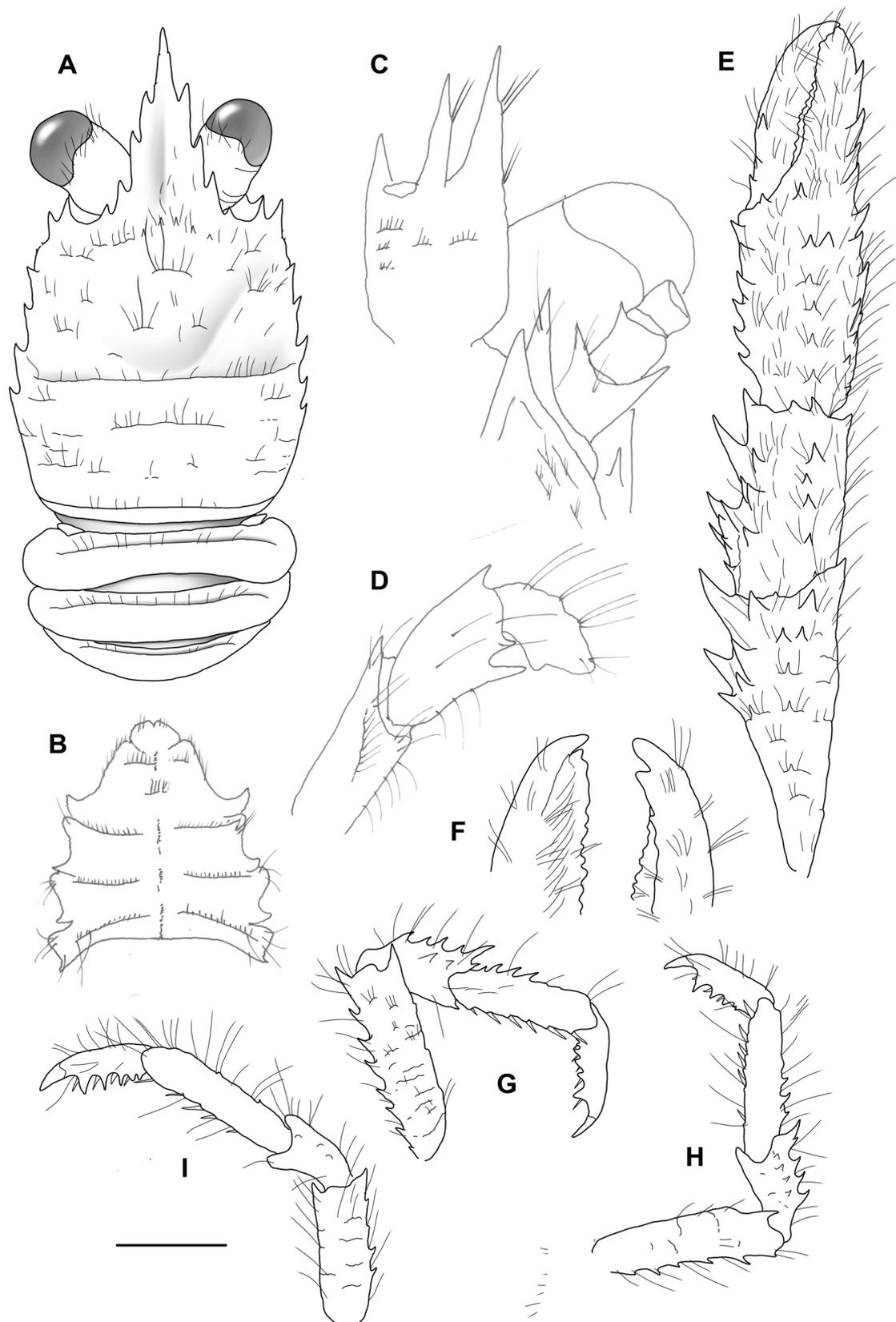


FIGURE 73. *Galathea nuda* n. sp., holotype, ovigerous female, 3.0 mm, French Polynesia (MNHN-IU-2013-8329). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P1 fingers, ventral view; G, right P2, lateral view; H, right P3, lateral view; I, right P4, lateral view. Scale: A, E, G, H, I = 1 mm; B–D, F = 0.5 mm.

slightly convex medially, with 6 spines: 1 spine in front of and 5 spines behind anterior cervical groove; first anterolateral, well-developed, at level of lateral limit of orbit, with accompanying spine ventral to between first and end of anteriormost spine of branchial margin; 2 spines on anterior branchial region, and 2 or 3 spines on posterior branchial margin, last small. Well-developed spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum 1.7 as long as broad, length 0.7 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, slightly concave, with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, ridges with short setae, anterior margin ending in acute angle.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 1 anterior uninterrupted transverse ridges on tergite; somites 5 and 6 smooth. Telson completely subdivided, with 7 plates. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 spines; well-developed distodorsal and distolateral spines, distodorsal larger than others. Ultimate article with a few long fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine overreaching distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine longer than distomesial and exceeding midlength of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; extensor margin ending in acute angle; crista dentata with 19–21 denticles. Merus as long as ischium; flexor margin with 2 subequal spines, proximal longer than distal; extensor margin with small distal spine. Carpus unarmed, with several granules on extensor margin.

P1: 2.6 times carapace length, covered with finely setiferous scales, with scattered long plumose setae. Merus 0.9 times length of carapace, 1.5 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.9 length of palm, 1.8 times as long as broad; dorsal surface with some small spines; mesial margin with row of well-developed spines. Palm 1.6 times longer than broad, lateral and mesial margins subparallel; a few small spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side; dorsolateral spines continuing along fixed finger. Fingers as long as palm, each finger distally with two rows of teeth, spooned; 2 or 3 proximal dorsomesial spines along movable finger.

P2–4: Moderately slender, with setose striae and some long plumose setae. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7 carapace length, 3.6 times as long as broad, 1.7 times longer than P2 propodus; P3 merus 3.3 times longer than broad, 1.4 times longer than P3 propodus; P4 merus 2.9 times as long as broad, 1.1 length of P4 propodus. Extensor margin of P2–3 meri with row of 7 or 8 proximally diminishing spines, and 5 spines on P4; ventral margins distally ending in strong spine followed proximally by several tubercles or eminences; lateral sides unarmed on P2–4. Carpi with 5 or 6 spines on extensor margin on P2–3, unarmed on P4; lateral surface with 2–4 spines or acute granules sub-parallel to extensor margin on P2–4; flexor distal margin ending in acute angle. P2–4 propodi 2.8–3.3 times as long as broad; extensor margin with 3 or 4 proximal spines; flexor margin with 5 or 6 slender movable spines on P2–4. Dactyli distally ending in well-curved strong spine, length 0.8–0.9 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods present only on P1.

Remarks. The new species belongs to the group of species with the ridges on the dorsal carapace surface mostly obsolescent. The group contains three species: *G. kuboi* Miyake & Baba, 1967 from Japan, Philippines, and Indonesia, *G. nuda* **n. sp.** and *G. setigera* **n. sp.** from Indonesia (see Remarks of *G. setigera*).

The genetic divergences with other species are always higher than 12.8% (COI, the closest is *G. eulimene* **n. sp.**) and 4.4% (16S rRNA, the closest is *G. autahi* **n. sp.**) (Tab. 2).

Distribution. French Polynesia (Austral Islands), Chesterfield Islands; 95–150 m.

***Galathea ohshimai* Miyake & Baba, 1967**

(Fig. 118F)

Galathea ohshimai Miyake & Baba, 1967a: 207, fig. 3 (Palau, 10 m).—Baba, 1977a: 250 (Obi major and Talaud Islands, 6–10 m).—Baba, 1979a: 524 (Noumea, New Caledonia).—Baba, 1979b: 648 (Marsegu Island, Indonesia, subtidal).—Baba,

1982: 60 (Palau, subtidal).—Clark *et al.*, 2008: 919 (Conic Island cave, Hong Kong).—Baba *et al.*, 2008: 74 (compilation).

Material examined. Indonesia. East coast of Marsegu Island. Rumphius Expedition II, 18 January 1975: 1 M 2.3 mm (MNHN Ga 1159).

Papua New Guinea. PAPUA NIUGINI, Stn PB08, 05°11'S, 145°48.4'E, 4–5 m, 30 December 2012: 1 F 2.3 mm (MNHN-IU-2013-13851).—Stn PB11, 05°12.5'S, 145°49.1'E, 13 m, 30 December 2012: 1 ov. F 2.3 mm (MNHN-IU-2013-13852).—Stn PB28, 05°11.9'S, 145°49.6'E, 10 m, 30 December 2012: 1 M 2.6 mm (MNHN-IU-2013-13854).—Stn PS31, 05°08.167'S, 145°49.417'E, 10–37 m, 30 December 2012: 1 M 1.8 mm, 1 ov. F 2.2 mm (MNHN-IU-2013-13853).

Australia. Queensland. Lizard Island, 14.3902°S, 145.2737°E, 10–12 m, 9 February 2009: 2 M 2.7–3.0 mm, 1 ov. F 2.6 mm (UF16693).—Yonge reef, 10 February 2009: 1 M 2.4 mm (UF26309).—14.3902°S, 145.2737°E, 10–12 m, 11 February 2009: 1 M 2.5 mm (UF16769); 1 M 2.0 mm (UF16776).—14.3902°S, 145.2737°E, 10–12 m, 12 February 2009: 1 M 2.5 mm (UF16835).—14.3902°S, 145.2737°E, 10–12 m, 13 February 2009: 2 M 2.4–2.5 mm, 1 ov. F 2.3 mm (UF16911), 1 M 2.8 mm (UF16932).—14.7429°S, 145.5143°E, 1–2 m, 17 February 2009: 1 F 2.4 mm (UF17117); 1 M 3.1 mm, 1 F 2.5 mm (UF17124).—14.6564°S, 145.4956°E, no depth, 19 February 2009: 1 M 1.8 mm (UF18251). Heron Island, 23.4733°S, 151.9505°E, 10–12 m, 17 November 2006: 2 M 3.3–3.4 mm (UF25218); 2 ov. F 2.4–2.5 mm (UF25219); 2 ov. F 2.2–2.3 mm (UF25220); 1 ov. F 2.0 mm (UF25221); 1 M 2.4 mm (UF25217); 1 M 1.5 mm (UF25214); 2 M 2.5–3.2 mm (UF16625).—23.4322°S, 152.0338°E, 9–21 m, 18 November 2009: 1 ov. F 2.5 mm (UF26303).—23.4733°S, 151.9505°E, 10–12 m, 9 February 2009: 1 M 2.0 mm (UF16693).

Vanuatu. SANTO, Stn DB1, 15°33.1'S, 167°17.8'E, 15–25 m, 10 September 2006: 1 M 2.0 mm, 2 ov. F 2.4–2.6 mm (MNHN-IU-2013-13880).—Stn DB8, 15°34.6'S, 167°13.8'E, 12 m, 12 September 2006: 1 M 2.2 mm (MNHN-IU-2013-13881).—Stn DB12, 15°36.6'S, 167°10.1'E, 10–18 m, 13 September 2006: 1 M 2.0 mm, 5 ov. F 2.3–2.5 mm (MNHN-IU-2013-13882).—Stn DB25, 15°37.7'S, 167°11.3'E, 10 m, 16 September 2006: 1 M 2.6 mm (MNHN-IU-2013-13887).—Stn ED16, 15°35.3'S, 167°07.4'E, 5–7 m, 17 September 2006: 1 M 2.0 mm (MNHN-IU-2013-13883).—Stn DB33, 15°34.7'S, 167°13.8'E, 14–25 m, 18 September 2006: 4 M 2.3–2.6 mm, 3 ov. F 2.0–2.4 mm (MNHN-IU-2013-13888).—Stn DB46, 15°28.8'S, 167°15.2'E, 2–3 m, 20 September 2006: 1 M 2.4 mm, 3 ov. F 2.3–2.9 mm (MNHN-IU-2013-13894).—Stn DS49, 15°38.7'S, 167°05.2'E, 10–17 m, 21 September 2006: 2 M 2.4–3.1 mm (MNHN-IU-2013-13892).—Stn DB53, 15°28.8'S, 167°15.2'E, 5 m, 22 September 2006: 4 M 2.0–2.5 mm, 2 ov. F 2.0–2.5 mm (MNHN-IU-2013-13897).—Stn DB63, 15°26.9'S, 167°15.8'E, 21 m, 25 September 2006: 4 M 2.0–2.7 mm, 7 ov. F 2.1–2.6 mm (MNHN-IU-2013-13900).—Stn DB65, 15°25.8'S, 167°13.0'E, 13 m, 26 September 2006: 4 M 1.5–2.2 mm, 5 ov. F 2.0–2.3 mm (MNHN-IU-2013-13902).—Stn DB67, 15°22.9'S, 167°13.1'E, 7 m, 26 September 2006: 7 M 2.8–3.5 mm, 3 ov. F 2.9–3.1 mm (MNHN-IU-2013-13903).—Stn DB71, 15°21.6'S, 167°12.5'E, 7 m, 27 September 2006: 4 M 2.1–2.3 mm, 3 ov. F 2.3–2.8 mm, 1 F 2.3 mm (MNHN-IU-2013-13875).—Stn DB75, 15°22.9'S, 167°11.9'E, 20 m, 28 September 2006: 22 M 1.5–2.9 mm, 19 ov. F 1.7–2.6 mm, 3 F 1.5–1.6 mm (MNHN-IU-2013-13873).—Stn FB40, 15°22.9'S, 167°11.7'E, 9 m, 29 September 2006: 1 M 1.9 mm (MNHN-IU-2013-13891).—Stn FB43, 15°28.4'S, 167°14.9'E, 19 m, 30 September 2006: 2 M 2.0–2.5 mm, 3 ov. F 2.1–2.4 mm (MNHN-IU-2013-13893).—Stn NS36, 15°31.7'S, 167°09.5'E, 2–3 m, 2 October 2006: 1 M 1.4 mm (MNHN-IU-2013-13890).—Stn ZB9, 15°40.6'S, 5–7 m, 2 October 2006: 3 M 1.8–2.0 mm, 2 ov. F 2.0–3.0 mm (MNHN-IU-2013-13884).—Stn DB83, 15°43.4'S, 167°15.0'E, 6 m, 3 October 2006: 8 M 2.0–2.4 mm, 6 ov. F 2.0–2.4 mm (MNHN-IU-2013-13876).—Stn DB86, 15°38.5'S, 167°15.1'E, 13 m, 4 October 2006: 1 M 2.0 mm (MNHN-IU-2013-13878).—Stn FS51, 15°42.7'S, 167°15.1'E, 2–3 m, 5 October 2006: 1 F 2.1 mm (MNHN-IU-2013-13895).—Stn FB52, 15°42.7'S, 167°15.1'E, 7 m, 5 October 2006: 11 M 2.2–2.8 mm, 7 ov. F 2.0–2.6 mm, 2 F 2.2–3.2 mm (MNHN-IU-2013-13896).—Stn FB56, 15°35.2'S, 167°02.1'E, 3–18 m, 7 October 2006: 7 M 1.9–3.0 mm, 5 ov. F 2.0–2.6 mm (MNHN-IU-2013-13898).—Stn FB61, 15°34.4'S, 167°12.6'E, 2–3 m, 7 October 2006: 3 F 1.3–1.4 mm (MNHN-IU-2013-13899).—Stn ZB16, 15°32.4'S, 167°12.1'E, 5 m, 7 October 2006: 4 M 1.8–2.1 mm, 1 ov. F 2.0 mm (MNHN-IU-2013-13885).—Stn FB64, 15°35.4'S, 166°59.2'E, intertidal, 10 October 2006: 1 M 2.1 mm, 1 F 2.0 mm (MNHN-IU-2013-13901).—Stn ZB20, 15°36.1'S, 167°05.4'E, 15–20 m, 10 October 2006: 10 M 1.3–2.8 mm, 6 ov. F 1.6–2.3 mm (MNHN-IU-2013-13886).—Stn FB68, 15°35.4'S, 166°59.7'E, 11 m, 11 October 2006: 6 M 1.6–2.1 mm, 7 ov. F 1.9–2.3 mm (MNHN-IU-2013-13904).—Stn FB80, 15°33.1'S, 167°09.6'E, 2 m, 14 October 2006: 13 M 1.6–2.8 mm, 10 ov. F 1.6–2.6 mm (MNHN-IU-2013-13877).—Stn FB92, 15°33.6'S, 167°16.6'E, 2–4 m, 14 October 2006: 7 M 2.2–2.4 mm, 5 ov. F

2.1–2.4 mm (MNHN-IU-2013-13874).—Stn FB83, 15°32.6'S, 167°17.4'E, 8–20 m, 15 October 2006: 1 ov. F 2.7 mm (MNHN-IU-2013-13879).—Stn LD35, 15°32.8'S, 167°11.6'E, 3–8 m, 16 October 2006: 5 M 1.6–2.3 mm, 5 ov. F 2.0–2.3 mm (MNHN-IU-2013-13889).—Stn ZB36, 15°34.3'S, 167°12.4'E, intertidal, 19 October 2006: 1 M 2.1 mm, 1 ov. F 3.3 mm (MNHN-IU-2013-13855); 1 ov. F 3.0 mm (MNHN-IU-2013-13856); 1 ov. F 3.0 mm (MNHN-IU-2013-13857).

New Caledonia. Lagon East. Stn 616, 22°05.5'S, 166°58.8'E, 34–38 m, August 1986: 3 M 2.8–3.1 mm (MNHN-IU-2013-13862).—Stn 631, 21°58.3'S, 166°47.6'E, 43 m, August 1986: 1 F 3.5 mm (MNHN-IU-2013-13864).—Stn 644, 21°52.1'S, 166°41.2'E, 45–48 m, August 1986: 1 M 2.8 mm (MNHN-IU-2013-13872).—Stn 651, 21°48.0'S, 166°36.4'E, 48 m, August 1986: 1 ov. F 3.0 mm (MNHN-IU-2013-13858).—Stn 659, 21°45.3'S, 166°33.4'E, 46–48 m, August 1986: 2 M 3.0–3.1 mm (MNHN-IU-2013-13863).—Stn 661, 21°45.9'S, 166°41.4'E, 32 m, August 1986: 1 M 2.8 mm (MNHN-IU-2013-13868).—Stn 853, 20°41.35'S, 165°07.4'E, 27 m, 12 January 1987: 1 M 3.3 mm (MNHN-IU-2013-13865). Touho. 15 m, 31 August 1993: 1 M 2.9 mm, 2 ov. F 2.1–2.8 mm (MNHN-IU-2013-13869).—10–15 m, 6 September 1993: 4 M 1.8–2.2 mm, 2 ov. F 2.2–2.5 mm (MNHN-IU-2013-13867).—10–15 m, 7 September 1993: 4 M 1.9–2.8 mm, 3 ov. F 2.0–2.5 mm (MNHN-IU-2013-13866).—9 September 1993: 1 ov. F 2.7 mm (MNHN-IU-2013-13944). September 1993: 1 M 3.4 mm (MNHN-IU-2013-13870). Tié. 5–7 m, 9 September 1993: 1 M 2.6 mm (MNHN-IU-2013-13871). Laragnere Reef. 12–16 m, 3 May 1993: 1 M 2.7 mm (MNHN-IU-2013-13859); 1 ov. F 2.8 mm (MNHN-IU-2013-13860). Lifou Island. LIFOU, Stn 1421, 20°52.4'S, 167°08.5'E, 4 m, 27 November 2000: 1 M 2.8 mm (MNHN-IU-2013-13861). Aquarium Noumea: 1 M 3.2 mm (MNHN Ga 1157).

Coloration. Ground color of carapace, abdomen and pereopods reddish. White transverse band on base of rostrum. Distal portion of P1 palm white. P2–4 with diffuse whitish and reddish bands.

Remarks. We have not observed notable variations in the morphological characteristics of this species. However, the facial pterygostomian spine is minute or obsolescent in some specimens. The genetic divergences between *G. ohshimai* and all other sequenced related species are larger than 15.0% (COI), and 8.6% (16S rRNA) (Tab. 1).

Distribution. Palau, Hong Kong, Indonesia, Papua New Guinea, Australia (Queensland), Vanuatu, New Caledonia; 0–48 m, in corals and rubble.

***Galathea orientalis* Stimpson, 1858**

Galathea orientalis Stimpson, 1858: 252 (Ly-i-moon Passage near Hong Kong, 46 m).—Stimpson, 1907: 231 (Ly-i-moon Passage, near Hong Kong, 46 m).—Miers, 1879: 51 (Korea Strait, 22–92 m).—Ortmann, 1892: 252, pl. 11, figs 10, 10a, 10i (Kadsiyama [= Katsuyama], Sagami Bay, Maizuru, Tanagawa [= Kanagawa], Kagoshima, shallow-water to 92 m).—Doflein, 1902: 644 (Sagami Bay).—Nakazawa, 1927: 1035, fig. 1993 (Misaki, Japan, intertidal).—Melin, 1939: 63, figs 36–38 (between Chichijima and Hahajima, and Chichijima, Bonin Islands, 64 m).—Nakazawa in Miyake & Nakazawa, 1947: 732, fig. 2115 (no record).—Utinomi, 1956: 63, pl. 32, fig. 5 (no record).—Miyake, 1960: 97, pl. 48, fig. 5 (no record).—Miyake, 1965: 634, fig. 1042 (no record).—Miyake & Baba, 1967c: 232, fig. 5 (East China Sea, Chejudo, 50–101 m).—Lewinsohn, 1969: 110 (no record).—Haig, 1974: 447 (no record).—Kim, 1973: 175, fig. 19, pl. 64, figs. 5a, 5b (Korea).—Miyake, 1982: 145, with 1 fig., pl. 49, fig. 1 (S Kii Peninsula, 45 m).—Takeda, 1982: 50, fig. 149 (no record).—Baba, 1989: 130 (Oshima Strait, Amami-oshima, 40–70 m).—Komai, 2000: 353 (list).—Minemizu, 2000: 166, with fig. (Ohse-zaki, Shizuoka Pref., Japan, 22 m).—Davie, 2002: 62 (list).—Baba, 2005: 81, 244 (key, synonymies, Japan and East China Sea and Hong Kong, shore–549 m).—Macpherson, 2008: 291 (Dampier Archipelago, 1–28 m).—Clark *et al.*, 2008: 920 (Conic Island cave, Hong Kong).—Baba *et al.*, 2008: 74 (compilation); 2009: 120, figs. 100–103 (Taiwan, 83–95 m).—Dong & Li, 2010: 15 (East and South China Sea, intertidal to 110 m).

Galathea longimana.—Stimpson, 1907: 232 (China Sea, Oushima [Amami-Ohshima], and Kagoshima Bay).

Galathea acanthomera Stimpson, 1858: 90 (type locality: Bonin Islands, 1.8 m, type lost).—Stimpson, 1907: 232 (Port Lloyd, Bonin Islands).—De Man, 1907: 388 (Japan).—Balss, 1913b: 2, fig. 1 (Japan: Boshu, Misaki, Dsushi, Aziro near Misaki, Uraga Canal, Nagasaki, 20–200 m).—Yokoya, 1933: 55 (Japan: E of Omae-zaki, SW coast of Shikoku, W of Tanabe, S coast of Atsumi (Aichi Pref.), NE of Iki I., and coast of Tottori Pref., 18–154 m).—Miyake, 1938: 39, fig. 2 (Kii Peninsula, Japan, 100 m).—Makarov, 1938: 86 (no record).

Galathea coralliophilus.—Wu *et al.*, 1998: 90, figs 9, 42F (Taiwan) (not *G. coralliophilus* Baba & Oh, 1990).

Questionable identification:

Galathea orientalis.—Haig, 1974: 447 (Western Australia).

Not *Galathea orientalis*.—Tirmizi, 1966: 182, figs 6–8 (possibly = *G. anepipoda* Baba, 1990).

Material examined. Japan. Iwate, Otsuchi, 20 m 28 July 1992: 3 M 4.5–5.4 mm, 1 ov. F 5.6 mm (SMF 39254). Philippines. MUSORSTOM 3, Stn CP142, 11°47'N, 123°01'E, 26–27 m, 6 June 1985: 1 M 2.7 mm (MNHN-IU-2013-13938).

Vietnam. Tonkin. 1 ov. F 4.3 mm (MNHN Ga 742).

Papua New Guinea. PAPUA NIUGINI, Stn PB37, 05°15.9'S, 145°47.1'E, 10 m, 30 December 2012: 1 F 2.5 mm (MNHN-IU-2013-13999).

Australia. Western Australia. Dirk Herlog Island, 30–40 m, 1 March 1999: 1 M 2.7 mm, 1 ov. F 3.2 mm (UF5155).

Australia. Queensland. Lizard island, off Bird Island, 14.6928°S, 145.4668°E, 1–2 m, 8 February 2009: 1 M 3.7 mm (UF16625).—Lizard Island, Waining Reef, 14.4514°S, 145.3139°E, no depth, 15 February 2009: 1 ov. F 2.7 mm (UF18195).—Lizard Island, Younge Reef, 15–18 m, 18 February 2009: 1 M 2.4 mm (UF17133).

Remarks. *Galathea orientalis* is a widely distributed species. We have not observed significant morphological differences among the specimens from the different localities. The spines on the extensor margin of the Mxp3 carpus can be acute or blunt. The closest species to *G. orientalis* is *G. corallicola* Haswell, 1882. The two species can be distinguished by the following characters:

- The second abdominal somite has two transverse ridges in *G. orientalis*, instead of four transverse ridges in *G. corallicola*.
- The distomesial spine of the antennal article 1 reaches the end of the antennal peduncle in *G. orientalis*, whereas this spine slightly exceeds the article 2 in *G. corallicola*.

Distribution. Previously known from Japan (including Ogasawara Islands), Korean Strait, Taiwan, East and South China Sea, Western Australia (Dampier Archipelago), 0–200 m. The present material from Japan, Philippines, Vietnam, Papua New Guinea, Australia was collected at depths of 1–27 m, on algae or *Pocillopora* sp.

***Galathea paleroi* n. sp.**

(Fig. 74)

Material examined. *Holotype*: Vietnam. Gulf of Tonkin, 110 m, 9 February 1960: ov. F 4.0 mm (OIRAS).

Etymology. This species is dedicated to Ferran Palero of the University of Valencia, for his support in my work and his contributions to crustacean research.

Description. *Carapace*: As broad as long; transverse ridges with dense short setae, and numerous long and thick iridescent setae; cervical groove distinct, laterally bifurcated. Gastric region with some transverse ridges: 1 epigastric ridge with 2 median spines and medially interrupted, some small scale-like ridges between epigastric and anterior protogastric ridges; 2 protogastric ridges, anterior ridge medially interrupted, without parahepatic spines, posterior ridge scale-like; 1 mesogastric ridge uninterrupted and not extending laterally to anteriormost of branchial marginal spines; 2 metogastric ridges, anterior ridge uninterrupted, not continuing laterally to anteriorbranchial ridge, posterior ridge scale-like. Hepatic region unarmed. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 5 transverse ridges. Lateral margins well convex medially, with 5 spines: 1 spine in front of and 4 spines behind anterior cervical groove; first anterolateral, well-developed, slightly behind of lateral limit of orbit, without spine ventral to between first and cervical groove; 2 spines on anterior branchial region, and 2 spines on posterior branchial margin. Small spine on lateral limit of orbit; infraorbital margin with strong spine and additional acute granules. Rostrum 1.6 times as long as broad, length 0.7 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous small scale-like setose ridges; lateral margin with 4 deeply incised teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin blunt.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 or 3 uninterrupted transverse ridges on tergite; somites 5 and 6 each with 2 medially interrupted ridges, posteromedian margin of somite 6 slightly convex.

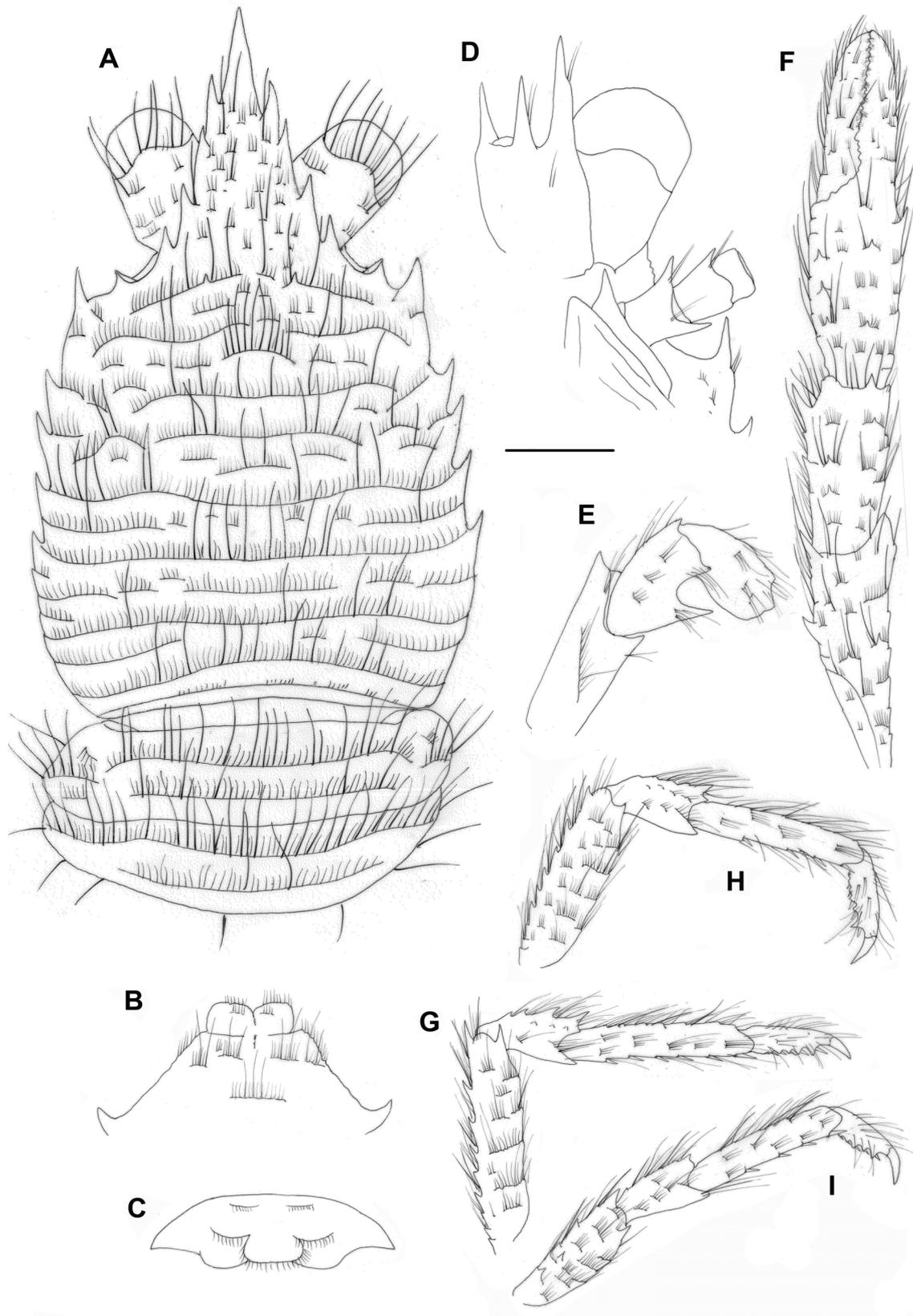


FIGURE 74. *Galathea paleroi* n. sp., holotype, ovigerous female, 4.0 mm, Vietnam (OIRAS). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, abdominal somite 6, dorsal view; D, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; E, ischium, merus and carpus of right Mxp3, lateral view; F, right P1, dorsal view; G, right P2, lateral view; H, right P3, lateral view; I, right P4, lateral view. Scale: A, C, F, G, H, I = 1 mm; B, D, E = 0.5 mm.

Eyes: Ocular peduncles 1.4 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger. Ultimate article moderately elongate, twice longer than broad, with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine not reaching distal margin of article 2. Article 2 with 2 subequal distal spines, and not exceeding midlength of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with flexor margins ending in small spine, extensor margin ending in acute angle; crista dentata with 20 denticles. Merus shorter than ischium; flexor margin with 2 spines, proximal spine much longer than distal; extensor margin ending in small spine. Carpus unarmed, extensor border with some prominences.

P1: 2.4 times carapace length, with numerous setiferous scales, and some scattered long setae. Merus 0.8 times carapace length, 1.3 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus as long as palm, 2.3 times as long as broad; dorsal surface with some small spines; mesial margin with row of spines, distal second much stronger than others. Palm 1.9 times longer than broad, lateral and mesial margins subparallel; small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers as long as palm, unarmed, each finger distally with two rows of teeth, spooned.

P2–4: long and slender, with some setose striae and numerous long iridescent setae. P2 2.1 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.7 length of P3 merus); P2 merus 0.8 carapace length, 4.5 times as long as broad, 1.5 times longer than P2 propodus. P3 merus 3.5 times as long as broad, 1.3 times longer than P3 propodus. P4 merus 3 times as long as broad, as long as P4 propodus. Extensor margin with row of 9 or 10 proximally diminishing spines on P2–3, 5 spines on P4; ventral margins distally ending in strong spine, and 2 or 3 eminences, lateral sides unarmed on P2–3, 2 spines on P4. Carpi with 4 or 5 spines on extensor margin on P2–3, 3 or 4 small spines on P4; lateral surface with 3 or 4 spines or acute granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 4.5 times as long as broad; extensor margin unarmed; flexor margin with 4–6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6 that of propodi; flexor margin with 5 or 6 proximally diminishing teeth, terminal one prominent.

Epipods absent on pereopods.

Remarks. The new species is closely related to *G. anepipoda* Baba, 1990, from Madagascar. Both species can be distinguished by the following aspects:

- The carapace and abdomen have numerous, long and thick, iridescent setae in the new species, whereas these setae are very scarce in *G. anepipoda*.
- The anterior protogastric ridge is divided into some scale-like ridges, with the median scale moderately long and having numerous long iridescent setae in the new species. This ridge is represented by one short median scale with two long iridescent setae in *G. anepipoda*.

The specimens from the East China Sea, referred to *G. anepipoda* by Dong & Li (2010), it might belong to this new species. According to the illustrations provided by these authors, the long setae and transverse ridges on the carapace are less numerous in these specimens than in the new species. In order to establish the specific identity of Dong & Li's (2010) specimens, direct comparison would be necessary. The material from Sagami Bay, Japan, and Kei Islands (Baba 2005), and identified as *G. anepipoda*, could be also related to the new species. Additional material and a more complete comparison is needed to confirm the identity of these occurrences.

No genetic data are available from *G. paleroi*.

Distribution. Vietnam, Gulf of Tonkin, 110 m.

***Galathea parvula* n. sp.**

(Figs 75, 118G)

Material examined. *Holotype:* Saudi Arabia, Yanbu, 24.4427°N, 37.2477°E, 3–22 m, 4 October 2013: ov F 2.9 mm (UF38286).

Etymology. From the Latin *parvulus*, child, in reference to the small size of the species.

Description. *Carapace:* Slightly longer than broad; transverse ridges with short setae, with scattered long non-

plumose, iridescent setae; cervical groove distinct, laterally bifurcated. Gastric region with 5 transverse ridges: 1 epigastric ridge medially interrupted, with 2 spines; 1 protogastric ridge, uninterrupted (medially interrupted in one paratype), 1 parahepatic spine on each side between epigastric and protogastric ridges; 1 mesogastric ridge, scale-like, not continuing laterally with anteriormost branchial spines; 2 metagastric ridges, anterior ridge medially interrupted, not continuing laterally to anterior branchial ridges, posterior one short. Anterior branchial region with some ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 4 ridges, 2 of them uninterrupted. Lateral margins slightly convex, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, behind level of lateral limit of orbit, second small, with spine ventral to between first and second spines; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin. Lateral limit of orbit with small spine; infraorbital margin with strong spine. Rostrum narrowly triangular, 1.7 as long as broad, length 0.6 carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface slightly concave; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin bluntly produced.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somite 2 with 2 transverse uninterrupted ridges; somite 3 with 1 anterior uninterrupted ridge and 1 scale-like ridge; somites 4–6 smooth; posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger than others. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine exceeding distal margin of article 3. Article 2 with subequal distolateral and distomesial spines, reaching midlength of article 3. Article 3 with minute distomesial spine. Article 4 unarmed.

Mxp3: Ischium with small spine on flexor distal margin, extensor margin ending in acute point; crista dentata with 22–25 denticles. Merus as long as ischium; flexor margin with 2 spines, proximal longer than distal; extensor margin with small distal spine. Carpus unarmed.

P1: 2.5–3.0 times carapace length, with some finely setiferous scales, and some scattered long setae; some setae iridescent. Merus 0.9–1.2 times length of carapace, 1.5 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.8–1.0 length of palm, 2.0–2.2 times longer than broad; dorsal surfaces with a few minute spines; mesial margin with 1 strong median spine and some additional smaller spines. Palm 2.4 times longer than broad, lateral and mesial margins subparallel; spines arranged roughly in dorsolateral and dorsomesial rows; dorsolateral row continuing along fixed finger; some scattered small dorsal spines. Fingers as long as palm, movable finger unarmed; each finger with two rows of teeth distally spooned.

P2–4: Moderately long and slender, with setose striae and long setae; setae non-iridescent. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.7 carapace length, 4.5 times as long as broad, 1.5 times longer than P2 propodus; P3 merus 3.5 times longer than broad, 1.3 times longer than P2 propodus; P4 merus 3.5 times as long as broad, slightly longer than P4 propodus. Extensor margins of meri with row of 8 or 9 proximally diminishing spines on P2–3, 2 or 3 spines on P4; flexor margins distally ending in strong spine followed proximally by several tubercles or eminences; lateral sides unarmed. Carpi with 3 or 4 spines on extensor margin; lateral surface with 2 or 3 granules subparalleling extensor margin on P2–4; flexor margin bluntly produced. Propodi 4.2–4.6 times as long as broad; extensor margin with 1 or 2 small proximal spines on P2–4; flexor margin with 4 or 5 slender movable spines on P2–4. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 5 proximally diminishing teeth, terminal one prominent.

Epipods on P1–2.

Coloration. Base color of carapace and abdomen reddish. P1 with transverse reddish and whitish stripes. P2–4 with distal part of meri, carpi and propodi with darker red transverse ridges. Rostrum and eyes peduncle reddish.

Remarks. *Galathea parvula* is closely related to *G. gnoma* n. sp. from Indonesia and Vanuatu. The two species can be distinguished by the following characters:

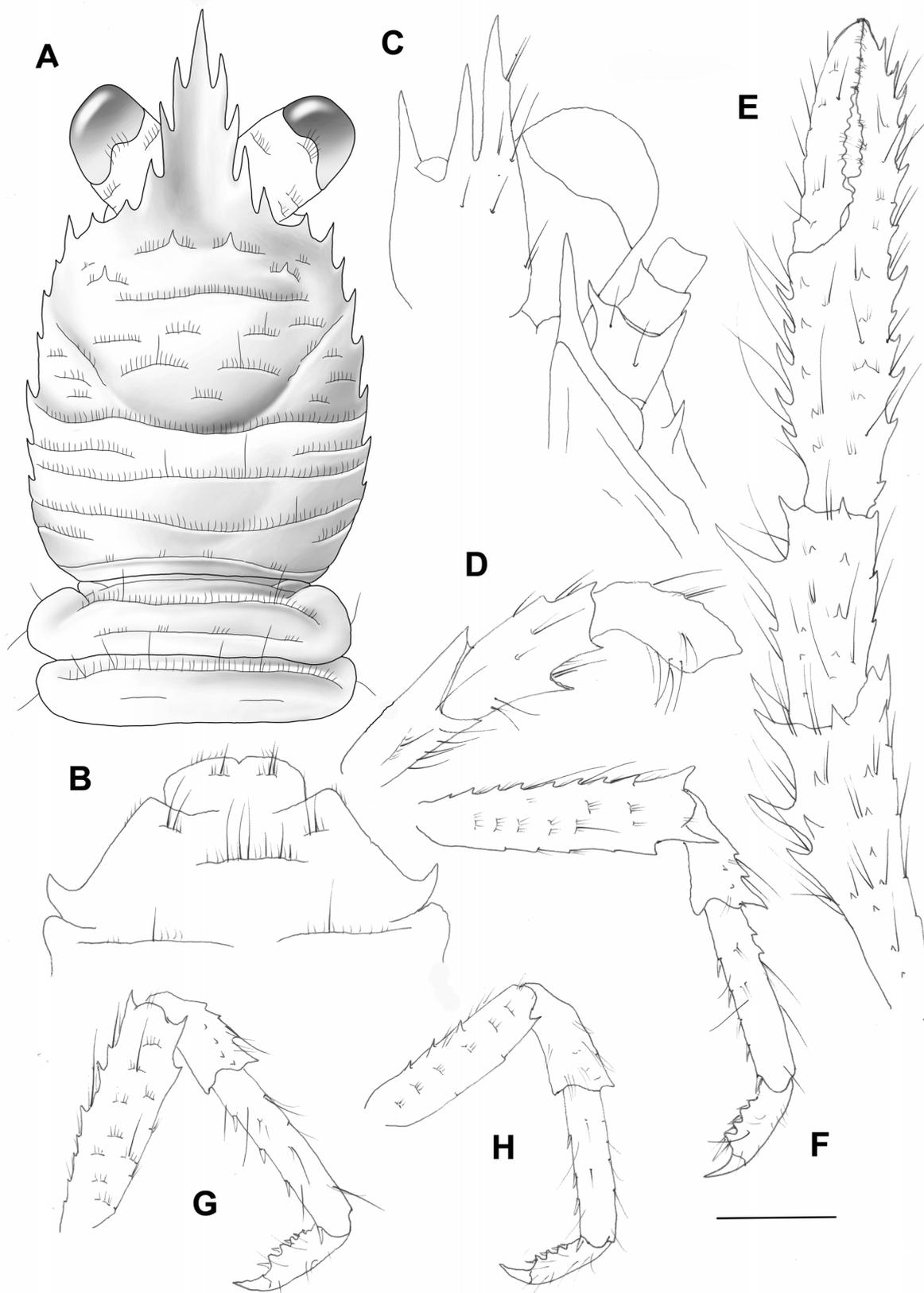


FIGURE 75. *Galathea parvula* n. sp., holotype, ovigerous female, 2.9 mm, Saudi Arabia (UF38286). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

- Epipods are present on P1–2 in *G. parvula*, instead of P1 only in *G. gnoma*.
- The protogastric region has one median arcuate scale-like ridge posterior to anterior protogastric ridge in *G. gnoma*, whereas this scale-like ridge is absent in *G. parvula*.
- The lateral margin of the fixed finger of P1 has a row of spine in the present new species, whereas this margin is unarmed in *G. gnoma*.
- The mesial margin of P1 carpus has one strong median spine in the new species, that is absent in *G. gnoma*.
- The distomesial spine of antennal article 1 slightly exceeds article 2 in *G. gnoma*, whereas this spine exceeds article 3 in *G. parvula*.
- The two spines on the flexor margin of Mxp3 merus are subequal in *G. gnoma*, whereas the proximal is clearly longer than distal spine in the new species.

No genetic data are available for *G. parvula*.

Distribution. Red Sea, Saudi Arabia, 3–22 m.

Galathea pascualae n. sp.

(Fig. 76)

Material examined. *Holotype*: New Caledonia. Lifou Island. LIFOU, Stn DW1648, 20°54.1'S, 167°03.3'E, 150–200 m, 7 November 2000: M 4.3 mm (MNHN-IU-2013-8078).

Paratypes: Indonesia. Kei Islands. KARUBAR, Stn DW1, 05°46'S, 132°10'E, 156–305 m, 22 October 1991: 1 M 4.6 mm (MNHN-IU-2013-8086).

Vanuatu. MUSORSTOM 8, Stn CP1017, 17°52.80'S, 168°26.20'E, 294–295 m, 27 September 1994: 1 M 3.8 mm (MNHN-IU-2013-8087).—Stn CP1071, 15°36.63'S, 167°16.34'E, 180–191 m, 4 October 1994: 1 M 4.5 mm, 1 ov. F 3.5 mm (MNHN-IU-2013-8062), 2 M 4.0–5.0 mm (MNHN-IU-2013-8084), 1 M 4.3 mm (MNHN-IU-2013-8083).—Stn CP1086, 15°36.58'S, 167°16.32'W, 182–215 m, 5 October 1994: 1 M broken, 1 ov. F 4.0 mm (MNHN-IU-2013-8063). SANTO, Stn AT22, 15°32.3'S, 167°16.0'E, 180–227 m, 22 September 2006: 1 M 4.0 mm, 1 ov. F 4.9 mm (MNHN-IU-2013-8077).—Stn AT116, 15°32.9'S, 167°16.2'E, 153–196 m, 18 October 2006: 1 M 4.7 mm (MNHN-IU-2013-8082), 1 ov. F 4.5 mm (MNHN-IU-2013-8081).

New Caledonia. Chesterfield Islands. CHALCAL 84, Stn D35, 19°44.84'S, 158°25.83'E, 210 m, 21 July 1984: 1 ov. F 3.1 mm (MNHN-IU-2013-8058).—Stn CP10, 20°00.20'S, 158°46.60'E, 225 m, 22 July 1984: 2 ov. F 4.1–5.0 mm (MNHN-IU-2013-8085). CORAIL 2, Stn DW114, 19°25'S, 158°38'E, 217 m, 28 July 1988: 1 F 3.1 mm (MNHN-IU-2013-8059).

New Caledonia. BIOCAL, Stn CP108, 22°02.55'S, 167°05.68'E, 335 m, 9 September 1985: 3 ov. F 3.7–4.0 mm, 1 F 4.0 mm (MNHN-IU-2013-8070).—Stn CP110, 22°12.38'S, 167°06.43'E, 275–320 m, 9 September 1985: 1 ov. F 3.7 mm (MNHN-IU-2013-8071). MUSORSTOM 4, Stn DW149, 19°07.60'S, 163°22.7'E, 165 m, 14 September 1985: 1 M 5.5 mm (MNHN-IU-2013-8060).—Stn DW151, 19°07.00'S, 163°22.00'E, 200 m, 14 September 1985: 3 M 4.1–5.0 mm, 3 ov. F 4.2–4.6 mm (MNHN-IU-2013-8065).—Stn CP153, 19°04.20'S, 163°21.20'E, 235 m, 14 September 1985: 1 M 3.9 mm, 1 ov. F 3.8 mm (MNHN-IU-2013-8051).—Stn CC173, 19°02.50'S, 163°18.80'E, 250–290 m, 17 September 1985: 5 M 3.8–4.4 mm, 4 ov. F 3.5–3.8 mm, 1 F 4.0 mm (MNHN-IU-2013-8055).—Stn CC174, 19°00.30'S, 163°18.50'E, 365 m, 17 September 1985: 2 M 3.4–5.0 mm, 1 ov. F 4.9 mm (MNHN-IU-2013-8066).—Stn CP178, 18°56.30'S, 163°12.90'E, 520 m, 18 September 1985: 2 M 3.3–3.7 mm, 1 ov. F 3.5 mm (MNHN-IU-2013-8064).—Stn DW183, 19°01.80'S, 163°29.50'E, 280 m, 18 September 1985: 1 ov. F 3.4 mm (MNHN-IU-2013-8075). BATHUS 1, Stn CP667, 20°57'S, 165°34'E, 205–212 m, 14 March 1993: 2 M 4.0–5.1 mm, 1 ov. F 4.4 mm (MNHN-IU-2013-8068).—Stn CP669, 20°57'S, 165°35'E, 255–280 m, 14 March 1993: 1 M 4.3 mm, 1 F 4.2 mm (MNHN-IU-2013-8072).—Stn CP710, 21°43'S, 166°36'E, 320–385 m, 19 March 1993: 6 M 3.7–5.6 mm, 1 F 5.0 mm (MNHN-IU-2013-8052).—Stn CP712, 21°44'S, 166°35'E, 210 m, 19 March 1993: 1 M 3.2 mm, 1 ov. F 3.2 mm (MNHN-IU-2013-8076). BATHUS 2, Stn DW717, 22°44'S, 167°16'E, 350–393 m, 11 May 1993: 2 ov. F 3.6–4.0 mm (MNHN-IU-2013-8061). BATHUS 3, Stn CP835, 23°02.29'S, 166°58.22'E, 350 m, 30 November 1993: 2 ov. F 3.5–4.6 mm (MNHN-IU-2013-8074). BATHUS 4, Stn CP905, 19°02.45'S, 163°15.65'E, 294–296 m, 4 August 1994: 2 M 4.7–4.9 mm (MNHN-IU-2013-8069).—Stn CP906, 19°01.07'S, 163°14.51'E, 339–350 m, 04 August 1994: 4 M 4.5–5.2 mm, 2 ov. F

3.7–6.3 mm (MNHN-IU-2013-8054). NORFOLK 1, Stn CP1713, 23°22'S, 168°03'E, 204–210 m, 26 June 2001: 1 M 4.8 mm (MNHN-IU-2013-8073). South Reef. Stn 367bis, 22°37'S, 167°04'E, 105 m, November 1984: 1 M 3.4 mm (MNHN-IU-2013-13979). Lagon. Stn 540, 19°06.2'S, 163°15.8'E, 35–40 m, 6 March 1985: 1 M 3.7 mm (MNHN-IU-2013-13990). Lifou Island. LIFOU, Stn DW1648, 20°54.1'S, 167°03.3'E, 150–200 m, 7 November 2000: 2 M 3.8–5.2 mm (MNHN-IU-2013-8079).—Stn DW1649, 20°54.2'S, 167°01.1'E, 150–220 m, 8 November 2000: 2 M 4.4–4.6 mm, 2 ov. F 3.4–3.7 mm (MNHN-IU-2013-8067).—Stn DW1650, 20°54.15'S, 167°01.7'E, 120–250 m, 15 November 2000: 16 M 2.2–4.4 mm, 6 ov. F 3.2–3.3 mm (MNHN-IU-2013-8088, MNHN-IU-2013-8080). Loyalty Islands. MUSORSTOM 6, Stn DW413, 20°40.10'S, 167°03.50'E, 463 m, 15 February 1989: 1 M 5.4 mm (MNHN-IU-2013-8053).—Stn CP419, 20°41.65'S, 167°03.70'E, 283 m, 16 February 1989: 1 M 4.0 mm (MNHN-IU-2013-8057), 1 M 4.4 mm (MNHN-IU-2013-8056).

Etymology. This species is dedicated to Marta Pascual of the Genetic Department, University of Barcelona, for her support to molecular crustacean research.

Description. *Carapace:* slightly longer than broad; transverse ridges with some moderately long non-plumose setae among short fine setae; cervical groove distinct, laterally bifurcated; most ridges on gastric region uninterrupted, with some scattered scale-like ridges; epigastric region with 8 or 9 spines; 1 or 2 small hepatic spines on each side, near anterolateral spine; 1 or 2 parahepatic spines lateral to anterior protogastric ridge; anterior mesogastric ridge not extending laterally to anteriormost of branchial marginal spines; anterior metogastric ridge not extending laterally to anterior branchial ridges; mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 6 transverse ridges, 3 of them uninterrupted. Lateral margins slightly convex medially, with 7–9 spines: first anterolateral, well-developed, second very small but distinct, located at midlength between first spine and anteriormost spine of branchial margin, with small spine ventral to between first and second; 3 or 4 spines on anterior branchial margin, and 3 spines on posterior branchial margin. Small outer orbital spine; infraorbital margin with strong spine, and 1 or 2 minute spines. Rostrum triangular, 1.9–2.0 times as long as broad, length 0.6 that of, breadth 0.3–0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions, dorsal surface slightly concave, nearly horizontal in lateral view, with some thick long plumose setae; lateral margin with 4 moderately incised sharp teeth.

Pterygostomian flap rugose, with sparse short setae, anterior margin bluntly angular.

Sternum: Slightly longer than broad, lateral limits divergent posteriorly.

Abdomen: Somites 2–3 each with 2 uninterrupted and 2 interrupted transverse ridges on tergite, anterior ridge more distinctly elevated than posterior ridge; somites 4–6 each with 2 medially interrupted ridges, sometimes anterior ridge of somite 4 uninterrupted; posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.5–1.7 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 spines; well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine clearly shorter than others; 2 small spines along lateral margin. Ultimate article moderately short, twice longer than broad, with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with distomesial spine not reaching or reaching distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine reaching midlength of article 3, distomesial spine slightly shorter than distolateral. Article 3 with small distomesial and distolateral spine. Article 4 unarmed.

Mxp3: Basis with several denticles on mesial ridge, distalmost larger. Ischium with well-developed spine on flexor distal margin; crista dentata with 20–21 denticles. Merus as long as ischium; flexor margin with 1 strong spine at midlength, and 1 small distal spine, sometimes 1 additional spine between them; extensor margin unarmed. Carpus unarmed.

P1: 4.6–4.7 times carapace length, covered with finely setiferous scales, with scattered long thick plumose setae. Merus 1.8 times length of carapace, 2.0 times as long as carpus, with spines arranged roughly in rows, dorsomesial and ventromesial spines stronger; distal spines prominent. Carpus 0.9 length of palm, 3.3–3.6 times as long as broad; dorsal surface with small spines arranged roughly in 2 longitudinal rows; mesial spines slightly stronger than dorsal spines. Palm 3.3–3.4 times longer than broad, lateral and mesial margins with small spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side. Fingers 0.9 length of palm, each finger distally with two rows of teeth, spooned; mesial margin of movable finger unarmed.

P2–4: Moderately long and slender, with setose striae and sparse long plumose setae. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.9 carapace length, 6.3 times as long as broad, 1.4 times longer than P2 propodus; P3 merus 5.0 times longer than broad, 1.2 times longer

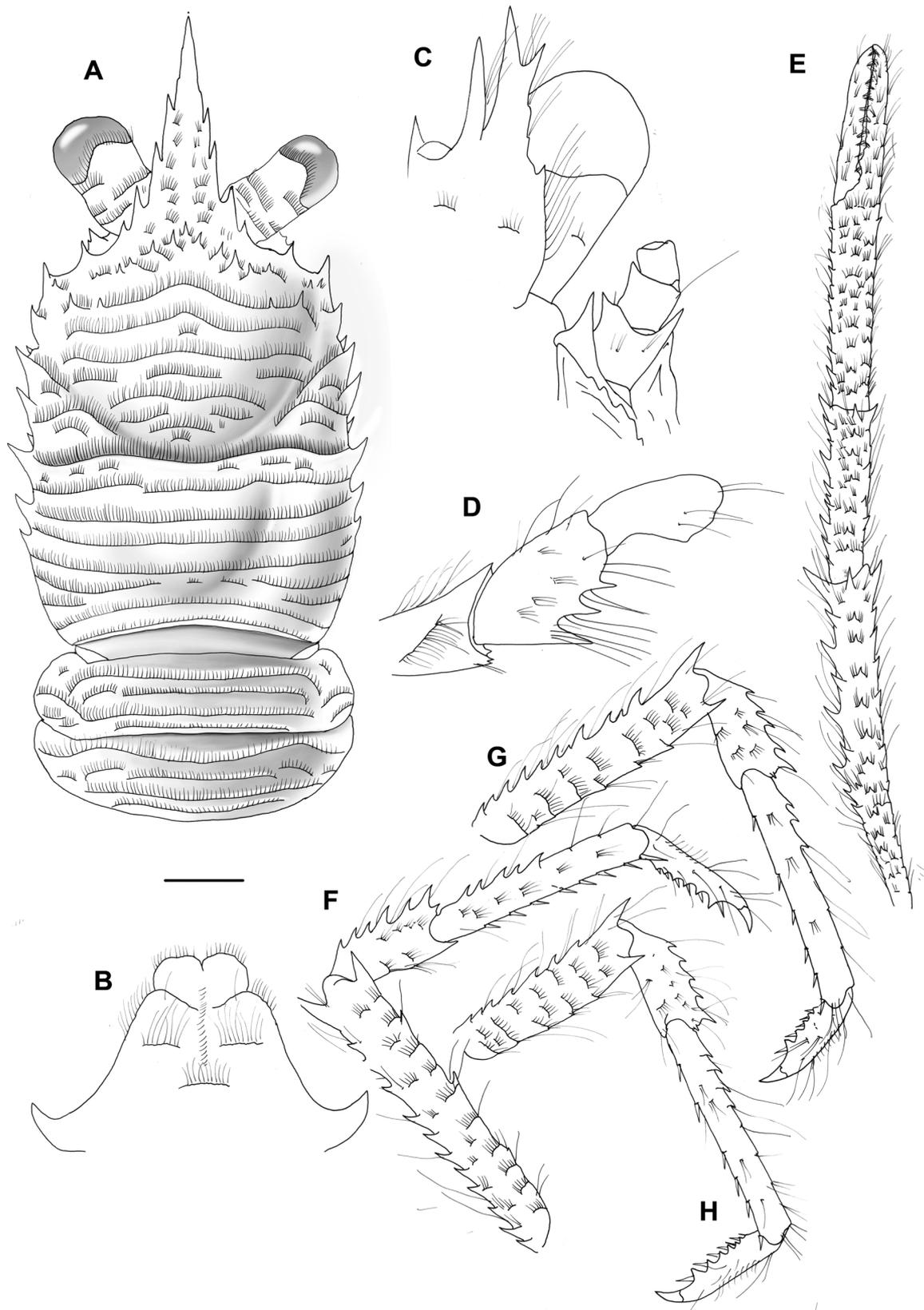


FIGURE 76. *Galathea pascualae* n. sp., holotype, male, 4.3 mm, New Caledonia (MNHN-IU-2013-8078). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

than P3 propodus; P4 merus 4.3 times as long as broad, 1.2 length of P4 propodus. Extensor margins of meri with row of 8 or 9 proximally diminishing spines; flexor margins distally ending in strong spine followed proximally by small spine and several tubercles or eminences. Carpi with 3–6 spines on extensor margin on P2–3, 1 or 2 spines on P4, distalmost smaller than distal second; lateral surface with acute granules sub-parallel to extensor margin on P2–4; flexor distal margin sometimes with small spine. Propodi subequal in length, 6 times as long as broad; extensor margin with 3–5 small proximal spines on P2, 0–4 on P3–4; flexor margin with 6 or 7 slender movable spine on P2–4. Dactyli subequal in length, distally ending in well-curved strong spine, length 0.7 that of propodi; flexor margin with 5 or 6 proximally diminishing teeth, terminal one prominent.

Epipods on P1.

Remarks. *Galathea pascualae* resembles *G. pubipes* n. sp. from New Caledonia (see below under Remarks for this species).

Distribution. Indonesia (Kei Islands), Vanuatu, New Caledonia, Loyalty and Chesterfield Islands, 35–520 m.

***Galathea patriciae* n. sp.**

(Fig. 77)

Material examined. *Holotype:* Wallis and Futuna. MUSORSTOM 7, Stn CP498, 14°18.9'S, 178°03.1'W, 105–160 m, 10 May 1992: F 3.8 mm (MNHN-IU-2013-13604).

Paratypes: Wallis and Futuna. MUSORSTOM 7, Stn CP498, 14°18.9'S, 178°03.1' W, 105–160 m, 10 May 1992: 16 M 2.6–5.5 mm, 7 ov. F 3.3–5.4 mm, 2 F 3.2–3.8 mm (MNHN-IU-2013-13605).

Etymology. This species is dedicated to Patricia Cabezas of the Museo Nacional de Ciencias Naturales, Madrid, for her support to crustacean taxonomy.

Description. *Carapace:* As broad as long; transverse ridges with dense short setae, and a few scattered long non plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with some transverse ridges: 1 epigastric ridge unarmed and usually uninterrupted; 2 protogastric ridges, anterior ridge uninterrupted, without or with minute parahepatic spine on each side, posterior ridge median, short, sometimes interrupted, without long thick setae; 1 mesogastric ridge uninterrupted or medially interrupted, not extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, anterior ridge sometimes medially interrupted, not continuing laterally to anteriorbranchial ridge, posterior ridge short, sometimes absent. Hepatic region with small spine near first marginal (anterolateral) spine. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 5 transverse ridges, sometimes 1 ridge uninterrupted. Lateral margins well convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, with spine ventral to between first and second; 2 spines on anterior branchial region, last small, and 3 spines on posterior branchial margin. Small spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum 1.8–2.0 times as long as broad, length 0.7–0.8 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous small scale-like setose ridges; lateral margin with 4 deeply incised teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somites 5 and 6 each with 2 scale-like ridges, posteriormedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching distal margin of article 2. Article 2 with 2 distal spines, distolateral spine longer than distomesial and exceeding midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor margins ending in small spine, extensor margin ending in acute angle; crista dentata with 20–21 denticles. Merus as long as ischium; flexor margin with 2 spines, proximal spine longer than distal; extensor margin acute. Carpus unarmed.

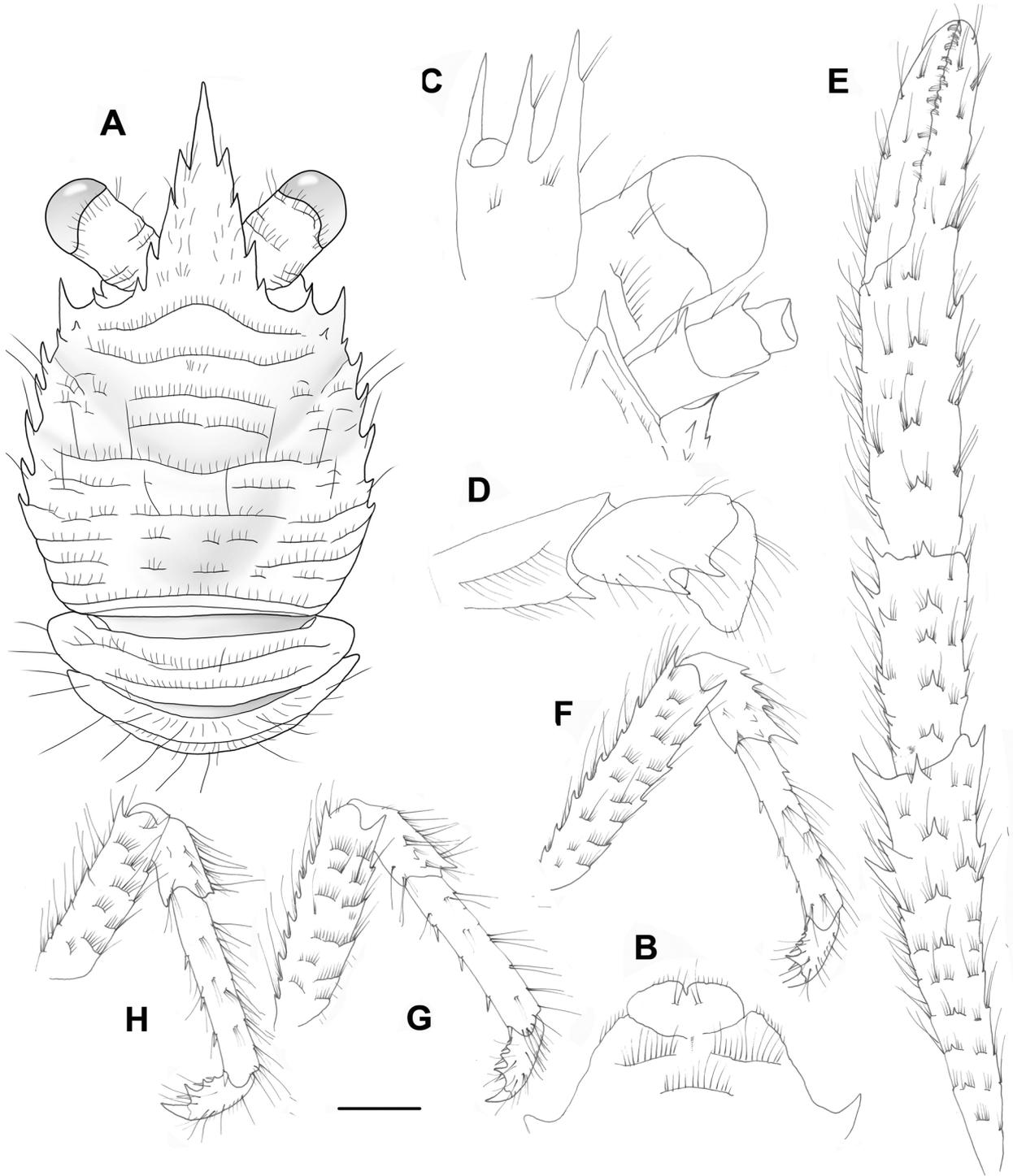


FIGURE 77. *Galathea patriciae* n. sp., holotype, female, 3.8 mm, Wallis and Futuna (MNHN-IU-2013-13604). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

P1: 3.0–3.6 times carapace length, with numerous setiferous scales, and some scattered long setae. Merus 1.5 times carapace length, 1.9–2.1 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.8–0.9 length of palm, 2.4–2.5 times as long as broad; dorsal surface with some small spines; mesial margin with row of spines, distal second stronger than others. Palm 2.1–2.7 times longer than broad, lateral

and mesial margins subparallel; small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers as long as palm, each finger with two rows of teeth distally spooned; fingers unarmed.

P2–4: long and slender, with some setose striae and sparse long plumose setae. *P2* 2.0–2.2 times carapace length. Meri successively shorter posteriorly (*P3* merus 0.8–0.9 length of *P2* merus, *P4* merus 0.8 length of *P3* merus); *P2* merus 0.9 carapace length, 4.5 times as long as broad, 1.3–1.4 times longer than *P2* propodus. *P3* merus 3.7 times as long as broad, 1.3–1.4 times longer than *P3* propodus. *P4* merus 3.5 times as long as broad, as long as *P4* propodus. Extensor margin with row of 8–10 proximally diminishing spines on *P2–3*, 0–1 spines on *P4*; ventral margins distally ending in strong spine, and 1–4 additional distal spines, lateral sides with 0–2 spines on *P4* only. Carpi with 2–4 spines on extensor margin on *P2–3*, unarmed on *P4*; lateral surface with 3 or 4 small spines or granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 5.0–5.5 times as long as broad; extensor margin unarmed, sometimes with proximal spine on *P2*; flexor margin with 4–6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.4–0.5 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods present on *P1*.

Remarks. *Galathea patriciae* n. sp. is very close to *G. boisselierae* n. sp. from the Philippines to New Caledonia, and *G. providentia* Laurie, 1926 from the southwestern Indian Ocean and Western Pacific, from the Philippines, to New Caledonia, and Fiji (see Remarks of *G. providentia*). These three species are also related to *G. ternatensis* (see Remarks of this species).

No genetic data are available for *G. patriciae*.

Distribution. Wallis and Futuna, 105–160 m.

***Galathea paulae* n. sp.**

(Fig. 78)

Material examined. *Holotype*: Tonga. BORDAU 2, Stn CP1578, 19°42'S, 174°25'W, 329–331 m, 11 June 2000: 1 M 5.8 mm (MNHN-IU-2013-8311).

Paratypes: Fiji. MUSORSTOM 10, Stn CP1351, 17°31.14'S, 178°39.96'E, 292–311 m, 11 August 1998: 1 M 4.6 mm (MNHN-IU-2013-8314); 1 ov. F 6.1 mm (MNHN-IU-2013-8315); 2 M 6.2–6.3 mm (MNHN-IU-2013-8313). BORDAU 1, Stn CP1403, 16°39.60'S, 179°35.96'E, 220–224 m, 25 February 1999: 1 M 7.0 mm (MNHN-IU-2013-8312).

Etymology. This species is dedicated to Paula Martin-Lefèvre of the Muséum nationale d'Histoire Naturelle, Paris, for her support to crustacean research.

Description. *Carapace*: As long as broad. Cervical groove distinct, laterally bifurcated. Ridges with dense short setae, with a few long plumose setae. Gastric region with 7 transverse ridges; first epigastric, with 2 submedian spines; 2 protogastric ridges, anterior one medially interrupted, posterior ridge scale-like; 2 mesogastric ridges, anterior one laterally not continuous to anteriormost branchial marginal spine, posterior ridge scale-like; 2 metogastric ridges successively shorter posteriorly, uninterrupted. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by cervical groove. Posterior branchial region with 5 transverse ridges, 2 of them uninterrupted; some additional scattered scales among ridges. Lateral margins convex medially, with 9 spines: 3 spines in front of and 6 spines behind anterior cervical groove; first anterolateral, well-developed, second very small, and third, located between second and anteriormost spine of branchial margin, accompanying another small spine ventral to between first and second; 3 spines on anterior branchial margin, and 3 spines on posterior branchial margin. External limit of orbit with small spine; infraorbital margin denticulate. Rostrum triangular, 1.8 times as long as broad, length 0.5 postorbital carapace length and breadth 0.3 that of carapace; dorsal surface nearly horizontal in lateral view, with small setiferous ridges; lateral margin with 5 deeply incised teeth.

Pterygostomian flap spineless on surface, with sparse short setae, anterior margin bluntly angular.

Sternun: Plastron about as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted and 1 medially interrupted transverse ridges on tergite, anterior ridge more distinctly elevated than posterior ridge; somites 5 and 6 with 2 medially interrupted ridges, posterior margin of somite 6 slightly convex. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.6 rostrum width.

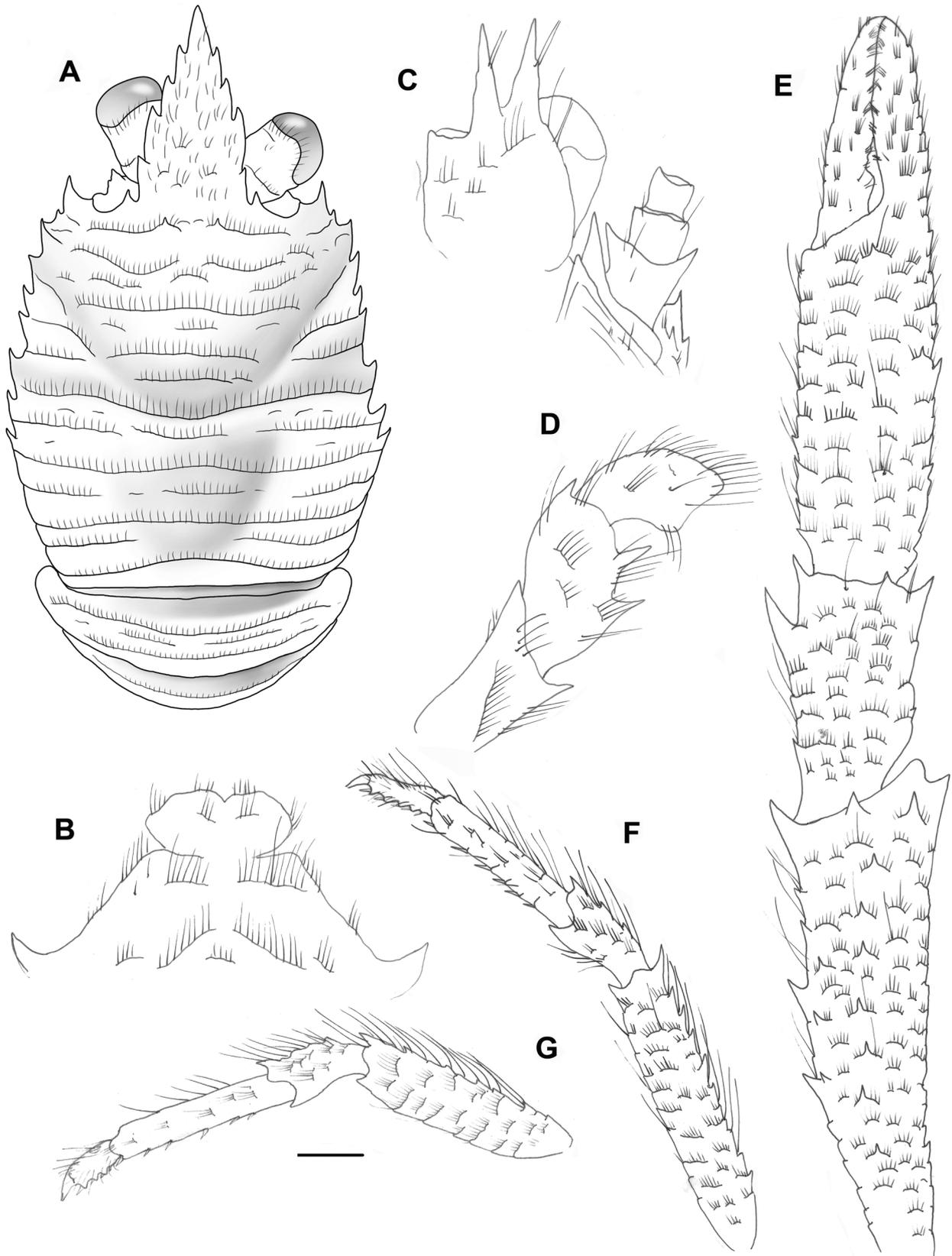


FIGURE 78. *Galathea paulae* n. sp., holotype, male, 5.8 mm, Tonga (MNHN-IU-2013-8311). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, left P2, lateral view; G, left P4, lateral view. Scale: A, E, F, G = 1 mm; B–D = 0.5 mm.

Antennula: Article 1 with 2 spines; well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine obsolescent. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 hardly visible in dorsal view, with ventral distomesial spine exceeding distal margin of article 2. Article 2 with 2 subequal distal spines, not reaching midlength of article 3. Articles 3–4 unarmed.

Mxp3: Ischium with small spine on flexor distal margin; extensor margin with small but distinct distal spine; crista dentata with 22 or 23 denticles. Merus shorter than ischium; flexor margin with 2 strong subequal spines; extensor margin with distal spine. Carpus unarmed.

P1: 3.0 times carapace length, with setose scales and some long plumose setae. Merus 1.3 times as long as carapace, 2.0–2.1 times as long as carpus, with spines arranged roughly in rows, dorsomesial and ventromesial spines stronger, distal spines prominent. Carpus 0.6–0.7 length of palm, 2.0–2.1 times as long as broad; dorsal surface with some small spines arranged roughly in rows; mesial margin with 3 or 4 spines (distal second largest). Palm 2.4–2.6 times longer than broad, lateral and mesial margins subparallel; spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side; dorsolateral row continuing along entire lateral margin of fixed finger. Fingers 0.7–0.8 length of palm, each finger distally with two rows of teeth, spooned; mesial margin of movable finger unarmed.

P2–4: moderately slender, with setose striae, and some long plumose setae. P2 1.7 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus; P2 merus 0.8 carapace length, 5.5 times as long as broad, 1.8 times longer than P2 propodus; P3 merus 4.0 times longer than broad, 1.5 times longer than P3 propodus; P4 merus 3.3 times as long as broad, 1.3 length of P4 propodus. Extensor margins with row of 9–11 proximally diminishing small spines on P2–3, distal spine only on P4; flexolateral surface unarmed on P2–4; flexolateral margin distally ending in strong spine followed proximally by several prominences. Carpi with 3 or 4 small spines on extensor margin on P2–3, 1 or 2 minute spines on P4; lateral surface with acute granules sub-parallelizing extensor margin on P2–4; flexor distal margin with small distal spine. Propodi 4.6 (P2), 4.3 (P3), 4.0 (P4) 4 times as long as broad; extensor margin unarmed; flexor margin with 6 or 7 slender movable spines on P2–4. Dactyli subequal in length, distally ending in well-curved strong spine, 0.5–0.6 length of propodi; flexor margin with 5 successively diminishing teeth, terminal one prominent.

Epipods on P1, absent on P2–4.

Remarks. *Galathea paulae* n. sp. is closely related to *G. inermis* n. sp. from the Solomon Islands (see above) and *G. sanctae* Macpherson, 2012 from Vanuatu and New Caledonia. *Galathea paulae* and *G. sanctae* can be differentiated by the shape of the rostrum, being less than 1.5 times longer than broad in *G. sanctae*, in contrast more than 1.5 times in *G. paulae*. Furthermore, the P2 merus is less than 5 times longer than broad in *G. sanctae*, whereas is more than 5 times in *G. paulae*.

The genetic divergences between *G. sanctae* and *G. paulae* are 12.1% (COI) and 6.4 (16S rRNA), and the divergences between *G. paulae* and *G. inermis* are 17.4% (COI) and 7.0% (16S rRNA) (Tab. 3).

Distribution. Fiji, Tonga; 220–331 m.

***Galathea paulayi* n. sp.**

(Figs 79, 118H)

Galathea sp.—Poore *et al.*, 2011: 334, pl. 12F (color photo, Moorea).

Material examined. *Holotype*: French Polynesia. Moorea Island, 17.5145°S, 149.7616°W, 20 m, 23 October 2008: M 5.3 mm (UF16039).

Paratypes: French Polynesia. Society Islands. Moorea Island, NE of Tareu Pass, 17.4836°S, 149.8581°W, 22 m, 24 July 2006: 1 ov. F 4.6 mm (UF9750).—Moorea Island, ca.1 km W of Avaoa Pass, 17°4758'S, 149.8322°W, 20 m, 25 July 2006: 1 M 5.3 mm (UF9689).—Moorea Island, fore reef between Cook's and Opunohu Bay, 17.4747°S, 149.8392°W, 18 m, 28 July 2006: 1 ov. F 4.7 mm (UF10163).—Moorea Island, Barrier reef, 17.4768°S, 149.8327°W, no depth, 5 August 2006: 3 ov. F 4.2–5.0 mm (UF14832).—Moorea Island, 17.4817°S, 149.8558°W, 17–18 m, 16 October 2008: 1 M 4.7 mm (UF15618), 1 M 4.5 mm (UF15641).—Moorea Island, 17.479°S, 149.7643°W, 29 m, 17 October 2008: 1 M 3.5 mm (UF15687).—Moorea Island, 17.5145°S, 149.7616°W, 20 m, 23 October 2008: 1 F 4.5 mm (UF16036), 3 M 4.9–5.2 mm, 2 ov. F 3.6–4.5 mm

(UF16044).—Moorea Island, 17.4764°S, 149.8327°W, 4–7 m, 10 November 2008: 1 M 3.2 mm (UF16350), 1 M 4.3 mm (UF16400).—Moorea Island, 17.5493°S, 149.784°W, 0 m, 19 October 2008: 1 M 3.1 mm (UF15784).—Moorea Island, 17.5099°S, 149.761°W, 33 m, 26 October 2008: 2 M 4.2–6.0 mm, 2 ov. F 3.4–3.7 mm (UF36176).—Moorea Island, 17.4758°S, 149.8314°W, 11–12 m, 18 October 2009: 2 F 2.0–2.6 mm (UF34937).—Moorea Island, 17.4756°S, 149.8425°W, 13–17 m, 5 December 2009: 1 ov. F 4.3 mm (UF24186).—Moorea Island, 17.5496°S, 149.776°W, 30–35 m, 9 December 2009: 1 ov. F 4.4 mm (UF37688).—Moorea Island, 17.5219°S, 149.7622°W, 20 m, 23 November 2010: 1 M 4.1 mm (UF29189).—Moorea Island, 17.4759°S, 149.8419°W, 11 m, 30 January 2012: 1 M 3.7 mm (UF33742).

French Polynesia, Gambier Islands. Temoe Atoll, 23.3152°S, 134.4956°W, 15.5 m, 10 February 2013: 1 ov. F 5.2 mm (UF35530), 1 ov. F 4.7 mm (UF35531), 1 F 2.7 mm (UF35532), 1 M 1.5 mm (UF35533), 1 F 1.8 mm (UF35536).

French Polynesia. Austral Islands. BENTHAUS, Stn DW1880, 27°54.8'S, 143°29.45'W, 90–94 m, 6 November 2002: 1 F 3.4 mm (MNHN-IU-2013-15817).—Stn DW1879, 27°54.8'S, 143°30.14'W, 52 m, 6 November 2002: 3 M 4.0–4.1 mm, 4 ov. F 3.4–5.2 mm, 3 F 2.6–4.5 mm (MNHN-IU-2013-15818), 1 M 4.0 mm (MNHN-IU-2013-13923), 1 ov. F 5.0 mm (MNHN-IU-2013-15819).—Stn DW1917, 27°03.29'S, 146°03.82'W, 50–60 m, 12 November 2002: 1 M 4.4 mm (MNHN-IU-2013-8448).

French Polynesia. Austral Islands. Rapa, Stn 4, 27°34.3'S, 144°22.1'W, 18 m, 4 November 2002: 1 M 3.1 mm (MNHN-IU-2013-15816).—Stn 30, 27°38.2'S, 144°18.2'W, 16–20 m, 16/18 November 2002: 2 M 3.5–3.7 mm, 3 ov. F 3.8–4.7 mm, 1 F 3.5 mm (MNHN-IU-2013-15815).—Stn 32, 27°35.8'S, 144°23.0'W, 15–20 m, 18 November 2002: 6 M 3.0–5.6 mm, 7 F 3.3–4.2 mm (MNHN-IU-2013-15814).

Kiribati. Line Islands. Fint Island, 11.4311°S, 151.8248°W, 10 m, 18 October 2013: 3 M 1.8–3.0 mm, 1 F 2.0 mm (UF38754).—11.4311°S, 151.8248°W, 10 m, 19 October 2013: 1 M 3.2 mm (UF38473), 1 M 3.4 mm (UF39161). Millennium Island, 9.91°S, 150.21°W, 12 m, 5 November 2013: 1 M 3.2 mm (UF38705). Starbuck Island, 5.64°S, 155.88°W, 1 m, 26 October 2013: 1 M 3.6 mm, 1 F 2.5 mm (UF39147).—5.64°S, 155.88°W, 10–12 m, 29 October 2013: 1 F 3.6 mm (UF39148).

Etymology. This species is dedicated to Gustav Paulay of the Florida Museum of Natural History, Gainesville, for his valuable contributions to benthic research.

Description. *Carapace.* As long as broad; anterior cervical groove indistinct; ridges with dense short setae and a few scattered moderately long non plumose setae. Eight ridges on gastric region: 2 epigastric ridges, anterior one with 2 epigastric spines, medially convex, sometimes medially interrupted, posterior ridge short and scale-like; 2 protogastric ridges, anterior one uninterrupted, with 1 parahepatic spine at each side, posterior ridge usually uninterrupted; 2 mesogastric ridges, anterior ridge uninterrupted extending laterally to anteriormost of branchial marginal spines, posterior one short; 2 metogastric ridges, anterior ridge uninterrupted and sometimes fused with anterior branchial ridge, posterior ridge short. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 6 ridges, 3 or 4 uninterrupted ridges. Lateral margins medially convex, with 7 spines: 2 spines in front of, and 5 spines behind, indistinct anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, accompanying another spine ventral to between first and second, second spine small; 2 spines on anterior branchial region, last small, and 3 spines on posterior branchial margin, last small. External orbital limit ending in small spine; infra-orbital margin with strong spine. Rostrum broad triangular, 1.3–1.4 times as long as broad, length 0.5–0.6 that of, breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25–0.30 distance between proximalmost lateral incisions, dorsal surface nearly horizontal in lateral view, numerous setose small scales; lateral margin with 4 sharp teeth.

Pterygostomial flap rugose, with spine on anterior ridge, anterior margin ending in well-developed spine.

Sternum: Slightly broader than long, lateral limits divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somites 5 and 6 each with 2 medially interrupted ridges. Males with G1 and G2.

Eyes: Ocular peduncles 1.2 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger. Ultimate article with a few short setae not in tuft on distodorsal margin.

Antenna: Article 1 hardly visible from dorsal view, with depressed ventral distomesial process reaching distal margin of peduncle. Article 2 with distomesial spine smaller than distolateral, exceeding midlength of article 3. Articles 3 and 4 unarmed.

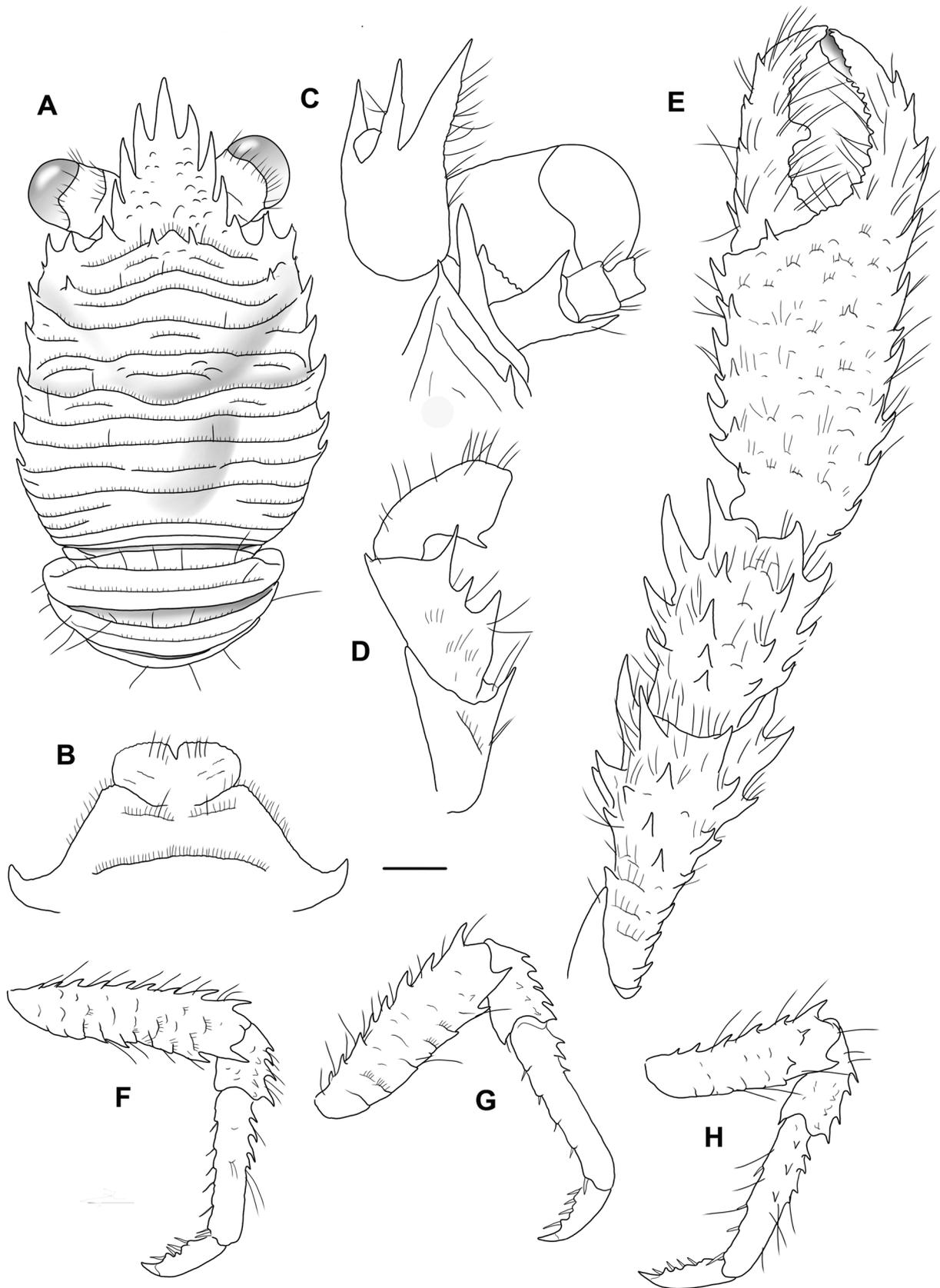


FIGURE 79. *Galathea paulayi* n. sp., holotype, male, 5.3 mm, French Polynesia (UF16039). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor margin unarmed; crista dentata with 26 or 27 denticles. Merus subequal in length to ischium, with 3 strong spines on flexor margin, proximal one located at midlength, distal one at terminal end, median spine smaller than others; extensor margin with distal spine. Carpus with distal spine on flexor margin.

P1: 1.8–3.0 times carapace length, with numerous short setae and some scattered long plumose setae on dorsal surface and along lateral and mesial margins of all articles. Merus 0.5–1.0 times carapace length, 1.3–1.9 times as long as carpus, with rows of spines, mesial and distal spines strong. Carpus 0.7–0.8 length of palm, 1.2–1.5, times longer than broad, lateral and mesial margins subparallel, dorsal surface with some spines in 2 longitudinal rows; mesial surface with row of well-developed spines; and row of small spines along lateral margin. Palm 1.3–1.5 times longer than broad, lateral and mesial margins subparallel; small spines roughly in rows on dorsal; lateral row continued on to lateral margin of fixed finger; mesial row continuing on the mesial margin of movable finger. Fingers 0.7–0.9 as long as palm, each finger distally with two rows of teeth, spooned.

P2–4: Relatively slender, somewhat compressed, moderately setose, sparsely with long setae on all articles. P2 1.7 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7–0.8 carapace length, 3.5–3.9 times as long as broad, 1.5–1.6 times longer than P2 propodus; P3 merus 3.0–3.5 times as long as broad, 1.3 times length of P3 propodus; P4 merus 3.0 times as long as broad, 1.1 length of P4 propodus. Extensor margins with row of 7 or 8 proximally diminishing spines on P2–3, 6 spines on P4; lateral surface unarmed on P2–3, 1 or 2 spines on P4; flexorlateral margins with strong terminal spine and 1 or 2 additional spines (not on P4) on terminal half; flexomesial margin with terminal spine on P2–3. Carpi with 4 or 5 spines on extensor margin; lateral surface with row of 2–4 small spines or acute granules paralleling extensor row; flexor distal margins with spine. Propodi slightly shorter on P2, each 4.5–5.5 times as long as broad; extensor margin with 3 or 4 proximal spines on P2–4; flexor margin with 5 or 6 slender movable spines on P2–3, 4 on P4; 3 proximal spines on lateral side of P4. Dactyli subequal in length, 0.5 length of propodi, ending in incurved, strong, sharp spine; flexor margin with prominent triangular terminal tooth preceded by obsolescent 4 or 5 teeth.

Epipods present on P1–3, sometimes only on P1–2.

Coloration. Ground color of carapace and abdomen orange. Carapace and abdomen with some bluish flecks and spots. Rostrum orange or reddish, spines with white spots and red tips. Base color of P1–4 reddish; P1 finger tips white; P2–4 meri each with one distal white spot.

Remarks. *Galathea paulayi* belongs to the group of species having an uninterrupted ridge between the anteriormost branchial marginal spines, the rostrum has four lateral teeth, the carapace lateral margin having one small spine between the anterolateral spine and the anteriormost branchial marginal spine, one pair of epigastric spines, and the antennal article 3 with a distinct distomesial spine. The new species is closely related to *G. guttata* Osawa, 2004 from the Ryukyu and Izu Islands, Japan.

The new species is easily distinguished from *G. guttata* by the following characters:

- The pterygostomian flap has one facial spine on the anterior part in *G. paulayi*, whereas such a spine is absent in *G. guttata*.
- The flexor margin of the Mxp3 merus has three spines in *G. paulayi*, whereas there are only two spines in *G. guttata*. Furthermore, there is one distal spine on the flexor margin of the Mxp3 carpus in the new species, which is absent in *G. guttata*.
- The epipod on P3 is present in the new species, whereas it is absent on P3 in *G. guttata*.

The genetic divergences between *G. paulayi* and other species are always higher than 9.6% (COI, the closest is *G. homologa* n. sp.) and 7.8% (16S rRNA, the closest is *G. anouchkae* n. sp.) (Tab. 1). No genetic data are available for *G. guttata*.

Distribution. French Polynesia (Austral, Society and Gambier Islands), Line Islands, 0–94 m, on hard bottoms, sand, rubble, and dead corals

***Galathea pauxilla* n. sp.**

(Fig. 80)

Material examined. *Holotype*: Vanuatu. SANTO, Stn AT86, 15°31.9'S, 167°16.2'E, 176–246 m, 12 October 2006: ov. F 4.3 mm (MNHN-IU-2013-13998).

Etymology. From the Latin *pauxillus*, dim, in reference to the small size of the species.

Description. *Carapace*: As slightly longer than broad; transverse ridges with numerous short fine setae, without long setae; cervical groove distinct, laterally bifurcated. Gastric region with 9 ridges; 1 epigastric scale-like ridge, with 5 small median spines; 3 protogastric ridges, anterior ridge uninterrupted, with 1 small parahepatic spine on each side, median ridge uninterrupted, posterior ridge scale-like; 2 mesogastric ridges, not continuing laterally with anterior branchial ridges; 3 metagastric ridges, medially uninterrupted and not continuing laterally with anterior branchial ridges. One small spine on each hepatic region. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 6 ridges, 4 uninterrupted. Lateral margins slightly convex medially, with 7 spines: first anterolateral, well-developed, second very small but distinct, located at midlength between first spine and anteriormost spine of branchial margin, with small spine ventral to between first and second; 2 spines on anterior branchial margin, and 3 spines on posterior branchial margin. Small outer orbital spine; infraorbital margin with 1 strong spine. Rostrum triangular, 1.8 times as long as broad, length 0.5 that of, breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions, dorsal surface nearly horizontal in lateral view, with some thick long plumose setae; lateral margin with 4 shallowly incised spines.

Pterygostomian flap rugose, with sparse short setae, anterior margin bluntly angular.

Sternum: About as long as broad, lateral limits divergent posteriorly.

Abdomen: Somites 2–3 each with 4 uninterrupted transverse ridges on tergite, anterior ridge more elevated than posterior ridge; somites 4–5 with 3 ridges; somite 6 each with 2 medially interrupted ridges, posteromedian margin of somite 6 straight.

Eyes: Ocular peduncles 1.4 times longer than broad, maximum corneal diameter 0.9 rostrum width.

Antennule: Article 1 with 2 well-developed spines, distodorsal larger; distomesial spine obsolescent; lateral margin with 2 small spines. Ultimate article elongate, more than 2.5 times longer than broad, with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with distomesial spine barely reaching distal margin of article 2. Article 2 with 2 subequal distal spines, reaching midlength of article 3. Article 3 with minute distomesial spine. Article 4 unarmed.

Mxp3: Basis with several denticles on mesial ridge, distalmost larger. Ischium with well-developed spine on flexor distal margin; crista dentata with 22–23 denticles. Merus as long as ischium; flexor margin with 3 spines, proximal stronger than others; extensor margin with small distal spine. Carpus unarmed.

P1: 3.3 times carapace length, with numerous finely setiferous scales, with scattered long thick setae. Merus 1.6 times length of carapace, 2.2 times as long as carpus, with spines arranged roughly in rows, dorsomesial and ventromesial spines stronger; distal spines prominent. Carpus 0.9 length of palm, 4 times as long as broad; dorsal surface with small spines arranged roughly in longitudinal rows; mesial spines slightly stronger than dorsal spines. Palm 4 times longer than broad, lateral and mesial margins with small spines arranged roughly in dorsolateral and dorsomesial rows, some minute spines scattered on dorsal side. Fingers as long as palm, each finger distally ending in two rows of teeth, incurved to cross each other when closed, mesial margin of movable finger and lateral margin of fixed finger unarmed.

P2–4: Moderately long and slender, with setose striae and long setae. P2 twice carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.7 length of P3 merus); P2 merus 0.8 carapace length, 9 times as long as broad, 1.5 times longer than P2 propodus; P3 merus 7 times longer than broad, 1.5 times longer than P3 propodus; P4 merus 6 times as long as broad, as long as P4 propodus. Extensor margins of P2–3 meri with row of 10 or 11 proximally diminishing spines, P4 merus with 4 spines and 1 small dorsal spine; flexor margins distally ending in strong spine followed proximally by 1 or 2 small spines and several tubercles or eminences. P2–4 carpi with 6 small spines on extensor margin; lateral surface with 5 or 6 small spines or acute granules sub-parallel to extensor margin on P2–4; flexor distal margin sometimes with small spine. P2, P3 and P4 propodi 5.5, 6.0 and 5.5 times as long as broad, respectively; extensor margin with 1–3 small proximal spines; flexor margin with 5–7 slender movable spines on P2–4. Dactyli subequal in length, distally ending in well-curved strong spine, length 0.6 that of propodi; flexor margin with 7 or 8 proximally diminishing teeth, terminal one prominent.

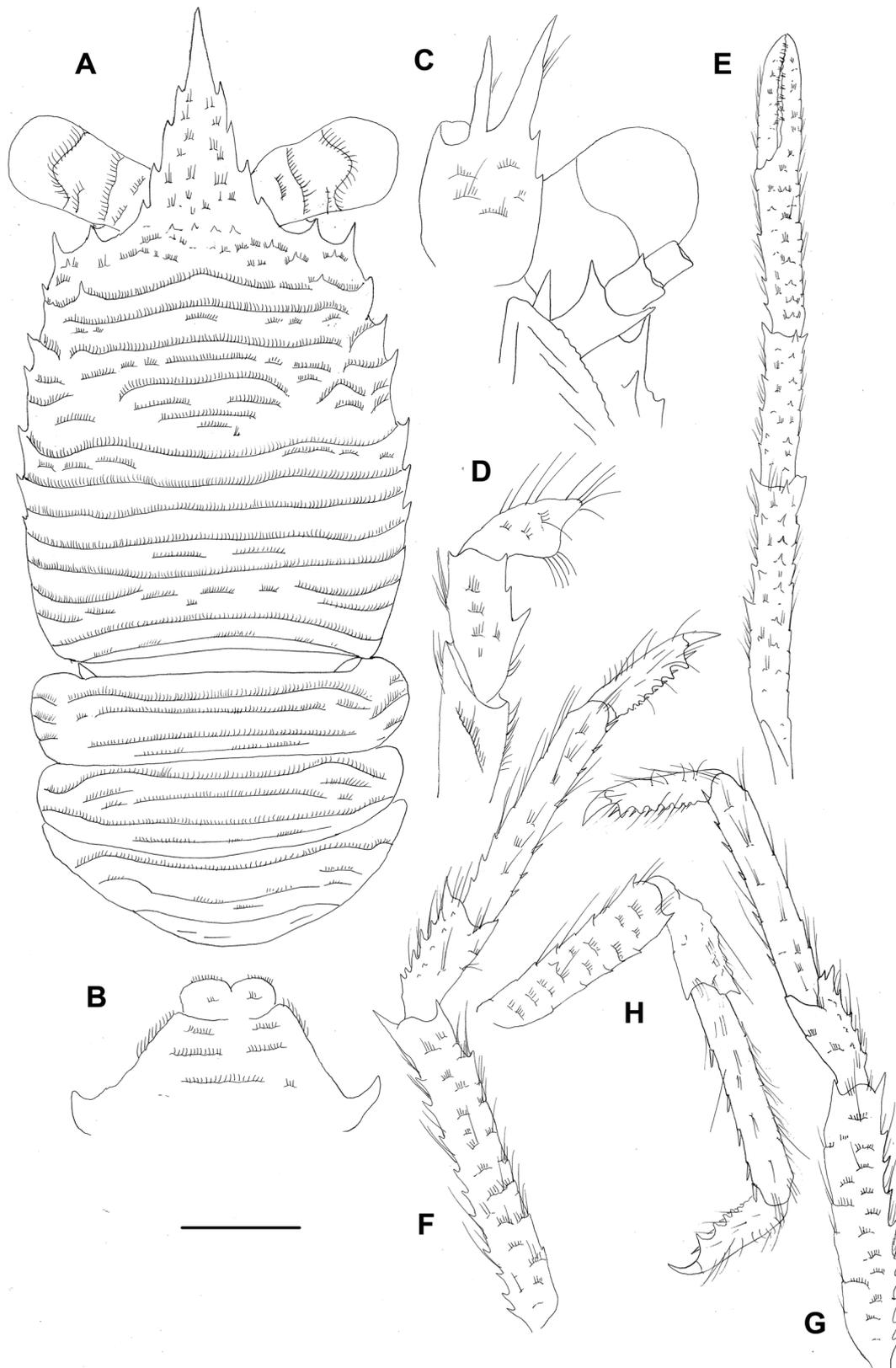


FIGURE 80. *Galathea pauxilla* n. sp., holotype, ovigerous female, 4.3 mm, Vanuatu (MNHN-IU-2013-13998). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, left P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

Epipods present on P1.

Remarks. The new species resembles *G. albatrossae* Baba, 1988 from Taiwan, Philippines to New Caledonia. The two species can be distinguished by the anterior metagastric ridge. This ridge is uninterrupted and continuing laterally with the anterior branchial ridges in *G. albatrossae*, whereas this ridge is not continuing laterally in *G. pauxilla*.

No genetic data are available for *G. pauxilla*.

Distribution. Vanuatu, 176–246 m.

***Galathea peitho* n. sp.**

(Figs 81, 118I)

Material examined. *Holotype:* Australia. Queensland, Lizard Island, off North Point, 30 m, 25 February 2009: ov. F 4.4 mm (QM W29209).

Paratypes: Japan. Ryukyu Islands. Iriomote Island, Nakano Beach, 24.4323°N, 123.7916°E, 19 m, 9 July 2010: 1 M 2.2 mm, 1 ov. F 2.5 mm, 2 juv. 1.2–1.3 mm (UF26912).—Okinawa Island, Uruma, Tengan Pier, 26.4063°N, 127.8501°E, 0–12 m, 19 July 2010: 1 ov. F 4.0 mm (UF29328).

Mariana Islands. Guam Island, Apra Harbor, 13.435°N, 144.663°E, no depth, 22 June 2010: 1 M 2.0 mm (UF26724).

Papua New Guinea. PAPUA NIUGINI, Stn PR22, 05°17.8'S, 145°46.9'E, 3–10 m, 12 November 2012: 2 M 2.6–2.7 mm (MNHN-IU-2013-13507).—Stn PD32, 05°04.4'S, 145°48.7'E, 1–8 m, 17 November 2012: 1 F 3.0 mm (MNHN-IU-2013-721).—Stn PB03, 05°11.5'S, 145°49.1'E, 15 m, 30 December 2012: 3 M 2.0–3.7 mm, 3 ov. F 2.1–2.8 mm (MNHN-IU-2013-142).—Stn PB06, 05°09.9'S, 145°50.4'E, 20 m, 30 December 2012: 1 M 2.6 mm, 2 ov. F 2.5–3.3 mm (MNHN-IU-2013-13504).—Stn PB08, 05°11'S, 145°48.4'E, 4–5 m, 30 December 2012: 2 ov. F 2.2–3.0 mm (MNHN-IU-2013-13509).—Stn PB11, 05°12.5'S, 145°49.1'E, 13 m, 30 December 2012: 2 ov. F 3.0–3.2 mm (MNHN-IU-2013-13505).—Stn PB12, 05°11.8'S, 145°48.8'E, 7–15 m, 30 December 2012: 1 M 4.0 mm (MNHN-IU-2013-372); 3 ov. F 3.0–3.5 mm (MNHN-IU-2013-13512).—Stn PB15, 05°04.7'S, 145°48.9'E, 5 m, 30 December 2012: 1 M 2.7 mm (MNHN-IU-2013-709); 3 M 2.1–3.3 mm, 3 ov. F 2.7–3.3 mm (MNHN-IU-2013-13506).—Stn PB26, 04°59.1'S, 145°47.7'E, 22 m, 30 December 2012: 1 M 3.2 mm, 1 F 2.5 mm (MNHN-IU-2013-13508).—Stn PB31, 05°09.4'S, 145°50'E, 31 m, 30 December 2012: 3 M 2.0–3.3 mm, 1 ov. F 2.3 mm (MNHN-IU-2013-13510).—Stn PS31, 05°08.167'S, 145°49.417'E, 10–37 m, 30 December 2012: 1 M 1.8 mm (MNHN-IU-2013-13511).

Australia. Western Australia, Dirk Herlog Island, 30–40 m, 1 March 1999: 2 M 3.8–4.1 mm (UF5155).

Australia. Queensland, Stn AIMS17, 18°17'S, 146°38'E, no date: 1 M 3.1 mm, 3 ov. F 2.8–3.6 mm (AM-J13333). Queensland, Lizard Island, 14.6966°S, 145.4642°E, 4–8 m, 8 February 2009: 1 M 3.8 mm (UF16671).—14.3902°S, 145.2737°E, 10–12 m, 9–13 February 2009: 1 M 2.8 mm (UF16677); 1 M 4.4 mm (UF16678); 1 M 4.6 mm (UF16681); 2 M 3.3–4.2 mm, 4 ov. F 3.6–4.5 mm, 1 F 2.7 mm (UF16685); 4 M 1.8–3.4 mm (UF16693); 3 M 3.2–4.9 mm, 5 ov. F 3.5–4.4 mm (UF16719); 8 M 3.0–4.6 mm, 6 ov. F 2.7–4.5 mm (UF16728); 6 M 2.6–4.3 mm, 5 ov. F 3.3–4.2 mm (UF16776); 5 M 3.0–5.4 mm, 3 ov. F 4.2–4.5 mm (UF16777); 9 M 2.0–3.4 mm, 3 ov. F 3.0–4.8 mm (UF16835); 6 M 2.4–4.3 mm, 3 ov. F 4.2–4.4 mm, 1 F 1.6 mm (UF16866); 4 M 1.6–4.2 mm, 7 ov. F 3.3–4.7 mm, 3 F 2.0–2.3 mm (UF16911); 7 M 2.2–4.3 mm, 10 ov. F 3.1–4.5 mm, 1 F 3.2 mm (UF16914); 1 M 4.2 mm (UF16796); 1 M 4.0 mm (UF16682); 1 M 4.8 mm (UF16679). Day Reef, 22 February 2009: 1 F 1.7 mm (UF17372).—off North Point, 30 m, 25 February 2009: 6 M 2.8–4.6 mm, 7 ov. F 2.8–4.4 mm, 2 F 2.6–2.8 mm (UF17565); 1 M 4.2 mm (UF17586).—14.6515°S, 145.4607°E, no depth, 17 February 2009: 1 M 3.6 mm (UF18208); 3 M 2.0–2.5 mm, 1 F 1.8 mm (UF18213); 1 F 1.8 mm (UF18212); 3 M 2.0–2.1 mm (UF18207).—14.6504°S, 145.4621°E, no depth, 18 February 2009: 4 M 2.0–3.7 mm, 1 M 2.1 mm (UF18238); 3 M 1.6–2.2 mm, 1 F 1.4 mm (UF18230); 4 M 2.0–3.7 mm, 1 M 2.1 mm (UF18238).—14.6564°S, 145.4956°E, no depth, 19 February 2009: 1 M 2.1 mm (UF18251).—14.6504°S, 145.4621°E, no depth, 20–21 February 2009: 5 M 1.4–2.2 mm (UF18262); 2 M 1.3–2.0 mm, 1 F 1.8 mm (UF18276); 4 M 1.7–3.6 mm, 3 F 1.7–1.8 mm (UF18305); 5 M 1.4–2.2 mm (UF18262); 2 M 1.3–2.0 mm, 1 F 1.8 mm (UF18276); 1 M 3.0 mm (UF18265).—25–30 m, 22 February 2009: 1 F 1.7 mm (UF17372). Queensland, Bird Island, 14.6926°S, 145.4684°E, no depth, 22–23 February 2009: 4 M 1.5–4.2 mm, 1 ov. F 3.6 mm, 2 F 1.7–1.8 mm (UF18336); 1 M 4.2 mm, 3 ov. F 3.0–3.8 mm

(UF18351); 1 ov. F 3.2 mm (UF18360); 4 M 1.5–4.2 mm, 1 ov. F 3.6 mm, 2 F 1.7–1.8 mm (UF18336). Heron Island, 23.4733°S, 151.9505°E, 17 November 2006: 1 ov. F 3.5 mm (UF25217); 1 F 2.0 mm (UF25214).

Etymology. *Peitho*, persuasion, is one of the children of the Ocean in Greek mythology. The name is considered as a substantive in apposition.

Description. *Carapace*: as long as broad; ridges with dense short and moderately long non-plumose setae; cervical groove distinct, laterally bifurcated; ridges on gastric and anterior branchial regions scale-like or in concentric arcs; epigastric region with 2–4 median spines; 2 small spines on median protogastric scale-ridge; 1 parahepatic and 1 anterior branchial spine on each side. Mid-transverse ridge laterally interrupted, preceded by shallow cervical groove, followed by 5 ridges, with 2 laterally interrupted transverse ridges; scale-like ridges between mid-transverse and first transverse ridge, and between first and second transverse ridges. Lateral margins slightly convex medially, with 8 spines: 2 spines in front of and 6 spines behind anterior cervical groove; first anterolateral, second spine very small, additional spine ventral to between first and anterior branch of cervical groove; 3 spines on anterior branchial margin, and 3 spines on posterior branchial margin, last smaller than others. External orbital limit ending in small spine; infraorbital margin with 1 strong spine, sometimes 1 or 2 additional minute spines; 1 small frontal spine between lateral orbital spine and first anterolateral spine, absent in some specimens. Rostrum moderately elongate, triangular, 1.3–1.4 times as long as broad, 0.6 carapace length and breadth 0.4 that of carapace, nearly horizontal in lateral view; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface with small setiferous ridges; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, with sparse short setae, anterior margin sharply angular.

Sternum: Plastron slightly broader than long, lateral extremities gently divergent posteriorly.

Abdomen: Somite 2 with 2 transverse ridges on tergite, anterior ridge more distinctly elevated than posterior ridge; somites 3–4 smooth, with anterior ridge only; somites 5–6 smooth, posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 well-developed spines, distodorsal larger; distomesial spine somewhat smaller and more slender than distolateral. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine exceeding distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine slightly longer than distomesial and exceeding midlength of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with extensor and flexor margins without distinct distal spine; crista dentata with 22–24 denticles. Merus shorter than ischium; flexor margin with 2 strong spines of subequal size, proximal one located at midlength, distal one at terminal end; extensor margin ending in small spine or acute angle. Carpus unarmed.

P1: 3.0–3.2 times carapace length, with numerous short uniramous setae and some long plumose and non-plumose setae; setae non iridescent. Merus 1.2 times length of carapace, 1.5–1.6 times as long as carpus, with spines arranged roughly in rows, mesial and distal spines prominent. Carpus as long as palm, 2.0–2.1 times as long as broad; dorsal surface with spines arranged roughly in longitudinal rows; mesial margin with 3 or 4 strong spines, distal second largest. Palm 1.6–1.8 times longer than broad, lateral and mesial margins subparallel; spines arranged roughly in rows, dorsolateral row of spines continued on to whole lateral margin of fixed finger. Fingers 0.9 length of palm, each finger with two rows of teeth distally spooned; movable finger with spines along mesial margin.

P2–4: Moderately slender, with sparse long plumose and non-plumose setae; setae non iridescent. P2 2.0–2.1 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.8 carapace length, 3.2 times as long as broad, 1.3 times longer than P2 propodus; P3 merus 3.0 times longer than broad, 1.2–1.3 times longer than P3 propodus; P4 merus 2.9 times as long as broad, 1.0–1.2 length of P4 propodus. Extensor margins with row of 8–10 proximally diminishing spines on P2–3, 2–4 on P4; lateral surface with 1 or 2 small spines on P4; distoflexor margin ending in 1 spine, followed proximally by small spines and several tubercles or eminences. Carpi with 3–5 spines on extensor margin on P2–3, unarmed or ending in 1 spine on P4; lateral surface with 4 or 5 spines or acute granules sub-parallel to extensor margin on P2–4; flexor distal margin with small distal spine. Propodi 4.3–4.5 times as long as broad; extensor margin with 2–4 spines on proximal half on P2 and P3, 1 or 2 proximal spines on P4; flexor margin with 3–5 slender movable spines. Dactyli distally ending in well-curved strong spine, 0.5–0.6 length of propodi; flexor margin with 4 or 5 proximally diminishing teeth.

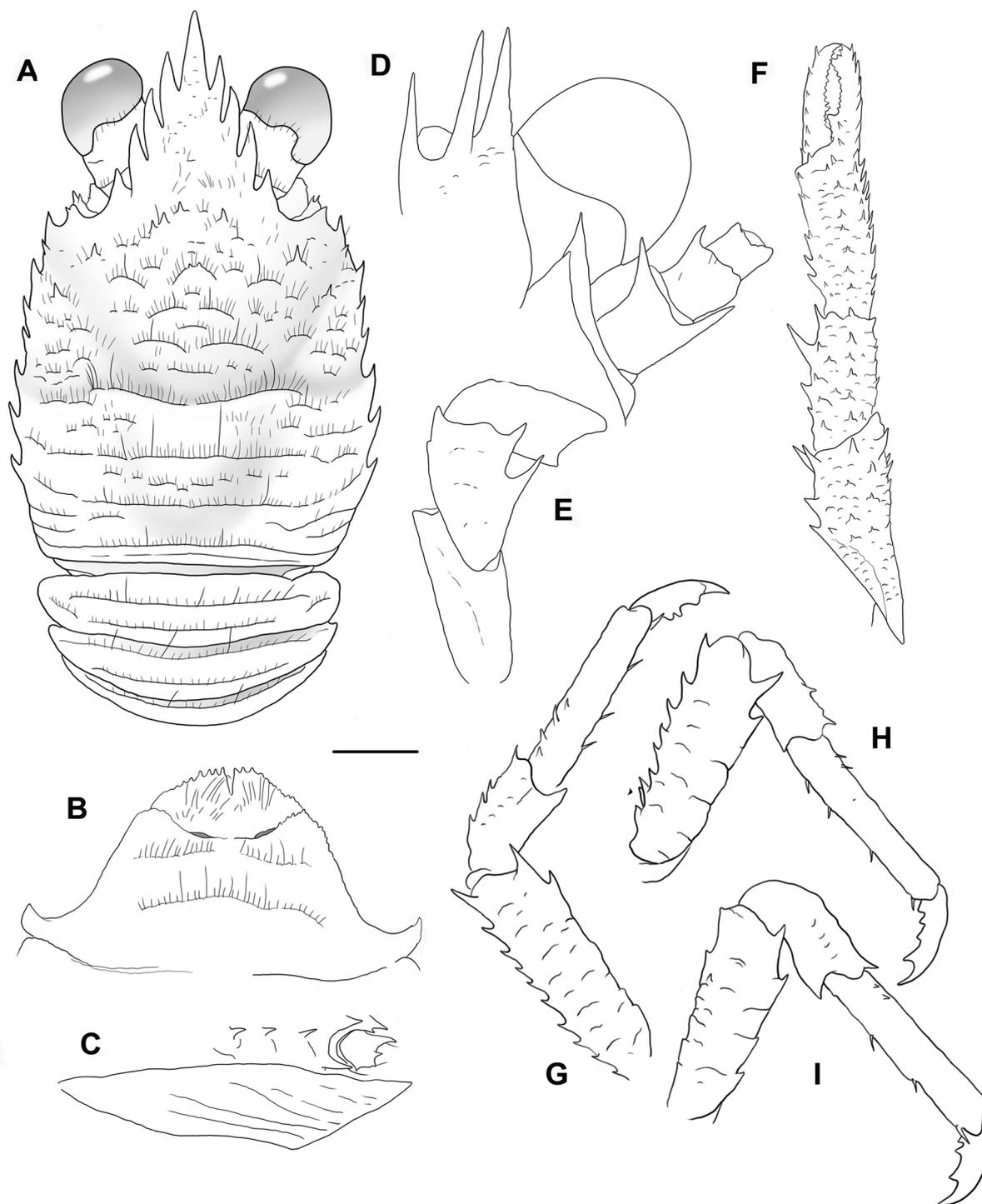


FIGURE 81. *Galathea peitho* n. sp., holotype, ovigerous female, 4.4 mm, Australia, Queensland (QM W29209). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, right pterygostomial region, lateral view; D, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; E, ischium, merus and carpus of right Mxp3, lateral view; F, right P1, dorsal view; G, right P2, lateral view; H, right P3, lateral view; I, right P4, lateral view (setae on appendages not figured). Scale: A, C, G, H, I = 1 mm; F = 2 mm; B, D, E = 0.5 mm.

Epipods present on P1–3.

Coloration. Translucent brownish or greenish overall. Rostrum reddish or greenish. Tips of rostral and carapace spines red; Carapace ridges reddish. Abdominal somites 2–4 with longitudinal one whitish stripe on each side. P1 with distal part of merus, carpus and palm with white spots; proximal part of cutting edges of P1 fingers white. P2–4 with diffuse reddish bands. P1–4 spines red.

Remarks. *Galathea peitho* **n. sp.** belongs to the group of species characterized by the possession of scale-like ridges on the gastric region of the carapace, epipods on P1–3, the presence of at least one dorsal spine on the anterior branchial region, and the absence of postcervical spines. It is most closely related to *G. aculeata* Haswell, 1882 from Queensland. The two species can be differentiated by the following characters:

- The carapace is clearly longer than broad in *G. aculeata*, rather than as long as broad in *G. peitho*.
- The transverse ridges of the posterior half of the carapace are laterally interrupted in *G. peitho*, whereas these ridges are uninterrupted in *G. aculeata*.
- The rostrum is more than 1.5 times longer than broad in *G. aculeata*, whereas it is less than 1.5 times longer than broad in *G. peitho*.
- The P2–4 propodi are more than 4 times as long as broad in *G. peitho*, while 4 times as long in *G. aculeata*.

The two species are also close to *G. polydora* **n. sp.** from Indonesia, Vanuatu, New Caledonia, Chesterfield Islands, and Fiji (see the Remarks of *G. polydora*).

Galathea peitho is also genetically close to *G. leporis* **n. sp.** from Indonesia, Papua New Guinea, Vanuatu, and New Caledonia, 7.2 % (COI) and 12.1% (16S rRNA) (Tab. 3). However, the two species are easily distinguished by the presence of one spine between the anterolateral spine and the the anteriormost branchial marginal spine in *G. leporis*, that is absent in *G. peitho*. Furthermore, the epipods are present on P1–3 in *G. peitho*, instead of only on P1 in *G. leporis*.

Distribution. Japan. Okinawa, Mariana Islands, Papua New Guinea, Australia (Western Australia, Queensland); 0–37 m.

***Galathea perone* n. sp.** (Fig. 82)

Galathea inconspicua.—Dong & Li, 2010: 12, fig. 7 (South China Sea, 158–220 m).

?*Galathea inconspicua*.—Poore *et al.*, 2011: 332, pl. 10I (color photo, Philippines).

Material examined. *Holotype*: Philippines. MUSORSTOM 1, Stn CP25, 14°03'N, 120°20'E, 191–200 m, 22 March 1976: F 4.0 mm (MNHN-IU-2013-8500).

Paratypes: Philippines. MUSORSTOM 2, Stn CP35, 13°28'N, 121°12'E, 160–198 m, 24 November 1980: 1 M 3.1 mm (MNHN-IU-2013-8501).

Etymology. From the Greek *perone*, pin, in reference to the acute rostrum.

Description. *Carapace*: 1.2 times longer than broad; transverse ridges with dense short setae, without long setae; cervical groove distinct, laterally bifurcated. Gastric region with some transverse ridges: 1 epigastric ridge, scale-like, with 6 small spines; 2 protogastric ridges, anterior ridge uninterrupted, medially convex, with 1 parahepatic spine on each side, posterior interrupted; 2 mesogastric ridges, anterior ridge uninterrupted and not extending laterally to anteriormost of branchial marginal spines, posterior ridge interrupted; 2 metogastric ridges, anterior ridge uninterrupted, not continuing laterally to anteriorbranchial ridge, posterior ridge short. Hepatic region unarmed. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 6 transverse ridges (counting along lateral margin; exclusive of mid-transverse ridge directly behind cervical groove and posteriormost ridge anterior to posterior margin of carapace), 2 ridges uninterrupted. Lateral margins subparallel, with 8 spines: 2 spines in front of and 5 or 6 spines behind anterior cervical groove; first anterolateral, well-developed, slightly behind level of lateral limit of orbit, 1 small spine at midlength between anterolateral spine and anteriormost spine of branchial margin, with small spine ventral to between first and second; 3 spines on anterior branchial region, and 3 spines on posterior branchial margin. Small spine on lateral limit of orbit, 1 or 2 small frontal spines between orbit and anterolateral spine; infraorbital margin with some small spines. Rostrum narrow, 2.5 times as long as broad, length 0.7 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.20 distance between proximalmost lateral incisions; dorsal surface horizontal, with numerous small scale-like setose ridges; lateral margin with 4 deeply incised teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute; upper margin, near linea anomurica, with numerous small teeth.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted and 2 interrupted ridges; somite 5 with 2 uninterrupted ridges; somite 6 with 2 medially interrupted ridges.

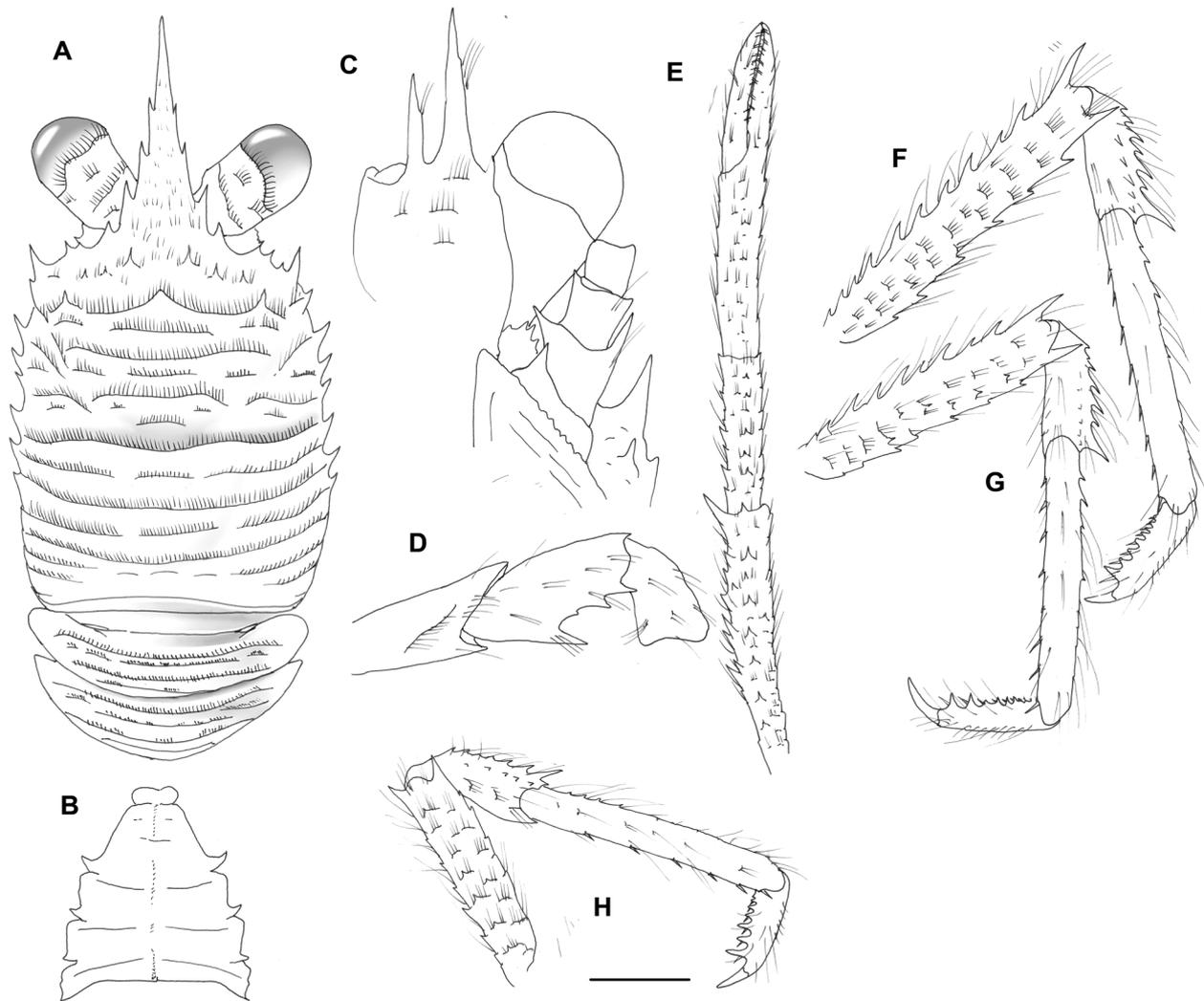


FIGURE 82. *Galathea perone* n. sp., holotype, female, 4.0 mm, Philippines (MNHN-IU-2013-8500). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 2 well-developed distal spines, distodorsal larger, distomesial obsolescent; 1 small spine along lateral margin. Ultimate article with tuft of long fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine not reaching end of article 2. Article 2 with 2 distal spines, distolateral spine longer than distomesial, and barely reaching end of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor margins ending in small spine, extensor margin ending in acute angle; crista dentata with 20 or 21 denticles. Merus as long as ischium; flexor margin with 3 spines, proximal spine clearly longer than others, median spine smaller than distal; extensor margin ending in small spine. Carpus unarmed.

P1: 3.8 times carapace length, with numerous setiferous small scales, and some scattered long setae. Merus 1.6 times carapace length, 1.8 times as long as carpus, with numerous spines, dorsomesial and distal spines stronger than others. Carpus 0.9 length of palm, 4.3 times as long as broad; dorsal surface with some small spines; mesial margin with row of spines. Palm 3.9 times longer than broad, lateral and mesial margins subparallel; small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers unarmed, 0.9 times palm length, each finger distally with two rows of teeth, spooned.

P2–4: long and slender, with some setose striae and sparse long setae. P2 2.5 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus as long as carapace, 7.3 times as long as broad, 1.2 times longer than P2 propodus. P3 merus 5.3 times as long as broad, 1.1 times longer than P3 propodus. P4 merus 4.2 times as long as broad, 0.9 times longer than P4 propodus. Extensor margin with row of 10 or 11 proximally diminishing spines on P2–3, 6 spines on P4; ventral margins distally ending in strong spine, lateral sides with row of small spines on P2–4. Carpi with 6 or 7 spines on extensor margin on P2–4; lateral surface with 5 or 6 small spines sub-parallel to extensor margin; flexor distal margin acute. Propodi 7.0–7.4 times as long as broad; extensor margin with 4 or 5 small proximal spines; flexor margin with 7 or 8 slender movable spines, distal two spines with another smaller spine mesial to them. Dactyli distally ending in well-curved strong spine, length 0.5 that of propodi; flexor margin with 7 or 8 proximally diminishing teeth, distal one clearly larger than penultimate.

Epipods present only on P1.

Remarks. The new species is closely related to *G. raphidia* n. sp. and *G. inconspicua* Henderson, 1885 (for differentiation, see Remarks of *G. inconspicua*).

Distribution. Philippines, South China Sea; 158–200 m.

***Galathea phalangis* n. sp.**

(Fig. 83)

Material examined. *Holotype*: Madagascar. Tulear, Stn D37, 23°29'42"S, 43°39'30"E, 50 m, 12 September 1963: ov. F 3.6 mm (MNHN-Ga788, MNHN-IU-2013-9693).

Paratypes: Madagascar. Tulear, Stn D18, 23°30'57"S, 43°42'18"E, 170 m, 31 August 1963: 1 ov. F 3.1 mm (MNHN-Ga787, MNHN-IU-2013-9692). MIRIKY, Stn CP3260, 15°35'S, 45°45'E, 179–193 m, 10 July 2009: 1 M 2.5 mm (MNHN-IU-2013-14304).—Stn CP3282, 14°52'S, 46°58'E, 215–261 m, 13 July 2009: 1 M 3.8 mm (MNHN-IU-2013-14305).

Etymology. From the Latin *phalanx*, line, battle-array, in reference to the numerous ridges on the carapace.

Description. *Carapace*: As long as broad; cervical groove distinct, laterally bifurcated. Ridges with dense short setae, with some long thick iridescent setae. Gastric region with 9 transverse ridges: 2 epigastric ridges medially interrupted, anterior with 2 submedian spines; 2 uninterrupted protogastric ridges, without parahepatic spines; 2 uninterrupted mesogastric ridges, anterior ridge, laterally not continuous to anteriormost branchial marginal spine; 2 metogastric ridges successively shorter posteriorly, uninterrupted and not continuing with anterior branchial ridges. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by cervical groove. Posterior branchial region with 6 transverse ridges, 2 or 3 ridges uninterrupted; some additional scattered scales among ridges. Lateral margins subparallel, with 8–10 spines: 2–4 spines in front of and 6 spines behind anterior cervical groove; first anterolateral, well-developed, situated in frontal margin, second very small, 0–2 minute spines between them and accompanying another small spine ventral to between first and second; 3 spines on anterior branchial margin, and 3 spines on posterior branchial margin. External orbital limit ending in minute spine; infraorbital margin with strong spine. Rostrum spatulate, 2.0 times as long as broad, length 0.7 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with small setiferous ridges; lateral margin convex, with 4 relatively small, shallowly incised teeth.

Pterygostomian flap spineless on surface, with sparse short setae, anterior margin bluntly angular.

Sternun: Plastron about as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 5 uninterrupted transverse ridges on tergite, anterior ridge more distinctly elevated than posterior ridge; some thick long iridescent setae on median portion of somites; somites 5 and 6 with 2 ridges, posterior margin of somite 6 slightly convex. Males with G1 and G2.

Eyes: Ocular peduncles as long as broad, maximum corneal diameter 0.6 rostrum width.

Antennula: Article 1 with 2 spines; well-developed distodorsal and distolateral spines; distomesial spine obsolescent. Ultimate article with tuft of fine setae on distodorsal margin.

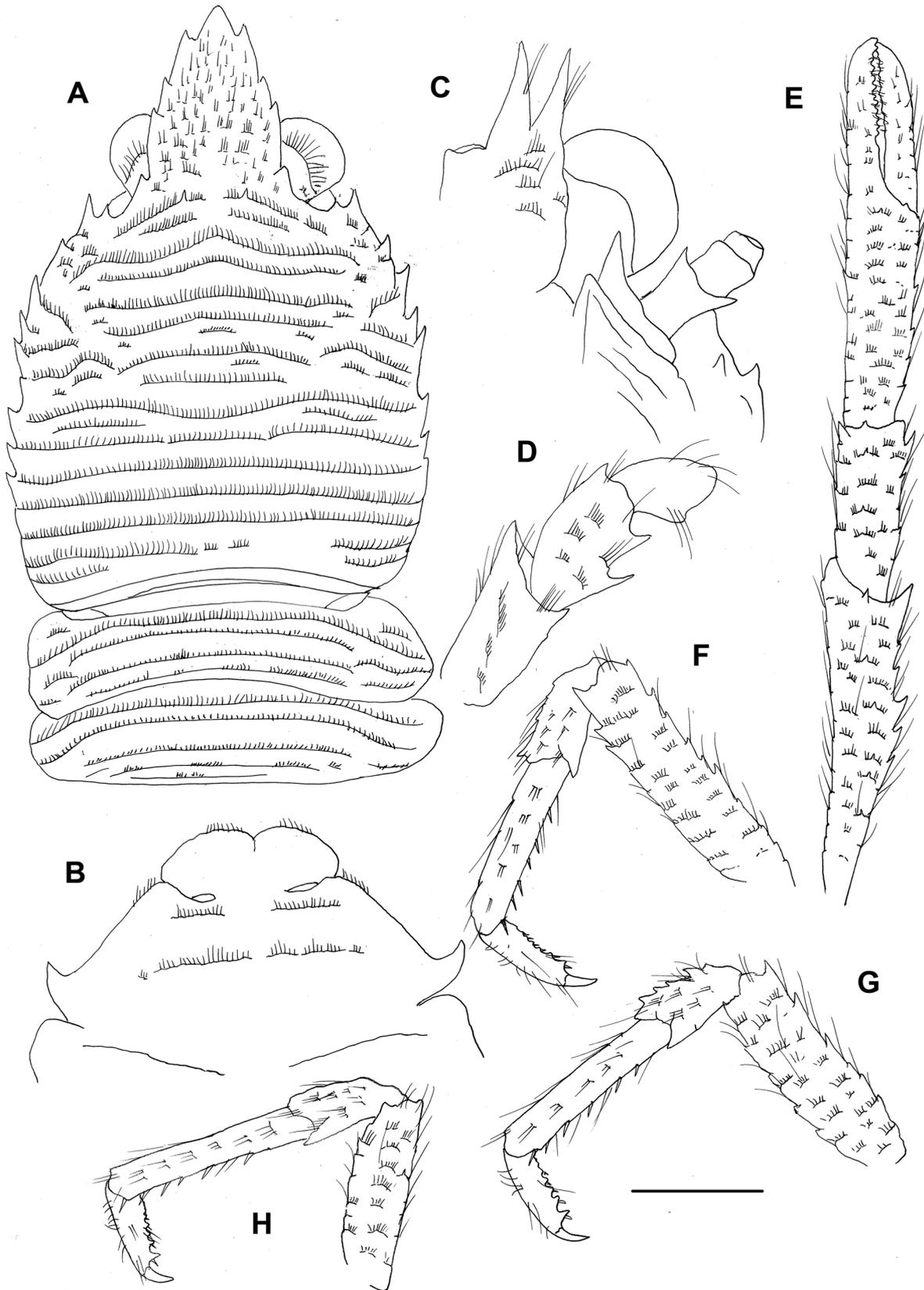


FIGURE 83. *Galathea phalangis* n. sp., holotype, ovigerous female, 3.6 mm, Madagascar (MNHN-Ga788, MNHN-IU-2013-9693). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, left P2, lateral view; G, left P3, lateral view; H, left P4, lateral view. Scale: A, F–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

Antenna: Article 1 hardly visible in dorsal view, with ventral distomesial spine exceeding distal half of article 2. Article 2 with 2 subequal distal spines, not reaching midlength of article 3. Articles 3–4 unarmed.

Mxp3: Ischium with small spine on flexor distal margin; extensor margin with small but distinct distal spine; crista dentata with 18 denticles. Merus as long as ischium; flexor margin with 2 strong subequal spines; extensor margin with distal spine. Carpus unarmed.

P1: 2.5 times carapace length, subcylindrical, with setose scales and numerous long simple setae. Merus as long as carapace, 1.8 times as long as carpus, with small spines arranged roughly in rows, dorsomesial and ventromesial spines stronger, distal spines prominent. Carpus 0.9 length of palm, 2.6 times as long as broad; dorsal surface with some small spines arranged roughly in rows; mesial margin with 1 or 2 well-developed spines. Palm 3.0 times longer than broad, lateral and mesial margins subparallel; small spines arranged roughly in dorsolateral and dorsomesial rows. Fingers as long as palm, each finger distally with two rows of teeth, spooned; fingers unarmed.

P2–4: moderately slender, with setose striae, and numerous long simple setae. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.8 length of P3 merus; P2 merus 0.8 carapace length, 4.5 times as long as broad, 1.7 times longer than P2 propodus; P3 merus 3.5 times longer than broad, 1.3 times longer than P3 propodus; P4 merus 3.5 times as long as broad, 1.1 length of P4 propodus. Extensor margins with row of 10–12 proximally diminishing small spines on P2–3, 1 or 2 spines on P4; lateral surface with 1 or 2 small spines on P4; flexolateral margin distally ending in 1 spine followed proximally by several prominences. Carpi with 4 or 5 small spines on extensor margin on P2–3, unarmed on P4; lateral surface with granules sub-parallel to extensor margin on P2–4; flexor distal margin with small distal spine. Propodi 4.5 times as long as broad; extensor margin unarmed; flexor margin with 5 or 6 slender movable spines on P2–4, terminal one paired with another seta mesial to it. Dactyli distally ending in well-curved strong spine, 0.6–0.7 length of propodi; flexor margin with 5 or 6 successively diminishing teeth, terminal one prominent; each tooth with articulating seta.

Epipod present only on P1.

Remarks. *Galathea phalangis* n. sp. resembles *G. punctata* n. sp. from the Philippines to New Caledonia (see Remarks for *G. punctata*).

Distribution. Madagascar, 50–261 m.

***Galathea pilosa* De Man, 1888**

(Figs 84, 119A, B)

Galathea pilosa De Man, 1888: 460, pl. 19, figs 4, 4a (Ambon).—Miyake & Baba, 1966a: 72, figs 11, 12 (Amami-oshima Island, intertidal).—Baba, 1977a: 245 (Obi Major).—Kamezaki *et al.*, 1988: 98, with color fig. (Okinawa Island).—Baba *et al.*, 2008: 75 (compilation).—Dong & Li, 2010: 16, fig. 9 (South China Sea, 1–3 m).

?*Galathea pilosa*.—Edmondson, 1951: 196, fig. 7 (Christmas Island).

Not *Galathea pilosa*.—Poore *et al.*, 2011: 333, pl. 11E (color photo, Moorea) (= *G. polyphemus* n. sp.).

Material examined. *Holotype*: Indonesia. Moluccas. Ambon, July–September 1888: M 3.7 mm (SMF214).

Maldives Islands. Magoodhoo Island, 3.077°N, 72.969°E, 12 m, 14 May 2014: 1 M 3.6 mm, 1 ov. F 4.5 mm (UF39675).

Mariana Islands. Guam Island. Apra harbour, near Dog Leg reef, 6 m, 1 April 1998: 1 ov. F 4.2 mm (UF315).—UGML-498: 1 M 2.4 mm (UF549).

Papua New Guinea. PAPUA NIUGINI, Stn PB49, 05°06.4'S, 145°49.4'E, 6 m, 30 December 2012: 1 ov. F 4.5 mm (MNHN-IU-2013-1055).

Line Islands. Tabuaeran Atoll, W side of atoll, 10–15 m, 3.8418°N, 159.3608°W, 12 August 2005: 1 F broken (UF10847).—Palmyra Atoll, 0–15.7 m, 5.896°N, 162.1195°E, 21 August 2005: 1 F 5.2 mm (UF13796).—Starbuck Island, 5.64°S, 155.88°W, 1 m, 26 October 2013: 1 M 3.0 mm (UF39147).—5.64°S, 155.88°W, 16 m, 26 October 2013: 2 M 2.8–3.3 mm, 6 F 3.0–3.7 mm (UF39399).—Fint Island, 11.4311°S, 151.8248°W, 10 m, 19 October 2013: 1 M 3.0 mm (UF39190).

French Polynesia. Society Islands. Moorea Island, 12 October 2008: 1 M 4.4 mm (UF15424).

New Caledonia. Lifou Island. LIFOU, Stn 1420, 20°47.7'S, 167°09.35'E, 4–5 m, 18–19 November 2000: 2 F 3.7–4.2 mm (MNHN-IU-2013-8410).—Stn 1451, 20°47.3'S, 167°06.8'E, 10–21 m, 19 November 2000: 1 M 3.5 mm (MNHN-IU-2013-8411).

New Caledonia. Lagon East. Stn 625, 21°59.2'S, 166°53.6'E, 34–40 m, August 1986: 1 M 5.6 mm (MNHN-IU-2013-8409).

Description. *Carapace:* Slightly broader than long; dorsal surface nearly horizontal from anterior to posterior; transverse ridges with dense short setae, and numerous long plumose setae, some iridescent, and denser on rostrum surface; cervical groove distinct, laterally bifurcated. Gastric region with some transverse ridges: 1 epigastric ridge medially interrupted, with 4 or 5 spines; 2 protogastric ridges, anterior ridge usually uninterrupted, medially convex, with minute parahepatic spine on each side, sometimes absent, posterior ridge short, scale-like; 1 mesogastric ridge uninterrupted but not extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, anterior ridge usually uninterrupted, not continuing laterally to anteriorbranchial ridges, posterior ridge moderately short. Hepatic region unarmed. Anterior branchial region with distinct ridges, 1 spine on each side. One post-cervical spine, usually on each side. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, usually followed by 5 ridges before posterior ridge, 2 ridges uninterrupted. Lateral margins well convex medially, with 6 or 7 spines: 2 spines in front of, and 4 or 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second, small, without spine ventral to between first and second; 2 or 3 spines on anterior branchial region, and 1 or 2 spines on posterior branchial margin, last small and obsolescent in some specimens. Lateral limit of orbit unarmed; infraorbital margin with small spine. Rostrum truncate, as long as broad, length 0.6 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.20 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous small scale-like setose ridges; lateral margin with 4 deeply incised teeth, distal pair small.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin ending in spine.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 or 3 uninterrupted and 0–1 interrupted transverse ridges on tergite; somite 5 with 4 uninterrupted ridges; somite 6 with 2 uninterrupted ridges. Telson completely subdivided. Males with G1 and G2.

Eyes: Ocular peduncles 1.1 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 4 well-developed distal spines, distodorsal larger, distomesial spine slightly smaller than others. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine slightly longer than distomesial, and reaching midlength of article 3. Article 3 unarmed or with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with flexor margin ending in small spine, extensor margin ending in acute point; crista dentata with 24 or 25 denticles. Merus shorter than ischium; flexor margin with 3 subequal spines; extensor margin with distal spine. Carpus unarmed.

P1: twice carapace length, with numerous scales with numerous long setae, some of them iridescent. Merus 0.7 times carapace length, 2.2 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.8 length of palm, 0.8 times as long as broad; dorsal surface with some spines; mesial margin with row of spines, distal stronger than others. Palm as long as broad, lateral and mesial margins slightly divergent; small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers slightly longer than palm, each finger distally with two rows of teeth, spooned; fixed finger with some proximal spines along lateral margin; movable finger with 1–2 proximal spines.

P2–4: long and slender, with setose striae and numerous long plumose setae, some of the iridescent. P2 1.7 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P3 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.6 carapace length, 2.4 times as long as broad, 1.4 times longer than P2 propodus. Extensor margin with row of 10 or 11 proximally diminishing spines on P2–3, 1 distal spine on P4; ventral margins distally ending in strong spine, lateral sides with 2 or 3 small spines on P4. Carpi with 3 or 4 spines on extensor margin, distalmost smaller than distal second, sometimes absent; lateral surface with 3 or 4 small spines or acute granules sub-parallel to extensor margin; flexor distal margin with small spine. Propodi 2.6–2.9 times as long as broad; extensor margin with 2 or 3 proximal spines; flexor margin with 4–6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.8 that of propodi; flexor margin with 4 proximally diminishing teeth, terminal one moderately prominent.

Epipods absent on pereopods.

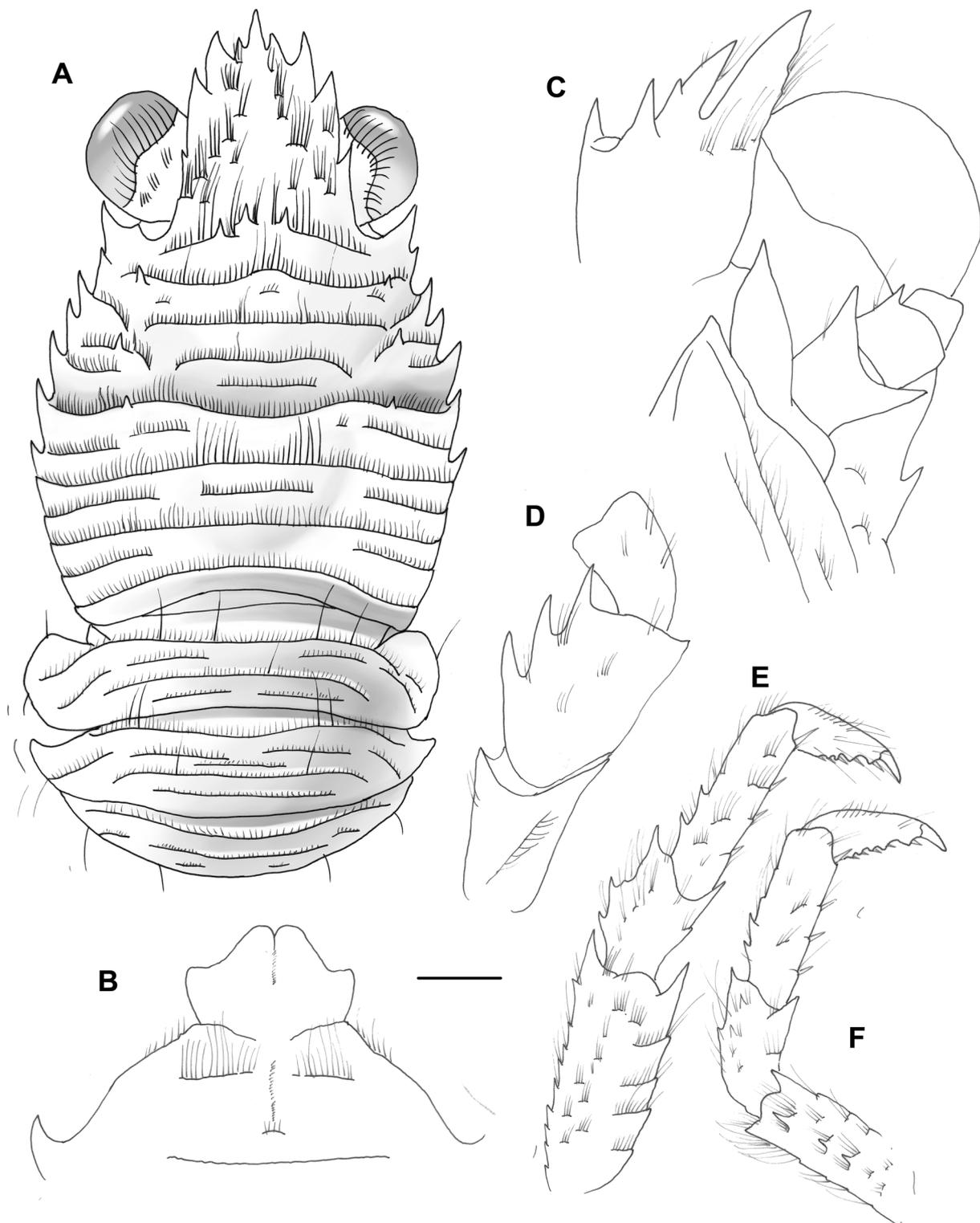


FIGURE 84. *Galathea pilosa* De Man, 1888, holotype, male, 3.7 mm, Indonesia, Moluccas (SMF214). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of left Mxp3, lateral view; E, right P2, dorsal view; F, right P4, lateral view. Scale: A, E, F = 1 mm; B–D = 0.5 mm.

Coloration. Base color of carapace and abdomen red, with numerous white spots. Wide transverse whitish or yellowish stripe covering hepatic, anterior branchial and anterior gastric regions; whitish fleck on each posterior branchial region. Rostrum with proximal part reddish, distal part whitish. P1 with numerous small red spots, usually on spines. P2–4 with transverse bluish and whitish bands.

Remarks. This species resembles *G. polyphemus* n. sp. from the French Polynesia (see Remarks for *G. polyphemus*). These two species cannot be differentiated morphologically, and can be distinguished by their color patterns. The available data suggests that *G. polyphemus* is restricted to French Polynesia.

The genetic divergences with other species are always higher than 13.0% (COI, the closest is *G. mauritiana*) and 6.9% (16S rRNA, the closest is *G. ceti* n. sp.) (Tab. 1).

Distribution. Maldives Islands, Indonesia (Ambon), Mariana Islands, Papua New Guinea, New Caledonia, Line Islands, French Polynesia (Society Islands); 1–45 m.

Galathea platycheles Miyake, 1953

(Figs 119C, D)

Galathea platycheles Miyake, 1953: 205, figs 5, 6 (Formosa (= Taiwan), shore).—Miyake & Baba, 1966a: 65, figs 6, 7 (Kumel Island, Okinawa Island, Amami-oshima Island, intertidal).—Baba, 1977a: 246 (Amboina, Lembah Strait and Obi Major, 0–2 m).—Baba, 1982b: 60 (Palau, subtidal).—Baba, 1989: 130 (Oshima Strait, Amami-oshima Island, 40 m).—Tirmizi & Javed, 1993: 81, fig. 36 (western Indian Ocean).—Wu *et al.*, 1998: 96, fig. 13 (Taiwan).—Baba *et al.*, 2008: 75 (compilation).—Baba *et al.*, 2009: 123, fig. 104 (Taiwan).

Material examined. Madagascar. ATIMO VATAE, Stn TS2, 25°01.3'S, 47°00.5'E, 18 m, 29 April 2010: 1 M 2.2 mm, 1 F 1.4 mm (MNHN-IU-2013-13816).—Stn TM5, 24°56.5'S, 47°07.1'E, intertidal, 30 April/6 May 2010: 1 M 2.3 mm (MNHN-IU-2013-13818).—Stn TB4, 25°02.1'S, 47°00.1'E, 11–12 m, 1 May 2010: 1 ov. F 1.5 mm (MNHN-IU-2010-2733).—Stn TS12, 25°02.5'S, 46°59.7'E, 4–5 m, 9 May 2010: 1 F 1.9 mm (MNHN-IU-2013-13820).—Stn TB07, 25°02.5'S, 46°59.7'E, 4–5 m, 9 May 2010: 2 M 1.5–1.7 mm, 2 ov. F 2.5–2.7 mm (MNHN-IU-2013-13819).—Stn TB9, 25°02.3'S, 46°59.6'E, 6–7 m, 10 May 2010: 1 ov. F 2.7 mm (MNHN-IU-2013-13817).—Stn TB10, 25°09.3'S, 46°45.3'E, 10 m, 11 May 2010: 1 M 1.7 mm (MNHN-IU-2010-2749).—Stn TS17, 25°09.2'S, 46°45.4'E, 5–6 m, 12 May 2010: 1 M 1.5 mm (MNHN-IU-2010-2738).—Stn DW3607, 25°45.7'S, 44°52.0'E, 40–41 m, 13 May 2010: 1 F 2.5 mm (MNHN-IU-2013-13811).—Stn TB12, 25°01.5'S, 47°00.0'E, 4–5 m, 14 May 2010: 1 F 2.2 mm (MNHN-IU-2013-13822); 2 M 1.4–2.4 mm, 2 ov. F 1.6–1.9 mm, 1 F 1.3 mm (MNHN-IU-2013-13821).—Stn TB13, 25°01.5'S, 47°00.0'E, 2–4 m, 15 May 2010: 3 M 1.5–1.8 mm, 1 ov. F 2.5 mm, 2 F 1.5–1.7 mm (MNHN-IU-2010-2724).

Scattered Islands. Juan de Nova, 17.0222°S, 42.6895°E, 7 m, 29 April 2009: 1 ov. F 2.3 mm (UF20729).

Maldives Islands. Magoodhoo Island, 3.07°N, 72.96°E, 10 m, 9 May 2014: 2 ov. F 1.9–2.0 mm (UF39594).

Chagos Islands. Diego Garcia, 8–12 m, February 2012: 1 M 1.8 mm, 1 F 1.5 mm (OUMNH). Salomon, 8–12 m, February 2012: 1 M 1.5 mm, 4 ov. F 1.4–1.8 mm, 2 F 1.4–1.5 mm (OUMNH). Peros Banhos, 8–12 m, February 2012: 4 M 1.2–1.9 mm, 1 F 1.8 mm (OUMNH).—February 2013: 2 M 1.6–2.0 mm, 1 ov. F 1.6 mm, 1 F 1.2 mm (OUMNH). Great Chagos Bank - Brothers Island, 8–12 m, February 2012: 3 ov. F 2.0–2.1 mm, 1 F 2.2 mm (OUMNH).—Nelson Island, 8–12 m, February 2013: 2 M 1.5–1.7 mm, 2 ov. F 1.6–2.0 mm (OUMNH).—Eagle Island, 8–12 m, February 2013: 1 M 1.7 mm (OUMNH). Egmont Island, 8–12 m, February 2012: 4 M 1.3–2.0 mm, 5 ov. F 1.4–1.9 mm, 2 F 2.1–2.2 mm (OUMNH). Diego Garcia, 8–12 m, February 2012: 1 M 2.3 mm, 1 ov. F 2.2 mm, 4 F 1.4–1.8 mm (OUMNH).

Japan. Okinawa Island. Kunigami Village, NW corner of a small bay near Oku Port, 26°50.772'N, 128°17.149'E, 0–0.1 m, 4 July 2004: 1 ov. F 2.5 mm (UF7230).

Mariana Islands. Guam Island. Apra harbour, 1 m, 6 August 1998: 1 ov. F 2.6 mm (UF231).—Haputo, 8–10 m, 8 July 2003: 1 M 2.3 mm (UF5934).—Tanguisson, no date, 7–25 m: 1 M 2.4 mm (UF7397).

Philippines. Luzon. Pangasinan Province, Marabutuka, 16°26.38'N, 119°56.55'E, 5–12 m, 16 July 2004: 1 ov. F 2.4 mm (UF6569).

Australia. Queensland. Lizard island, 17.7429°S, 145.5143°E, 1–2 m, 17 February 2009: 1 ov. F 2.4 mm (UF17114).

Australia. Western Australia. Ningaloo Reef, 22.7°S, 113.6431°E, 1–2 m, 14 May 2009: 1 ov. F 1.8 mm (UF21408); 1 F 1.6 mm (UF21409).—Ningaloo Reef, 22.6612°S, 113.619°E, 8 m, 15 May 2009: 1 ov. F 2.4 mm (UF21446); 1 ov. F 2.2 mm (UF21451); 1 ov. F 2.0 mm (UF21459); 1 ov. F 1.9 mm (UF21461); 1 M 1.6 mm (UF21462).—Ningaloo Reef, 22.7415°S, 113.6836°E, 2–3 m, 15 May 2009: 1 M 2.5 mm (UF21495); 1 M 1.8 mm (UF21499); 1 ov. F 2.3 mm (UF21522).—Ningaloo Reef, 22.6731°S, 113.6303°E, 7 m, 16 May 2009: 1 M 2.5 mm (UF21565); 1 M 2.1 mm (UF21566); 1 M 1.8 mm (UF21567).—Ningaloo Reef, 22.6755°S, 113.684°E, 0 m, 19

May 2009: 1 M 1.9 mm (UF21626); 1 M 2.1 mm (UF21627); 1 M 2.0 mm (UF21628); 1 ov. F 2.5 mm (UF21629); 1 ov. F 2.3 mm (UF21630); 1 M 2.0 mm (UF21631); 1 M 1.7 mm (UF21638).—Ningaloo Reef, 22.7581°S, 113.6491°E, 13 m, 1 May 2009: 1 ov. F 2.2 mm (UF21696); 1 M 2.2 mm (UF21715); 1 M 2.3 mm (UF21716); 1 ov. F 2.0 mm (UF21717); 1 M 1.5 mm (UF21718); 1 F 2.0 mm (UF21720); 1 M 2.6 mm (UF21778); 1 ov. F 2.1 mm (UF21779); 1 ov. F 2.2 mm (UF21781); 1 F 2.2 mm (UF21782); 1 ov. F 2.4 mm (UF21783); 1 M 2.2 mm (UF21784); 1 ov. F 2.0 mm (UF21785); 1 M 1.5 mm (UF21786); 1 ov. F 2.5 mm (UF21790); 1 M 2.3 mm (UF21890); 1 ov. F 2.1 mm (UF21893); 1 M 2.1 mm (UF21896); 1 M 2.3 mm (UF21906); 1 ov. F 2.1 mm (UF21907); 1 M 2.3 mm (UF21908); 1 M 2.1 mm (UF22013); 1 M 2.3 mm (UF22019); 1 ov. F 1.9 mm (UF22020); 1 ov. F 2.0 mm (UF22021); 1 F 2.1 mm (UF22022); 1 ov. F 2.4 mm (UF22023); 1 M 2.0 mm (UF22046); 1 M 1.8 mm (UF22048); 1 M 1.5 mm (UF22052); 1 ov. F 1.7 mm (UF22053); 1 M 2.1 mm (UF22056); 1 M 1.4 mm (UF22065); 1 ov. F 2.2 mm (UF22151); 1 ov. F 2.8 mm (UF22152); 1 M 1.7 mm (UF22183); 1 ov. F 2.2 mm (UF22234); 1 ov. F 2.4 mm (UF22235); 1 M 1.3 mm (UF22237); 1 M 2.0 mm (UF22295); 1 M 1.9 mm (UF22297); 1 M 2.0 mm (UF22298); 1 M 2.1 mm (UF22349); 1 F 1.5 mm (UF22350); 1 ov. F 2.0 mm (UF22352); 1 M 1.8 mm (UF22353); 1 ov. F 2.0 mm (UF22394); 1 ov. F 1.7 mm (UF22396); 1 ov. F 1.8 mm (UF22398); 1 M 2.0 mm (UF22399); 1 M 1.4 mm (UF22400); 1 ov. F 1.9 mm (UF22402); 1 M 1.6 mm (UF22564); 1 M 1.7 mm (UF22566); 1 F 1.7 mm (UF22567); 1 M 1.4 mm (UF22609); 1 ov. F 2.2 mm (UF22644).—Ningaloo Reef, 22.7473°S, 113.0752°E, 11 m, May 2009: 1 F 2.0 mm (UF22732); 1 F 2.3 mm (UF22745); 1 ov. F 2.4 mm (UF22746); 1 ov. F 2.5 mm (UF22748); 1 ov. F 1.8 mm (UF22747); 1 M 2.0 mm (UF22749); 1 M 1.6 mm (UF22751); 1 ov. F 1.9 mm (UF22788); 1 M 2.1 mm (UF22830); 1 ov. F 2.6 mm (UF22835); 1 M 1.7 mm (UF22836); 1 M 2.0 mm (UF22837); 1 ov. F 2.3 mm (UF22838); 1 M 2.4 mm (UF22839); 1 F 2.1 mm (UF22841); 1 M 1.7 mm (UF22842); 1 M 1.7 mm (UF22843); 1 M 1.9 mm, 5 ov. F 1.5–2.2 mm, 2 F 1.5–1.7 mm (UF23442).—Ningaloo Reef, 22.6083°S, 113.6249°E, 10 m, 2 July 2009: 1 M 1.6 mm (UF22403); 1 M 1.9 mm (UF22428); 1 M 2.1 mm (UF22461); 1 ov. F 2.2 mm (UF22467).—Ningaloo Reef, 22.7603°S, 113.6433°E, 14–15 m, 2009: 1 M 2.0 mm, 1 ov. F 2.1 mm (UF23443).—Ningaloo Reef, 22.581°S, 113.7618°E, 13 m, 2009: 3 M 1.4–2.0 mm (UF23444).—Ningaloo Reef, 22.6583°S, 113.6181°E, 13–15 m, 2009: 2 M 1.6–1.8 mm, 1 ov. F 1.8 mm (UF23445).—Ningaloo Reef, 22.6283°S, 113.6436°E, 6–7 m, 16 May 2010: 1 ov. F 2.0 mm (UF27988).—Ningaloo Reef, 22.7691°S, 113.7046°E, 12 m, 17 May 2010: 1 F 1.4 mm (UF27986); 2 M 1.9–2.0 mm, 1 ov. F 2.8 mm (UF28039).—Ningaloo Reef, 22.7691°S, 113.7046°E, 12 m, 18 May 2010: 1 M 3.0 mm (UF28001); 1 M 3.2 mm (UF28003); 3 M 2.3–2.6 mm, 2 ov. F 2.1–2.5 mm (UF28004); 1 M 3.0 mm, 1 ov. F 2.8 mm (UF28017).—Ningaloo Reef, 22.7691°S, 113.7046°E, 12 m, 20 May 2010: 1 F 2.4 mm (UF27818); 1 ov. F 2.8 mm (UF27819); 3 M 2.2–2.9 mm, 5 ov. F 2.0–2.7 mm (UF27835).—Ningaloo Reef, 22.6206°S, 113.6424°E, 5–6 m, 27 May 2010: 1 ov. F 2.3 mm (UF27593).—Ningaloo Reef, Deep Black Rock Channel, 22.7725°S, 113.6666°E, 30 m, 31 May 2010: 1 M 2.0 mm (UF27660).

Papua New Guinea. PAPUA NIUGINI, Stn PB01, 05°11.3'S, 145°49.4'E, 6–10 m, 30 December 2012: 2 ov. F 2.3–2.4 mm (MNHN-IU-2013-13850).—Stn PB21, 05°01.4'S, 145°48'E, 5 m, 30 December 2012: 3 M 1.3–1.6 mm, 4 F 1.4–1.7 mm (MNHN-IU-2013-13849).

New Caledonia. Lifou Island. LIFOU, Stn 1434, 20°52.5'S, 167°08.1'E, 5–20 m, 6 November 2000: 1 F 1.7 mm (MNHN-IU-2013-13812).—Stn 1410, 20°56.7'S, 167°03.1'E, 2–4 m, 25 November 2000: 1 ov. F 2.1 mm, 1 ov. F 1.9 mm (MNHN-IU-2013-13813); 1 M 1.8 mm (MNHN-IU-2013-13815); 1 ov. F 1.7 mm (MNHN-IU-2013-13814). Isle of Pines. Platier, August 1993: 1 M 2.3 mm (MNHN-IU-2013-13810).

Coloration. Variable, from reddish to dark brown, sometimes with white spots and flecks on carapace and abdomen. P1 with dark bands on distal part of merus, carpus and palm, tips of fingers white. P2–4 with whitish and dark transverse bands; white band on distal part of merus and propodus. Miyake & Baba (1966) described a different color pattern: overall yellowish white, carapace yellowish gray.

Remarks. The morphological characters are quite constant in all specimens examined, although they came from various localities. However, we have observed a small genetic divergence between the specimens collected from Australia and Madagascar (<3.0%). The divergences with all other species are usually larger than 12.0% (COI), although the smallest divergence is seen between *G. paulayi* n. sp. (9.3% COI) (Tab. 1).

Distribution. Japan, Palau island, Mariana Islands, Taiwan, Philippines, Indonesia, Australia, Papua New Guinea, New Caledonia, western Indian Ocean, Maldives Islands, Chagos islands, Scattered Islands, Madagascar; 0–41 m, on *Pocillopora* spp., rubble, algae, hydroids, under rocks.

***Galathea ploto* n. sp.**

(Fig. 85)

Material examined. *Holotype*: New Caledonia. Lifou Island. LIFOU, Stn 1410, 20°56.7'S, 167°03.1'E, 2–4 m, 25 November 2000: M 3.4 mm (MNHN-IU-2013-9734).

Paratypes: New Caledonia. Lifou Island. LIFOU, Stn 1435, 20°55.2'S, 167°00.7'E, 5–30 m, 8 November 2000: 1 ov. F 3.0 mm (MNHN-IU-2013-13997).—Stn 1430, 20°47.5'S, 167°07.1'E, 20–25 m, 9 November 2000: 2 M 3.2–3.8 mm, 1 ov. F 2.6 mm (MNHN-IU-2013-15882).—Stn 1464, 20°54.5'S, 167°05.9'E, 35–50 m, 14 November 2000: 1 M 2.0 mm (MNHN-IU-2013-9718).—Stn 1449, 20°45.8'S, 167°01.65'E, 17 m, 17 November 2000: 1 ov. F 2.1 mm (MNHN-IU-2013-9715).—Stn 1451, 20°47.3'S, 167°06.8'E, 10–21 m, 19 November 2000: 1 ov. F 3.0 mm (MNHN-IU-2013-15879).—Stn 1410, 20°56.7'S, 167°03.1'E, 2–4 m, 25 November 2000: 1 ov. F 3.5 mm (MNHN-IU-2013-15880).—Stn 1455, 20°56.8'S, 167°02.7'E, 15–20 m, 25 November 2000: 1 M 3.1 mm, 2 ov. F 2.1–3.0 mm (MNHN-IU-2013-9716).—Stn 1421, 20°52.4'S, 167°08.5'E, 4 m, 27 November 2000: 1 ov. F 3.1 mm (MNHN-IU-2013-9719).—Stn 1457, 20°46.8'S, 167°02.75'E, 5–10 m, 27 November 2000: 7 M 2.6–3.5 mm, 3 ov. F 2.0–2.6 mm, 2 F 2.0–2.3 mm (MNHN-IU-2013-15881). Koumac Reef, 20 m, 6 October 1993: 1 M 2.9 mm, 1 ov. F 2.6 mm (MNHN-IU-2013-9717). Chesterfield Islands. CORAIL 2, Stn DW85, 19°12'S, 158°56'E, 32 m, 26 July 1988: 1 M 2.7 mm (MNHN-IU-2013-13928), 1 ov. F 3.0 mm (MNHN-IU-2013-13929), 1 ov. F 4.1 mm (MNHN-IU-2013-13930).

Etymology. The name *Ploto*, sailing, refers to one of the Nereids of Greek mythology. The name is considered as a substantive in apposition.

Description. *Carapace*: As long as broad; ridges with short fine setae, with a few scattered moderately long non-plumose setae; cervical groove slightly distinct, laterally bifurcated; gastric and anterior branchial regions only with interrupted ridges or scale-like ridges; 2 median epigastric spines; 1 hepatic spine on each side, near anterolateral spine; mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 4 ridges, 2 uninterrupted. Lateral margins convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, second small, accompanying another spine ventral to between first and second; 2 spines on anterior branchial margin, and 3 spines on posterior branchial margin. External orbital limit ending in small spine; infraorbital margin with 1 strong spine. Rostrum broad triangular, 1.3 times as long as broad, length 0.6 postorbital carapace length and breadth 0.4 that of carapace, nearly horizontal in lateral view; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, anterior margin acutely produced.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 with 2 transverse ridges, anterior ridge more distinctly elevated than posterior ridge; somites 4–6 smooth, with minute scales, posteromedian lobe indistinct. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed spines, distodorsal larger; distomesial spine slightly smaller than distoventral. Ultimate article with a few short fine setae, not in tuft, on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching end of article 2. Article 2 with 2 subequal distal spines, slightly exceeding midlength of article 3. Article 3 with distomesial spine; article 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin, crista dentata with 19–21 denticles. Merus longer than ischium; flexor margin with 2 subequal spines; extensor margin unarmed. Carpus unarmed.

P1: 3.3 times carapace length, relatively slender. Merus 1.2 times length of carapace, 1.7 times as long as carpus, with spines arranged roughly in rows, 3 strong spines along mesial margin, distal spines prominent. Carpus 0.8 length of palm, 1.8 times as long as broad; dorsal surface with spines arranged roughly in longitudinal rows; mesial margin with 3 or 4 spines, distal second very strong. Palm 1.9–2.0 times longer than broad, lateral and mesial margins subparallel; spines arranged roughly in rows; dorsolateral row continuing on to lateral margin of fixed finger. Fingers 0.8 length of palm, each finger distally spooned, with two rows of fingers; movable finger with some proximal spines.

P2–4: moderately slender, with setose striae and sparse long non-plumose setae. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P3 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.8 carapace length, 3.8 times as long as broad, 1.6 times longer than P2 propodus. Extensor margin with row of 7 or 8 proximally diminishing spines on P2–3, 4 spines on P4; ventral margins distally ending in strong

spine followed proximally by 0–1 spines and several eminences, lateral unarmed. Carpi with 3 or 4 spines on extensor margin on P2–3; 0–1 spines on P4; lateral surface with 2 or 3 spines or acute granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 4.3–4.8 times as long as broad; extensor margin with 3–5 proximal spines on P2–4; flexor margin with 4 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6 that of propodi; flexor margin with 4 proximally diminishing teeth, terminal one prominent.

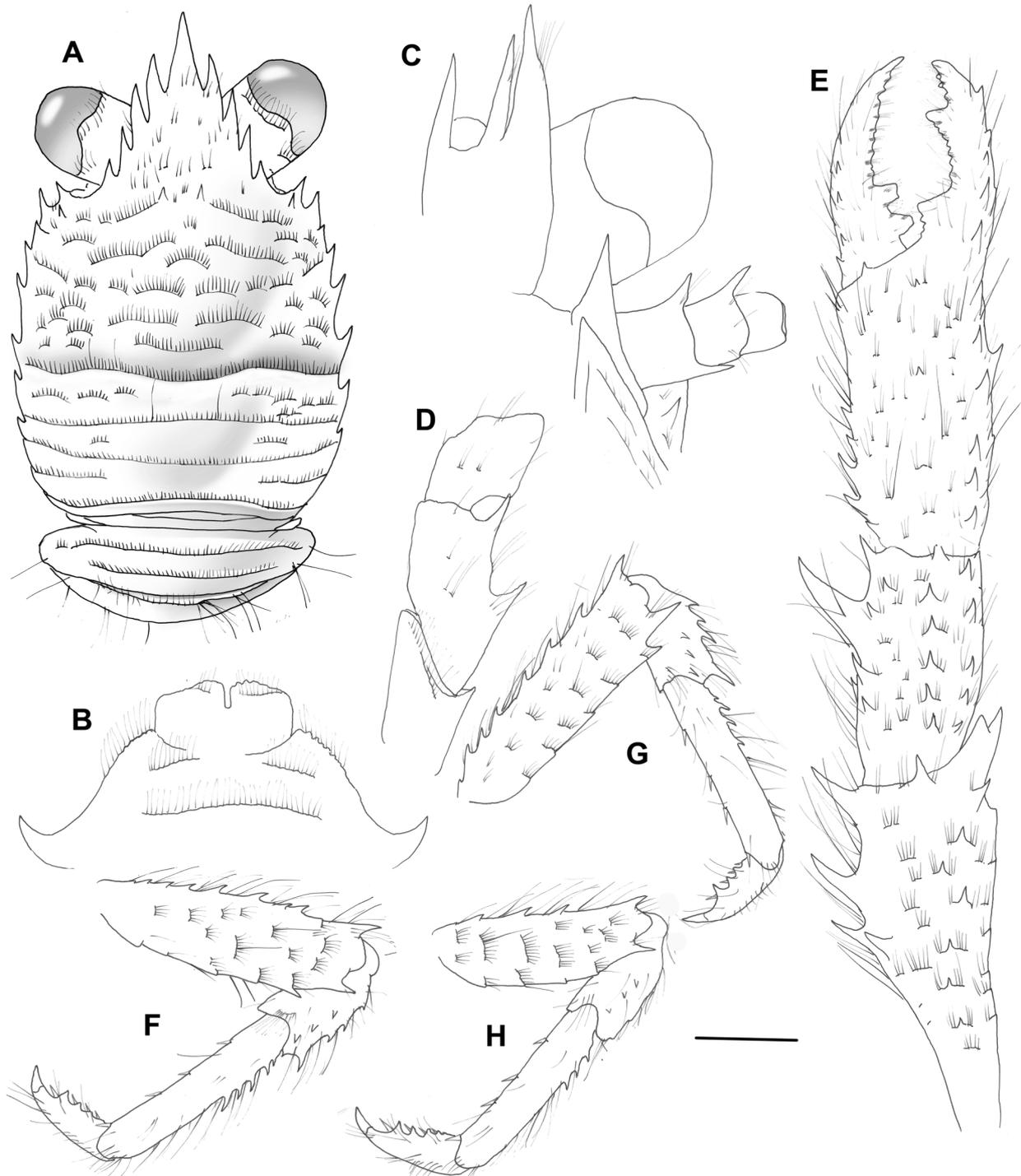


FIGURE 85. *Galathea ploto* n. sp., holotype, male, 3.4 mm, New Caledonia (MNHN-IU-2013-9734). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Epipods on P1.

Remarks. *Galathea ploto* n. sp. belongs to the group of species with scale-like ridges on the gastric region and without dorsal spines on the branchial regions. The closest relatives are *G. bimaculata* Miyake & Baba, 1966 from Japan to New Caledonia and Western Australia, *G. bracteosa* n. sp. from French Polynesia and *G. psila* n. sp. from New Caledonia.

Galathea bracteosa is easily differentiated from the other two species by the presence of one facial pterygostomial spine, which is always absent in the other species.

Galathea ploto is easily differentiated from the other closely related species (*G. bimaculata* and *G. psila*) by the presence of epigastric and hepatic spines on the carapace, whereas these spines are absent in the other species.

Galathea ploto is also close to *G. magnifica* Haswell, 1882 and *G. schnabelae* n. sp. (see Remarks of these species).

The genetic divergences among *G. ploto*, *G. bimaculata*, *G. psila* and *G. bracteosa* are larger than 15.0% (COI) and 6.1 % (16S rRNA) (Tab. 3).

Distribution. New Caledonia, Chesterfield Islands; 2–50 m.

***Galathea politula* n. sp.**

(Figs 86, 119E)

Material examined. *Holotype:* Vanuatu. SANTO, Stn AT39, 15°22.4'S, 167°12.6'E, 57–81 m, 27 September 2006: M 3.5 mm (MNHN-IU-2013-9707).

Paratypes: New Caledonia, Lagon. Stn DW1234, 22°24.05'S, 166°55.08'E, 52 m, 9 March 1993: 1 F 4.3 mm (MNHN-IU-2013-15871).

Vanuatu. SANTO, Stn FR10, 15°36.9'S, 167°10.5'E, 6–33 m, 15 September 2006: 2 M 1.9–4.0 mm, 2 ov. F 2.8–3.4 mm (MNHN-IU-2013-15872).—Stn DR35, 15°31.4'S, 167°09.7'E, 4–18 m, 18 September 2006: 2 M 2.5–3.7 mm (MNHN-IU-2013-15868).—Stn AT38, 15°21.4'S, 167°12.8'E, 29–58 m, 27 September 2006: 3 ov. F 3.0–3.4 mm (MNHN-IU-2013-9711).—Stn AT39, 15°22.4'S, 167°12.6'E, 57–81 m, 27 September 2006: 1 ov. F 2.8 mm (MNHN-IU-2013-15870).—Stn AT52, 15°31.5'S, 167°12.7'E, 52–62 m, 2 October 2006: 1 M 3.3 mm (MNHN-IU-2013-9709).—Stn FP47, 15°32.4'S, 167°12.7'E, 45–50 m, 2–3 October 2006: 1 M 1.8 mm (MNHN-IU-2013-9710).—Stn AT75, 15°37.0/37.3'S, 167°09.2/09.6'E, 52–66 m, 10 October 2006: 1 M 3.6 mm (MNHN-IU-2013-9713), 1 ov. F 3.4 mm (MNHN-IU-2013-9712).—Stn AT80, 15°31.7'S, 167°10.8'E, 36–43 m, 12 October 2006: 1 M 3.1 mm (MNHN-IU-2013-9708), 1 M 3.5 mm (MNHN-IU-2013-15869).

Etymology. From the Latin *politus*, smooth, in reference to the smooth carapace surface.

Description. *Carapace:* as broad as long; transverse ridges with dense short setae, and some scattered long plumose setae; cervical groove distinct, laterally bifurcated. One small hepatic spine near first marginal spine (anterolateral). Gastric region with some transverse ridges: 1 epigastric ridge uninterrupted, unarmed, followed by some scale-like short ridges; 1 protogastric ridge medially interrupted, unarmed; 2 mesogastric ridges, anterior ridge uninterrupted, not extending laterally to anteriormost of branchial marginal spines, posterior ridge scale-like or uninterrupted; 2 metagastric ridges, anterior ridge uninterrupted usually continuing laterally with anterobranchial ridge, posterior ridge uninterrupted and short. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 6 ridges, 3 uninterrupted. Lateral margins well convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, with spine ventral to between first and second; 2 spines on anterior branchial region, last small, and 3 spines on posterior branchial margin, last small. Small spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum 1.8 times as long as broad, length 0.6 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.30 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous short uniramous setae and long plumose setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin ending in blunt angle.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 each with 2 uninterrupted and 2 interrupted transverse ridges placed alternately; somite 4 with 1 uninterrupted and 1 interrupted ridge; somites 5 and 6 each with 2 uninterrupted or medially interrupted ridges. Males with G1 and G2.

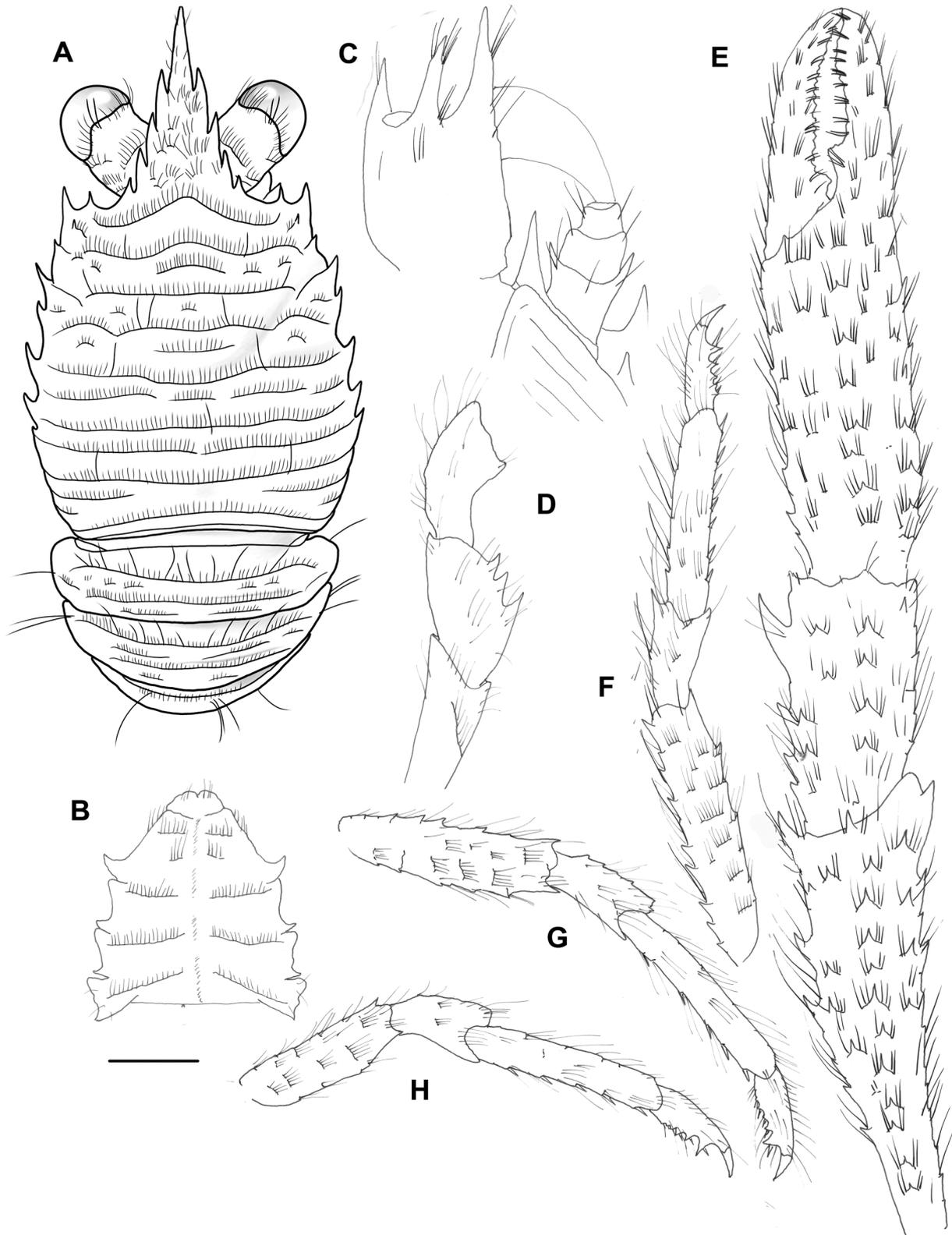


FIGURE 86. *Galathea politula* n. sp., holotype, male, 3.5 mm, Vanuatu (MNHN-IU-2013-9707). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine smaller than others. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with strong distomesial spine reaching distal margin of article 3. Article 2 with 2 well-developed distal spines, distolateral spine longer than distomesial and exceeding midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with long distal spine on flexor margin, unarmed on extensor margin; crista dentata with 19–21 denticles. Merus as long as ischium; flexor margin with 3 spines, proximal slightly longer than others; extensor margin with 1 small distal spine. Carpus with 2 or 3 acute granules along extensor margin.

P1: 3.2 times carapace length, somewhat depressed on palm, more so on fingers, covered with finely setiferous scales, with numerous long plumose setae. Merus 1.2 times carapace length, 1.5 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.8 length of palm, twice longer than broad; dorsal and lateral surfaces with a few spines; mesial margin with 5 spines (median strong). Palm 2.3 times longer than broad, lateral and mesial margins subparallel; small spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side. Fingers slightly longer than palm, unarmed, each finger distally with two rows of teeth, spooned.

P2–4: moderately slender, with setose striae and sparse long plumose setae. P2 1.9 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P3 merus, P4 merus 0.7 length of P3 merus); P2 merus 0.8 carapace length, 4.7 times as long as broad, 1.5 times longer than P2 propodus. Extensor margin with row of 7–9 proximally diminishing spines on P2–3, 1 distal spine on P4; ventral margins distally ending in strong spine followed proximally by 0–2 spines and several eminences, lateral sides unarmed; distoventral spine on P2 only. Carpi with 4 or 5 small spines on extensor margin on P2–3, unarmed on P4, distalmost (sometimes absent) smaller than distal second; lateral surface with granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 4.3–4.6 times as long as broad; extensor margin with 2 proximal spines on P2, unarmed on P3–4; flexor margin with 5–7 slender movable spines. Dactyli distally ending in wellcurved strong spine, length 0.5–0.6 that of propodi; flexor margin with 5 or 6 proximally diminishing teeth, terminal one prominent.

Epipods absent on pereopods.

Coloration. Base color translucent light orange. Ridges on carapace and abdomen reddish. Rostrum whitish. P1 with distal part of merus, carpus and palm dark orange, base of fingers with white fleck. P2–4 with whitish band on distal part of merus, carpus and propodus.

Remarks. *Galathea politula* n. sp. belongs to the group of species having the anterior mesogastric ridge interrupted, the carapace lateral margin bearing a small spine between the anterolateral and the anteriormost branchial marginal spines, non-scale-like gastric ridges, the absence of epigastric spines, the antennular article 1 bearing three terminal spines, and the lack of pereopodal epipods. The closest relative is *G. lenis* Baba, 1969 from Japan, from which it is easily distinguished by the following features:

- The anterior metagastric ridge continues to the anterior branchial ridges in the new species, whereas this ridge does not continue in *G. lenis*.
- The antennal article 1 has the distomesial spine not reaching the distal margin of the article 2 in *G. politula*, whereas this spine reaches the distal margin of the article 3 in *G. lenis*.

Distribution. Vanuatu, New Caledonia; 4–81 m.

***Galathea polydora* n. sp.**

(Figs 87, 119F, G)

Galathea subsquamata.—Baba, 1979b: 645 (Marsegu Island, Indonesia, subtidal) (not *G. subsquamata* Stimpson, 1858)
Galathea sp.—Poore *et al.*, 2011: 334, pl. 12G (color photo, Vanuatu).

Material examined. *Holotype:* New Caledonia. St. Marie Bay, 14 m, 4 January 1993: M 3.4 mm (MNHN-IU-2013-13377).

Paratypes: Indonesia. Moluccas. Ternate, Aru Island, 12 m, 22 March 1908: 1 M 3.4 mm (SMF 4605). NE of Marsegu Island, 18 January 1975, on coral: 1 F 3.2 mm (MNHN-Ga1155).

Vanuatu. SANTO, Stn FR01, 15°32.3'S, 167°13.1'E, 18–20 m, 10 September 2006: 1 ov. F 3.0 mm (MNHN-IU-2013-13474).—Stn DS4, 15°31.4'S, 167°14.1'E, 25 m, 11 September 2006: 1 F 1.5 mm (MNHN-IU-2013-13472).—Stn DS6Light, 15°30.9'S, 167°11.1'E, 8–15 m, 11 September 2006: 5 M 1.9–2.5 mm, 2 F 1.5–1.8 mm (MNHN-IU-2013-13471).—Stn FR2-HH1, 15°33.3'S, 167°08.8'E, 1–25 m, 11 September 2006: 1 M 2.1 mm (MNHN-IU-2013-13465).—Stn FR5, 15°33.8'S, 167°12.8'E, 6–25 m, 12 September 2006: 2 M 2.1–3.2 mm (MNHN-IU-2013-13478).—Stn DB12, 15°36.6'S, 167°10.1'E, 10–18 m, 13 September 2006: 20 M 2.4–3.0 mm, 19 ov. F 2.1–2.7 mm (MNHN-IU-2013-13461); 1 M 2.8 mm (MNHN-IU-2013-13412).—Stn H, no depth, 17 September 2006: 2 M 2.0–2.2 mm, 2 ov. F 1.5–2.4 mm (MNHN-IU-2013-13464); 1 ov. F 2.0 mm (MNHN-IU-2013-13460).—Stn FR20, 15°33.1'S, 167°12.4'E, 3–52 m, 19 September 2006: 4 M 1.9–2.7 mm, 3 ov. F 2.0–2.5 mm (MNHN-IU-2013-13469); 1 M 3.0 mm (MNHN-IU-2013-13448); 1 ov. F 2.5 mm (MNHN-IU-2013-13449).—Stn LD1, 15°29'S, 167°14.9'E, 2–4 m, 19 September 2006: 1 M 2.0 mm (MNHN-IU-2013-13463).—Stn DS49, 15°38.7'S, 167°05.2'E, 10–17 m, 21 September 2006: 2 M 2.0–2.4 mm, 2 ov. F 2.4–3.0 mm (MNHN-IU-2013-13450).—Stn DB69, 15°24.4'S, 167°13.0'E, 38 m, 27 September 2006: 1 M 2.6 mm, 1 ov. F 2.2 mm, 2 F 1.6–2.3 mm (MNHN-IU-2013-13455).—Stn DB75, 15°22.9'S, 167°11.9'E, 20 m, 28 September 2006: 13 M 2.0–2.8 mm, 14 ov. F 2.0–2.5 mm, 3 F 1.8–1.9 mm (MNHN-IU-2013-13399).—Stn LD8, 15°22.3'S, 167°11.3'E, 2–4 m, 28 September 2006: 1 M 3.2 mm (MNHN-IU-2013-13468).—Stn AT43, 15°36.4'S, 167°02.3'E, 84–105 m, 29 September 2006: 1 F 2.8 mm (MNHN-IU-2013-13451).—Stn FB40, 15°22.9'S, 167°11.7'E, 9 m, 29 September 2006: 1 M 2.3 mm (MNHN-IU-2013-13470).—Stn FB52, 15°42.7'S, 167°15.1'E, 7 m, 5 October 2006: 1 ov. F 2.6 mm (MNHN-IU-2013-13453).—Stn DS91, 15°33.7'S, 167°08.4'E, 7 m, 6 October 2006: 1 M 2.3 mm, 1 ov. F 2.2 mm (MNHN-IU-2013-13452).—Stn FB56, 15°35.2'S, 167°02.1'E, 3–18 m, 7 October 2006: 3 M 1.9–2.8 mm, 2 ov. F 1.8–2.1 mm (MNHN-IU-2013-13467).—Stn ZB16, 15°32.4'S, 167°12.1'E, 5 m, 7 October 2006: 12 M 1.7–3.1 mm, 8 ov. F 2.0–3.2 mm, 2 F 1.6–1.8 mm (MNHN-IU-2013-13473).—Stn ZB20, 15°36.1'S, 167°05.4'E, 15–20 m, 10 October 2006: 4 M 1.9–2.7 mm, 5 ov. F 2.3–3.4 mm (MNHN-IU-2013-13410).—Stn DB14, 15°30.9'S, 167°11'E, 10–14 m, 13 October 2006: 1 ov. F 2.5 mm (MNHN-IU-2013-13476); 11 M 2.0–2.8 mm, 11 ov. F 2.1–2.9 mm (MNHN-IU-2013-13411).—Stn FB80, 15°33.1'S, 167°09.6'E, 2 m, 14 October 2006: 1 M 2.0 mm (MNHN-IU-2013-13477).—Stn EP34, 15°33.3'S, 167°12.9'E, 40–60 m, 14 October 2006: 8 M 2.4–3.8 mm (MNHN-IU-2013-13459).—Stn EP37, 15°23.4'S, 167°13.1'E, 50–61 m, 16 October 2006: 1 ov. F 2.5 mm (MNHN-IU-2013-13454).—Stn NR64, 15°31.5'S, 167°14.1'E, 22 m, 18 October 2006: 2 M 2.6–2.7 mm, 2 ov. F 2.4–2.8 mm, 1 F 2.6 mm (MNHN-IU-2013-13475).—Stn ZB36, 15°34.3'S, 167°12.4'E, intertidal, 19 October 2006: 1 M 3.3 mm, 6 ov. F 2.6–3.4 mm (MNHN-IU-2013-9871).

New Caledonia. Chesterfield Islands, CHALCAL 84, Stn D42, 20°38.00'S, 158°43.10'E, 67 m, 23 July 1984: 1 ov. F 3.4 mm (MNHN-IU-2013-13406). New Caledonia. Stn 92, 22°26.6'S, 166°36.9'E, 24 m, August 1984: 2 M 3.0–3.4 mm (MNHN-IU-2013-9874).—Stn 99, 22°32.6'S, 166°34.6'E, 14 m, August 1984: 1 ov. F 3.2 mm (MNHN-IU-2013-13395).—Stn 121, 22°28'S, 166°43.1'E, 12 m, August 1984: 1 M 3.5 mm (MNHN-IU-2013-13407).—180 m, 30 June 1992: 2 ov. F 3.2–3.4 mm (MNHN-IU-2013-13458).—10–11 m, 14 April 1993: 4 M 3.6–5.0 mm (MNHN-IU-2013-13457); 1 M 4.0 mm (MNHN-IU-2013-13456).—Stn 82, 22°30.1'S, 166°28.5'E, 10.5 m, 14 November 1995: 1 M 1.6 mm, 2 ov. F 3.6–3.7 mm (MNHN-IU-2013-9872).—22°19.35'S, 166°25.85'E, 20 m, 10 November 1995: 2 M 2.5–2.6 mm, 2 ov. F 2.7–3.9 mm (MNHN-IU-2013-13423). Croissant Reef, 9 m, 29 September 1978: 8 M 2.5–3.4 mm, 3 ov. F 3.0–3.6 mm (MNHN-IU-2013-13481).—20 m, 18 April 1994: 1 M 2.9 mm, 2 F 1.9–2.2 mm (MNHN-IU-2013-13484). Lagon, 21 m, 21 April 1978: 1 M 3.1 mm, 1 ov. F 3.9 mm (MNHN-IU-2013-13486).—4 October 1978: 2 M 3.2–3.8 mm, 2 ov. F 3.1–3.6 mm (MNHN-IU-2013-13492). Lagon East, Stn 648, 21°52.8'S, 166°35.2'E, 22–25 m, August 1986: 1 M 3.1 mm (MNHN-IU-2013-13447); 1 M 3.5 mm (MNHN-IU-2013-13446).—Stn 663, 21°42.2'S, 166°30.5'E, 38–40 m, August 1986: 1 M 4.1 mm (MNHN-IU-2013-13427).—Stn 664, 21°43.9'S, 166°29.4'E, 28–30 m, August 1986: 1 M 2.5 mm (MNHN-IU-2013-13440).—Stn 669, 21°40.5'S, 166°26.2'E, 30–40 m, August 1986: 1 M 3.7 mm (MNHN-IU-2013-9875).—Stn 677, 21°36.8'S, 166°21.6'E, 32 m, August 1986: 1 M 3.1 mm (MNHN-IU-2013-13443).—Stn 692, 21°32'S, 166°12.3'E, 44–48 m, August 1986: 1 M 4.2 mm (MNHN-IU-2013-13433).—Stn 693, 21°30.3'S, 166°13.4'E, 35–38 m, August 1986: 1 M 4.5 mm, 1 ov. F 4.1 mm (MNHN-IU-2013-13417).—Stn 698, 21°29.3'S, 166°08.7'E, 40–43 m, August 1986: 1 M 3.0 mm (MNHN-IU-2013-13445).—Stn 713, 21°22.6'S, 166°00.7'E, 34–35 m, August 1986: 1 M 2.9 mm (MNHN-IU-2013-13428).—Stn 731, 21°17.2'S, 165°52'E, 37–42 m, August

1986: 1 M 3.6 mm (MNHN-IU-2013-13432).—Stn 732, 21°18.9'S, 165°50.9'E, 43–50 m, August 1986: 1 M 3.7 mm (MNHN-IU-2013-13442).—Stn 807, 20°59.1'S, 165°28.75'E, 55 m, January 1987: 1 M 3.1 mm (MNHN-IU-2013-13383).—Stn 816, 21°52.6'S, 165°25.4'E, 31 m, 10 January 1987: 1 M 3.4 mm (MNHN-IU-2013-13381).—Stn 846, 20°39.2'S, 165°14.1'E, 15–28 m, 11 January 1987: 1 M 3.1 mm (MNHN-IU-2013-13385).—Stn 853, 20°41.35'S, 165°07.4'E, 27 m, 12 January 1987: 2 M 3.0–3.4 mm (MNHN-IU-2013-13393).—Stn 860, 20°41.7'S, 165°01.7'E, 22–27 m, 13 January 1987: 1 ov. F 3.7 mm (MNHN-IU-2013-13388).—Stn 886, 20°24.15'S, 164°41.25'E, 20 m, 14 January 1987: 2 M 3.2–3.6 mm, 1 ov. F 3.0 mm (MNHN-IU-2013-13390).—Stn 902, 20°13.4'S, 164°19.7'E, 32 m, 14 January 1987: 1 M 3.9 mm (MNHN-IU-2013-13382). Lagon North, Stn DW1063, 20°02.5'S, 163°46.5'E, 31 m, 23 October 1989: 1 M 3.2 mm, 1 ov. F 3.3 mm (MNHN-IU-2013-13438).—Stn DW1088, 19°45.5'S, 163°57.7'E, 23 m, October–November 1989: 1 M 3.9 mm, 1 ov. F 3.0 mm, 1 F 2.9 mm (MNHN-IU-2013-13435). Lagon NW, Stn DW946, 20°34.8'S, 164°07.8'E, 16–17 m, April 1988: 1 M 3.6 mm (MNHN-IU-2013-13437).—Stn DW947, 20°33.2'S, 164°07.1'E, 17–18 m, April 1988: 1 ov. F 3.1 mm (MNHN-IU-2013-13436).—Stn DW1008, 20°11'S, 163°53.4'E, 27 m, April 1988: 1 ov. F 3.1 mm (MNHN-IU-2013-13444).—Stn DW1017, 20°07.5'S, 163°51'E, 21 m, 3 April 1988: 1 M 4.3 mm (MNHN-IU-2013-13387).—Stn DW1046, 20°05'S, 164°06.6'E, 6–7 m, May 1988: 1 ov. F 3.8 mm (MNHN-IU-2013-13398). Maitre Island, 5 m, 29 August 1978: 1 M 2.8 mm, 1 ov. F 3.6 mm (MNHN-IU-2013-13480).—25 m, 5 September 1978: 4 M 2.3–3.9 mm, 2 ov. F 2.0–2.6 mm (MNHN-IU-2013-13488).—25 m, 19 September 1978: 4 M 2.2–3.4 mm (MNHN-IU-2013-13487).—20 m, June 1992: 4 M 3.0–3.5 mm, 1 ov. F 3.3 mm, 1 F 3.0 mm (MNHN-IU-2013-13485).—22 m, 28 September 1992: 5 M 3.5–4.4 mm, 4 ov. F 4.1–4.5 mm (MNHN-IU-2013-13419).—Stn 99, 22°19.61'S, 166°24.07'E, 10.5 m, 14 November 1995. 7 M 1.8–3.7 mm (MNHN-IU-2013-13426).—Stn 1502, 22°20'S, 166°24.2'E, 4 m, 21 October 2000: 1 ov. F 3.7 mm (MNHN-IU-2013-13441). Nou Island, 5–8 m, 12 October 1992: 3 M 3.4–4.0 mm, 1 F 3.7 mm (MNHN-IU-2013-13415). Noumea, Stn 34, 22°12.5'S, 166°23.6'S, 10 m, 1 May 1984: 2 M 3.5–3.6 mm, 2 ov. F 3.6–3.7 mm (MNHN-IU-2013-13434); 1 M 3.9 mm (MNHN-IU-2013-13379).—Stn 56, 22°10'S, 166°15'E, 11 m, May 1984: 1 M 4.2 mm (MNHN-IU-2013-13391).—Stn 272, 22°11.8'S, 166°23.1'E, 9 m, November 1984: 1 M 5.0 mm (MNHN-IU-2013-13418).—Stn 277, 22°17'S, 166°16'E, 30 m, November 1984: 1 ov. F 3.3 mm (MNHN-IU-2013-13389). Nouville, 18–20 m, 1 April 1993: 9 M 2.3–3.1 mm, 3 ov. F 3.2–3.4 mm, 4 F 2.3–3.7 mm (MNHN-IU-2013-13479). Ouen Island, Stn 75, 22°28.2'S, 166°34.5'E, 35 m, August 1984: 1 M 4.1 mm (MNHN-IU-2013-13421).—Stn 77, 22°25.9'S, 166°31.8'E, 22 m, August 1984: 3 M 3.0–4.0 mm, 1 ov. F 3.0 mm (MNHN-IU-2013-13404).—Stn 122, 22°28.1'S, 166°41'E, 28 m, August 1984: 1 ov. F 3.7 mm (MNHN-IU-2013-13400).—Stn 145, 22°21.5'S, 166°50.3'E, 15–30 m, August 1984: 1 ov. F 3.1 mm (MNHN-IU-2013-13425). South Reef, Stn 290, 22°38'S, 166°44'E, 35 m, November 1984: 1 M 3.7 mm (MNHN-IU-2013-13380).—Stn 464, 18°21'S, 163°03.1'E, 44 m, February 1985: 3 M 3.0–3.5 mm (MNHN-IU-2013-13384).—Stn 564, 22°47'S, 166°56'E, 35 m, 16 July 1985: 1 M 3.3 mm (MNHN-IU-2013-13392). St. Marie Bay, 14 m, 4 January 1993: 21 M 3.3–4.0 mm, 19 ov. F 2.6–4.2 mm (MNHN-IU-2013-13378). St. Vincent, Stn 173, 22°08.3'S, 166°07'E, 20–50 m, September 1984: 3 M 3.5–5.4 mm, 2 ov. F 3.9–4.1 mm (MNHN-IU-2013-13439).—Stn 179, 22°01.1'S, 166°04.3'E, 12 m, September 1984: 1 M 3.4 mm (MNHN-IU-2013-13414).—Stn 197, 21°58.5'S, 166°03.4'E, 6 m, September 2000: 1 M 3.9 mm (MNHN-IU-2013-13429).—Stn 206, 21°57.3'S, 165°55.5'E, 8 m, September 1984: 1 M 4.3 mm (MNHN-IU-2013-13493). Surprise Atoll, Stn 455, 18°30'S, 163°08'E, 40 m, 28 February 1985: 1 ov. F 4.2 mm (MNHN-IU-2013-13386). Touho, 20°47'S, 165°13'E, 10 m, 6 September 1993: 1 M 2.3 mm (MNHN-IU-2013-13482).—30 m, 13 September 1978: 1 ov. F 3.6 mm (MNHN-IU-2013-13489).—September 1993: 6 M 2.3–2.9 mm, 6 ov. F 2.6–3.9 mm (MNHN-IU-2013-13491).—20°47'S, 165°13'E, 35 m, 10 October 1993: 1 M 3.3 mm (MNHN-IU-2013-13490); 1 M 2.6 mm (MNHN-IU-2013-13483). Vauban, Stn 1, 22°18'S, 166°24.6'E, 19 m, 22 May 1984: 2 M 3.9–4.7 mm, 3 ov. F 3.3–4.7 mm (MNHN-IU-2013-13394).—Stn 16, 22°20.7'S, 166°37.9'E, 30 m, 23 mayo 1984: 1 M 3.9 mm, 1 ov. F 3.8 mm (MNHN-IU-2013-13413). Surprises Atoll, SURPRISES, Stn CP1376, 18°27.2'S, 163°09.2'E, 39 m, 9 May 1999: 2 M 3.8–3.9 mm (MNHN-IU-2013-13430).—Stn CP1377, 18°27.4'S, 163°10.3'E, 36 m, 9 May 1999: 1 ov. F 2.4–2.8 mm (MNHN-IU-2013-13405).—Stn CP1378, 18°26.3'S, 163°08.2'E, 39 m, 9 May 1999: 1 ov. F 3.5 mm (MNHN-IU-2013-13401).—Stn CP1379, 18°25.2'S, 163°05.0'E, 46 m, 9 May 1999: 1 ov. F 3.2 mm (MNHN-IU-2013-13408).—Stn DW1381, 18°28.5'S, 163°04.0'E, 32–36 m, 9 May 1999: 2 M 3.0–3.2 mm (MNHN-IU-2013-13422).—Stn DW1382, 18°26.5'S, 163°05.9'E, 41–42 m, 9 May 1999: 1 M 2.4 mm, 1 ov. F 2.3 mm (MNHN-IU-2013-13403).—Stn CP1383, 18°24.0'S, 163°04.0'E, 44–49 m, 9 May 1999: 1 M 2.0 mm (MNHN-IU-2013-9873).—Stn CP1385, 18°24.9'S, 163°05.8'E, 45 m, 10 May 1999: 1 ov. F 3.7 mm (MNHN-IU-2013-13424).—Stn CP1386,

18°35.0'S, 163°06.0'E, 45 m, 10 May 1999: 2 M 2.0–3.8 mm, 3 ov. F 3.0–3.7 mm (MNHN-IU-2013-13397).—Stn CP1388, 18°23.8'S, 163°06.9'E, 40 m, 11 May 1999: 1 ov. F 3.0 mm (MNHN-IU-2013-13402); 1 M 3.5 mm (MNHN-IU-2013-13431).—Stn DW1394, 18°18.4'S, 163°03.1'E, 36 m, 13 May 1999: 1 M 3.0–3.2 mm (MNHN-IU-2013-13420).—Stn DW1397, 18°21.9'S, 163°03.9'E, 43 m, 13 May 1999: 4 M 2.4–2.8 mm, 3 ov. F 2.2–2.5 mm (MNHN-IU-2013-13416).

Fiji. SUVA 4, Stn DW7, 18°22.1'S, 178°02.5'E, 28–32 m, 24 September 1999: 2 M 2.0–2.2 mm (MNHN-IU-2013-13376).—Stn DW22, 18°27.0'S, 177°58.5'E, 32–36 m, 25 September 1999: 1 M 3.5 mm (MNHN-IU-2013-13375).

Etymology. *Polydora* (generous giver) is one of the children of Ocean in the Greek mythology. The name is considered as a substantive in apposition.

Description. *Carapace*: as long as broad; ridges with dense short setae and some scattered moderately long non-plumose setae; cervical groove nearly indistinct, laterally bifurcated; transverse ridges on gastric and anterior branchial regions interrupted into scale-like or concentric arcs; epigastric region with 2 (rarely 4) submedian spines; 1 parahepatic and 1 anterior branchial dorsal spine on each side; median protogastric scale-like ridge unarmed. Mid-transverse ridge laterally interrupted, preceded by cervical groove, followed by 4 transverse ridges. Lateral margins slightly convex medially, with 7 spines: 1 spine in front of and 6 spines behind anterior cervical groove; first anterolateral, additional spine ventral to between first and anterior branch of cervical groove; 3 spines on anterior branchial margin, and 3 spines on posterior branchial margin, last smaller than others. External orbital limit ending in small spine; infraorbital margin with 1 strong spine; 1 small frontal spine between lateral orbital spine and first anterolateral spine, absent in some specimens. Rostrum moderately elongate, triangular, 1.5–1.8 times as long as broad, 0.6–0.7 carapace length and breadth 0.3–0.4 that of carapace, nearly horizontal in lateral view; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface with small setiferous ridges; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, with sparse short setae, anterior margin sharply angular.

Sternum: Plastron slightly broader than long, lateral extremities gently divergent posteriorly.

Abdomen: Somite 2 with 2 transverse ridges on tergite, anterior ridge more distinctly elevated than posterior ridge; somites 3–4 with anterior ridge only; somites 5–6 smooth. Males with G1 and G2.

Eyes: Ocular peduncles 1.3–1.5 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 well-developed spines, distodorsal larger; distomesial spine somewhat smaller and more slender than distolateral. Ultimate article with tuft of fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine exceeding distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine slightly longer than distomesial and reaching midlength of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with extensor and flexor margins without distinct distal spine; crista dentata with 25 or 26 denticles. Merus longer than ischium; flexor margin with 2 strong spines of subequal size, proximal one located at midlength, distal one at terminal end; extensor margin ending in small spine or acute angle. Carpus unarmed.

P1: 3.2–3.4 times carapace length, somewhat depressed on palm, more so on fingers, and spinose, with numerous short uniramous setae and some long plumose setae. Merus 1.2–1.3 times length of carapace, 1.6–1.8 times as long as carpus, with spines arranged roughly in rows, mesial and distal spines prominent. Carpus 0.8–0.9 length of palm, 1.7–2.2 times as long as broad; dorsal surface with spines arranged roughly in longitudinal rows; mesial margin with 3 or 4 strong spines, distal second largest. Palm 1.6–2.7 times longer than broad, lateral and mesial margins subparallel; spines arranged roughly in rows, dorsolateral row of spines continued on to whole lateral margin of fixed finger. Fingers 0.8–0.9 length of palm, each finger with two rows of teeth distally spooned; movable finger with 1 proximal and 2 distal spines.

P2–4: Moderately slender, with long sparse plumose setae. P2 2.0–2.1 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.8 carapace length, 3.6–4.2 times as long as broad, 1.3–1.5 times longer than P2 propodus; P3 merus 3.2–3.8 times longer than broad, 1.3–1.4 times longer than P3 propodus; P4 merus 2.6 times as long as broad, 1.0–1.2 length of P4 propodus. Extensor margins with row of 8–10 proximally diminishing spines on P2–3, 3 or 4 on P4; lateral surface with 1–2 small spines on P4; flexolateral margin distally ending in 1 spine followed proximally by small spines and several tubercles or eminences. Carpi with 4 or 5 spines on extensor margin on P2–3, unarmed on P4; lateral surface with 4 or 5 spines subparalleling extensor margin on P2–4; flexor distal margin with small distal

spine. Propodi 4.5–5.7 times as long as broad; extensor margin with 4–6 spines on proximal half on P2 and P3, 1 or 2 proximal spines on P4; flexor margin with 5 or 6 slender movable spines. Dactyli distally ending in well-curved strong spine, 0.5–0.6 length of propodi; flexor margin with 6 proximally diminishing teeth.

Epipods on P1–3.

Coloration. Base color brownish to reddish. Some whitish flecks on carapace and abdomen, sometimes obsolescent. Ridges on carapace reddish. P1 with white bands on distal part of merus, carpus and palm, and base of fingers; additional white band on merus; tips of fingers white; spines reddish. P2–4 with 2 white bands on merus, 1 band on distal part of carpus and base of dactylus.

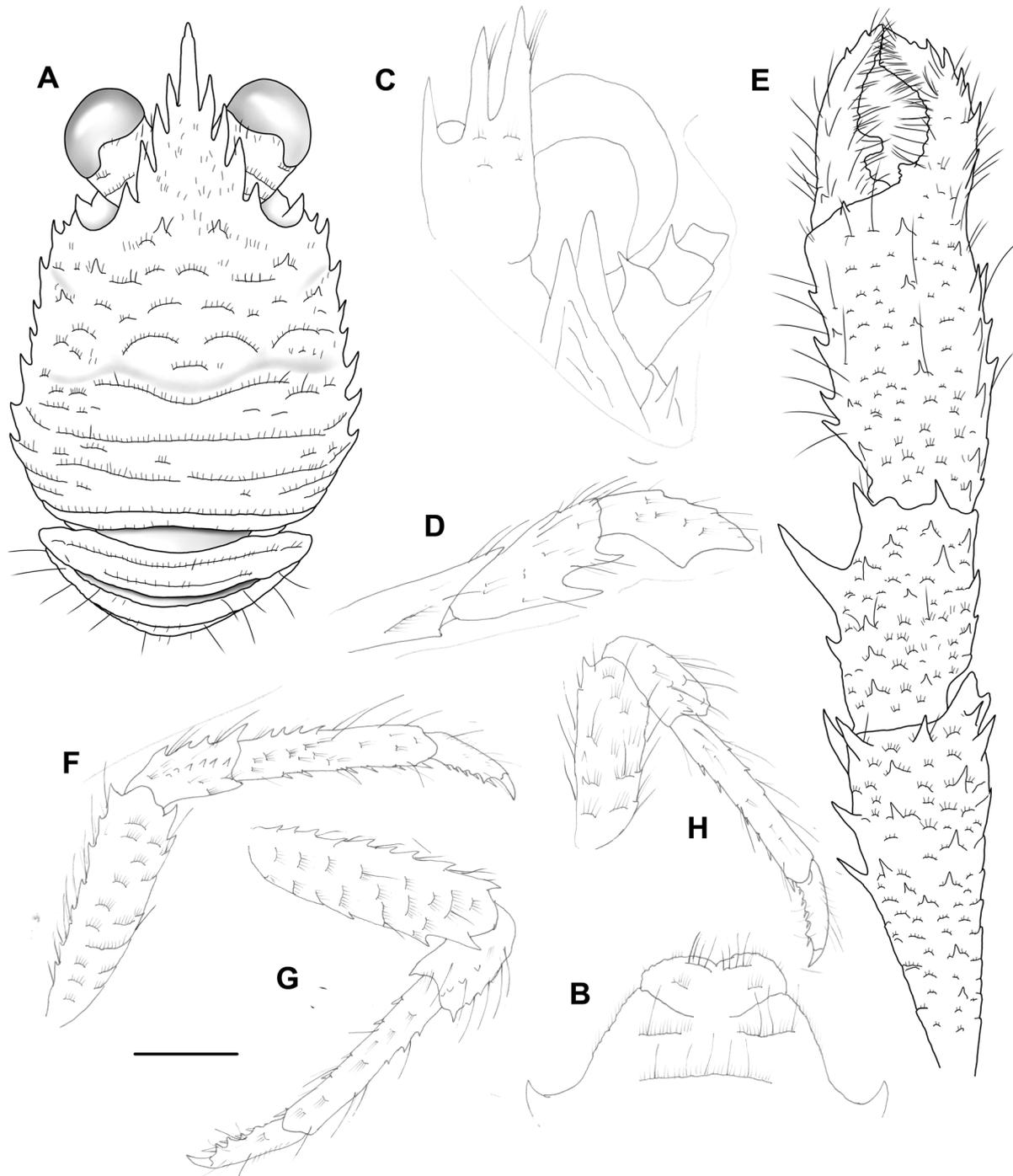


FIGURE 87. *Galathea polydora* n. sp., holotype, male, 3.4 mm, New Caledonia (MNHN-IU-2013-13377). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Remarks. *Galathea polydora* resembles *G. peitho* **n. sp.** from Japan to Australia and *G. aculeata* Haswell, 1882 from Queensland. The three species have scale-like ridges on the gastric region of the carapace, epipods on P1–3, at least one dorsal spine on the anterior branchial region. *Galathea polydora* is easily distinguished from the latter two species by the absence of a marginal spine between the anterolateral and the anteriormost branchial marginal spines, which is present in the latter two species.

The genetic divergences between *G. polydora* and *G. peitho* were 19.1% (COI) and 9.3% (16S rRNA). The samples from Fiji have a genetic divergence greater than 5.0%, but without clear morphological differences. However, the specimens are mostly broken and more material and genetic analyses are needed to establish their specific status.

Distribution. Indonesia (Moluccas, NE Marsegu Island), Vanuatu, New Caledonia, Chesterfield Islands, Fiji; 0–105 m, in corals, sponges, tubes of Eunicidae and algae.

***Galathea polyphemus* n. sp.**

(Figs 88, 119H)

Galathea pilosa.—Poore *et al.*, 2011: 333, pl. 11E (color photo, Moorea).

Material examined. *Holotype*: French Polynesia, Society Islands. Moorea, outer reef slope, 12 October 2008: ov. F 4.0 mm (UF15464).

Paratypes: French Polynesia, Society Islands. Moorea, June–August 2006: 1 M 5.6 mm (UF13856).

French Polynesia, Society Islands. Moorea, outer reef slope, 12 October 2008: 1 M 4.4 mm (UF15414); 1 M 4.4 mm (UF15427); 1 M 3.4 mm (UF15455); 1 ov. F 4.0 mm (UF15463); 1 F 3.9 mm (UF18867).

Etymology. *Polyphemus*, one of the Cyclopes, was in love of the sea-nymph *Galathea*. The name is considered as a substantive in apposition.

Description. *Carapace*: Slightly broader than long; transverse ridges with dense short setae, and numerous long plumose setae, some iridescent, and denser on rostrum surface; cervical groove distinct, laterally bifurcated. Gastric region with some transverse ridges: 1 epigastric ridge medially interrupted, with 5–7 spines; 2 protogastric ridges, anterior ridge usually uninterrupted, medially convex, with minute parahepatic spine on each side, posterior ridge scale-like; 1 mesogastric ridge uninterrupted but not extending laterally to anteriormost of branchial marginal spines; 2 metogastric ridges, anterior ridge usually uninterrupted, not continuing laterally to anteriorbranchial ridges, posterior ridge moderately short. Hepatic region unarmed. Anterior branchial region with distinct ridges, 1 spine on each side. One post-cervical spine usually on each side. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, usually followed by 5 ridges before posterior ridge, 2 or 3 ridges uninterrupted. Lateral margins well convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, without spine ventral to between first and second; 3 spines on anterior branchial region, last small, and 2 spines on posterior branchial margin, last small and obsolescent in some specimens. Lateral limit of orbit unarmed; infraorbital margin with small spine. Rostrum truncate, as long as broad, length 0.6 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.15 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous small scale-like setose ridges; lateral margin with 4 deeply incised teeth, distal pair small.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin ending in spine.

Sternum: As long as broad, lateral extremities gently divergent posteriorly. Sternite 3 2.2 times as broad as long, with median knot bordering left and right lobes, each lateral margin with convex margin. Sternite 4 1.9 times longer and 3.6 times broader than sternite 3, 0.9 as long as broad; surface of sternites 4–7 with setiferous scale-like ridges.

Abdomen: Somites 2–4 each with 2 or 3 uninterrupted and 0–1 interrupted transverse ridges on tergite; somite 5 with 4 uninterrupted or interrupted ridges; somite 6 with 2 uninterrupted ridges. Males with G1 and G2.

Eyes: Ocular peduncles 1.1 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 4 well-developed distal spines, distodorsal larger, distomesial and distoventral spines smaller than others. Ultimate article with tuft of fine setae on distodorsal margin.

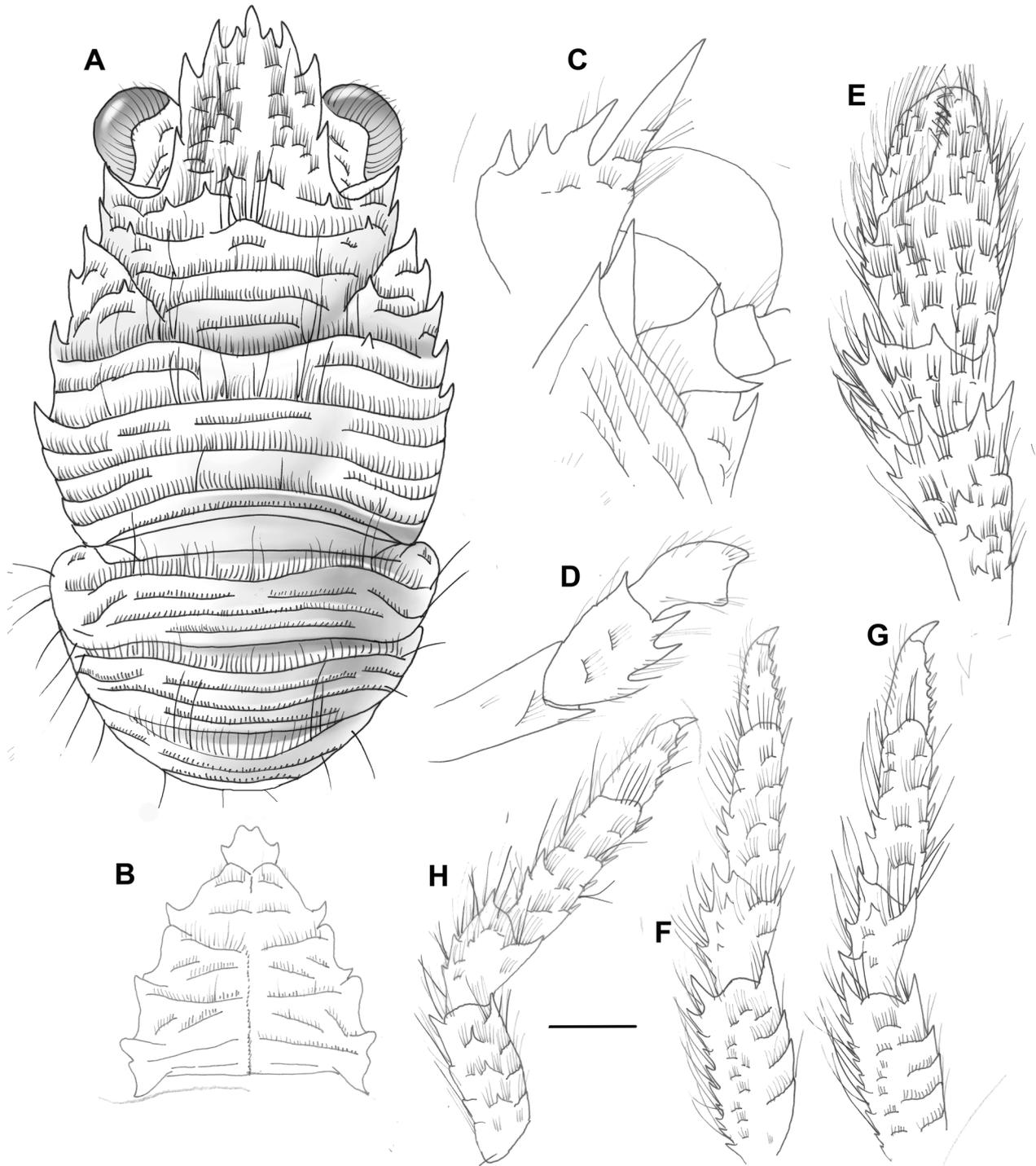


FIGURE 88. *Galathea polyphemus* n. sp., holotype, ovigerous female, 4.0 mm, French Polynesia (UF15464). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Antenna: Article 1 with ventral distomesial spine exceeding distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine slightly longer than distomesial, and reaching midlength of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with flexor margin ending in small spine, extensor margin ending in acute point; crista dentata with 24 or 25 denticles. Merus slightly shorter than ischium; flexor margin with 3 subequal spines; extensor margin with distal spine. Carpus unarmed.

P1: 1.7 times carapace length, with numerous scales with numerous long setae, some of them iridescent. Merus 0.7 times carapace length, 2.7 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.9 length of palm, 0.8 times as long as broad; dorsal surface with some spines; mesial margin with row of spines, distal stronger than others. Palm 0.8 times as long as broad, lateral and mesial margins slightly divergent; small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers 1.3 times as long as palm, each finger distally with two rows of teeth, spooned; fixed finger with some proximal spines along lateral margin; movable finger with 1 or 2 proximal spines.

P2–4: long and slender, with setose striae and numerous long plumose setae, some of the iridescent. *P2* 1.7 times carapace length. Meri successively shorter posteriorly (*P3* merus 0.9 length of *P3* merus, *P4* merus 0.9 length of *P3* merus); *P2* merus 0.7 carapace length, 2.6 times as long as broad, 1.5 times longer than *P2* propodus. Extensor margin with row of 9 or 10 proximally diminishing spines on *P2–3*, 1 distal spine on *P4*; ventral margins distally ending in strong spine, lateral sides with 2 or 3 small spines on *P4*. Carpi with 3 or 4 spines on extensor margin, distalmost smaller than distal second, sometimes absent; lateral surface with 3 or 4 small spines or acute granules sub-parallel to extensor margin; flexor distal margin with small spine. Propodi 2.5–2.9 times as long as broad; extensor margin with 2 or 3 proximal spines on *P2–3*, 0–1 spines on *P4*; flexor margin with 4–7 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.7–0.8 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one moderately prominent.

Epipods absent on pereopods.

Coloration. Base color of carapace and abdomen purple, with numerous white spots, each spot encircled by dark purple. Large yellow fleck on each hepatic, anterior branchial and lateral gastric regions; yellow fleck on each posterolateral branchial region. Rostrum yellowish. *P1* with numerous small red spots, usually on spines, merus bluish. *P2–4* with transverse bluish and yellowish bands.

Remarks. *Galathea polyphemus* n. sp. and *G. pilosa* De Man, 1888 are closely related. There are not clear morphological differences between the two species, but the living coloration provides the differentiation of them. In this new species, the base color of the carapace and abdomen is purple, whereas it is red in *G. pilosa*. In spite of the morphological proximity, the genetic divergences between the two are enough great to recognize them as distinct species (15.3 % for COI, 9.4 % for 16S rRNA). (Tab. 1).

Distribution. French Polynesia, Society Islands; depth not recorded.

Galathea poupini n. sp.

(Fig. 89)

Material examined. *Holotype*: French Polynesia. Society Islands. Moorea Island, 17.5044°S, 149.7584°W, 74–81 m, 30 January 2012: 1 ov. F 2.8 mm (UF33711).

Etymology. This species is dedicated to Joseph Poupin of the Ecole navale et groupe des écoles du Poulmic, Brest, for his enormous support to crustacean taxonomy.

Description. *Carapace*: As long as broad; ridges with dense short fine plumose setae, without long setae; cervical groove slightly distinct, laterally bifurcated; gastric and anterior branchial regions only with scale-like or in concentric arcs; 2 median epigastric spines. Posterior branchial region with 5 transverse ridges. Lateral margins convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, second small, accompanying another spine ventral to between first and second; 2 spines on anterior branchial margin, and 3 spines on posterior branchial margin. External orbital limit ending in small spine; infraorbital margin with 1 or 2 spines. Rostrum broad triangular, 1.5 times as long as broad, length 0.6 postorbital carapace length and breadth 0.4 that of carapace, nearly horizontal in lateral view; distance between distalmost lateral incisions 0.2 distance between proximalmost lateral incisions; dorsal surface with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, anterior margin blunt.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 with 2 or 3 transverse ridges, anterior ridge more distinctly elevated than posterior ridge; somites 5–6 smooth, with some scale-like ridges, nearly straight lobe on posteromedian margin.

Eyes: Ocular peduncles 1.4 times longer than broad, maximum corneal diameter 0.6 rostrum width.

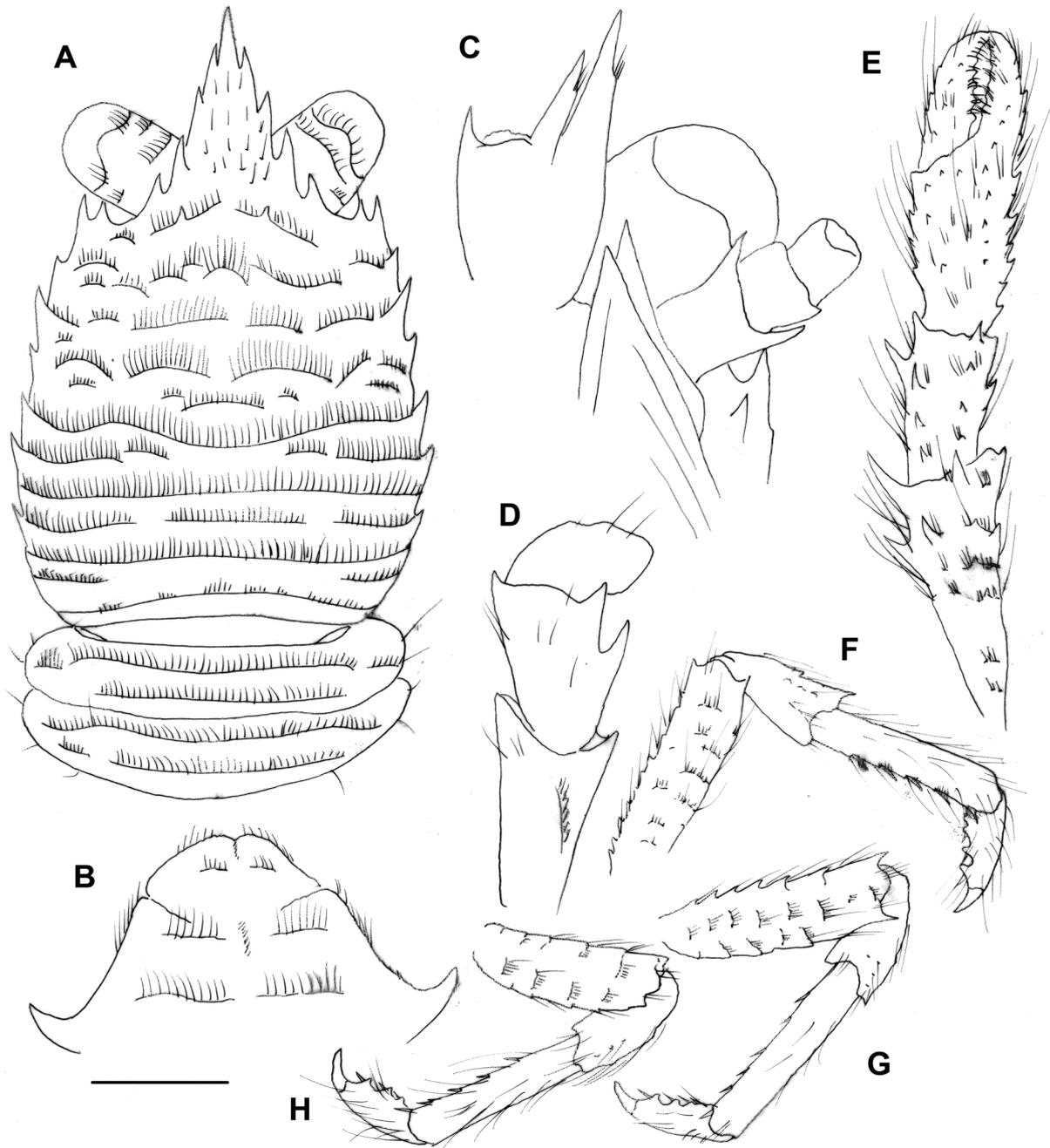


FIGURE 89. *Galathea poupini* n. sp., holotype, ovigerous female, 2.8 mm, French Polynesia (UF33711). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Antennule: Article 1 with 3 well-developed spines, distodorsal larger; distomesial spine small. Ultimate article with a few short fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine not reaching end of article 2. Article 2 with 2 distal spines, distolateral spine larger than distomesial, overreaching midlength of article 3. Articles 3–4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor and flexor margins ending in spine; crista dentata with 18 denticles. Merus equally long as ischium; flexor margin with 2 subequal spines; extensor margin with small distal spine. Carpus unarmed.

P1: 1.7 times carapace length, relatively slender, somewhat depressed on palm, more so on fingers. Merus as

long as carapace, 1.5 times as long as carpus, with spines arranged roughly in rows, distal spines prominent. Carpus as long as palm, twice longer than broad; dorsal surface with small spines arranged roughly in longitudinal rows; mesial margin with 2 strong spines. Palm 1.5 times longer than broad, lateral and mesial margins subparallel; spines arranged roughly in rows; dorsolateral row continuing on to lateral margin of fixed finger. Fingers as long as palm, each finger distally with two rows of teeth and spooned; movable finger with row of dorsomesial spines.

P2–4: moderately slender, with setose striae and sparse plumose setae. *P2* 1.6 times carapace length. Meri successively shorter posteriorly (*P3* merus 0.9 length of *P3* merus, *P4* merus 0.8 length of *P3* merus); *P2* merus 0.6 carapace length, 3.6 times as long as broad, 1.3 times longer than *P2* propodus. Extensor margin with row of 8–10 proximally diminishing spines on *P2–3*, 1 small distal spine on *P4*; ventral margins distally ending in strong spine followed proximally by 1 or 2 spines and several eminences, lateral sides with 1 small spine on *P4*. Carpi with 2 spines on extensor margin on *P2*; unarmed on *P3–4*; lateral surface with 2 or 3 spines or acute granules subparalleling extensor margin; flexor distal margin blunt. Propodi 4.0–4.3 times as long as broad; extensor margins unarmed; flexor margin with 5 or 6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods on *P1–2*.

Remarks. The new species belongs to the group of species characterized by scale-like ridges on the gastric region and the absence of dorsal spines on the branchial regions. However, *G. poupini* is easily differentiated from the other closely related species (e.g. *G. submagnifica* Laurie, 1926, *G. waiora* n. sp.) by the presence of epipods on *P1* and *2*, instead of *P1* only in the other species.

Distribution. French Polynesia, Moorea Island; 74–81 m.

***Galathea providentia* Laurie, 1926**

(Figs 90, 119I)

Galathea providentia Laurie, 1926: 125, pl. 8, figs 1–4 (type locality: Providence, 92 m, type no longer extant).

Galathea ternatensis.—Baba, 1990: 960 (Madagascar, 25–115 m).—Tirmizi & Javed, 1993: 83, fig. 37 (stn AB43-63, AB-22A, and Mozambique Channel, 62–65 m).—Macpherson & Cleva, 2010: 63, color figs 3I, J (Madagascar, 24–25 m).—Poore *et al.*, 2011: 334, pl. 12D (color photo, Madagascar) (not *G. ternatensis* De Man, 1902).

Material examined. Madagascar, near Nosy Be, 23 m, 30 September 1970: 4 M 2.3–4.2 mm, 7 ov. F 2.4–4.7 mm (MNHN-IU-2013-13786). Between Nosy Be and Nosy Tanikely, 13.4572°S, 48.2484°E, 24–25 m, 21 May 2008: 1 F 4.0 mm (UF12544); 1 M 2.9 mm (UF12548); 1 F 3.4 mm (UF14630). MIRIKY, Stn CP3204, 12°37.03'S, 48°30.3'E, 59–60 m, 29 June 2009: 1 M 4.3 mm (MNHN-IU-2010-1113); 1 M 4.8 mm (MNHN-IU-2010-1114).—Stn CP3205, 12°37.64'S, 48°25.99'E, 60–63 m, 29 June 2009: 1 ov. F 4.3 mm (MNHN-IU-2010-1117).—Stn CP3250, 15°22'S, 46°00'E, 493–750 m, 8 July 2009: 1 F 2.5 mm (MNHN-IU-2013-14303).—Stn CP3257, 15°47'S, 44°46'E, crash, no depth, 10 July 2009: 3 M 3.3–4.7 mm, 8 ov. F 2.7–4.6 mm, 3 F 2.8–4.3 mm (MNHN-IU-2010-1321 & 1325 & 1116-1117).—Stn CP3273, 15°29.86'S, 46°03.37'E, 26–34 m, 13 July 2009: 1 M 5.2 mm (MNHN-IU-2010-1020).—Stn CP3280, 14°54.64'S, 46°55.53'E, 57–87 m, 14 July 2009: 1 F 3.6 mm (MNHN-IU-2013-13787).—Stn CP3287, 14°33.69'S, 47°27.93'E, 48–54 m, 15 July 2009: 1 M 4.8 mm, 1 F 2.7 mm (MNHN-IU-2010-1324).—Stn CP3288, 14°31.9'S, 47°26.54'E, 46–54 m, 15 July 2009: 1 ov. F 3.5 mm (MNHN-IU-2013-13788). ATIMO VATAE, Stn CP3512, 25°15'S, 47°17'E, 140–144 m, 29 April 2010: 4 M 3.5–3.7 mm, 1 ov. F 3.8 mm (MNHN-IU-2010-4022).—Stn DW3518, 24°50.7'S, 47°28.7'E, 99–101 m, 30 April 2010: 3 M 3.0–4.4 mm, 4 ov. F 3.0–3.6 mm, 1 F 3.1 mm (MNHN-IU-2013-13800).—Stn TB4, 25°02.1'S, 47°00.1'E, 11–12 m, 1 May 2010: 1 F 1.2 mm (MNHN-IU-2013-13795).—Stn DW3530, 24°35.9'S, 47°32.1'E, 80–86 m, 2 May 2010: 2 M 2.8–3.0 mm, 2 F 2.7–2.9 mm (MNHN-IU-2010-2732).—Stn DW3533, 24°42'S, 47°32'E, 187–209 m, 2 May 2010: 1 ov. F 3.7 mm (MNHN-IU-2013-13801).—Stn CP3538, 25°22.4'S, 47°02.8'E, 89–95 m, 3 May 2010: 1 F 3.6 mm (MNHN-IU-2013-13806).—Stn CP3539, 25°25'S, 47°03'E, 106–114 m, 3 May 2010: 1 F 3.2 mm (MNHN-IU-2013-13805).—Stn CP3545, 25°29'S, 46°42'E, 108–110 m, 4 May 2010: 1 M 3.4 mm, 1 ov. F 3.3 mm, 1 F 4.8 mm (MNHN-IU-2013-13809).—Stn CP3546, 25°22.7'S, 46°42.5'E, 84–85 m, 4 May 2010: 4 M 2.7–3.5 mm, 3 F 3.0–3.9 mm (MNHN-IU-2013-13808).—Stn CP3547, 25°18.0'S, 46°40.3'E, 69–70 m, 4 May 2010: 12 M 2.7–4.4 mm, 11 ov. F 3.0–3.5 mm, 10 F 3.6 mm (MNHN-IU-2010-2731); 1 M 3.0 mm (MNHN-IU-2013-13796); 1 M 4.2 mm (MNHN-IU-2013-13797); 1 F 3.2 mm (MNHN-IU-2013-13798); 1 ov. F 3.4 mm

(MNHN-IU-2013-13799).—Stn CP3572, 25°11.7'S, 47°12.5'E, 75–77 m, 8 May 2010: 9 M 2.7–3.6 mm, 2 ov. F 2.4–4.5 mm, 6 F 1.9–3.0 mm (MNHN-IU-2010-2746); 1 F 3.0 mm (MNHN-IU-2013-13802); 1 M 3.5 mm (MNHN-IU-2013-13803).—Stn CP3579, 25°54.5'S, 45°33.2'E, 65–66 m, 9 May 2010: 1 M 2.5 mm, 1 ov. F 3.4 mm (MNHN-IU-2010-3945).—Stn CP3620, 25°47'S, 46°02'E, 133–178 m, 15 May 2010: 1 M 3.0 mm, 1 ov. F 3.5 mm (MNHN-IU-2013-13804).—Stn CP3624, 25°38.1'S, 45°57.0'E, 63 m, 15 May 2010: 3 M 2.3–3.7 mm, 3 ov. F 2.6–3.7 mm (MNHN-IU-2013-13807).

La Réunion. MD32, Stn CP43, 21°20.7'S, 55°26.9'E, 73–77 m, 18 August 1982: 10 M 2.8–3.6 mm, 13 ov. F 2.7–3.6 mm, 3 F 2.7–2.8 mm (MNHN-IU-2013-13915).—CP55, 21°05.3'S, 55°12.5'E, 97–130 m, 22 August 1982: 1 M 2.6 mm (MNHN-IU-2013-13912).—Stn CP127, 20°52'S, 55°37.1'E, 92 m, 2 September 1982: 13 M 2.9–4.0 mm, 12 ov. F 3.0–3.9 mm, 3 F 3.5–3.6 mm (MNHN-IU-2013-13913).—Stn CP172, 20°51.8'S, 55°37.7'E, 105–120 m, 8 September 1982: 1 M 2.1 mm (MNHN-IU-2013-13911).—Stn CP174, 20°51.8'S, 55°36.5'E, 78–85 m, 8 September 1982: 1 M 3.4 mm, 3 ov. F 3.5–3.9 mm, 1 F 3.0 mm (MNHN-IU-2013-13914).

Philippines. MUSORSTOM 2, Stn CP47, 13°33'N, 122°10'E, 81–84 m, 26 November 1980: 1 M 4.2 mm (MNHN-IU-2013-13791); 1 M 4.4 mm (MNHN-IU-2013-13792).

South China Sea. Macclesfield Bank, Stn 63, 15°37'2"N, 114°28'42"E, 63 m, 3 May 1893: 2 M 3.5–3.7 mm (NHMUK).—Stn 76, 15°55'25"N, 114°21'58"E, 87 m, 9 May 1893: 2 M 3.2–3.6 mm (NHMUK).—Stn 15, 15°37'N, 113°52'E, 68 m, May 1892: 1 F 4.0 mm (NHMUK).

Vanuatu. SANTO, Stn CP3549, 25°16.9'S, 46°31.3'E, 53–54 m, 4 May 2010: 1 M 2.5 mm, 1 ov. F 2.8 mm, 2 F 2.0 mm (MNHN-IU-2010-2735).

New Caledonia. Kenden Island, 20°39.8'S, 164°15.3'E, 49–63 m, 7 October 1993: 2 M 3.2–4.2 mm (MNHN-IU-2013-13792). Koumac, 20°39.8'S, 164°15.3'E, 55 m, 6 October 1993: 2 M 4.3–4.8 mm, 1 ov. F 4.0 mm (MNHN-IU-2013-13790); 1 M 4.4 mm (MNHN-IU-2013-13789). Koumac, 55–60 m, 7 October 1993: 1 M 3.5 mm, 1 ov. F 5.2 mm (MNHN-IU-2013-13794).

Fiji. MUSORSTOM 10, Stn DW1359, 17°49.7'S, 178°47.8'E, 183–188 m, 13 August 1998: 1 ov. F 5.0 mm (MNHN-IU-2013-13917).

Description. *Carapace*: Slightly broader than long; transverse ridges with dense short setae, and with some scattered long non plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with transverse ridges: 1 epigastric ridge unarmed, uninterrupted, medially convex; 2 protogastric ridges, anterior one medially interrupted, sometimes with minute parahepatic spine on each side, posterior ridge short; 1 mesogastric ridge medially interrupted and not extending laterally to anteriormost of branchial marginal spines; 2 metagastric ridges, anterior one uninterrupted or medially interrupted, not continuing laterally to anteriorbranchial ridges, posterior ridge short. Hepatic region with small spine near first lateral (anterolateral) spine. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 5 or 6 ridges, 0–3 of them uninterrupted. Lateral margins well convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second, small, at midlength between anterolateral spine and anteriormost spine of branchial margin, with small spine ventral to between first and second; 2 spines on anterior branchial region, last small, and 3 spines on posterior branchial margin. Small spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum 1.8–1.9 times as long as broad, length 0.7–0.8 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous small scale-like setose ridges; lateral margin with 4 deeply incised teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly. *Abdomen*: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somites 5 and 6 each with 2 scale-like ridges. Males with G1 and G2.

Eyes: Ocular peduncles 1.6–1.7 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distoventral spine slightly smaller than others. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine barely reaching distal margin of article 2. Article 2 with 2 distal spines, distolateral spine longer than distomesial, and exceeding midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor margins ending in small spine, extensor margin ending in acute angle; crista dentata with 20–22 denticles. Merus as long as ischium; flexor margin with 2 strong subequal spines, sometimes 1 small spine between them; extensor margin ending in acute angle. Carpus unarmed.

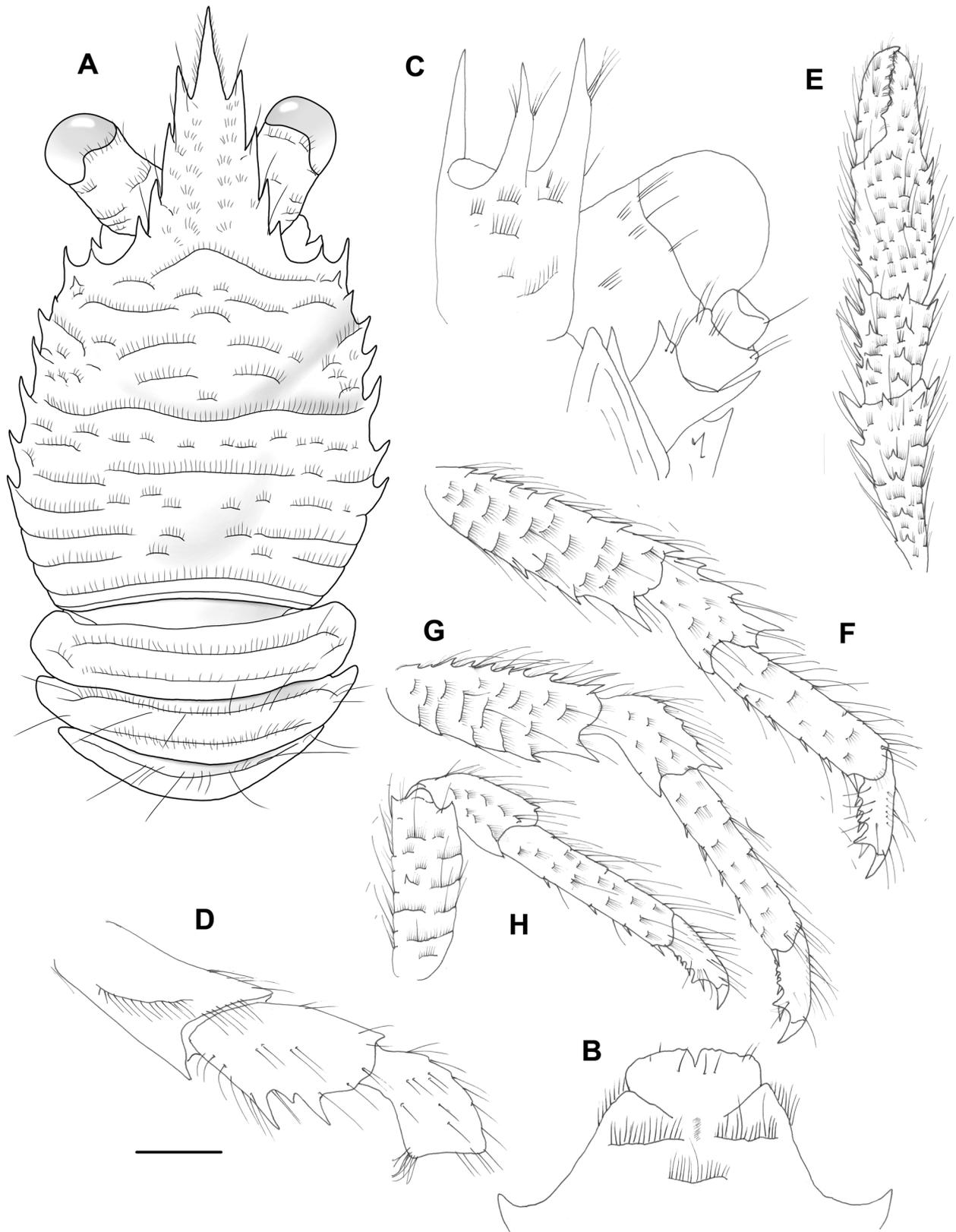


FIGURE 90. *Galathea providentia* Laurie, 1926, male, 4.2 mm, Madagascar (MNHN-IU-2013-13797). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

P1: 3.0–3.5 times carapace length, with numerous setiferous scales, and some scattered long non-plumose setae. Merus 1.1–1.2 times carapace length, 1.6–2.1 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.7–0.9 length of palm, 1.6–2.2 times as long as broad; dorsal surface with some small spines; mesial margin with row of spines, distal second stronger than others. Palm 1.5–2.3 times longer than broad, lateral and mesial margins subparallel; small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers 0.9–1.0 times palm length, each finger with two rows of teeth distally spooned; fingers unarmed.

P2–4: long and slender, with some setose striae and sparse long non-plumose setae. *P2* 1.9–2.2 times carapace length. Meri successively shorter posteriorly (*P3* merus 0.9 length of *P2* merus, *P4* merus 0.7–0.8 length of *P3* merus); *P2* merus 0.7–0.9 carapace length, 3.0–4.5 times as long as broad, 1.4–1.6 times longer than *P2* propodus. *P3* merus 2.5–3.5 times as long as broad, 1.0–1.4 times longer than *P3* propodus. *P4* merus 2.5–3.2 times as long as broad, 1.0–1.2 times longer than *P4* propodus. Extensor margin with row of 7–9 proximally diminishing spines on *P2–3*, 1 distal spine on *P4*; ventral margins distally ending in strong spine, lateral sides with 1–4 small spines on *P4*. Carpi with 3–5 spines on extensor margin on *P2–3*, 1 or 2 distal spines on *P4*, distalmost smaller than distal second and sometimes absent; lateral surface with 2–5 small spines or acute granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 3.5–5.0 (*P2*), 3.5–5.0 (*P3*), 3.8–5.0 (*P4*) times as long as broad; extensor margin with 0–3 minute proximal spines; flexor margin with 4–6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.4–0.6 that of propodi; flexor margin with 3–5 proximally diminishing teeth, terminal one prominent.

Epipods present only on *P1*.

Coloration. Base color translucent light orange or greenish. Long setae on carapace and abdomen reddish. *P1* with tips of fingers whitish. *P2–4* with distal white stripes on merus, carpus and propodus.

Remarks. *Galathea providentia* was originally described by Laurie (1926) from six specimens (including two males, one non-ovigerous female and three ovigerous females, one of the three ovigerous females was designated as holotype) collected in Providence Island (southwestern Indian Ocean). Unfortunately the types are lost. Based on the description and illustrations of Laurie (1926), however, we believe that the material from Madagascar matches very well with this species. *Galathea providentia* has been placed in the synonymy of *G. ternatensis* (Baba 1990; Baba *et al.* 2008), but, they can be easily differentiated by the extension of the anterior metagastric ridge. In *G. providentia*, that ridge does not extend laterally to the anterior branchial ridge, rather than extending to it in *G. ternatensis*. This character is constant in all specimens examined. Furthermore, the genetic divergences between the two species are 16.7% (COI) and 6.3% (16S rRNA) and (Tab. 2). However, some specimens exhibit some minor intraspecific morphological variation and genetic divergence. For instance, the rostrum is more slender in some specimens from the Philippines, and the hepatic spines can be minute in some individuals. Furthermore, some specimens from distant localities have a genetic divergence of 3.0–4.0% (COI). These differences can suggest the existence of cryptic species, recommending further studies in order to confirm their taxonomic status.

Galathea providentia is also close to *G. boisseliera* **n. sp.** from Philippines to New Caledonia, and *G. patriciae* **n. sp.** from Wallis and Futuna. The three species can be distinguished by the following characters:

- The length of the walking legs is different between *G. patriciae* and *G. boisseliera* and *G. providentia*. The *P2* merus is more than 4 times longer than broad in *G. patriciae* and less than 4 times in *G. boisseliera* and *G. providentia*. Furthermore, the *P2* propodus is equal or more than 5 times longer than broad in *G. patriciae*, and less than 5 times in *G. boisseliera* and *G. providentia*.
- The anterior protogastric ridge is usually medially uninterrupted in *G. boisseliera*, whereas it is usually medially interrupted in *G. providentia*.
- Two uninterrupted ridges after the mid-transverse ridge of the carapace in *G. boisseliera*, instead of at most one uninterrupted ridge in *G. providentia*.

The genetic divergences between *G. providentia* and *G. boisseliera* (no data are available for *G. patriciae*) are 7.4% (16S rRNA) and 14.2% (COI). The divergences are always larger among these species and other species of *Galathea* (Tab. 2).

Distribution. Providence, Madagascar, La Réunion, Philippines, South China Sea (Macclesfield Bank), Vanuatu, New Caledonia, Fiji, 11–209 m (the occurrence at Madagascar, Stn. 3250, 493–750 m, should be

considered with caution, because the depth record significantly departs from the known bathymetrical range of the species).

***Galathea psila* n. sp.**

(Fig. 91)

Material examined. *Holotype*: New Caledonia. CHALCAL 2, Stn CP18, 24°47.00'S, 168°09.43'E, 274 m, 27 October 1986: ov. F 3.4 mm (MNHN-IU-2013-8303).

Etymology. From the Greek, *psilos*, bare, smooth, in reference to the absence of spines on the dorsal carapace surface.

Description. *Carapace*: Slightly longer than broad; transverse ridges on dorsal surface with dense short setae, and some scattered long non-plumose iridescent setae; cervical groove distinct, laterally bifurcated. Gastric region unarmed, with 5 transverse ridges: 1 epigastric ridge, unarmed, medially interrupted; 1 protogastric ridge medially interrupted; 1 mesogastric ridge, scale-like and 1 median scale between protogastric and mesogastric ridges; 2 metogastric ridges, anterior ridge medially interrupted, not extending laterally to anteriorbranchial region, posterior ridge short. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 5 transverse ridges, 2 ridges uninterrupted. Lateral margins slightly convex medially, with 5 spines: 1 spine in front of and 4 spines behind anterior cervical groove; first anterolateral, well-developed, clearly behind level of lateral limit of orbit, 1 spine ventral to between first and anterior branch of cervical groove; 2 spines on anterior branchial region, and 2 spines on posterior branchial margin. Minute spine on limit of orbit; infraorbital margin with well-developed spine. Rostrum 1.5 times as long as broad, length 0.7 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface longitudinally concave, with numerous some small setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: 0.8 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somite 2 with 2 uninterrupted transverse ridges on tergite; somite 3–4 with anterior ridge only, and some scattered scales; somites 5–6 smooth.

Eyes: Ocular peduncles 1.4 times longer than broad, maximum corneal diameter 0.5 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger than others. Ultimate article twice longer than wide, with a few fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with strong distomesial spine reaching distal margin of article 2. Article 2 with 2 subequal distal spines, and barely reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor margins ending in small spine, extensor margin ending in acute angle; crista dentata with 22 denticles. Merus shorter than ischium; flexor margin with 2 strong subequal spines; extensor margin with distal spine. Carpus unarmed.

P1: missing.

P2–4: moderately short and slender, with some setose striae and some long plumose and non-plumose setae, some of them iridescent. P2 1.6 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.6 carapace length, 3 times as long as broad, 1.3 times longer than P2 propodus. P3 merus 2.9 times as long as broad, 1.2 times longer than P3 propodus. P4 merus 2.8 times as long as broad, 1.1 times longer than P4 propodus. Extensor margin with row of 8 or 9 proximally diminishing spines on P2–4; ventral margins distally ending in strong spine, lateral sides unarmed; ventromesial margin with terminal spine on P2–4. Carpi with 5–7 spines on extensor margin on P2–4; lateral surface with 4 or 5 small spines sub-parallel to extensor margin; flexor distal margin bluntly produced. Propodi 3.3 (P2), 4.0 (P3) 3.4 (P4) times as long as broad; extensor margin with 5–7 proximal spines; flexor margin with 4–6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 5 proximally diminishing teeth, terminal one prominent.

Epipods present on P1.

Remarks. The new species resembles *G. bimaculata* Miyake & Baba, 1966 from Japan to New Caledonia and Western Australia, from which it can be distinguished by the following characters:

- The extensor margin of the Mxp3 merus is unarmed in *G. bimaculata*, whereas one distal spine is always present in *G. psila*.
- The gastric region has all ridges scale-like or concentric arcs in *G. bimaculata*, whereas the proto gastric ridge is transverse and medially interrupted in *G. psila*.

The genetic divergence with *G. bimaculata* is 17.8% (COI) and 12.7% (16S rRNA) (Tab. 3).

Galathea psila is also related to *G. ploto* **n. sp.** from New Caledonia from which it can be distinguished by the absence of epigastric and hepatic spines in *G. psila*, whereas these spines are present in *G. ploto*. The genetic divergence with *G. ploto* is 18.8% (COI) and 13.1% (16S rRNA) (Tab. 3).

Distribution. New Caledonia, 274 m.

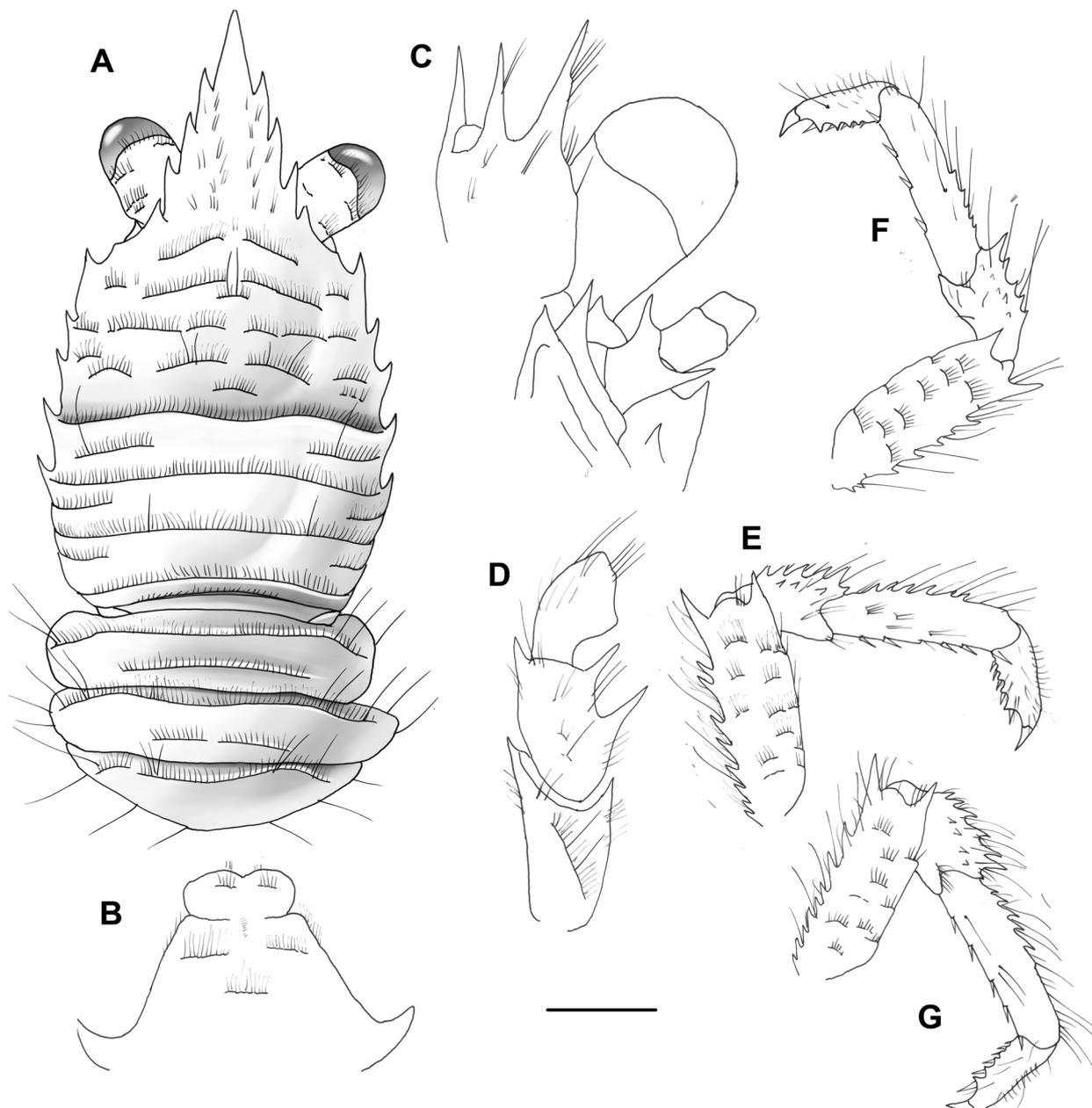


FIGURE 91. *Galathea psila* **n. sp.**, holotype, ovigerous female, 3.4 mm, New Caledonia (MNHN-IU-2013-8303). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P2, dorsal view; F, left P3, lateral view; G, right P4, lateral view. Scale: A, E, F, G = 1 mm; B–D = 0.5 mm.

***Galathea pubescens* Stimpson, 1858**

(Fig. 120A)

Galathea pubescens Stimpson, 1858: 90 (Hakodate and Amami-oshima Island, Japan, 46–60 m).—Stimpson 1907: 233 (E coast of Amami-oshima Island and Hakodate, Hokkaido, 46–60 m).—Bals, 1913b: 11, figs 11, 12 (Sagami Bay, 120–150 m).—Yokoya, 1933: 57 (W of Muroto-zaki, Japan, 234 m).—Makarov, 1938: 91, figs 32, 33 (no record).—Miyake in Miyake & Nakazawa, 1947: 732, fig. 2116 (no record).—Miyake, 1965: 634, fig. 1043 (no record).—Miyake, 1982: 145, pl. 49, fig. 3 (S of Kii Peninsula, 45 m).—Tirmizi, 1966: 187 (Zanzibar, 421–457 m).—Baba, 1969a: 48, fig. 5 (East China Sea, 120 m).—Kim, 1973: 176, fig. 20, pl. 65, figs. 6a, 6b (Korea).—Haig, 1974: 447 (Western Australia).—Miyake, 1982: 145, pl. 49, fig. 3 (southern Kii Peninsula, 45 m).—Baba, 1988: 76 (off N Mindanao, between Cebu and Bohol, between Cebu and Leyte, E coast of Mindoro, and South China Sea off SW Luzon, 198–494 m).—Baba, 1994: 4 (off Central Queensland, 296–303 m).—Wu *et al.*, 1998: 97, figs 14, 21A (Taiwan).—Komai, 2000: 353 (list).—Davie, 2002: 62 (list).—Baba, 2005: 83, fig. 30, 245 (key, synonymies, Japan, Bali Sea, Kei Islands, Arafura Sea and New Caledonia, 137–450 m).—Baba *et al.*, 2008: 76 (compilation).—Baba *et al.*, 2009: 92, figs. 105–106 (Taiwan, 209–349 m).—Dong & Li, 2010: 17 (East and South China seas, 110–494 m).—Poore *et al.*, 2011: 333, pl. 11F (color photo, Philippines).

Not *Galathea pubescens*.—Baba, 1990: 956 (Madagascar, 150–350 m) (= *Galathea villosa* n. sp.).

Dubious identification:

Galathea pubescens.—Tirmizi & Javed, 1993: 72, fig. 31 (Durban, South Africa, 138 m).

Material examined. Indonesia. Kei Islands. KARUBAR, Stn DW49, 08°00'S, 132°59'E, 206–210 m, 29 October 1991: 1 M 3.8 mm, 1 F 3.5 mm (MNHN-IU-2013-15959).

Philippines. MUSORSTOM 1, Stn CP24, 14°00'N, 120°18'E, 189–209 m, 22 March 1976: 1 M 6.0 mm, 1 F 5.6 mm (MNHN-IU-2013-15971).—Stn CP25, 14°03'N, 120°20'E, 191–200 m, 22 March 1976: 1 ov. F 4.8 mm (MNHN-IU-2013-15972).—Stn CP32, 14°02'N, 120°18'E, 184–193 m, 23 March 1976: 1 M 3.7 mm (MNHN-IU-2013-15974).—Stn CP33, 13°59'N, 120°19'E, 187–197 m, 23 March 1976: 1 ov. F 6.0 mm (MNHN-IU-2013-15973).—Stn CP40, 13°57'N, 120°28'E, 265–287 m, 24 March 1976: 1 ov. F 6.4 mm (MNHN-IU-2013-15975).—Stn CP51, 13°49'S, 120°04'E, 170–200 m, 25 March 1976: 1 M 5.3 mm (MNHN-IU-2013-15976).—Stn CP61, 14°02'N, 120°18'E, 184–202 m, 27 March 1976: 1 M 4.2 mm (MNHN-IU-2013-15977). MUSORSTOM 2, Stn CP18, 14°00'N, 120°19'E, 188–195 m, 22 November 1980: 2 ov. F 4.9–6.7 mm (MNHN-IU-2013-15966).—Stn CP63, 14°07'N, 120°15'E, 215–230 m, 29 November 1980: 1 ov. F 5.9 mm (MNHN-IU-2013-15967).—Stn CP64, 14°01'N, 120°19'E, 191–195 m, 29 November 1980: 1 M 5.6 mm (MNHN-IU-2013-15968).—Stn CP68, 14°02'N, 120°19'E, 195–199 m, 29 November 1980: 1 ov. F 5.7 mm (MNHN-IU-2013-15969).—Stn CP72, 14°01'N, 120°19'E, 182–197 m, 30 November 1980: 1 M 4.9 mm (MNHN-IU-2013-15970). MUSORSTOM 3, Stn CP99, 14°01'N, 120°19'E, 196–204 m, 1 June 1985: 1 M 6.2 mm (MNHN-IU-2013-15962).—Stn CP103, 14°00'N, 120°18'E, 193–200 m, 1 June 1985: 1 M 5.4 mm, 1 ov. F 6.6 mm (MNHN-IU-2013-15963).—Stn CP111, 14°00'N, 120°17'E, 193–205 m, 2 June 1985: 1 ov. F 5.4 mm (MNHN-IU-2013-15965).—Stn CP125, 11°58'N, 121°28'E, 388–404 m, 4 June 1985: 1 ov. F 8.0 mm (MNHN-IU-2013-15947).—Stn CP138, 11°54'N, 122°15'E, 252–370 m, 6 June 1985: 1 F 5.5 mm (MNHN-IU-2013-15964).

Vanuatu. MUSORSTOM 8, Stn CP1039, 16°49.63'S, 168°30.20'E, 464–472 m, 30 September 1994: 1 M 5.3 mm (MNHN-IU-2013-15960).—Stn CP1090, 15°08.46'S, 167°17.94'E, 470–502 m, 6 October 1994: 1 M 6.2 mm (MNHN-IU-2013-15952). BOA 0, Stn CP2330, 15°41.779'S, 167°03.829'E, 295–890 m, 18 November 2004: 1 ov. F 6.3 mm (MNHN-IU-2013-15958). SANTO, Stn AT18, 15°41.3'S, 167°02.6'E, 321–336 m, 21 September 2006: 1 ov. F 5.9 mm (MNHN-IU-2013-15951).—Stn AT27, 15°22.4'S, 167°15.4'E, 341–347 m, 23 September 2006: 1 M 5.7–6.2 mm, 1 F 6.0 mm (MNHN-IU-2013-15949); 1 M 6.2 mm (MNHN-IU-2013-15948).—Stn AT28, 15°23.6'S, 167°16.1'E, 342–350 m, 23 September 2006: 1 ov. F 6.7 mm (MNHN-IU-2013-15950).

New Caledonia. MUSORSTOM 4, Stn CP241, 22°09.00'S, 167°12.20'E, 470–480 m, 3 October 1985: 2 M 4.3–5.4 mm (MNHN-IU-2013-15961). BATHUS 1, Stn CP670, 20°54'S, 165°53'E, 394–397 m, 14 March 1993: 1 ov. F 4.3 mm (MNHN-IU-2013-15955).—Stn DW687, 20°34'S, 165°07'E, 408–440 m, 16 March 1993: 1 ov. F 3.9 mm (MNHN-IU-2013-15956). BATHUS 4, Stn CP930, 18°51.36'S, 163°23.63'E, 520–530 m, 7 August 1994: 1 ov. F 6.4 mm (MNHN-IU-2013-15953).—Stn CP939, 18°58.18'S, 163°25.37'E, 304–320 m, 8 August 1994: 1 ov. F 6.5 mm (MNHN-IU-2013-15954).

Tonga. BORDAU 2, Stn CP1541, 21°15'S, 175°14'W, 319–333 m, 5 June 2000: 2 ov. F 3.8–4.2 mm (MNHN-IU-2013-15957).

Coloration. Base color translucent light pink or pink. Carapace and anterior half of abdomen orange, whitish

along lateral margin, with pale longitudinal stripe flanking midline. P1 orange, with tips of spines whitish (Baba *et al.*, 2009). The specimens photographed in Vanuatu do not have the longitudinal stripes.

Remarks. The present material agrees quite well with previous descriptions (see Baba *et al.* 2009 and references). The material from Madagascar and identified as *G. pubescens* (Baba 1990, see below) belongs to *G. villosa* **n. sp.** The specimens from South Africa (Tirmizi & Javed 1993) needs further study. *Galathea pubescens* is closely related with *G. caesariata* **n. sp.** from Papua New Guinea, Vanuatu and New Caledonia, *G. crinita* **n. sp.** from New Caledonia and Chesterfield Islands, *G. tagaloa* **n. sp.** from Fiji and Tonga, and *G. villosa* **n. sp.** from Madagascar, Mozambique, and Vanuatu (see Remarks of *G. tagaloa* and *G. villosa*).

The genetic divergences between *G. pubescens* and other species are always higher than 16.8% (COI) and 8.5%, (16S rRNA) (Tab. 2).

Distribution. Previous records from Japan to New Caledonia and off Central Queensland, 45–494 m. Present records from the Philippines, Indonesia (Kei Islands), Vanuatu, New Caledonia, and Tonga, 170–890 m.

***Galathea pubipes* n. sp.**

(Fig. 92)

Material examined. *Holotype:* New Caledonia. HALIPRO 1, Stn CP869, 21°14.84'S, 165°55.49'E, 450–490 m, 23 March 1994: 1 ov. F 7.8 mm (MNHN-IU-2013-15940).

Paratypes: New Caledonia. MUSORSTOM 4, Stn CP170, 18°57.00'S, 163°12.60'E, 485 m, 17 September 1985: 1 M 8.1 mm, 4 ov. F 5.8–7.3 mm (MNHN-IU-2013-15943); 1 ov. F 5.4 mm (MNHN-IU-2013-15944).—Stn CP195, 18°54.80'S, 163°22.20'E, 465 m, 19 September 1985: 1 ov. F 7.0 mm (MNHN-IU-2013-13943).—Stn CC201, 18°55.80'S, 163°13.80'E, 490 m, 20 September 1985: 1 ov. F 7.6 mm (MNHN-IU-2013-13945). HALIPRO 1, Stn CP869, 21°14.84'S, 165°55.49'E, 450–490 m, 23 March 1994: 1 ov. F 6.5 mm (MNHN-IU-2013-15941). BATHUS 4, Stn CP909, 18°57.64'S, 163°10.30'E, 516–558 m, 4 August 1994: 1 M 7.0 mm, 1 ov. F 8.7 mm (MNHN-IU-2013-15942).

Etymology. From the Latin *pubes*, pubescent, covered with down or fine short hair.

Description. *Carapace:* As long as broad; transverse ridges with dense short setae, without long setae (sometimes 1 or 2 on cardiac region); cervical groove distinct, laterally bifurcated; most ridges on gastric region interrupted, with numerous scattered scale-like ridges; epigastric region with 10–13 small spines; 2 small hepatic and 1–3 small parahaepatic spines on each side; anterior branchial region with scale-like ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 10 or 11 ridges, mostly interrupted. Lateral margins convex medially, with 9 or 10 spines: 2 spines in front of and 7 or 8 spines behind anterior cervical groove; first anterolateral, well-developed, slightly behind level of orbit, second small but distinct, located at midlength between first spine and anteriormost spine of branchial margin, with small 1 or 2 spines ventral to between first and second, sometimes 1 additional minute spine at base of second spine; 3 spines on anterior branchial margin, last small, and 4 or 5 spines on posterior branchial margin, last small. Small outer orbital spine; infraorbital margin with 2 or 3 spines. Rostrum triangular, twice longer than broad, length 0.7 that of, breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.35 distance between proximalmost lateral incisions; dorsal surface flatish, nearly horizontal in lateral view, with some uniramous setae; lateral margin with 4 moderately incised sharp teeth.

Pterygostomian flap rugose, with sparse short setae, anterior margin bluntly angular.

Sternum: About as long as broad; lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 each with 3 or 4 uninterrupted transverse ridges on tergite, anterior ridge slightly more elevated than posterior ridges; somite 4 with 2 ridges, posterior ridge medially interrupted; somites 5 and 6 each with 2 medially interrupted ridges, posteriormedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine smaller than others. Ultimate article with a few short fine setae on distodorsal margin.

Antenna: Article 1 with distomesial spine barely reaching midlength of article 2. Article 2 with 2 subequal distal spines, reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; crista dentata with 20–22 denticles. Merus slightly shorter than ischium; flexor margin with 2 spines, proximal clearly stronger than distal; extensor margin with 1 distinct distal spine. Carpus unarmed.

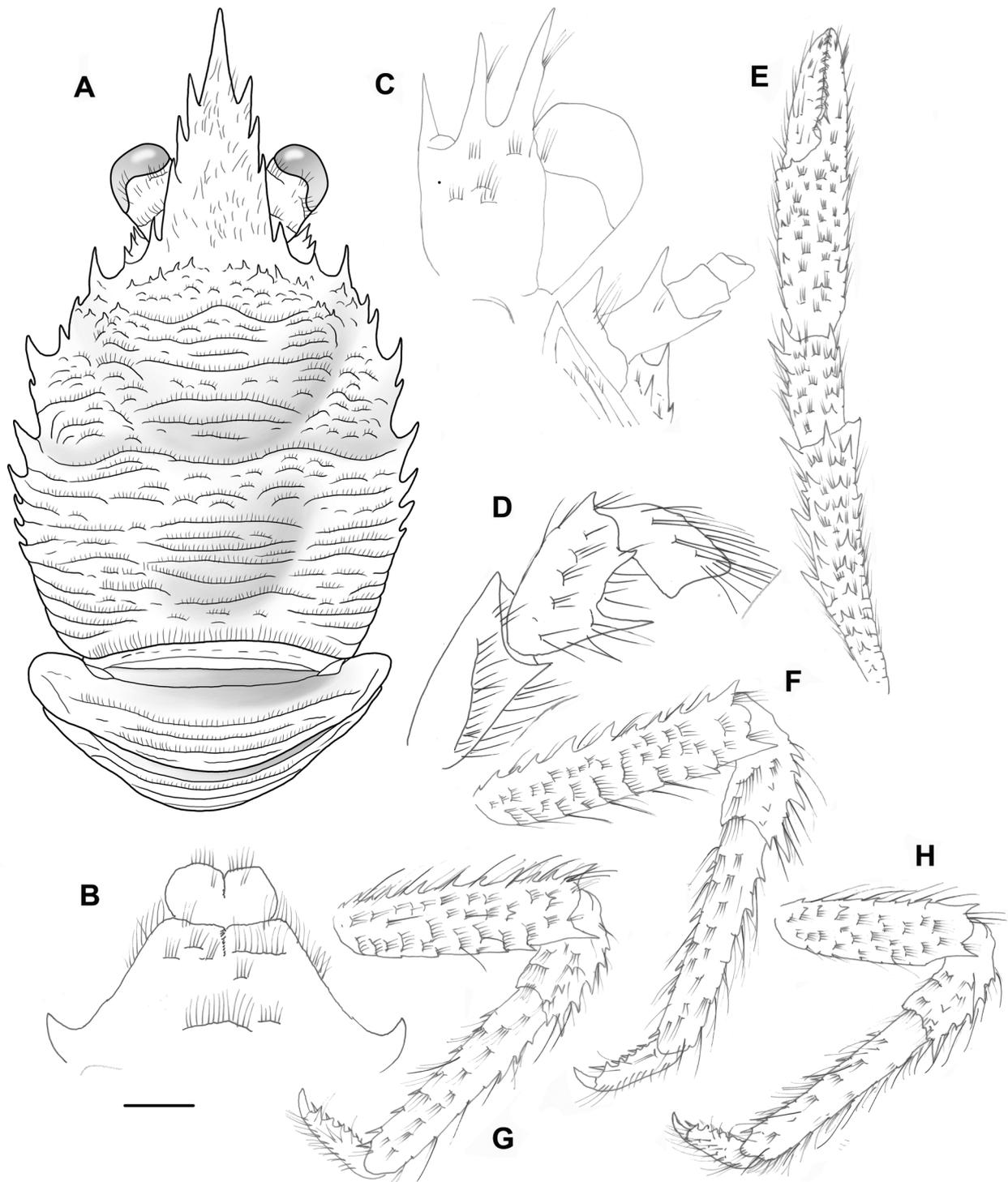


FIGURE 92. *Galathea pubipes* n. sp., holotype, ovigerous female, 7.8 mm, New Caledonia (MNHN-IU-2013-15940). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

P1: 3.0–3.2 times carapace length, with numerous finely setiferous scales, with some long thick setae. Merus 1.3 times length of carapace, 2.2 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.7 length of palm, 2.4 times as long as broad; dorsal surface with small spines arranged roughly in longitudinal rows; mesial row of well-developed spines. Palm 2.5 times longer than

broad, lateral and mesial margins with small spines arranged roughly in dorsolateral and dorsomesial rows, a few small spines scattered on dorsal side. Fingers as long as palm, each finger distally with two rows of teeth, spooned; mesial margin of movable finger and lateral margin of fixed finger unarmed.

P2–4: Moderately long and slender, with setose striae and long plumose setae. *P2* 1.8 times carapace length. Meri successively shorter posteriorly (*P3* merus 0.8 length of *P2* merus, *P4* merus 0.8 length of *P3* merus); *P2* merus 0.7 carapace length, 4.4 times as long as broad, 1.3 times longer than *P2* propodus; *P3* merus 3.5 times longer than broad, as long as *P3* propodus; *P4* merus 3.0 times as long as broad, 0.9 length of *P4* propodus. Extensor margins of meri with row of 9 or 10 proximally diminishing spines on *P2–3*, 3 spines on *P4*; flexor margins distally ending in strong spine followed proximally by 1 or 2 small spines and several tubercles or eminences; lateral sides with some minute spines on *P3–4*. Carpi with 6 or 7 spines on extensor margin, distalmost longer than distal second; lateral surface with 4 or 5 small spines and acute granules sub-parallel to extensor margin on *P2–4*; flexor distal margin acute. Propodi 4.8–5.3 times as long as broad; extensor margin with 2 or 3 small proximal spines on *P2–3*; flexor margin with 5–7 slender movable spines on *P2–4*. Dactyli distally ending in well-curved strong spine, length 0.4–0.5 that of propodi; flexor margin with 5 proximally diminishing teeth, terminal one prominent.

Epipods on *P1*.

Remarks. *Galathea pubipes* **n. sp.** is close to *G. pascualae* **n. sp.** from Indonesia to New Caledonia, but the two can be easily distinguished by the following characters:

- The carapace has numerous scale-like ridges on the gastric and anterior branchial regions in *G. pubipes*, whereas there are only a few scale-like ridges on these regions in *G. pascualae*.
- The posterior branchial margin has 10 ridges, mostly interrupted, in *G. pubipes*, instead of 6 ridges, some of them uninterrupted, in *G. pascualae*.
- The rostrum is flatish in *G. pubipes*, instead of slightly concave in *G. pascualae*.
- The *P1* carpus is short, being 2.4 times as long as broad in *G. pubipes*, whereas the *P1* carpus is elongate, being 3.3–3.6 times as long as broad in *G. pascualae*.

The genetic divergences between the two species are 16.1% (COI) and 10.0% (16S rRNA). The divergences among *G. pascualae*, *G. pubipes* and all other sequenced species are larger than 15% (COI) and 9% (16S rRNA) (Tab. 2).

Distribution. New Caledonia, 450–558 m.

***Galathea punctata* n. sp.**

(Figs 93, 120B)

Material examined. *Holotype*: Vanuatu. SANTO, Stn AT22, 15°32.3'S, 167°16.0'E, 180–227 m, 22 September 2006: 1 M 4.9 mm (MNHN-IU-2013-8460).

Paratypes: Philippines. MUSORSTOM 3, Stn CP124, 12°03'N, 121°35'E, 120–123 m, 4 June 1985: 1 M 4.4 mm (MNHN-IU-2013-13951).

Indonesia. Makassar Strait. CORINDON, Stn DR258, 1°56.8'S, 119°17.3'E, 30 m, 6 November 1980: 1 F 2.7 mm (MNHN-IU-2013-8489).

Solomon Islands. SALOMON 2, no Stn number: 3 M 2.5–4.3 mm, 8 ov. F 2.7–4.0 mm (MNHN-IU-2013-15832).

Vanuatu. SANTO, Stn AT2, 15°32.5/32.8'S, 167°16.1/16.5'E, 160–175 m, 14 September 2006: 1 M 4.9 mm, 3 ov. F 4.8–5.5 mm, 1 F 4.6 mm (MNHN-IU-2013-15843), 1 M 6.2 mm, 1 ov. F 5.0 mm (MNHN-IU-2013-8491).—Stn AT4, 15°32.9–33.1'S, 167°13.3–13.7'E, 97–101 m, 15 September 2006: 1 ov. F 4.2 mm (MNHN-IU-2013-8484).—Stn AT5, 15°39.9'S, 167°03.8'E, 97–101 m, 15 September 2006: 1 ov. F 5.7 mm (MNHN-IU-2013-8478), 1 ov. F 5.0 mm, 1 F 4.5 mm (MNHN-IU-2013-8479).—Stn EP10, 15°38.0'S, 167°13.6'E, 45–101 m, 15 September 2006: 1 M 1.7 mm, 2 F 1.8–4.0 mm (MNHN-IU-2013-8468).—Stn EP15, 15°36.6–36.7'S, 167°01.7–02.1'E, 103–108 m, 16 September 2006: 1 M 2.5 mm (MNHN-IU-2013-8469).—Stn AT13, 15°27.8'S, 167°15.7'E, 146–153 m, 19 September 2006: 2 M 2.8–2.9 mm, 1 ov. F 4.8 mm (MNHN-IU-2013-8462).—Stn

AT14, 15°24'S, 167°13.5'E, 102–120 m, 19 September 2006: 1 M 3.7 mm, 2 ov. F 3.4–3.8 mm (MNHN-IU-2013-8465).—Stn AT20, 15°33.9'S, 167°15.1'E, 131–154 m, 22 September 2006: 2 M 3.8–5.1 mm, 2 ov. F 4.5–4.6 mm (MNHN-IU-2013-15836).—Stn AT22, 15°32.3'S, 167°16.0'E, 180–227 m, 22 September 2006: 2 M 4.3–4.7 mm, 2 ov. F 4.4–4.8 mm (MNHN-IU-2013-8488).—Stn AT29, 15°35.9/36.0'S, 167°01.3/01.6'E, 83–90 m, 25 September 2006: 1 F 4.4 mm (MNHN-IU-2013-8466).—Stn AT30, 15°36.7'S, 167°02.6'E, 83–120 m, 25 September 2006: 2 M 3.0–3.5 mm, 2 ov. F 3.6–4.5 mm (MNHN-IU-2013-15833).—Stn AT31, 15°37.3'S, 167°15.4'E, 83–120 m, 26 September 2006: 2 M 4.9–5.8 mm, 8 ov. F 4.8–5.5 mm (MNHN-IU-2013-15829).—Stn AT32, 15°36.0'S, 167°17.2'E, 176–233 m, 26 September 2006: 1 M 4.0 mm (MNHN-IU-2013-8480).—Stn AT34, 15°35.9'S, 167°17.1'E, 234–270 m, 23 September 2006: 1 F 5.2 mm (MNHN-IU-2013-8481).—Stn AT38, 15°21.4'S, 167°12.8'E, 29–58 m, 27 September 2006: 2 M 3.8–4.7 mm, 3 ov. F 4.2–4.4 mm (MNHN-IU-2013-8482).—Stn AT39, 15°22.4'S, 167°12.6'E, 57–81 m, 27 September 2006: 3 M 3.8–4.7 mm, 2 ov. F 3.5–4.4 mm, 1 F 3.6 mm (MNHN-IU-2013-8483).—Stn AT40, 15°23.4'S, 167°12.7'E, 81–94 m, 27 September 2006: 4 M 3.6–3.8 mm, 5 ov. F 3.6–4.7 mm (MNHN-IU-2013-15834).—Stn AT41, 15°36.7'S, 167°02.7'E, 88–118 m, 28 September 2006: 2 ov. F 3.7–5.2 mm (MNHN-IU-2013-8485).—Stn AT42, 15°37.5'S, 167°02.3'E, 112–148 m, 28 September 2006: 1 M 3.5 mm, 1 ov. F 2.8 mm (MNHN-IU-2013-8486).—Stn AT43, 15°36.4'S, 167°02.3'E, 84–105 m, 29 September 2006: 4 M 4.4–5.0 mm, 3 ov. F 4.0–4.8 mm, 1 F 2.7 mm (MNHN-IU-2013-15842).—Stn AT44, 15°36.5'S, 167°02.7'E, 86–118 m, 29 September 2006: 2 M 3.9–5.5 mm, 5 F 3.3–3.7 mm (MNHN-IU-2013-15826).—Stn AT45, 15°37.5'S, 167°02.7'E, 188–148 m, 29 September 2006: 3 ov. F 3.2–5.5 mm, 2 F 4.0–4.6 mm (MNHN-IU-2013-8463).—Stn AT50, 15°36.8'S, 167°14.1'E, 140–153 m, 30 September 2006: 10 M 2.4–5.6 mm, 12 ov. F 4.3–5.4 mm (MNHN-IU-2013-15830).—Stn AT51, 15°36.9'S, 167°16.0'E, 153–166 m, 30 September 2006: 1 ov. F 5.3 mm, 1 F 5.4 mm (MNHN-IU-2013-8477).—Stn AT53, 15°31.8'S, 167°13.6'E, 62–71 m, 2 October 2006: 2 F 3.4–3.8 mm (MNHN-IU-2013-8461).—Stn AT54, 15°32.1'S, 167°14.1'E, 68–79 m, 2 October 2006: 8 M 2.3–4.0 mm, 9 ov. F 3.4–5.2 mm (MNHN-IU-2013-15837).—Stn AT55, 15°36.2'S, 167°02.5'E, 80–82 m, 2 October 2006: 5 M 3.0–3.7 mm, 5 ov. F 3.8–4.6 mm (MNHN-IU-2013-8473).—Stn AT56, 15°36.1'S, 167°01.3'E, 98–105 m, 2 October 2006: 2 M 3.6–4.4 mm, 1 ov. F 3.8 mm (MNHN-IU-2013-8474), 1 M 4.0 mm (MNHN-IU-2013-13955).—Stn AT57, 15°36.3'S, 167°01.4'E, 106–126 m, 2 October 2006: 3 M 4.0–5.2 mm, 5 ov. F 4.6–5.5 mm (MNHN-IU-2013-15841), 1 ov. F 5.0 mm (MNHN-IU-2013-8492).—Stn FP49, 15°32.4'S, 167°12.7'E, 45–50 m, 3 October 2006: 1 M 3.7 mm, 1 ov. F 3.8 mm (MNHN-IU-2013-15831).—Stn EP27, 15°33'S, 167°16.0'E, 155 m, 7 October 2006: 1 M 2.8 mm, 1 F 2.4 mm (MNHN-IU-2013-8464).—Stn EP29, 15°38'S, 167°14.0'E, 91–110 m, 9 October 2006: 1 F 2.0 mm (MNHN-IU-2013-8467).—Stn AT75, 15°37.0–37.3'S, 167°09.2–09.6'E, 52–66 m, 10 October 2006: 2 M 4.5–5.2 mm, 2 ov. F 4.6–5.4 mm (MNHN-IU-2013-15835).—Stn AT76, 15°38.7'S, 167°03.6'E, 105–135 m, 10 October 2006: 4 M 3.5–5.7 mm, 2 ov. F 5.2–5.6 mm (MNHN-IU-2013-15839).—Stn AT78, 15°37.6'S, 167°02.5'E, 155–166 m, 10 October 2006: 1 M 6.0 mm, 1 ov. F 5.8 mm (MNHN-IU-2013-15840).—Stn AT84, 15°32.4'S, 167°14.3'E, 71–104 m, 12 October 2006: 1 M 4.2 mm, 1 ov. F 4.3 mm (MNHN-IU-2013-8475).—Stn AT85, 15°32.6'S, 167°15.7'E, 114–196 m, 12 October 2006: 2 M 3.8–4.0 mm, 1 ov. F 3.1 mm (MNHN-IU-2013-8476).—Stn AT86, 15°31.9'S, 167°16.2'E, 176–246 m, 12 October 2006: 1 ov. F 4.8 mm (MNHN-IU-2013-8472), 1 ov. F 4.7 mm (MNHN-IU-2013-8471).—Stn AT115, 15°33.9'S, 167°16.6'E, 152–158 m, 18 October 2006: 16 M 2.8–5.7 mm, 13 ov. F 4.4–5.1 mm (MNHN-IU-2013-15827).—Stn AT116, 15°32.9'S, 167°16.2'E, 153–196 m, 18 October 2006: 1 M 4.0–4.6 mm, 1 ov. F 4.5 mm (MNHN-IU-2013-15838), 1 M 4.0 mm (MNHN-IU-2013-8470).—Stn AT118, 15°36.0–36.5'S, 167°01.2–02.3'E, 71–122 m, 19 October 2006: 1 M 4.7 mm, 3 ov. F 3.2–4.6 mm (MNHN-IU-2013-8487).

New Caledonia. BATHUS 1, Stn CP667, 20°57'S, 165°34'E, 205–212 m, 14 March 1993: 1 ov. F 5.7 mm (MNHN-IU-2013-8490).—Stn CP668, 20°57'S, 165°34'E, 205–219 m, 14 March 1993: 3 M 3.9–5.7 m, 4 ov. F 4.2–5.0 mm (MNHN-IU-2013-15828), 1 M 5.0 mm (MNHN-IU-2013-8493).—Stn CP712, 21°44'S, 166°35'E, 210 m, 19 March 1993: 1 ov. F 5.6 mm (MNHN-IU-2013-15844).

Etymology. From the Latin, *puncta*, puncture, in reference to the blue dots on the body.

Description. *Carapace:* As long as broad; transverse ridges with dense short setae, without long plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with 7 transverse ridges, most of them interrupted: 1 epigastric ridge medially interrupted, with 2 median spines; 2 protogastric ridges, anterior ridge medially interrupted, without parahepatic spines, posterior one interrupted; 2 mesogastric ridges, anterior ridge not extending laterally to anterior branchial marginal spines; 2 metogastric ridges not extending laterally to anterior branchial ridges; some additional scales scattered on dorsal surface; 1 small hepatic spine near anterolateral margin

(absent in a few specimens). Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 6 ridges, 3 of them uninterrupted. Lateral margins well convex medially, with 9 spines: 2 spines in front of and 7 spines behind anterior cervical groove; first anterolateral, well-developed, at level of lateral limit of orbit; second, small, at midlength between anterolateral spine and anterior cervical groove, with accompanying spine ventral to between first and second; 3 spines on anterior branchial region, and 3 spines on posterior branchial margin. Small spine on lateral limit of orbit; infraorbital margin with 3–5 small spines. Rostrum spatulate, 1.5–1.7 as long as broad, length 0.5–0.6 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.30–0.35 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous setae; lateral margin straight, with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin bluntly angular.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–5 each with 4 uninterrupted transverse ridges on tergite; somite 6 each with 2 medially interrupted ridges. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 2 spines; well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine obsolescent; lateral margin with 0–3 minute spines. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine barely reaching distal margin of article 2. Article 2 with 2 distal spines, distolateral spine larger than distomesial and exceeding midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; extensor margin ending in acute angle; crista dentata with 18–20 denticles. Merus slightly shorter than ischium; flexor margin with 2 subequal spines; extensor margin unarmed or ending in small spine. Carpus unarmed, extensor margin rugose.

P1: 2.3–3.1 times carapace length, covered with finely setiferous scales, with scattered long plumosetae. Merus 1.0–1.2 times length of carapace, 2.0–2.3 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.6–0.8 length of palm, 1.7–1.8 times as long as broad; dorsal surface with some small spines; mesial margin with 2 or 3 welldeveloped spines. Palm 1.9–2.5 times longer than broad, lateral and mesial margins subparallel; a few small spines arranged roughly in dorsolateral and dorsomesial rows, a few small spines scattered on dorsal side. Fingers 0.5–0.6 length of palm, each finger distally with two rows of teeth, spooned; unarmed or with a few proximal spines on lateral margin of fixed finger.

P2–4: moderately slender, with setose striae and numerous long plumose setae. P2 1.6–1.7 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7–0.8 carapace length, 4.1–4.5 times as long as broad, 1.8–2.1 times longer than P2 propodus; P3 merus 3.7–4.3 times longer than broad, 1.5–1.6 times longer than P3 propodus; P4 merus 3.1 times as long as broad, 1.0–1.1 length of P4 propodus. Extensor margin of P2–3 meri with row of 9–13 proximally diminishing spines, and 4 or 5 spines on P4; ventral margins distally ending in strong spine followed proximally 0–2 spines and by several tubercles or eminences; lateral sides unarmed. Carpi with 5 or 6 spines on extensor margin on P2–4; lateral surface with 3 or 4 acute granules sub-parallelizing extensor margin on P2–4; flexor distal margin ending in acute angle. P2–4 propodi 3.7–4.7 times as long as broad; extensor margin unarmed; flexor margin with 5 or 6 slender movable spines on P2–4. Dactyli distally ending in well-curved strong spine, length 0.5 that of propodi; flexor margin with 5 proximally diminishing teeth, terminal one prominent.

Epipods on P1.

Coloration: Overall orange red; carapace with numerous blue spots; some specimens with light orange stripe in midline from whole rostrum posteriorly to abdominal somite 4; whitish band on distal part of P2–4 meri, propodi and dactyli.

Remarks. *Galathea punctata* is closely related to *G. hispida* Baba, 2005 from Kei Islands, *G. barbata* n. sp. from New Caledonia and Chesterfield Islands and *G. phalangis* n. sp. from Madagascar.

Galathea barbata can be easily differentiated from the other species by the presence of one parahepatic spine on each side, that are absent in *G. hispida*, *G. phalangis* and *G. punctata*.

Galathea punctata differs from *G. hispida* in the following characters:

- The rostrum is nearly truncate in *G. punctata*, instead of triangular in *G. hispida*.
- The flexor margin of the Mxp3 merus has the distal spine subequal to the proximal spine in *G. punctata*, whereas the distal spine is smaller than the proximal spine in *G. hispida*.

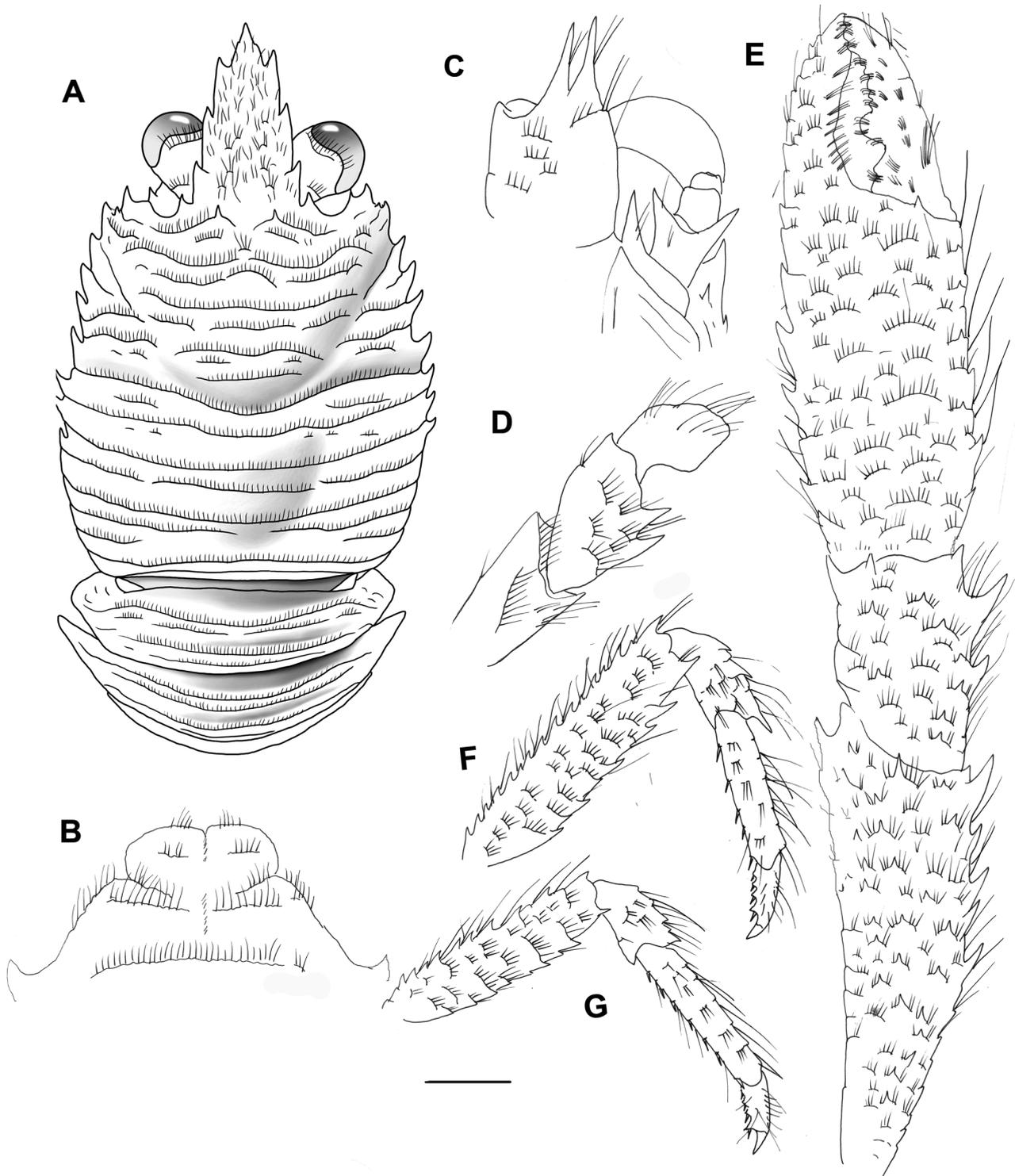


FIGURE 93. *Galathea punctata* n. sp., holotype, male, 4.9 mm, Vanuatu (MNHN-IU-2013-8460). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Galathea punctata is also easily differentiated from *G. phalangis* from Madagascar according to the following features:

- The rostrum is 2.0 times longer than broad in *G. phalangis*, whereas 1.5–1.7 times in *G. punctata*.
- The lateral margins of the rostrum are convex in *G. phalangis*, instead of straight in *G. punctata*.
- The lateral spines of the rostrum are small and shallowly incised in *G. phalangis*, whereas these spines are sharp and deeply incised in *G. punctata*.

The genetic divergences with other species are always higher than 10.3% (COI, the closest is *G. villosa* n. sp.) and 4.7% (16S eRNA, the closest is *G. inconspicua*) (Tab. 2).

Distribution. Philippines, Indonesia (Makassar Strait), Solomon Islands, Vanuatu, New Caledonia, 30–270 m.

***Galathea rangi* n.sp.**

(Fig. 94)

Material examined. *Holotype*: French Polynesia. Austral Islands. BENTHAUS, Stn DW1997, 22°29.14'S, 151°22.30'W, 700–1350 m, 23 November 2002: M 3.5 mm (MNHN-IU-2013-8304).

Etymology. In the Pacific mythology, *Rangi* is the Polynesian sky-god creator. The name is considered as a substantive in apposition.

Description. *Carapace*: as long as broad; transverse ridges with dense short setae, and some scattered long non-plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with 6 transverse ridges: 1 epigastric ridge uninterrupted, unarmed; 2 protogastric ridges, anterior extending laterally to second marginal spines, posterior ridge scale-like, median scale convex, with some long non-plumose setae; 1 mesogastric ridge uninterrupted but not extending laterally to anteriormost of branchial marginal spines; 2 metogastric uninterrupted ridges, not extending laterally to anterior branchial regions. One small hepatic spine near first marginal spine (anterolateral). Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges, 2 uninterrupted. Lateral margins well convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first spine on anterolateral angle, at same level of lateral limit of orbit; second small, at midlength between anterolateral spine and anterior cervical groove, with spine ventral to between first and second; 1 additional small spine between lateral limit of orbit and first anterolateral spine; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. Small spine on lateral limit of orbit, 1 minute frontal spine; infraorbital margin with 3 or 4 small spines. Rostrum 1.6 as long as broad, length 0.7 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous scale-like setose ridges; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin bluntly angular.

Sternum: 0.8 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 each with 3 uninterrupted or medially interrupted transverse ridges on tergite; somites 4–5 each with 2 uninterrupted ridges, somite 6 with 2 medially interrupted ridges, posteromedian margin transverse. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine smaller than others. Ultimate article twice longer than broad, with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine nearly reaching distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine larger than distomesial and nearly reaching end of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; extensor margin unarmed; crista dentata with 8 strong denticles. Merus shorter than ischium; flexor margin with 2 subequal strong spines; extensor margin with distal spine. Carpus unarmed.

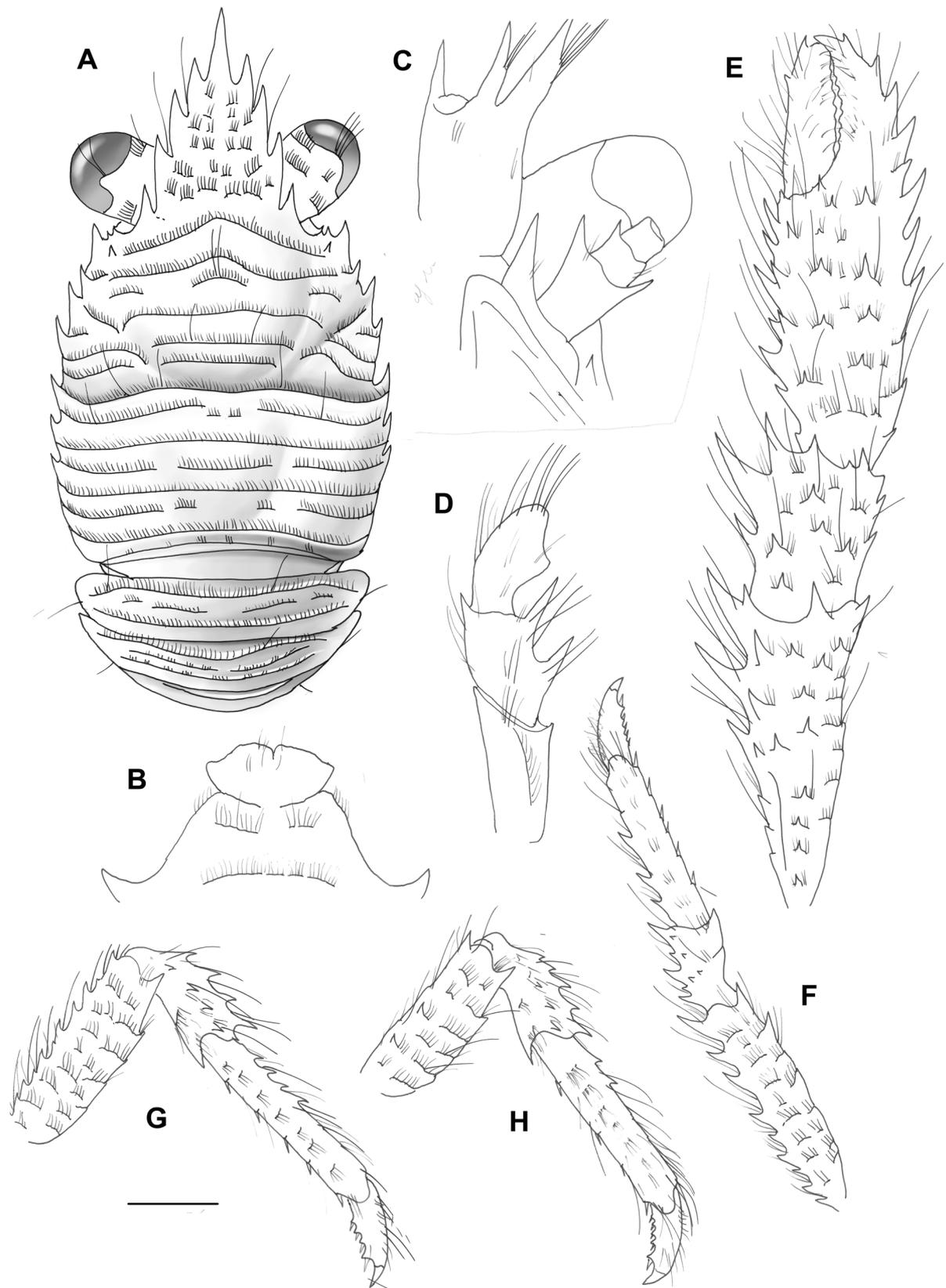


FIGURE 94. *Galathea rangi* n. sp., holotype, male, 3.5 mm, French Polynesia (MNHN-IU-2013-8304). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

P1: 2.7 times carapace length, covered with finely setiferous scales, with scattered long non-plumose setae. Merus as long as carapace, 2.5 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.5 length of palm, 1.3 times as long as broad; dorsal surface with some small spines; mesial margin with 3 spines (distal second strong). Palm twice longer than broad, lateral and mesial margins slightly convex; spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side; dorsolateral row continuing along entire fixed finger. Fingers 0.6 length of palm, each finger with 1 row of teeth, distally not spooned, prehensile distal edges close fitting with small blunt teeth; mesial margin of movable finger with distal spine.

P2–4: moderately slender, with setose striae and sparse long non-plumose setae. *P2* 1.8 times carapace length. Meri successively shorter posteriorly (*P3* merus 0.9 length of *P2* merus, *P4* merus 0.8 length of *P3* merus); *P2* merus 0.7 carapace length, 3.6 times as long as broad, 1.4 times longer than *P2* propodus; *P3* merus 3.2 times longer than broad, 1.1 times longer than *P3* propodus; *P4* merus 2.8 times as long as broad, 1.0–1.1 length of *P4* propodus. Extensor margin of *P2–3* meri with row of 9 or 10 proximally diminishing spines, and 1 distal spine on *P4*; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several eminences; lateral sides unarmed on *P2–3*, and with 2 or 3 small lateral spines on *P4*. Carpi with 5 or 6 spines on extensor margin on *P2–4*; lateral surface with 2 or 3 small spines sub-parallel to extensor margin on *P2–4*; flexor distal margin with spine. *P2–4* propodi 4.2–4.5 times as long as broad; extensor margin with 2–4 proximal spines on *P2–4*; flexor margin with 5 or 6 slender movable spines on *P2–4*. Dactyli subequal in length, distally ending in well-curved strong spine, length 0.4–0.5 that of propodi; flexor margin with 5 proximally diminishing teeth, terminal one prominent.

Epipods present on *P1–3*.

Remarks. *Galathea rangi* n. sp. is easily differentiated from the closest relative *G. leptochair* Baba & Fujita, 2008 from the Ryuku Islands, Japan, by the following features:

- The *P1* palm is more than 3 times as long as broad in *G. leptochair*, whereas twice in *G. rangi*.
- The crista dentata of the *Mxp3* ischium has 14–20 teeth in *G. leptochair* Baba & Fujita, 2008 instead of only eight teeth in *G. rangi*.

Distribution. French Polynesia, Austral Islands, 700–1350 m

***Galathea raventosae* Macpherson, 2012**

Galathea raventosae Macpherson, 2012: 418, figs. 4, 6A (New Caledonia, Vanuatu, 180–270 m).

Material examined. Philippines. MUSORSTOM 2, Stn DR33, 13°32'N, 121°07'E, 120–137 m, 24 November 1980: 1 F 3.7 mm (MNHN-IU-2013-13824). MUSORSTOM 3, Stn CP124, 12°03'N, 121°35'E, 120–123 m, 4 June 1985: 1 ov. F 4.2 mm (MNHN-IU-2013-13823); 6 ov. F 4.0–4.5 mm (MNHN-IU-2013-13986).

Solomon Islands. SALOMON 1, Stn CP1761, 8°46.535'S, 160°01.604'E, 191–290 m, 27 September 2001: 1 M 4.9 mm, 1 ov. F 4.0 mm (MNHN-IU-2013-13828).

Vanuatu. MUSORSTOM 8, Stn CP1017, 17°52.80'S, 168°26.20'E, 294–295 m, 27 September 1994: 1 M 3.6 mm (MNHN-IU-2013-13833).—Stn CP1018, 17°52.88'S, 168°25.08'E, 300–301 m, 27 September 1994: 1 M 3.2 mm (MNHN-IU-2013-13839).—Stn CP1077, 16°04.00'S, 167°06.09'E, 180–210 m, 5 October 1994: 1 M 3.3 mm (MNHN-IU-2013-13834).—Stn CP1078, 16°03.65'S, 167°26.18'E, 194–230 m, 5 October 1994: 1 M 3.4 mm, 2 ov. F 3.1–3.8 mm (MNHN-IU-2013-13835).—Stn CP1086, 15°36.58'S, 167°16.32'E, 182–215 m, 5 October 1994: 1 M 3.1 mm, 1 ov. F 4.6 mm (MNHN-IU-2013-13836).—Stn CP1131, 15°38.41'S, 167°03.52'E, 140–175 m, 11 October 1994: 1 F 3.8 mm (MNHN-IU-2013-13837).—Stn DW1100, 15°04.72'S, 167°09.99'E, 258–265 m, 7 October 1994: 1 M 3.8 mm (MNHN-IU-2013-13965). BOA 0, Stn CP2326, 15°39.83'S, 167°01.9'E, 260–313 m, 18 November 2004: 1 F 4.2 mm (MNHN-IU-2013-13829). SANTO, Stn AT2, 15°32.5–32.8'S, 167°16.1–16.5'E, 160–175 m, 14 September 2006: 1 ov. F 4.2 mm (MNHN-IU-2013-13840).—Stn AT9, 15°41.5'S, 167°01.3'E, 481 m, 17 September 2006: 1 M 5.3 mm (MNHN-IU-2013-13841).—Stn AT17, 15°39.9'S, 167°02.0'E, 267–270 m, 21 September 2006: 1 M 3.7 mm, 1 ov. F 3.3 mm (MNHN-IU-2013-13842).—Stn AT21, 15°32.9'S, 167°15.7'E, 154–190 m, 22 September 2006: 1 M 3.8 mm, 1 ov. F 4.3 mm (MNHN-IU-2013-13964).—Stn AT22, 15°32.3'S,

167°16.0'E, 180–227 m, 22 September 2006: 2 M 3.0–3.5 mm, 1 ov. F 3.5 mm (MNHN-IU-2013-13843); 1 M 3.5 mm (MNHN-IU-2013-13966).—Stn AT32, 15°36.0'S, 167°17.2'E, 176–233 m, 26 September 2006: 2 F 2.6–3.3 mm (MNHN-IU-2013-13845).—Stn AT72, 15°44.1'S, 167°03.3'E, 618–722 m, 7 October 2006: 1 M 4.6 mm (MNHN-IU-2013-13846).—Stn EP27, 15°33'S, 167°16.0'E, 155 m, 7 October 2006: 1 M 4.7 mm (MNHN-IU-2013-13844).—Stn AT86, 15°31.9'S, 167°16.2'E, 176–246 m, 12 October 2006: 1 M 5.2 mm, 2 ov. F 5.3–5.6 mm, 1 F 3.4 mm (MNHN-IU-2013-13847).—Stn AT116, 15°32.9'S, 167°16.2'E, 153–196 m, 18 October 2006: 1 M 3.7 mm (MNHN-IU-2013-13848).

New Caledonia. BATHUS 1, Stn CP667, 20°57'S, 165°34'E, 205–212 m, 14 March 1993: 2 ov. F 3.2–3.9 mm (MNHN-IU-2013-13831).—Stn CP712, 21°44'S, 166°35'E, 210 m, 19 March 1993: 8 M 3.0–5.2 mm, 3 ov. F 4.0–5.1 mm, 2 F 2.0–3.0 mm (MNHN-IU-2013-13830). HALIPRO 1, Stn CC855, 21°45.08'S, 166°37.25'E, 204–220 m, 20 March 1994: 2 M 3.0–4.1 mm (MNHN-IU-2013-13825); 1 M 3.8 mm (MNHN-IU-2013-13826); 1 ov. F 4.8 mm (MNHN-IU-2013-13827). BATHUS 4, Stn CP954, 21°44.13'S, 166°35.71'E, 250–255 m, 11 August 1994: 1 ov. F 4.7 mm (MNHN-IU-2013-13832). South Reef. Stn 390, 22°43'S, 167°02'E, 155 m, 22 January 1985: 1 ov. F 4.5 mm (MNHN-IU-2013-13839).

Remarks. The genetic divergences between *G. raventosae* and other species are always larger than 10.0% (COI) and 4.0% (16S rRNA). The closest relative is *G. balssi* (COI, 10.7% and 16S rRNA, 4.2%).

Distribution. Philippines, Solomon Islands, Vanuatu, New Caledonia; 120–722 m.

Galathea rhapsidia n. sp.

(Fig. 95)

Material examined. *Holotype*: Wallis and Futuna. MUSORSTOM 7, Stn DW610, 13°21.5'S, 176°08.9'W, 286 m, 26 May 1992: ov. F 5.3 mm (MNHN-IU-2013-8494).

Paratypes: Fiji. MUSORSTOM 10, Stn CP1348, 17°30.29'S, 178°39.63'E, 353–390 m, 11 August 1998: 1 M 5.8 mm (MNHN-IU-2013-8499).—Stn CP1389, 18°18.58'S, 178°04.73'E, 241–417 m, 19 August 1998: 1 ov. F 4.9 mm (MNHN-IU-2013-8495). BORDAU 1, Stn CP1407, 16°39.67'S, 179°38.69'E, 499–525 m, 25 February 1999: 1 F 5.6 mm (MNHN-IU-2013-8497).—Stn CP1446, 17°11.34'S, 178°42.03'W, 350–367 m, 3 March 1999: 2 ov. F 5.9–6.1 mm (MNHN-IU-2013-8502).

Tonga. BORDAU 2, Stn CP1511, 21°08'S, 175°22'W, 384–402 m, 31 May 2000: 1 ov. F 6.0 mm (MNHN-IU-2013-8498).—Stn CP1578, 19°42'S, 174°25'W, 329–331 m, 11 June 2000: 1 M 3.8 mm (MNHN-IU-2013-8496).

Etymology. From the Greek *rhapsis*, needle, in reference to the shape of the rostrum.

Description. *Carapace*: 1.2 times longer than broad; transverse ridges with dense short setae, without long setae; cervical groove distinct, laterally bifurcated. Gastric region with some transverse ridges: 1 epigastric ridge, scale-like, with 6–9 small spines; 2 protogastric ridges, anterior ridge uninterrupted, medially convex, with 1 parahepatic spine on each side, posterior uninterrupted; 2 mesogastric ridges, anterior ridge uninterrupted and not extending laterally to anteriormost of branchial marginal spines, posterior ridge short; 2 metogastric ridges, anterior ridge uninterrupted, not extending laterally to anteriorbranchial ridge, posterior ridge short. Hepatic region with 1 spine near anterolateral spine. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 6 transverse ridges, 1 ridge uninterrupted. Lateral margins subparallel, with 7 or 8 spines: 2 spines in front of and 5 or 6 spines behind anterior cervical groove; first anterolateral, well-developed, slightly behind level of lateral limit of orbit, 1 small spine at midlength between anterolateral spine and anterior cervical groove, with small spine ventral to between first and second; 2 or 3 small spines on anterior branchial region, and 2 or 3 spines on posterior branchial margin. Small spine on lateral limit of orbit, 1 small frontal spine between orbit and anterolateral spine; infraorbital margin with some small spines. Rostrum narrow, 3.2 times as long as broad, length 0.7 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface flatish, with numerous small scale-like setose ridges; lateral margin with 4 shallowly incised teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin acute; upper margin, near linea anomurica, with numerous small teeth.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted ridges, and some scattered short scales; somite 6 with 2 medially interrupted ridges. Males with G1 and G2.

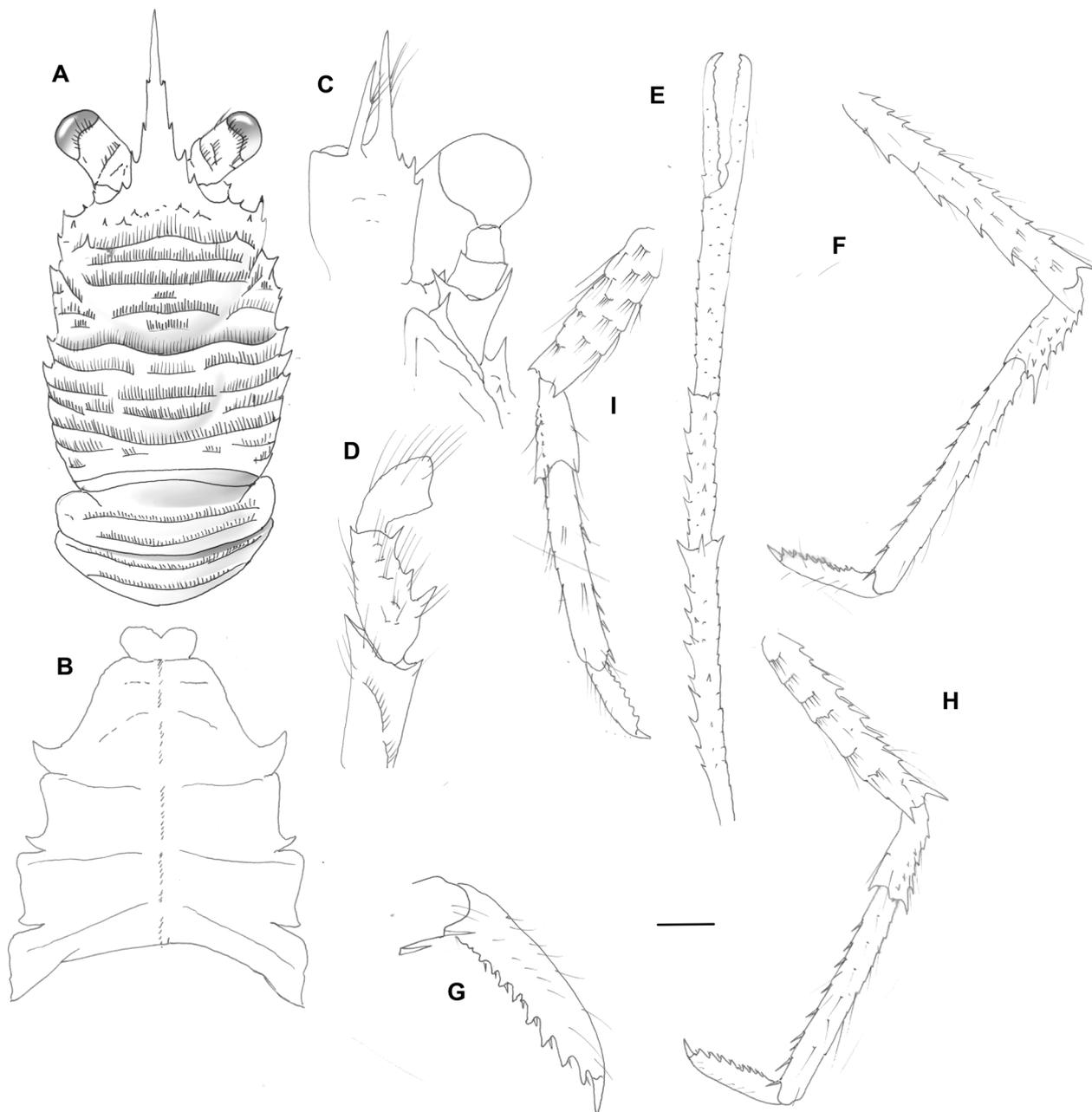


FIGURE 95. *Galathea rhapsidia* n. sp., holotype, ovigerous female, 5.3 mm, Wallis and Futuna (MNHN-IU-2013-8494). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, left P2 dactylus, lateral view; H, right P3, lateral view; I, right P4, lateral view. Scale: A, E, F, H, I = 1 mm; B–D, G = 0.5 mm.

Eyes: Ocular peduncles 1.8 times longer than broad, maximum corneal diameter 0.9 rostrum width.

Antennule: Article 1 with 2 well-developed distal spines, distodorsal larger, distomesial obsolescent; 3 small spines along lateral margin. Ultimate article with tuft of long fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine not reaching end of article 2. Article 2 with 2 distal spines, distolateral spine longer than distomesial, and barely reaching end of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor margins ending in small spine, extensor margin ending in acute angle; crista dentata with 20 or 21 denticles. Merus as long as ischium; flexor margin with 3 spines, proximal spine clearly longer than others, median spine smaller than distal; extensor margin ending in small spine. Carpus unarmed.

P1: 4.4–4.5 times carapace length, with numerous setiferous small scales, and some scattered long setae.

Merus 2.0 times carapace length, 1.8 times as long as carpus, with numerous spines, dorsomesial and distal spines stronger than others. Carpus 0.8 length of palm, 5.6 times as long as broad; dorsal surface with some small spines; mesial margin with row of spines. Palm 5.9 times longer than broad, lateral and mesial margins subparallel; small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers 0.7 times palm length, each finger distally with two rows of teeth, spooned; fingers unarmed.

P2–4: long and slender, with some setose striae and sparse long setae. P2 2.5 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus as long as carapace, 8.2 times as long as broad, 1.1 times longer than P2 propodus. P3 merus 5.7 times as long as broad, 1.0 times longer than P3 propodus. P4 merus 3.6 times as long as broad, 0.9 times longer than P4 propodus. Extensor margin with row of 10–12 proximally diminishing spines on P2–3, 4 or 5 small spines on P4; ventral margins distally ending in strong spine, lateral sides with row of small spines on P2–3. Carpi with 5–7 spines on extensor margin on P2–3; lateral surface with 5 or 6 small spines sub-parallel to extensor margin; flexor distal margin acute. Propodi 10.5 (P2), 8.0 (P3), 6.0 (P4) times as long as broad; extensor margin with 4 or 5 small proximal spines; flexor margin with 8 or 9 slender movable spines, distal two spines with another smaller spine mesial them. Dactyli distally ending in well-curved strong spine, length 0.5 that of propodi; flexor margin with 8 or 9 proximally diminishing teeth, ultimate and penultimate distal teeth usually subequal in size in P2.

Epipods present on P1.

Remarks. The new species is closely related to *G. inconspicua* Henderson, 1885 and other species, e.g. *G. perone* n. sp., *G. scolopia* n. sp., with extremely narrow rostrum and 2 well-developed distal spines on antennular article 1 (see Remarks of *G. inconspicua*).

Distribution. Fiji, Tonga, Wallis and Futuna; 286–525 m.

***Galathea robusta* Baba, 1990**

Galathea robusta Baba, 1990: 956, fig. 13 (Madagascar, 105–115 m).—Baba, 2005: 84, fig. 31, 245 (key, synonymies, Mauritius, 238 m).—Baba *et al.*, 2008: 76 (compilation).—Macpherson, 2012: 410 (comparative material).

Material examined. Madagascar. ATIMO VATAE. Stn CP3561, 25°38'S, 46°13'E, 128–133 m, 6 May 2010: 1 M 3.0 mm (MNHN-IU-2013-8421).

Reunion Island. MD32, Stn CP57, 21°04.5'S, 55°11'E, 210–227 m, 22 August 1982: 2 ov. F 3.0–4.4 mm (MNHN-IU-2013-8420).

Remarks. The specimens examined agree quite well with the holotype male (MNHN-Ga712) from Madagascar (Baba 1990). *Galathea robusta* resembles *G. sentosa* n. sp. from Wallis and Futuna (see Remarks for this latter species).

The genetic divergences with other species are always higher than 15.2% (COI, the closest is *G. psila* n. sp.) and 7.4% (16S rRNA, the closest is *G. cymo* n. sp.) (Tab. 3).

Distribution. Madagascar, La Réunion, Mauritius, 105–238 m.

***Galathea rubripina* n. sp.**

(Figs 96, 120C)

Material examined. *Holotype*: Papua New Guinea. PAPUA NIUGINI, Stn PD14, 05°12.3'S, 145°47.9'E, 10–15 m, 11 November 2012: 1 M 2.4 mm (MNHN-IU-2013-377).

Etymology. From the Latin *rubra*, red, and *spina*, thorn, in reference to the presence of some red spines in the rostrum and pereopods.

Description. *Carapace.* As long as broad; anterior cervical groove indistinct; ridges with numerous short setae, without long setae. Gastric region with some transverse ridges: 1 epigastric ridge, medially interrupted, with 2 small spines, 1 median scale-like ridge between epigastric and protogastric ridge; 1 protogastric ridge, medially interrupted, without parahepatic spines, and not extending laterally to carapace margin, 1 median scale-like ridge between protogastric and mesogastric ridge; 1 mesogastric ridge uninterrupted and not extending laterally to first branchial spine; 2 metagastric ridges, anterior ridge medially interrupted, not continuing laterally with anterior

branchial ridge, posterior ridge short. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 5 ridges. Lateral margins medially convex, with 5 spines: 1 spine in front of and 4 spines behind indistinct anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, without spine ventral to between first and cervical groove; 2 spines on anterior branchial region, and 2 spines on posterior branchial margin. External orbital limit ending in small spine; infra-orbital margin serrated. Rostrum broad triangular, 1.3 times as long as broad, length 0.6 that of, breadth 0.5 that of carapace; distance between distalmost lateral incisions 0.2 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with few scales; lateral margin with 4 sharp teeth.

Pterygostomian flap rugose, with spine on anterior ridge, anterior margin ending in well-developed spine.

Sternum: Slightly broader than long, lateral limits divergent posteriorly.

Abdomen: Somite 2 with 2 uninterrupted transverse ridges on tergite; somites 3–6 smooth, each with anterior ridge only; posteromedian margin of somite 6 slightly convex. Males with G1 and G2.

Eyes: Ocular peduncles as long as broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distomesial clearly smaller than others. Ultimate article with long tuft of setae on distodorsal margin.

Antenna: Article 1 with depressed ventral distomesial process exceeding distal margin of article 2. Article 2 with 2 subequal distal spines, exceeding midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor margin unarmed; crista dentata with 25 denticles. Merus subequal in length to ischium, with 2 spines on flexor margin, proximal one located at midlength, clearly longer than distal spine; extensor margin with small distal spine. Carpus unarmed.

P1. 3.1 times carapace length, with numerous short setae and some scattered long plumose setae on dorsal surface and along lateral and mesial margins of all articles. Merus 1.1 times carapace length, 1.5 times as long as carpus, with rows of spines, mesial and distal spines strong. Carpus 0.8 length of palm, 2.1 times longer than broad, lateral and mesial margins subparallel, dorsal surface with some well-developed spines; mesial surface with row of spines, with some strong spines; and row of small spines along lateral margin. Palm 2.5 times longer than broad, lateral and mesial margins subparallel and with row of spines; small spines roughly in rows on dorsal side; 2 lateral rows not continued on to lateral margin of fixed finger; mesial row not continuing on the mesial margin of movable finger. Fingers 0.5 times palm length, each finger distally with two rows of teeth, spooned.

P2–4: Relatively slender, moderately setose, sparsely with long setae on all articles. P2 1.7 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.6 carapace length, 3.0 times as long as broad, 1.4 times longer than P2 propodus; P3 merus 2.7 times as long as broad, 1.3 times length of P3 propodus; P4 merus 2.6 times as long as broad, 1.3 length of P4 propodus. Extensor margin of merus with row of 7 or 8 proximally diminishing spines on P2–3, 2 spines on P4; lateral surface unarmed; flexolateral margins with strong terminal spine and 1 or 2 additional spines on terminal half; flexomesial margins unarmed. Carpi with 4 or 5 spines on extensor margin on P2–3, 3 spines on P4; lateral surface with row of 2–4 small spines or acute granules paralleling extensor row; flexor distal margins with spine. Propodi 4 times as long as broad; extensor margin with 2 or 3 proximal spines; flexor margin with 3 or 4 movable spines. Dactyli subequal in length, 0.6–0.7 length of propodi, ending in incurved, strong, sharp spine; flexor margin with prominent triangular terminal tooth preceded by obsolescent 4 or 5 teeth.

Epipods present on P1–3.

Coloration. Base color whitish to orangish. Some dark orange spots scattered on carapace and abdomen. Tips of rostral spines red. P1 with whitish bands on distal part of merus, carpus, and palm; bluish flecks on distal part of palm and proximal part of fingers; finger tips whitish; spine tips red. P2–4 with orange and whitish bands.

Remarks. *Galathea rubrispina* n. sp. is closely related to *G. minima* n. sp. from Papua New Guinea from which it can be distinguished by the following characters:

- There are two spines on the anterior branchial margin in *G. rubrispina*, instead of three spines in *G. minima*.
- The gastric region has some scale-like ridges in *G. rubrispina*, but such scale-like ridges are absent in *G. minima*.
- The proximal spine on the flexor margin of the Mxp3 merus is much longer than the distal spine in *G. rubrispina*, whereas they are subequal or slightly unequal in *G. minima*.

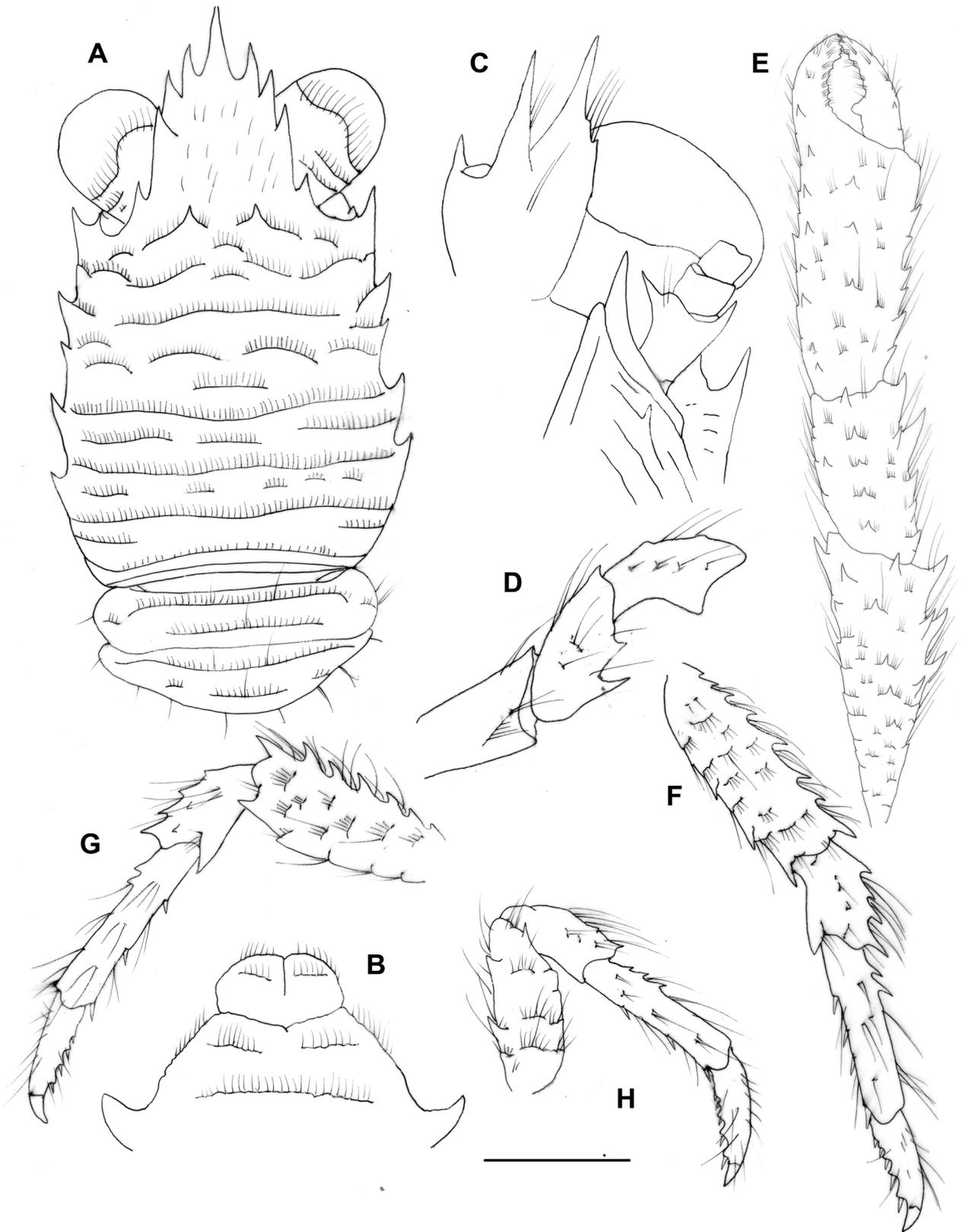


FIGURE 96. *Galathea rubrispina* n. sp., holotype, ovigerous female, 3.3 mm, Western Australia (J13344). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

No genetic data are available for *G. rubrispina*.

Distribution. Papua New Guinea, 10–15 m.

***Galathea rubromaculata* Miyake & Baba, 1967**

Galathea rubromaculata Miyake & Baba, 1967c: 236, figs 7, 8 (East China Sea, 32°24.8'N, 129°24.7'E, 173 m).—Baba, 1988: 77 (off N Mindanao, 333 m).—Baba, 2005: 245 (key, synonymies).—Baba *et al.*, 2008: 76 (compilation).—Poore *et al.*, 2011: 333, pl. 11G–H (color photo, Philippines).

Material examined. Philippines. MUSORSTOM 2, Stn DR45, 13°27'N, 122°18'E, 447–500 m, 26 November 1980: 1 ov. F 2.7 mm (MNHN-IU-2013-8310).

Remarks. No genetic data are available for this species.

Distribution. East China Sea, Philippines, 173–500 m.

***Galathea samadiae* n. sp.**

(Fig. 97)

Material examined. *Holotype*: Philippines. MUSORSTOM 1, Stn 57, 13°53'N, 120°13'S, 96–107 m, 26 March 1976: M 3.2 mm (MNHN-IU-2013-8425).

Paratypes: Philippines. MUSORSTOM 1, Stn 57, 13°53'N, 120°13'S, 96–107 m, 26 March 1976: 1 F 2.8 mm (MNHN-IU-2013-8425).

Etymology. This species is dedicated to Sarah Samadi of the Muséum nationale d'Histoire Naturelle, Paris, for her support to expeditions and crustacean research.

Description. *Carapace*: 1.2 times as long as broad; anterior and posterior cervical grooves distinct, ridges with dense short setae and some scattered long plumose setae. Gastric region with 6 transverse ridges: 1 epigastric ridge, scale-like, with 4 spines; 2 protogastric ridges, anterior one uninterrupted, with 1 parahepatic spine on each side, posterior ridge scale-like, with plumose stiff setae on median scale; 1 mesogastric ridge uninterrupted but not extending laterally to anteriormost of branchial marginal spines; 2 mesogastric ridges, not continuing laterally to anterior branchial regions. Mid-transverse ridge uninterrupted, preceded by distinct cervical groove, followed by 6 transverse ridges. Cardiac region with 2 median spines. Lateral margins slightly convex, with 7 spines: 2 spines in front of and 5 strong spines behind anterior cervical groove; first anterolateral, well-developed, distinctly posterior to level of lateral limit of orbit; second small, situated at midlength between anterolateral spine and anterior cervical groove, accompanying another small spine ventral to between first and second; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin. Small outer orbital spine; infra-orbital margin with 2 or 3 denticles. Rostrum 1.8 times as long as broad, length 0.5 that of, breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with small setiferous ridges; lateral margin with 4 sharp teeth.

Pterygostomial flap rugose with sparse setae, anteriorly acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 3 uninterrupted transverse ridges on tergite; somites 5 and 6 each with 2 ridges, both medially interrupted. Males with G1 and G2.

Eyes: Ocular peduncles 1.6 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 distal spines, two well-developed spines, distodorsal larger; distomesial spine very small but distinct; additional 2 small spine on lateral margin. Ultimate article with a few short setae not in tuft on distodorsal margin.

Antenna: Article 1 with depressed ventral distomesial process reaching distal margin of article 2. Article 2 with distolateral spine longer than distomesial, exceeding midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with spine on flexor distal margins; crista dentata with 18 or 19 denticles. Merus shorter than ischium, with 3 spines on flexor margin, proximal spine slightly longer than others; extensor margin with 2 small spines. Carpus spineless, extensor margin rugose.

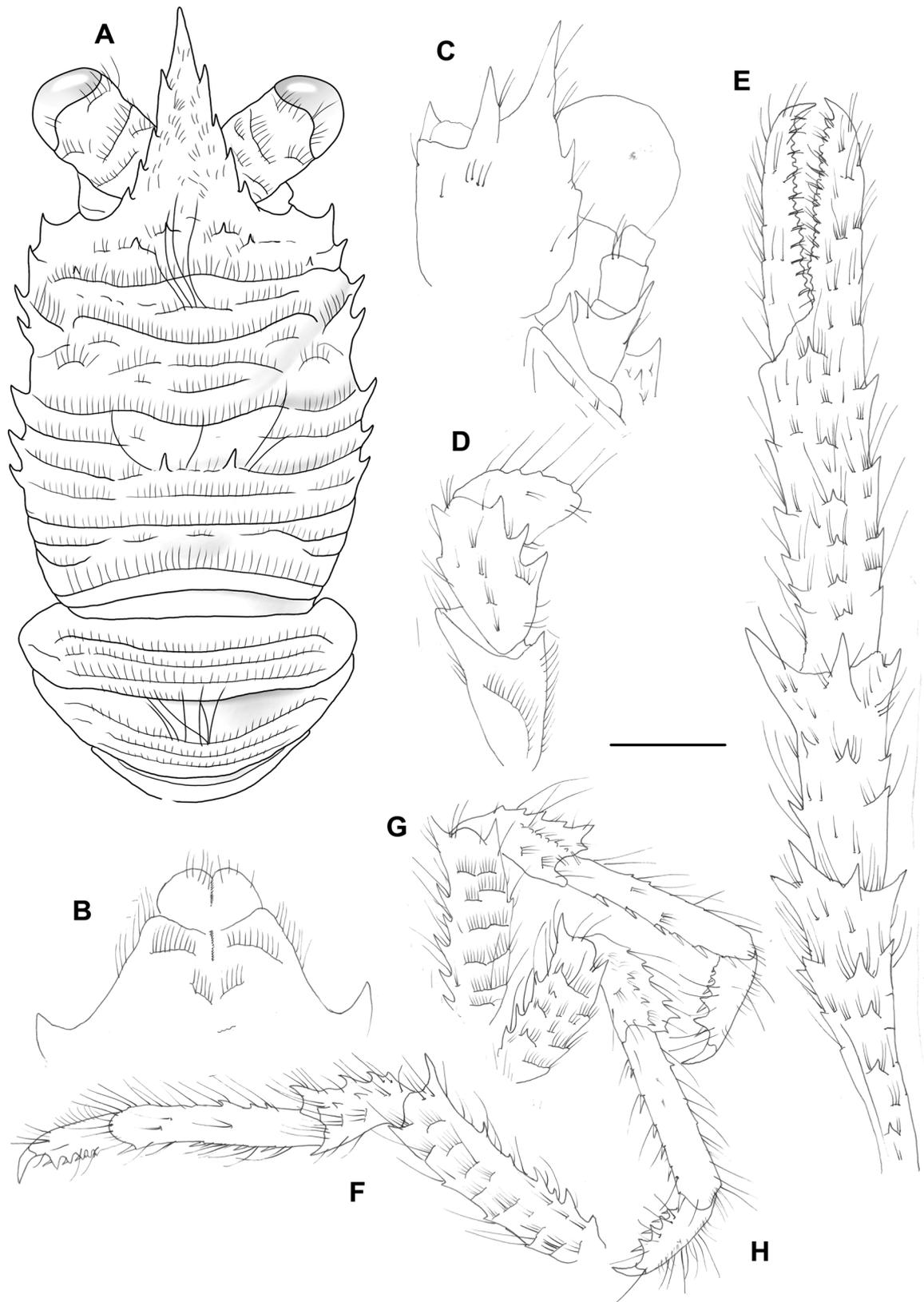


FIGURE 97. *Galathea samadiae* n. sp., holotype, male, 3.2 mm, Philippines (MNHN-IU-2013-8425). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, left P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

P1: 3.3 times carapace length, with long stiff setae on striae of all articles, and some scattered long and thick plumose setae. Merus 1.5 times length of carapace, twice longer than carpus, with several rows of spines, dorsomesial row with strong spines, distal spine stronger than others. Carpus as long as palm, 2.8 times longer than broad, dorsal surface with row of small spines; mesial surface with well-developed spines; and some small spines along lateral margin. Palm 2.7 times longer than broad; small dorsal spines roughly in rows: mesial, dorsal and lateral. Fingers 0.8 as long as palm, each finger distally with two rows of teeth, spooned; fingers unarmed.

P2–4: relatively short, setose, sparsely with thick long plumose setae on all articles. *P2* 1.7 times carapace length. Meri successively shorter posteriorly (*P3* merus 0.8 length of *P2* merus, *P4* merus 0.8 length of *P3* merus); *P2* merus 0.7 carapace length, 4.0 times as long as broad, 1.4 times longer than *P2* propodus; *P3* merus 3.0 times as long as broad, as long as *P3* propodus; *P4* merus 2.7 times as long as broad, as long as *P4* propodus. Extensor margins of meri with row of 5–7 proximally diminishing spines on *P2–4*; lateral surface with 3 small spines on *P4*; flexolateral margins ending in strong terminal spine proximally followed by 1 or 2 smaller spines; flexomesial margins unarmed. Carpi each with 5 or 6 spines on extensor margin on *P2–4*; lateral surface with row of 3–5 small spines or acute granules paralleling extensor row; flexor distal margins with very small distal spine. Propodi 4.5–5.3 times as long as broad; extensor margin with 1–3 proximal spines on *P2–4*; flexor margin with 5 or 6 movable spines. Dactyli subequal in length, 0.6–0.7 length of propodi, ending in incurved, strong, sharp spine; flexor margin with 4 or 5 successively diminishing teeth, terminal tooth prominent.

Epipods present only on *P1*.

Remarks. *Galathea samadiae* n. sp. is closest to *G. echinata* Macpherson, 2012 from New Caledonia. The two species can be distinguished by the following characters:

- The parahepatic spines are present in *G. samadiae*, whereas they are absent in *G. echinata*; the protogastric and megatastric spines are absent in *G. samadiae*, while these spines are present in *G. echinata*. Furthermore, the postcervical spines are present in *G. echinata*, rather than absent in *G. samadiae*.
- The branchial margin has two spines on the anterior part, and three spines on the posterior part in *G. samadiae*, whereas there are one spine on the anterior part, and two spines on the posterior part in *G. echinata*.
- The *Mxp3* merus has three weak spines on the flexor margin in *G. samadiae*, instead of one strong median spine in *G. echinata*.

No genetic data are available for *G. samadiae*.

Distribution. Philippines, 96–107 m.

***Galathea sanctae* Macpherson, 2012**

Galathea sanctae Macpherson, 2012: 422, figs. 5, 6B (New Caledonia, Vanuatu, 191–481 m).

Material examined. New Caledonia. HALIPRO 1, Stn CC855, 21°45.08'S, 166°37.25'E, 204–220 m, 20 March 1994: 1 M 5.0 mm (MNHN-IU-2013-13978).

Remarks. The genetic divergences with other species are always higher than 6.3% (COI, the closest is *G. squamea*) and 3.4% (16S rRNA, the closest is *G. inermis* n. sp.) (Tab. 3).

Distribution. New Caledonia, Vanuatu; 191–481 m.

***Galathea schnabelae* n. sp.**

(Figs 98, 120D)

Material examined. *Holotype*: Maldives Islands, Magoodhoo Islands, 3.078913°N, 72.962112°E, 18–23 m, 5 May 2014: M 3.3 mm (UF40283)

Paratypes: same data as holotype: 1 ov. F 2.4 mm (UF39560).

Etymology. This species is dedicated to Kareen Schnabel of the National Institute of Water and Atmospheric Research, Wellington, for her contributions to squat lobster taxonomy.

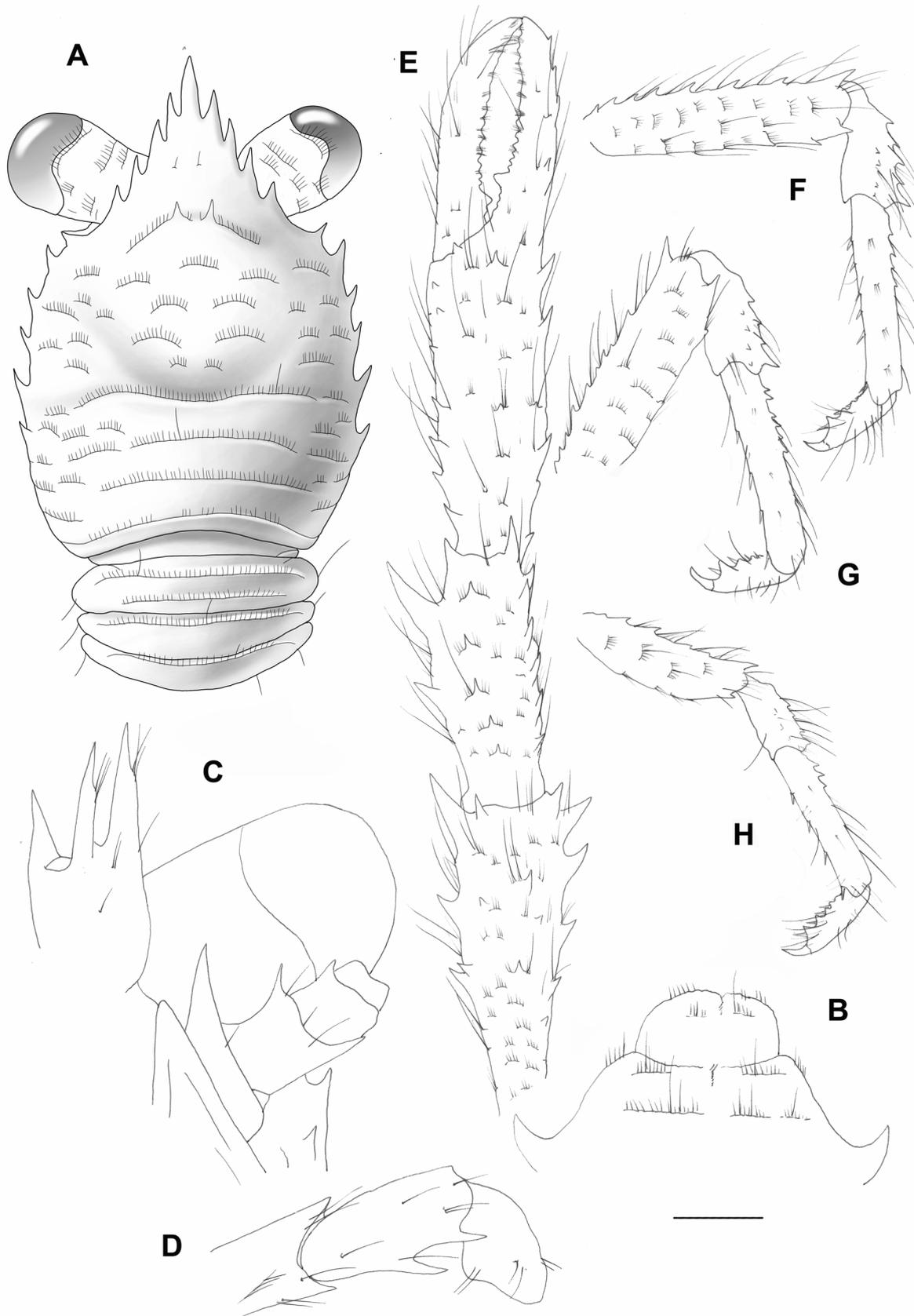


FIGURE 98. *Galathea schnabelae* n. sp., holotype, male, 3.3 mm, Maldives Islands (UF40283). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, left P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Description. *Carapace:* As long as broad; ridges with short fine setae, without long setae; cervical groove slightly distinct, laterally bifurcated; gastric and anterior branchial regions only with interrupted ridges or scale-like ridges; 2 median epigastric spines; without hepatic and parahepatic spines; mid-transverse ridge medially uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 4 ridges, 2 of them medially uninterrupted. Lateral margins slightly convex, with 5 spines: 1 spine in front of and 4 spines behind anterior cervical groove; first anterolateral, well-developed, accompanying another spine ventral to between first spine and anterior cervical groove; 2 spines on anterior branchial margin, and 2 spines on posterior branchial margin. External orbital limit ending in small spine; infraorbital margin with 1 strong spine. Rostrum broad triangular, slightly longer than broad, length 0.5 postorbital carapace length and breadth 0.4 that of carapace, nearly horizontal in lateral view; distance between distalmost lateral incisions 0.2 distance between proximalmost lateral incisions; dorsal surface slightly concave, with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, anterior margin acutely produced.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somite 2 with 2 transverse ridges, anterior ridge more distinctly elevated than posterior ridge; somites 3–6 smooth, posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed spines, distodorsal larger; distomesial spine slightly smaller than distoventral. Ultimate article with a few short fine setae, not in tuft, on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching end of article 2. Article 2 with 2 subequal distal spines, slightly exceeding midlength of article 3. Article 3 with distomesial spine; article 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin, crista dentata with 22–25 denticles. Merus longer than ischium; flexor margin with 2 spines, proximal spine slightly stronger than distal; extensor margin unarmed. Carpus unarmed.

P1: 3.0–3.3 times carapace length, relatively slender, with numerous long uniramous setae. Merus 1.1–1.2 times length of carapace, 1.4 times as long as carpus, with spines arranged roughly in rows, some strong spines along mesial margin, distal spines prominent. Carpus 0.8–0.9 length of palm, 2.0–2.4 times as long as broad; dorsal surface with spines arranged roughly in longitudinal rows; mesial margin with 1 strong spine and some well-developed spines. Palm 2.0–2.4 times longer than broad, lateral and mesial margins subparallel; spines arranged roughly in rows; dorsolateral row continuing on to lateral margin of fixed finger. Fingers 0.8 length of palm, each finger distally spooned, with two rows of fingers; movable finger unarmed.

P2–4: moderately slender, with setose striae and sparse long non-plumose setae. P2 1.9–2.0 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P3 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.8 carapace length, 4.0–4.3 times as long as broad, 1.5–1.6 times longer than P2 propodus; P3 merus broader than P2 merus. Extensor margin with row of 8–10 proximally diminishing spines on P2–3, 4 or 5 spines on P4; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several eminences, lateral unarmed. Carpi with 4 or 5 spines on extensor margin on P2–4; lateral surface with 2–4 spines or acute granules sub-parallel to extensor margin; flexor distal margin acute. Propodi 4.7–4.8 times as long as broad; extensor margin with 3–6 proximal spines on P2–4; flexor margin with 4 or 5 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.5–0.6 that of propodi; flexor margin with 4 proximally diminishing teeth, terminal one prominent.

Epipods on P1.

Coloration. Base color of carapace and abdomen whitish and pale. Whitish and reddish blotch behind rostrum; ridges reddish. P1 with transverse brown and whitish stripes; base of both fingers white. P2–4 with distal part of meri and propodi and dactyli pink, with darker transverse ridges.

Remarks. *Galathea schnabelae* n. sp. is characterized by the presence of scale-like ridges on the gastric region and the lack of dorsal spines on the branchial regions. The closest relative is *G. ploto* n. sp. from New Caledonia, Chesterfield Islands. However, *G. schnabelae* and *G. ploto* can be separated by the following aspects:

- There is one small but distinct spine between the anterolateral spine and the anteriormost spine on the branchial margin in *G. ploto*, whereas such a spine is absent in *G. schnabelae*.
- The carapace bears one hepatic spine on each side in *G. schnabelae*, whereas this spine is absent in *G. ploto*.

No genetic data are available for *G. schnabelae*.

Distribution. Maldives, 18–23 m.

***Galathea scolopia* n. sp.**

(Figs 99, 120E)

Material examined. *Holotype:* Vanuatu. BOA 1, Stn CP2414, 15°41.28'S, 167°02.897'E, 309–402 m, 5 September 2005: M 4.2 mm (MNHN-IU-2013-15855).

Paratypes: Vanuatu. BOA 0, Stn CP2326, 15°39.83'S, 167°01.9'E, 260–313 m, 18 November 2004: 1 M 5.3 mm (MNHN-IU-2013-15856). BOA 1, Stn CP2414, 15°41.28'S, 167°02.897'E, 309–402 m, 5 September 2005: 1 ov. F 4.3 mm (MNHN)

Papua New Guinea. BIOPAPUA, Stn CP3645, 06°44'S, 147°50'E, 403–418 m, 24 August 2010: 1 M 3.8 mm (MNHN-IU-2011-4479).

Etymology. From the Greek *skolos*, anything pointed, in reference to the long and thin rostrum.

Description. *Carapace:* As long as broad; transverse ridges with dense short setae, without long setae; cervical groove distinct, laterally bifurcated. Gastric region with some transverse ridges: 1 epigastric ridge, scale-like, with 6 small spines; 3 protogastric ridges, anterior ridge interrupted, with 1 or 2 parahepatic spines on each side, median ridge uninterrupted, posterior short; 2 mesogastric ridges, anterior ridge uninterrupted and not extending laterally to anteriormost of branchial marginal spines, posterior ridge uninterrupted; 2 metagastric ridges, anterior ridge uninterrupted, not continuing laterally to anteriorbranchial ridge, posterior ridge uninterrupted. Hepatic region with 1 small spine. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 6 transverse ridges, 1 ridge uninterrupted. Lateral margins subparallel, with 9 or 10 spines: 3 spines in front of and 6 or 7 spines behind anterior cervical groove; first anterolateral, well-developed, slightly behind level of lateral limit of orbit, 2 small spines at midlength between anterolateral spine and anterior cervical groove, with small spine ventral to between first and second; 4 spines on anterior branchial region, and 2 or 3 spines on posterior branchial margin. Small spine on lateral limit of orbit, with 1 small frontal spine; infraorbital margin with some small spines. Rostrum narrow, 2.5 times as long as broad, length 0.8 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.2 distance between proximalmost lateral incisions; dorsal surface horizontal, with numerous small scale-like setose ridges; lateral margin with 4 deeply incised teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin acute; upper margin, near linea anomurica, with numerous small teeth.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 3 or 4 uninterrupted and 0–1 interrupted ridges; somite 6 with 2 medially interrupted ridges. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 2 well-developed distal spines, distodorsal larger, distomesial obsolescent; 2 small spines along lateral margin. Ultimate article with tuft of long fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine not reaching end of article 2. Article 2 with 2 distal spines, distolateral spine as long as distomesial, and barely reaching end of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor margins ending in small spine, extensor margin ending in acute angle; crista dentata with 20 or 21 denticles. Merus shorter than ischium; flexor margin with 3 spines, proximal spine clearly longer than others, median spine smaller than distal; extensor margin ending in acute point. Carpus unarmed.

P1: 4.6 times carapace length, with numerous setiferous small scales, and some scattered long setae. Merus 2.2 times carapace length, twice longer than carpus, with numerous spines, dorsomesial and distal spines stronger than others. Carpus 0.7 length of palm, 4.0 times as long as broad; dorsal surface with some small spines; mesial margin with row of spines. Palm 5.0 times longer than broad, lateral and mesial margins subparallel; small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers 0.7 times palm length, each finger distally with two rows of teeth, spooned; fingers unarmed.

P2–4: long and slender, with some setose striae and sparse long setae. P2 3.0 times carapace length. Meri successively shorter posteriorly (P3 merus 0.7 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus as

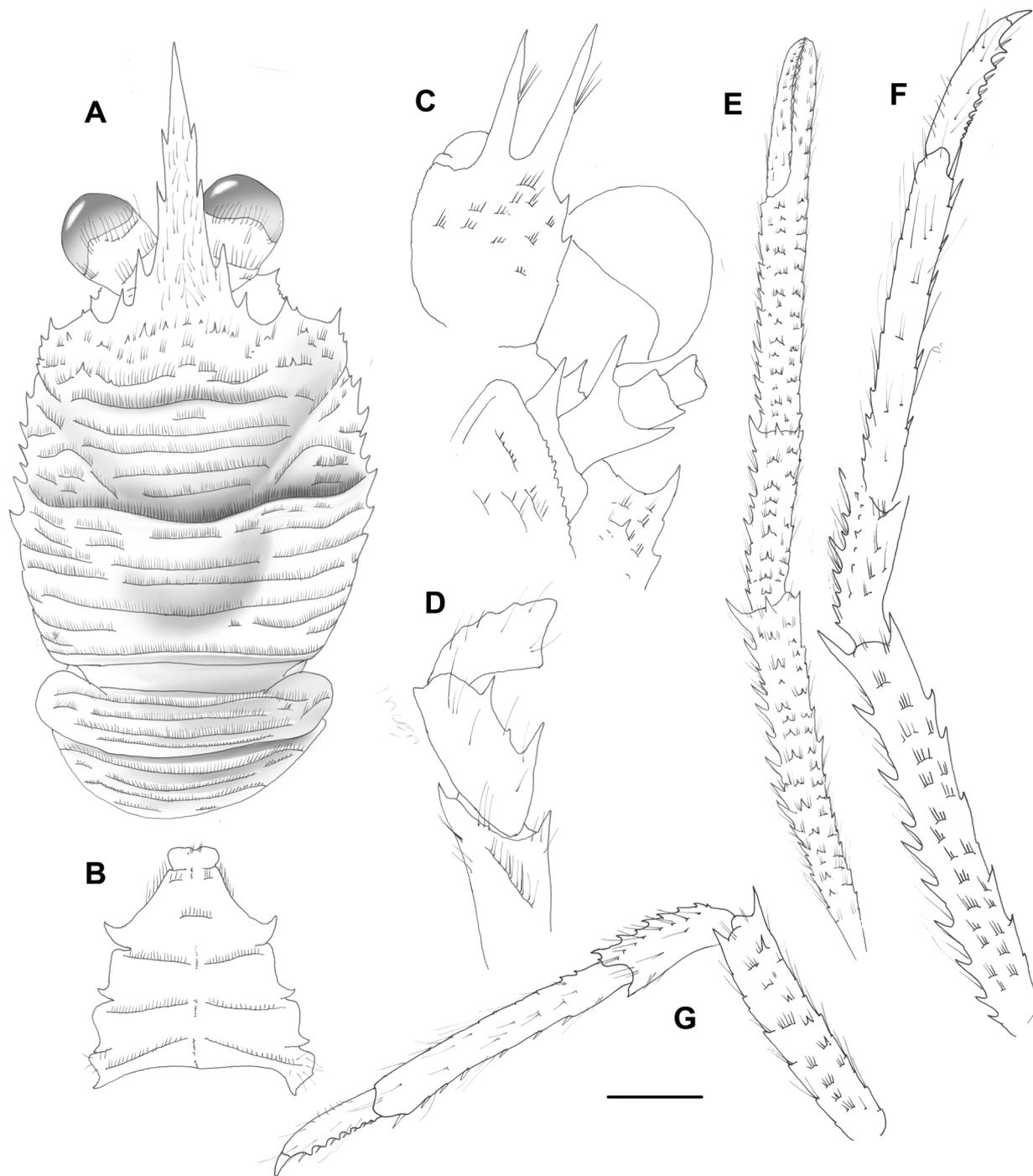


FIGURE 99. *Galathea scolopia* n. sp., holotype, male, 4.2 mm, Vanuatu (MNHN-IU-2013-15855). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, left P4, lateral view. Scale: A, E, G, H = 1 mm; F = 2 mm; B–D = 0.5 mm.

long as carapace, 7.0 times as long as broad, 1.2 times longer than P2 propodus. P3 merus 5.2 times as long as broad, 1.1 times longer than P3 propodus. P4 merus 4.5 times as long as broad, 0.9 times longer than P4 propodus. Extensor margin with row of 10 proximally diminishing spines on P2, 6 spines on P4; ventral margins distally ending in strong spine, lateral sides with row of small spines on P4. Carpi with 8 spines on extensor margin; lateral surface with 7 or 8 small spines sub-parallel to extensor margin; flexor distal margin acute. Propodi 6.5–7.5 times as long as broad; extensor margin with 3 or 4 small proximal spines; flexor margin with 6 or 7 slender movable spines, distal two spines with another smaller spine mesial to them. Dactyli distally ending in well-curved strong

spine, length 0.5 that of propodi; flexor margin with 8 or 9 proximally diminishing teeth, distal one clearly larger than penultimate.

Epipods present only on P1.

Coloration. Base color translucent orange, with reddish longitudinal stripe on each branchial region and lateral margins of abdominal somites 2–3. P1 orange, with red spines. P2–4 translucent orange.

Remarks. The new species is close to *G. inconspicua* Henderson, 1885 (see Remarks of *G. inconspicua*).

Distribution. Papua New Guinea, Vanuatu; 260–418 m.

***Galathea senta* n. sp.**

(Figs 100, 120F)

Galathea mauritiana Baba *et al.*, 2009: 115, figs. 94–96 (Taiwan).—Poore *et al.*, 2011: 333, pl. 111C (color photo, Taiwan) (not *G. mauritiana* Bouvier, 1914).

Material examined. *Holotype:* French Polynesia. Society islands. Moorea Island, 17.4764°S, 149.8327°W, 4–7 m, 10 November 2008: 1 ov. F 2.5 mm (UF40284).

Paratypes: French Polynesia. Society islands. Moorea Island, 17.4764°S, 149.8327°W, 4–7 m, 10 November 2008: 1 M 2.5 mm, 1 F 2.4 mm (UF18384), 2 M 2.2–2.8 mm (UF16370).—Mid N coast, 12 October 2008: 1 M 3.0 mm (UF15503), 1 M 3.1 mm (UF15504).—17.4756°S, 149.8425°E, 13–17 m, 5 December 2009: 1 ov. F 2.0 mm (UF24183).

French Polynesia. Gambier Islands. Terevai Island, 23.1548°S, 135.0189°W, 23.2 m, 2 February 2013: 1 ov. F 2.0 mm (UF35447).

French Polynesia. Austral Islands. Rapa, Stn 19, 27°37.7'S, 144°18.7'W, 3 m, 11 November 2002: 1 M 3.6 mm (MNHN-IU-2013-15890).—Stn 25, 27°38.4'S, 144°18.9'W, 3 m, 13 November 2002: 1 M 2.9 mm (MNHN-IU-2013-9736).—Stn 27, 27°38.7'S, 144°18.7'W, 6 m, 14 November 2002: 1 M 2.7 mm (MNHN-IU-2013-15892).—Stn 29, 27°34.3'S, 144°21.0'W, 2–4 m, 15 November 2002: 2 M 2.7–3.0 mm, 1 ov. F 3.0 mm (MNHN-IU-2013-15891).

Pitcairn Islands. Oeno Atoll, 4 August 2008: 1 ov. F 2.5 mm (UF5059).

New Caledonia. Lifou Island. LIFOU, Stn 1434, 20°52.5'S, 167°08.1'E, 5–20 m, 6 November 2000: 2 ov. F 3.0–3.2 mm, 3 F 2.8–3.4 mm (MNHN-IU-2013-14366), 1 F 3.0 mm (MNHN-IU-2013-9735).

Vanuatu. SANTO, Stn DB8, 15°34.6'S, 167°13.8'E, 12 m, 12 September 2006: 1 M 3.2 mm, 1 ov. F 3.4 mm (MNHN-IU-2013-14361). Stn DB71, 15°21.6'S, 167°12.5'E, 7 m, 27 September 2006: 5 M 2.2–2.4 mm, 8 ov. F 2.0–3.2 mm (MNHN-IU-2013-14362). Stn VM69, 15°33.4'S, 167°16.7'E, 0–1 m, 18 October 2006: 1 ov. F 3.2 mm (MNHN-IU-2013-14363).

Etymology. From the Latin *sentis*, thorn, in reference to the strong spine in the Mxp3.

Description. *Carapace.* 0.9 times as long as broad; anterior cervical groove indistinct. Ridges with dense short setae, and a few scattered long and thick setae. Gastric region with 6 ridges: 1 epigastric ridge with 2 median spines, medially interrupted; 1 protogastric ridge convex medially, uninterrupted and extending laterally to first lateral spine; 2 mesogastric ridges, anterior uninterrupted extending laterally to anteriormost of branchial marginal spines, posterior ridge short and scale-like; 2 metagastric ridges not continuing laterally to anterior branchial region; some additional scales between main ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges. Lateral margins medially convex, with 8 spines: 2 spines in front of and 6 spines behind indistinct anterior cervical groove; first anterolateral, well-developed, behind level of lateral limit of orbit, second very small; another spine ventral to between first and second spines; 3 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. External limit of orbit unarmed, with well-developed spine between orbit and first anterolateral spine, infra-orbital margin with strong acute process. Rostrum broad triangular, 1.4 times as long as broad, length 0.6–0.7 that of, breadth 0.4–0.5 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view; lateral margin with 4 sharp teeth.

Pterygostomial flap rugose, with 1 distinct spine on upper margin near linea anomurica, anterior margin ending in well-developed spine.

Sternum: As long as broad, lateral limits divergent posteriorly.

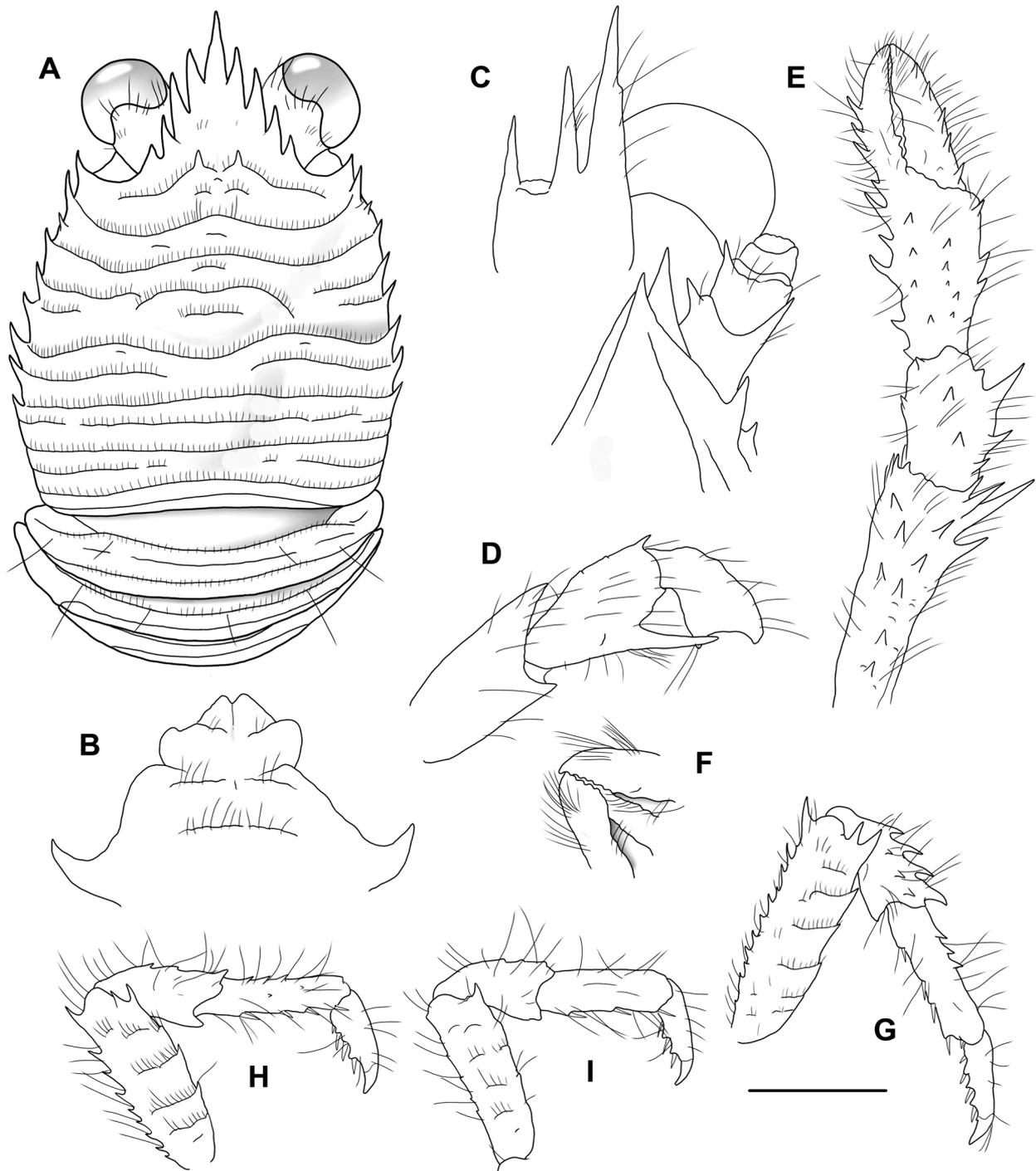


FIGURE 100. *Galathea senta* n. sp., holotype, ovigerous female, 2.5 mm, French Polynesia (UF40284). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, left P1 fingers, ventral view; G, right P2, lateral view; H, right P3, lateral view; I, right P4, lateral view. Scale: A, E, G, H, I = 1 mm; B–D, F = 0.5 mm.

Abdomen: Somites 2–5 each with 2 uninterrupted transverse ridges on tergite, with or without some short scales between; somite 6 each with 2 medially interrupted ridges. Males with G1 and G2.

Eyes: Ocular peduncles 1.1 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger. Ultimate article with a few short setae not in tuft on distodorsal margin.

Antenna: Article 1 with depressed ventral distomesial process slightly exceeding distal margin of article 2. Article 2 with distolateral spine larger than distomesial, nearly reaching end of article 3. Article 3 with distinct distomesial spine. Article 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor margin unarmed; crista dentata with 18–24 denticles. Merus shorter than ischium, with strong proximal spine on flexor margin, located at midlength, and exceeding distal margin of merus; distal spine obsolescent; extensor margin with distal spine. Carpus spineless.

P1. 2.6–2.8 times carapace length, relatively slender, subcylindrical, with numerous short setae and some long setae on dorsal surface and along lateral and mesial margins of all articles. Merus as long as carapace, 1.7 times as long as carpus, with rows of spines, mesial and distal spines strong. Carpus 0.9 length of palm, 1.3–1.7 times longer than broad, lateral and mesial margins subparallel, dorsal surface with small spines; mesial surface with row of 3 or 4 well-developed spines; and row of small spines along lateral margin. Palm 1.5–1.7 times longer than broad; spines roughly in rows on dorsal, mesial and lateral; lateral row continued on to whole lateral margin of fixed finger; mesial row continuing along mesial margin of movable finger. Fingers 0.8–0.9 as long as palm, each finger distally with two rows of teeth, spooned.

P2–4: Relatively slender, somewhat compressed, moderately setose, sparsely with long setae on all articles. *P2* 2.5 times carapace length. Meri successively shorter posteriorly (*P3* merus 0.8 length of *P2* merus, *P4* merus 0.8 length of *P3* merus), equally broad on *P2–4*; *P2* merus 0.9 carapace length, 3.5 times as long as broad, 1.7 times longer than *P2* propodus; *P3* merus 3.0 times as long as broad, 1.5 times length of *P3* propodus; *P4* merus 3.0 times as long as broad, 1.5 length of *P4* propodus. Extensor margins with row of 9 proximally diminishing spines on *P2–3*, unarmed on *P4*; lateral surface unarmed on *P2–3*, row of 4 proximally diminishing spines on *P4*; 2 well-developed spines on terminal flexolateral margin, sometimes obsolescent in *P4*; flexomesial margin with terminal spine on *P2* only. Carpi with 4 or 5 spines on extensor margin; lateral surface with row of 2 or 3 small spines or acute granules paralleling extensor row; flexor distal margin ending in acute angle. Propodi 3.9 (*P2*), 3.3 (*P3*), 2.7–3.5 (*P4*) times as long as broad; extensor margin with 3 proximal spines on *P2–3*, unarmed on *P4*; flexor margin with 4 slender movable spines on *P2–3*, 3 on *P4*; lateral sides unarmed. Dactyli 0.7–0.8 length of propodi, ending in incurved, strong, sharp spine; flexor margin with prominent triangular terminal tooth preceded by obsolescent 4 teeth.

Epipods absent on pereopods.

Coloration. Ground color of carapace, abdominal somites 2–4 and pereopods light brownish or pale, with darker transverse ridges and numerous darker minute spots. *P1* palm with whitish flecks, without distal black spot. *P2–4* with brownish and whitish bands.

Remarks. The new species resembles *G. mauritiana* and other species characterized by the pterygostomial flap with one or two spines on the upper margin near the linea anomurica, and an uninterrupted mesogastric ridge between the anteriormost branchial marginal spines (*Galathea aequata* n. sp., *G. acis* n. sp. and *G. ahyongi* n. sp.).

Galathea senta is easily differentiated from these species by the following features:?

The *Mxp3* merus has one strong proximal spine on the flexor margin, not reaching distal margin of the merus in *G. mauritiana*, *G. ahyongi*, *G. acis* and *G. aequata*, whereas this spine is very long, and clearly exceeds the distal margin in *G. senta*.

The walking legs (*P2–4*) are more slender in the other species than in *G. senta*. For instance, the *P2* propodus is 4.0 times longer than broad in *G. mauritiana*, whereas it is 3.0 times in *G. senta*.

The color patterns are different in both groups. There is one distinct black spot on the distal part of the *P1* palm in *G. mauritiana*-*G. acis*-*G. aequata*-*G. ahyongi*, whereas this spot is absent in *G. senta*.

The genetic divergences between *G. senta* and the other four species are always higher than 16.3% (COI,) and 9.8% (16S rRNA, only available for *G. acis*) (Tab. 1).

The specimens collected in Taiwan and identified as *G. mauritiana* (Baba *et al.* 2009) agree quite well with the new species (e.g. the *Mxp3* merus has a strong median spine on the flexor margin, exceeding distal margin of merus, and the distal part of the black spot on the *P1* palm is absent). Therefore, we have considered that this material belongs to *G. senta*.

Distribution. French Polynesia, Gambier, Society and Austral Islands, Pitcairn Island, Taiwan, Vanuatu and New Caledonia; 0–23 m.

***Galathea sentosa* n. sp.**

(Fig. 101)

Material examined. *Holotype*: Wallis and Futuna. MUSORSTOM 7, Stn CP508, 14°19.5'S, 178°04.5'W, 245–440 m, 11 May 1992: M 4.3 mm (MNHN-IU-2013-8423).

Paratypes: Wallis and Futuna. MUSORSTOM 7, Stn CP505, 14°19.5'S, 178°04.3'W, 245–400 m, 11 May 1992: 2 M 3.5–3.7 mm, 3 ov. F 4.0–6.3 mm (MNHN-IU-2013-8422).— Stn CP508, 14°19.5'S, 178°04.5'W, 245–440 m, 11 May 1992: 1 ov. F 4.2 mm (MNHN-IU-2013-8424).

Etymology. From the Latin *sentis*, thorny, in reference to the numerous spines on the carapace dorsal surface

Description. *Carapace*: 1.2–1.3 times as long as broad; anterior and posterior cervical grooves distinct; dorsal surface with scale-like and interrupted ridges in all regions; mid-transverse ridge scale-like, preceded by distinct cervical groove; transverse groove before cardiac spines; ridges setose and with some scattered long and thick plumose setae. Epigastric region with 6–8 small spines; 2 submedian protogastric spines, and 2 parahepatic spines on each side; 1 or 2 postcervical spines on each side and 4 or 5 cardiac spines placed side by side. Lateral margins slightly convex, with 7 spines: 2 spines in front of and 5 strong spines behind anterior cervical groove; first anterolateral, well-developed, distinctly posterior to level of lateral limit of orbit; second small, situated at midlength between anterolateral spine and anterior cervical groove, accompanying another small spine ventral to between first and second; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin. External limit of orbit rounded; infra-orbital margin with 1 or 2 spines. Rostrum twice longer than broad, length 0.6 that of, breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with small setiferous ridges; lateral margin with 4 sharp teeth.

Pterygostomial flap rugose with sparse setae, anteriorly rounded; some granules on upper margin near linea anomurica.

Sternum: Plastron 1.2 times as long as broad; sternite 4 wider than following sternites.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somites 5 and 6 each with scale-like ridges; posteriormedian lobe of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.8 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 distal spines, 2 well-developed spines, distodorsal larger than others; distomesial spine very small but distinct; additional 2 small spine on lateral margin. Ultimate article with a few short setae not in tuft on distodorsal margin.

Antenna: Article 1 with depressed ventral distomesial process not reaching distal margin of article 2. Article 2 with small distomesial and distolateral spines, not reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with spine on extensor and flexor distal margins; crista dentata with 20 or 21 denticles. Merus subequal in length to ischium, with 2 subequal spines on flexor margin; extensor margin with small distal spine. Carpus spineless.

P1: 3.4 times carapace length, with long stiff setae on striae of all articles, and some scattered long and thick plumose setae. Merus 1.5 times length of carapace, twice longer than carpus, with several rows of spines, dorsomesial row with strong spines. Carpus as long as palm, 2.6 times longer than broad, dorsal surface with row of small spines; mesial surface with well-developed spines; and some small spines along lateral margin. Palm 2.8 times longer than broad; small dorsal spines roughly in rows: mesial, dorsal and lateral. Fingers 0.8 as long as palm, each finger distally with two rows of teeth, spooned; fingers unarmed.

P2–4: relatively short, somewhat compressed, setose, sparsely with thick long plumose setae on all articles. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.8 length of P3 merus), equally broad on P2–4; P2 merus 0.8 carapace length, 5.0 times as long as broad, 1.5 times longer than P2 propodus; P3 merus 3.8 times as long as broad, 1.2 times length of P3 propodus; P4 merus 3.3 times as long as broad, as long as P4 propodus. Extensor margins of meri with row of 5 or 6 proximally diminishing spines on P2–4; lateral surface with 1–3 small spines on P2–4; ventrolateral margins ending in strong terminal spine proximally followed by smaller spine; flexomesial margin with 2 or 3 spines on P2–4. Carpi each with 4–6 spines on extensor margin on P2–4; lateral surface with row of 2–4 small spines or acute granules paralleling extensor row; flexor distal margins with very small distal spine. Propodi 3.7–4.6 times as long as broad; extensor margin with 1–3 proximal spines on P2–4; flexor margin with 5 or 6 movable spines. Dactyli subequal in length, 0.6–0.7 length of propodi, ending in incurved, strong, sharp spine; flexor margin with 5–7 successively diminishing teeth, terminal tooth prominent.

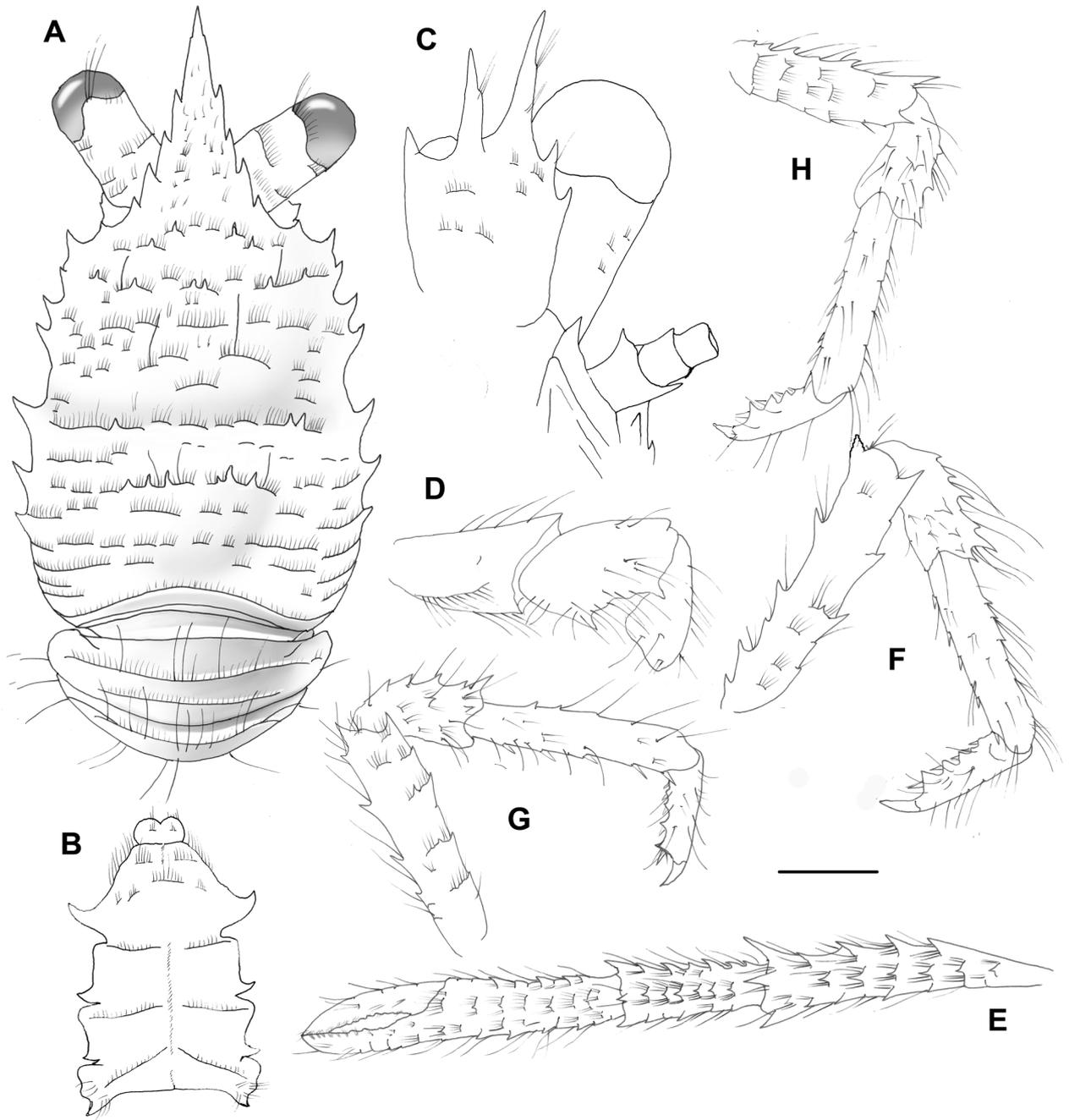


FIGURE 101. *Galathea sentosa* n. sp., holotype, male, 4.3 mm, Wallis and Futuna (MNHN-IU-2013-8423). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

Epipod present only on P1.

Remarks. *Galathea sentosa* n. sp. closely resembles *G. robusta* Baba, 1990 from Madagascar and La Reunion from which it can be distinguished by the following characters:

- In *G. sentosa*, there are no spines on the metagastric and mesogastric regions of the carapace, whereas in *G. robusta*, there are two spines on each region.
- The Mxp3 merus has a well-developed extensor distal spine in *G. robusta*, rather than unarmed in *G. sentosa*.
- The abdominal somites 2 or 3 each has four transverse ridges in *G. robusta*, instead of two ridges in *G. sentosa*.

- The genetic divergence between the two species are 8.5% (COI) (Tab. 3).

Distribution. Wallis and Futuna islands; 245–440 m.

***Galathea setigera* n. sp.**

(Fig. 102)

Material examined. *Holotype:* Indonesia. Kei Islands. KARUBAR, Stn CP16, 05°17'S, 132°50'E, 315–349 m, 24 October 1991: ov. F 6.8 mm (MNHN-IU-2013-8325).

Paratypes: Indonesia. Kei Islands. KARUBAR, Stn ED11, 05°23'S, 132°30'E, 360–368 m, 23 October 1991: 1 M 5.0 mm (MNHN-IU-2013-8334). Stn CP16, 05°17'S, 132°50'E, 315–349 m, 24 October 1991: 1 M 5.4 mm (MNHN-IU-2013-8326).

Etymology. From the Latin, *setiger*, bearing bristles, in reference to the pilosity of the carapace.

Description. *Carapace:* As long as broad; dorsal surface nearly horizontal from anterior to posterior. Dorsal surface covered by fine simple and non-iridescent setae, lacking distinct long transverse ridges, except mid-transverse and posterior ridges and a few scattered scale-like or short ridges on posterior half. Mid-transverse ridge preceded by shallow cervical groove. Epigastric region with 2 or 3 pairs of small spines. Anterior branch of cervical groove distinct. Lateral margins slightly convex medially, with 6 spines: 1 spine in front of and 5 spines behind anterior cervical groove; first anterolateral, well-developed, at level of lateral limit of orbit; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. Well-developed spine on lateral limit of orbit; infraorbital margin with some minute spines. Rostrum 1.4 as long as broad, length 0.5 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, slightly concave, with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, ridges with short setae, anterior margin ending in acute angle.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somites 5 and 6 smooth; posteromedian margin of somite 6 straight. Telson completely subdivided, with 7 plates. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 spines; well-developed distodorsal and distolateral spines, distodorsal larger than others. Ultimate article with a few long fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine, reaching distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine longer than distomesial and reaching end of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; extensor margin ending in acute angle; crista dentata with 25–27 denticles. Merus as long as ischium; flexor margin with 2 spines, proximal longer than distal; extensor margin unarmed. Carpus unarmed.

P1: 1.8–2.0 times carapace length, covered with finely setiferous scales, and some scattered long plumose setae. Merus 0.7 times length of carapace, twice longer than carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.9 length of palm, 1.7 times as long as broad; dorsal surface with some small spines; mesial margin with row of well-developed spines. Palm twice longer than broad, lateral and mesial margins subparallel; a few small spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side; dorsolateral spines continuing along fixed finger. Fingers as long as palm, each finger distally with two rows of teeth, spooned; movable finger unarmed.

P2–4: moderately slender, with setose striae and some long non-plumose setae. P2 1.8 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.8 carapace length, 4.2 times as long as broad, 1.7 times longer than P2 propodus; P3 merus 3.0 times longer than broad, 1.4 times longer than P3 propodus; P4 merus 3.0 times as long as broad, 1.2 length of P4 propodus. Extensor margin of P2–3 meri with row of 14 or 15 proximally diminishing spines, and 1 or 2 spines on P4; ventral margins distally ending in strong spine followed proximally by several tubercles or eminences; lateral sides unarmed. Carpi with 4 or 5 spines on extensor margin on P2–4; lateral surface with 4–6 spines or acute

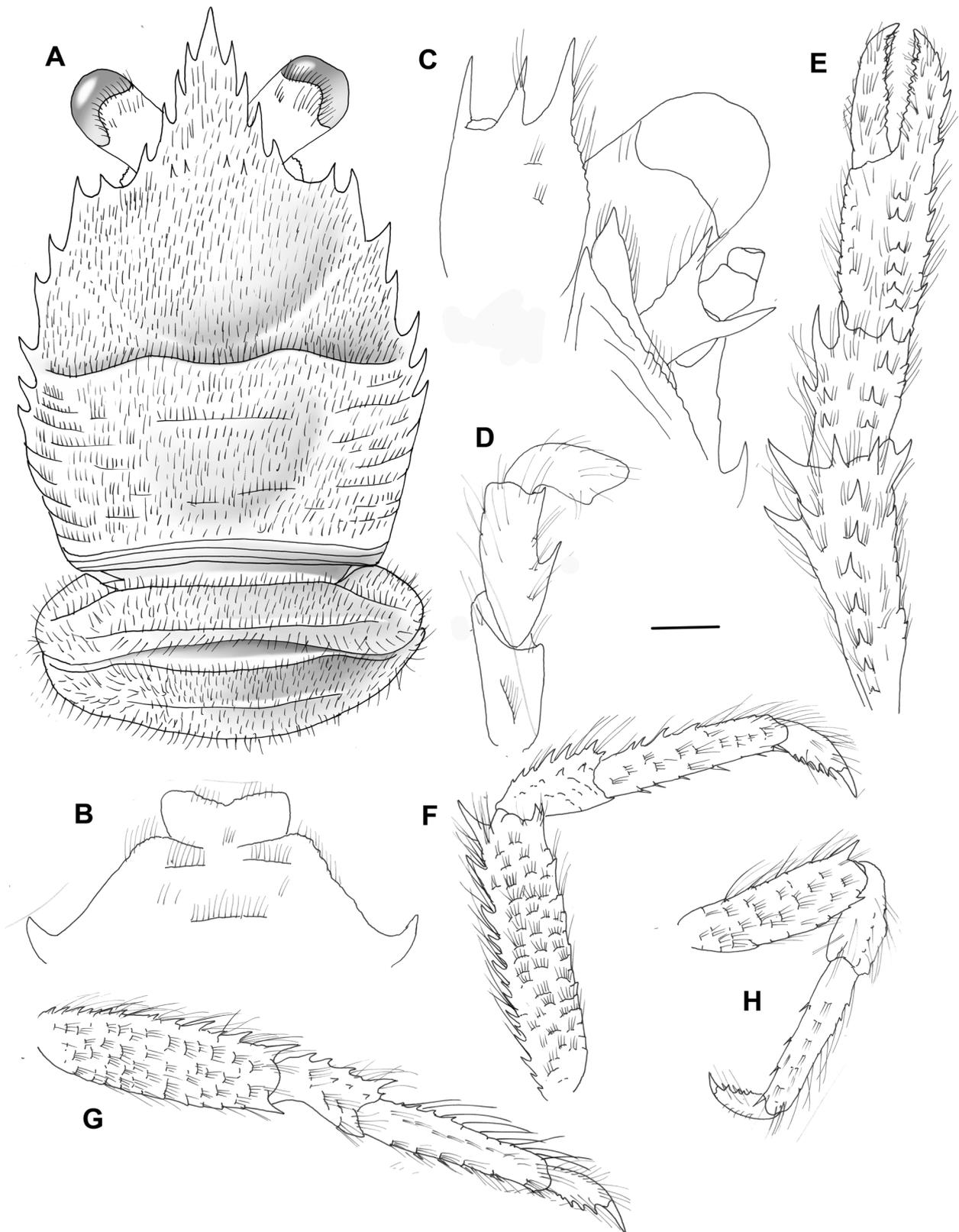


FIGURE 102. *Galathea setigera* n. sp., holotype, ovigerous female, 6.8 mm, Indonesia, Kei Islands (MNHN-IU-2013-8325). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

granules sub-parallel to extensor margin on P2–4; flexor distal margin ending in acute angle. P2–4 propodi 4.0–4.4 times as long as broad; extensor margin with 3 or 4 proximal spines; flexor margin with 5 or 6 slender movable spines on P2–4. Dactyli distally ending in well-curved strong spine, length 0.5–0.6 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods absent on pereopods.

Remarks. *Galathea setigera* n. sp. is closest to *G. kuboi* from Japan, Philippines, and Indonesia, and *G. nuda* n. sp. from French Polynesia and Chesterfield Islands. In these three species most of dorsal ridges on the carapace are obsolescent. They can be easily distinguished by the following characters:

- In *G. kuboi*, the distal spine on the flexor margin of the Mxp3 merus is subequal in the size to the proximal spine, rather than smaller than the proximal spine in *G. nuda* and *G. setigera*.
- The epipods are present on P1 in *G. nuda*, rather than absent from all pereopods in *G. setigera* and *G. kuboi*.
- The rostrum is elongate and more than 1.5 times longer than broad in *G. nuda*, whereas the rostrum is short and less or equal than 1.5 times longer than broad in *G. setigera* and *G. kuboi*.
- The gastric region on the carapace has some scale-like ridges in *G. nuda*, but these ridges are absent in *G. setigera* and *G. kuboi*.

No genetic data are available for *G. setigera*.

Distribution. Indonesia, Kei Islands, 315–368 m.

***Galathea simulata* n. sp.**

(Fig. 103)

Material examined. *Holotype*: New Caledonia. Lagon East. Stn 613, 22°07.3'S, 166°59.5'E, 45–50 m, August 1986: ov. F 5.1 mm (MNHN-IU-2013-8024).

Paratypes: New Caledonia. Chesterfield Islands. CORAIL 2, Stn DW46, 19°18.54'S, 158°20'E, 21 m, 23 July 1988: 1 F 2.7 mm (MNHN-IU-2013-8049).—Stn DW94, 19°06'S, 158°50'E, 36–53 m, 27 July 1988: 1 M 3.8 mm (MNHN-IU-2013-8048).—Stn CP124, 19°29'S, 158°20'E, 53–56 m, 29 July 1988: 1 M 4.3 mm, 1 ov. F 4.4 mm (MNHN-IU-2013-8029). Lifou Island. LIFOU, Stn 1420, 20°47.7'S, 167°09.35'E, 4–5 m, 18–19 November 2000: 1 F 3.0 mm (MNHN-IU-2013-8032).—Stn 1421, 20°52.4'S, 167°08.5'E, 4 m, 27 November 2000: 1 M 2.0 mm (MNHN-IU-2013-8030). Goro. 22°19.23'S, 167°00.65'E, 0 m, 5 November 1965: 1 M 1.8 mm (MNHN-IU-2013-8023).—Noumea, Stn 34, 22°12'S, 166°24'E, 10 m, May 1984: 1 M 5.8 mm (MNHN-IU-2013-8041).—Tie, 5–7 m, 9 September 1993: 1 ov. F 4.0 mm (MNHN-IU-2013-8035).—Touho, 20°47'S, 165°13'E, no depth, September 1993: 2 M 3.3–4.1 mm (MNHN-IU-2013-8040). Lagon East. Stn 606, 22°12.8'S, 167°00.5'E, 46–48 m, August 1986: 1 M 5.7 mm (MNHN-IU-2013-8042).—Stn 607, 22°12.1'S, 167°02.5'E, 48–54 m, August 1986: 1 M 3.8 mm (MNHN-IU-2013-8037).—Stn 612, 22°08.9'S, 167°00.5'E, 46–48 m, August 1986: 1 M 3.0 mm, 2 ov. F 4.2–4.6 mm (MNHN-IU-2013-8045).—Stn 613, 22°07.3'S, 166°59.5'E, 45–50 m, August 1986: 1 M 5.8 mm, 1 ov. F 4.6 mm (MNHN-IU-2013-8025).—Stn 616, 22°05.5'S, 166°58.8'E, 34–38 m, August 1986: 2 ov. F 4.7–5.5 mm (MNHN-IU-2013-8027).—Stn 617, 22°04.0'S, 166°57.5'E, 49 m, August 1986: 1 M 4.9 mm (MNHN-IU-2013-13956).—Stn 619, 22°03.2'S, 166°54.2'E, 27–42 m, August 1986: 1 F 4.4 mm (MNHN-IU-2013-8026).—Stn 625, 21°59.2'S, 166°53.6'E, 34–40 m, August 1986: 1 M 3.6 mm (MNHN-IU-2013-8033).—Stn 627, 21°58.9'S, 166°50.7'E, 45–47 m, August 1986: 1 ov. F 5.1 mm (MNHN-IU-2013-8034).—Stn 648, 21°52.8'S, 166°35.2'E, 22–25 m, August 1986: 1 ov. F 5.4 mm (MNHN-IU-2013-8047).—Stn 692, 21°32'S, 166°12.3'E, 44–48 m, August 1986: 1 ov. F 3.6 mm (MNHN-IU-2013-8043).—Stn 735, 22°05.1'S, 166°57.2'E, 15–34 m, August 1986: 1 ov. F 3.7 mm (MNHN-IU-2013-8038).—Stn 736, 22°06.7'S, 166°58.4'E, 44–45 m, August 1986: 1 ov. F 4.8 mm (MNHN-IU-2013-8044).—Stn 737, 22°08.4'S, 166°59.1'E, 49–50 m, August 1986: 1 M 4.9 mm (MNHN-IU-2013-8046).—Stn 738, 22°09.8'S, 167°00.2'E, 59–61 m, August 1986: 1 F 3.8 mm (MNHN-IU-2013-8031).—Stn 739, 22°11.6'S, 167°01'E, 41–44 m, August 1986: 1 M 5.0 mm (MNHN-IU-2013-8036). South Reef, Stn 305, 22°41.5'S, 166°46.3'E, 26 m, January 1985: 1 ov. F 4.8 mm (MNHN-IU-2013-8039).—Stn 409, 22°41.5'S, 167°24.2'E, 18 m, 24 January 1985: 1 M 4.7 mm, 2 ov. F 5.0–5.1 mm (MNHN-IU-2013-8028).

Etmology. From the Latin, *simulo*, imitate, copy, in reference to the similarity with *G. aegyptiaca*.

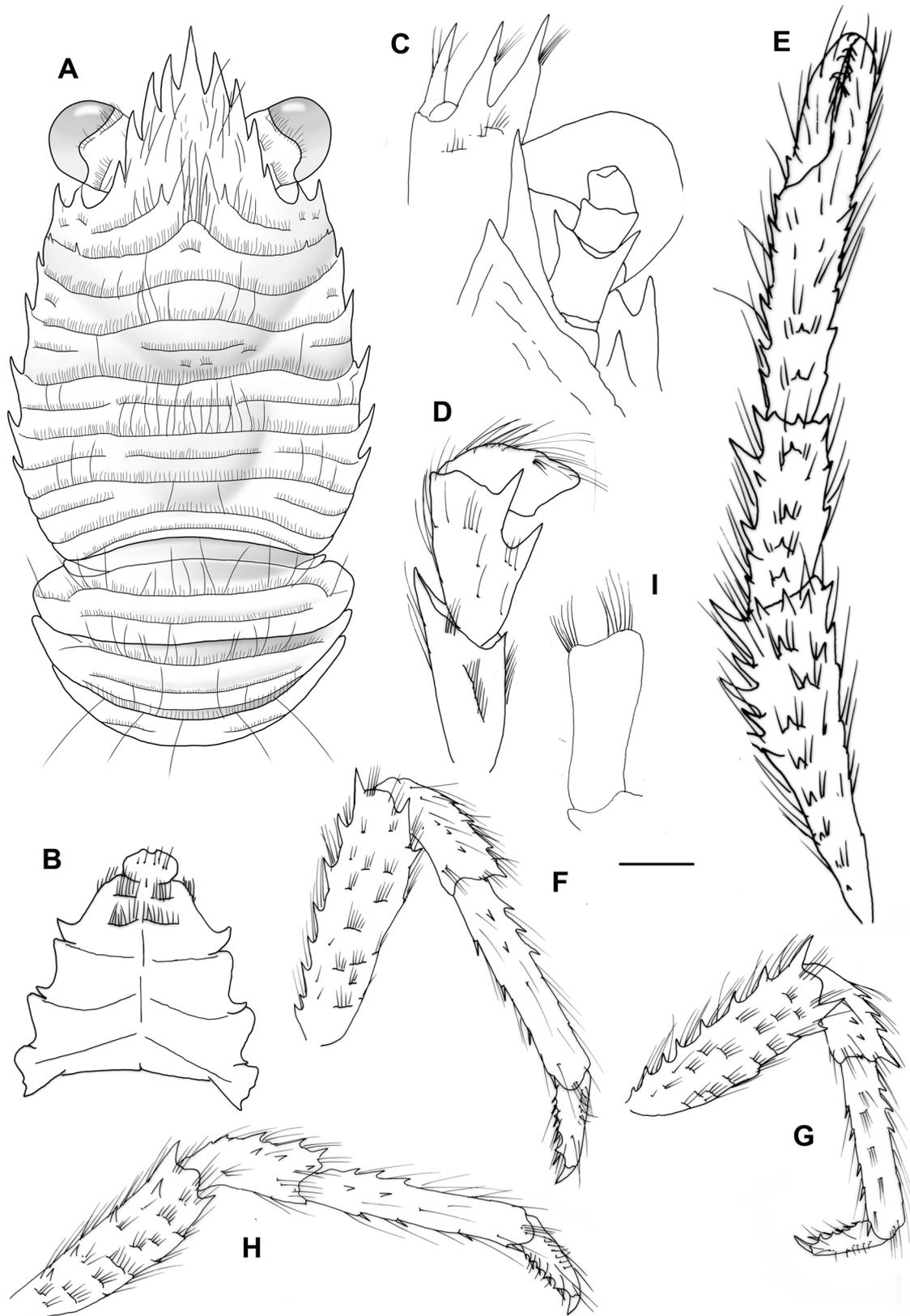


FIGURE 103. *Galathea simulata* n. sp., holotype, ovigerous female, 5.1 mm, New Caledonia (MNHN-IU-2013-8024). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view; I, ultimate article of antennular peduncle. Scale: A, E–H = 1 mm; B–D, I = 0.5 mm.

Description. *Carapace:* As long as broad; anterior cervical groove indistinct. Six ridges on gastric region: 1 epigastric ridge medially interrupted, with 2 median spines; 2 protogastric ridges, anterior one strongly convex medially, uninterrupted, with 1 parahepatic spine at each side, posterior ridge short, scale-like and placed medially; 1 mesogastric ridge uninterruptedly extending laterally to anteriormost of branchial marginal spines, no posterior ridge scale-like; 2 metagastric ridges, anterior ridge uninterrupted and fused with anterior branchial ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 transverse ridges, 2 of them uninterrupted. Lateral margins medially convex, with 7 spines: 2 spines in front of, and 5 spines behind, indistinct anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit; second, small, at midlength between anterolateral spine and anterior cervical groove, accompanying another spine ventral to between first and second; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. External orbital limit ending in small spine; infra-orbital margin with strong spine. Rostrum broad triangular, as long as broad, length 0.5 that of, breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.2 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some thick long plumose setae; lateral margin with 4 sharp spines. Ridges with numerous uniramous setae, and some thick long plumose setae on dorsal surface of rostrum, between epigastric spines and on median convexity of second gastric ridge.

Pterygostomian flap rugose, unarmed.

Sternum: Lateral limits divergent posteriorly.

Abdomen: Somites 2–3 each with 2 uninterrupted transverse ridges on tergite; somite 4 with posterior ridge medially interrupted; somite 5 and 6 each with 2 medially interrupted ridges, posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.1 times longer than broad, maximum corneal diameter 0.5 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger. Ultimate article elongate, 2.5 times longer than broad, with tuft of setae on distodorsal margin.

Antenna: Article 1 with depressed ventral distomesial process slightly exceeding distal margin of peduncle. Article 2 with distomesial spine as long as distolateral, reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor margin unarmed; crista dentata with 23–26 denticles. Merus subequal in length to ischium, with 2 strong spines of subequal size on flexor margin, proximal one located at midlength, distal one at terminal end; extensor margin with small distal spine. Carpus spineless.

P1: 3.0–3.5 times carapace length, with numerous short setae and some scattered long plumose setae on dorsal surface and along lateral and mesial margins of all articles. Merus 1.1 times length of carapace, 1.7 times as long as carpus, with rows of spines, mesial and distal spines strong. Carpus 0.8 length of palm, 2.7 times longer than broad, lateral and mesial margins subparallel, dorsal surface with small spines in 2 longitudinal rows; mesial surface with row of well-developed spines; and row of small spines along lateral margin. Palm 3.0 times longer than broad, spines roughly in rows on dorsal, mesial and lateral sides; lateral row continued on to whole lateral margin of fixed finger. Fingers 0.7 as long as palm, each finger distally with two rows of teeth, spooned; mesial margin of movable finger with proximal spines.

P2–4: Relatively slender, moderately setose, sparsely with long setae on all articles. P2 1.7 times carapace length. P3 merus 1.2 length of P2 merus, P4 merus 0.8 length of P3 merus), equally broad on P2–4; P2 merus 0.7 carapace length, 3.3 times as long as broad, 1.3 times longer than P2 propodus; P3 merus 3.4 times as long as broad, 1.2 times length of P3 propodus; P4 merus 3.3 times as long as broad, 1.1 length of P4 propodus. Extensor margins with row of 8 or 9 proximally diminishing spines on P2–3, only distal spine on P4; lateral surface unarmed on P2–3, row of 3 spines on P4; flexolateral margins with strong terminal spine; flexomesial margin with terminal spine on P2 only. Carpi with 4 spines on extensor margin; lateral surface with row of 2 or 3 small spines paralleling extensor row; flexor distal margins with spine. Propodi subequal in length on P3 and P4, slightly shorter on P2, equally broad on P2–4 and ca. 5 times as long as broad; extensor margin with 3 proximal spines on P2–4; flexor margin with 5 slender seta-like movable spine on P2, 4 on P3–4; 2 proximal spines on lateral side of P3–4, unarmed on P2. Dactyli subequal in length, 0.5–0.6 length of propodi, ending in incurved, strong, sharp spine; flexor margin with prominent triangular terminal tooth preceded by obsolescent 5 teeth.

Epipods present on P1, absent on P2–3.

Remarks. *Galathea simulata* is close to *G. aegyptiaca* Paul'son, 1875 and other related species, e.g. *G.*

corbariae n. sp., *G. homologa* n. sp., *G. imitata* n. sp. However, *G. simulata* can be differentiated from the other 4 species by having the P2–3 propodi more elongate, 5 times longer than broad, whereas they are less slender, equal or less than 4 times longer than broad, in the other species.

The genetic divergences between *G. simulata* and the other related species are quite large (10.0–17.1% COI, 5.7–9.0% 16S rRNA, see Tab. 1).

Distribution. New Caledonia, Chesterfield Islands, 4–56 m.

***Galathea sinensis* Dong & Li, 2010**

(Fig. 120G)

Galathea sinensis Dong & Li, 2010: 17, figs. 10–11 (South China Sea, Nansha Islands, 113 m).

Material examined. Philippines. MUSORSTOM 1, Stn CP26, 14°01'N, 120°17'E, 189 m, 22 March 1976: 1 M 2.8 mm (MNHN-IU-2013-8217). MUSORSTOM 3, Stn CP124, 12°03'N, 121°35'E, 10–123 m, 4 June 1985: 1 F 5.1 mm (MNHN-IU-2013-8231).

Solomon Islands. SALOMON 2, Stn CP2284, 8°37.29'S, 157°21.94'E, 195–197 m, 6 November 2004: 1 M 3.8 mm, 2 ov. F 2.8–3.0 mm (MNHN-IU-2013-8222). Stn CP2295, 8°46.09'S, 157°30.008'E, 94–133 m, 7 November 2004: 11 M 2.1–3.8 mm, 12 ov. F 2.0–3.4 mm (MNHN-IU-2013-8230; 11985).

Papua New Guinea. PAPUA NIUGINI, Stn PP8, 05°03'S, 145°49'E, 120 m, 30 December 2012: 1 F 4.4 mm (MNHN-IU-2013-643); 2 M 2.7–3.5 mm, 1 ov. F 3.8 mm (MNHN-IU-2013-13905).

Vanuatu. MUSORSTOM 8, Stn CP1102, 15°03.82'S, 167°08.68'E, 208–210 m, 7 October 1994: 2 M 3.2–3.3 mm (MNHN-IU-2013-8228). BOA 1, Stn CP2443, 15°09.105'S, 166°54.406'E, 220–277 m, 10 September 2005: 1 ov. F 3.7 mm (MNHN-IU-2013-8226).—Stn CP2444, 15°7'80"S, 166°53'70"E, 250–330 m, 10 September 2005: 1 M 3.5 mm (MNHN-IU-2013-8223). SANTO, Stn AT2, 15°32.5/32.8'S, 167°16.1/16.5'E, 160–175 m, 14 September 2006: 2 M 2.8–2.9 mm, 4 ov. F 3.5–5.7 mm (MNHN-IU-2013-8229; 11986).—Stn AT4, 15°32.9–33.1'S, 167°13.3–13.7'E, 97–101 m, 15 September 2006: 1 F 3.3 mm (MNHN-IU-2013-8225).—Stn AT30, 15°36.7'S, 167°02.6'E, 83–120 m, 25 September 2006: 1 M 4.5 mm, 1 ov. F 3.8 mm (MNHN-IU-2013-8224).—Stn AT57, 15°36.3'S, 167°01.4'E, 106–126 m, 2 October 2006: 1 F 3.3 mm (MNHN-IU-2013-8219).—Stn EN33, 15°32.6'S, 167°12.5'E, 80 m, 14 October 2006: 2 M 1.5–3.7 mm, 2 ov. F 3.3–4.0 mm (MNHN-IU-2013-8218).—Stn EP32, 15°36.6'S, 167°02.0'E, 100 m, 14 October 2006: 1 ov. F 3.8 mm (MNHN-IU-2013-8220).—Stn AT115, 15°33.9'S, 167°16.6'E, 152–158 m, 18 October 2006: 1 F 2.0 mm (MNHN-IU-2013-8221).

New Caledonia. HALIPRO 1, Stn CP852, 21°44'S, 166°36'E, 253–266 m, 19 March 1994: 1 ov. F 4.3 mm (MNHN-IU-2013-8216). BATHUS 4, Stn CP952, 20°34'S, 164°58'E, 270–316 m, 10 August 1994: 1 M 3.7 mm (MNHN-IU-2013-8227).

Coloration. Base color white. Red flecks covering lateral and posterior parts of carapace. Rostrum white. Abdomen with 2 red lateral stripes. P1 with red stripe on proximal half of merus and palm. P2–4 with red stripes on proximal part of merus and propodus; tips of dactylus red.

Remarks. The specimens examined agree quite well with the description and illustrations provided by Dong & Li (2010). The genetic data are only obtained for 16S rRNA. The divergences among *G. sinensis* and other sequenced species are always greater than 6.3% (16S rRNA, *G. cymo*) (Tab. 3).

Distribution. South China Sea, Philippines, Solomon Islands Papua New Guinea, Vanuatu, 10–330 m.

***Galathea spinimanus* Borradaile, 1900**

Galathea spinimanus Borradaile, 1900: 421, pl. 39, figs 16a (Lifou, Loyalty Islands).—Baba *et al.*, 2008: 77 (compilation).

Remarks. This species was originally described by Borradaile (1910) on the basis of one male and two females collected in Lifou, Loyalty Islands, New Caledonia. The illustration given by Borradaile includes the carapace and the abdomen only, and the description is very short. No additional specimens were collected since the original description. Unfortunately, in spite of the extensive sampling carried out in Lifou Island we have not found any specimens that match the original description of *G. spinimanus*. In the present study we have found more than 20

species of *Galathea* from that Island, although only one species, *G. maculiabdominalis* Baba, 1972, is close to *G. spinimanus*. These two species can be easily distinguished by the structure of the mesogastric ridge. This ridge is uninterrupted laterally in *G. spinimanus* and interrupted laterally in *G. maculiabdominalis*. Therefore, we consider for the time being that *G. spinimanus* and *G. maculiabdominalis* are distinct. Nevertheless, additional samples referable to *G. spinimanus* would be necessary to fully assess the specific identity of that taxon.

Galathea spinimanus is also similar to *G. celiae* n. sp. and *G. latirostris* Dana, 1852 (differentiating characters are discussed under Remarks of these latter species).

Distribution. Lifou Island, Loyalty Islands.

***Galathea spinosorostris* Dana, 1852**

(Figs 104, 120H)

Galathea spinoso-rostris Dana, 1852: 480 (Sandwich Islands, Hawaiian Islands).—Dana, 1855: pl. 30, figs 9a, 9b, 9c.

Galathea spinosorostris.—Castro, 2011: 14 (list of Hawaii occurrences).

Dubious identifications:

Galathea spinosirostris [sic].—Henderson, 1893: 431 (Muttuwar Par and Gulf of Martaban).

Galathea spinosorostris.—De Man, 1888: 456 (Ambon).—Baba, 1988: 78 (South China Sea off SW Luzon, off N Luzon, Waikiki Reef, and Honolulu, 22–410 m).—Wu *et al.*, 1998: 9, figs 15, 21B (Taiwan).—Komai, 2000: 353 (list).—Kawamoto & Okuno, 2003: 95, unnumbered fig. (Kume-jima, Okinawa, 10 m).—Baba, 2005: 245 (key, synonymies).—Kawamoto & Okuno, 2006: 95, unnumbered fig. (Kume-jima, Okinawa, 10 m).—Baba *et al.*, 2008: 77 (in part, compilation).—Dong & Li, 2010: 20 (South China Sea, 22–410 m).

Galathea algae.—Baba, 1982b: 59 (Palau Islands and Yap Island, subtidal).—Peyrot-Clausade, 1989: 112 (Tuamotu Archipelago, 5–30 m).—Poupin, 1996: 20 (compilation of French Polynesia records).

Not *Galathea spinosorostris*.—Johnson, 1970: 6, fig. 1b (Singapore, low tide to 3.6 m) (= *G. coralliophilus* Baba & Oh, 1990).

Not *Galathea spinosorostris*.—Laurie, 1926: 124 (Providence, Seychelles, Amirante, Saya de Malha Bank, Cargados Carajos, Chagos, 13–81 m).—Tirmizi & Javed, 1993: 59, fig. 26 (Andaman Sea and N Madagascar, 1.5–772 m).—Macpherson & Cleva, 2010: 62, color fig 3F (La Réunion, Mayotte, 10–30 m) (= *G. eulimene* n.sp.).

Material examined. *Neotype*: Hawaii. Oahu Island, off Kewalo, 21.289°N, 157.865°W, 9–12 m, 1 December 2008: F 1.5 mm (UF15249).

Hawaii. Maui, Palis, Scenic Lookout, 2–20 m, 15 October 2004: 1 ov. F 2.0 mm (UF8325). French Frigate Shoals. 23.6577°N, 166.0738°W, 24 m, 13 October 2006: 1 M 3.0 mm (UF12053); 1M 2.3 mm (UF12081); 6 M 1.4–2.5 mm, 1 ov. F 2.5 mm, 1 F 2.6 mm (UF12085).—23.699°N, 166.0575°W, 18 m, 19 October 2006: 1 F 2.2 mm (UF12200).—23.8632°N, 166.1842°W, 25 m, 21 October 2006: 1 M 2.4 mm, 3 ov. F 2.3–2.5 mm (UF12075).—23.8633°N, 166.1877°W, 28 m, 26 October 2006: 1 ov. F 2.4 mm (UF12376).—23.8538°N, 166.3267°W, 1.5 m, 26 October 2006: 1 M 3.0 mm, 1 F 2.0 mm (UF12982); 1 M 2.6 mm (UF13161).—Oahu Island, off Kewalo, 21.289°N, 157.865°W, 9–12 m, 1 December 2008: 1 F 2.6 mm (UF15247); 1 M 2.2 mm (UF15248); 1 ov. F 1.7 mm.—Hawaii, no date: 1 M 3.1 mm (UF20157).

Marquesas Islands. Stn LC119, 9°59,976'S, 139°07,831'W, 27–35 m, 15–16 January 2012: 1 M 3.7 mm 1,ov. F 2.8 mm (MNHN-IU-2013-15981).

Description. *Carapace*: slightly broader than long; transverse ridges with dense very short setae, without long plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with 5 transverse ridges: 1 epigastric ridge scale-like, with 2 spines (rarely 4–6); 2 mesogastric ridges, anterior one uninterrupted, not extending laterally to anteriormost branchial spines, posterior ridge scale-like; 2 metagastric ridges arcuate. One small parahepatic spine and one hepatic spine, near anterolateral spine, on each side. Anterior branchial region with distinct scale-like ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 3 or 4 ridges, 2 of them uninterrupted. Lateral margins slightly convex, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second small, with spine ventral to between first and second spines; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. Spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum 1.3 as long as broad, length 0.6 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some short setae; lateral margin with 4 deeply incised sharp teeth.

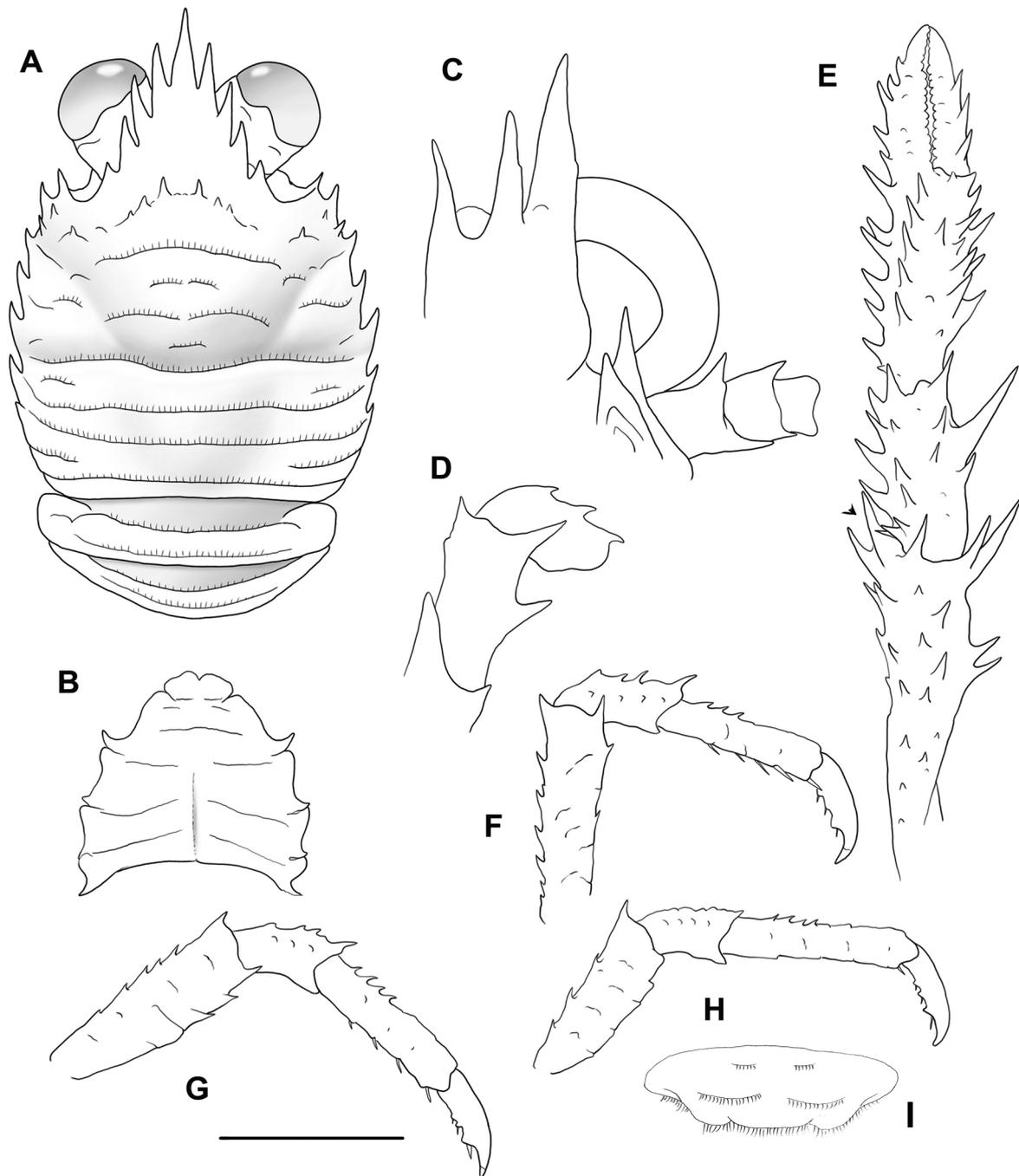


FIGURE 104. *Galathea spinosorostris* Dana, 1852, neotype, ovigerous female, 1.7 mm, Hawaii (UF15249). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, showing antennular and antennal peduncles; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view; I, abdominal somite 6, dorsal view. Scale: A, E–H, I = 1 mm; B–D = 0.5 mm (setae on appendages not figured).

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: 0.8 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 with 2 transverse uninterrupted ridges; somites 5 and 6 each with 2 uninterrupted or medially interrupted ridges; somite 6 with posteriomedian margin slightly convex. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine smaller. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching distal margin of article 2. Article 2 with 2 subequal distal spines, reaching midlength of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with small spine on flexor and extensor distal margins; crista dentata with 19–21 denticles. Merus as long as ischium; flexor margin with 2 well-developed spines, distal spine slightly larger than proximal spine; extensor margin with distal spine. Carpus with 2 or 3 spines or acute granules along extensor margin.

P1: 2.5 times carapace length, somewhat depressed on palm, more so on fingers, covered with finely setiferous scales, with numerous long simple setae (not figured). Merus as long or slightly longer than carapace, 1.7 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus as long as palm, 2.3 times as long as broad; dorsal and lateral surfaces with some spines; mesial margin with 3 or 4 spines (distal second strong). Palm 2.3 times longer than broad, lateral and mesial margins slightly convex; strong spines arranged roughly in dorsolateral and dorsomesial rows, continuing along fixed and movable fingers, respectively; a few well-developed spines scattered on dorsal side. Fingers 0.8 times as long as palm, each finger distally with two rows of teeth, spooned.

P2–4: moderately slender, with setose striae and sparse long plumose setae. P2 twice carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P2 merus); P2 merus 0.7 carapace length, 3.0 times as long as broad, 1.5 times longer than P2 propodus; P3 merus 3.7 times as long as broad, 1.5 times longer than P3 propodus; P4 merus 3.0 times as long as broad, as long as P2 propodus. Extensor margin of P2–3 meri with row of 6–8 proximally diminishing spines, 4 spines on P4; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several eminences; lateral sides unarmed. Carpi with 5 or 6 spines on extensor margin on P2–3, 1 or 2 spines on P4; lateral surface with 2–4 granules sub-parallel to extensor margin; flexor distal margin acute. P2–4 propodi 3.8–4.2 times as long as broad; extensor margin with 3 or 4 proximal spines on P2–4; flexor margin with 4 or 5 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods present on P1.

Coloration. Base color translucent whitish or reddish, with numerous minute red spots on carapace and abdomen. Cardiac region with 2 white spots; abdominal somites with some white spots. P1 with reddish band on distal part of merus, carpus and palm. P2–4 each with distal red band on merus and white band on distal part of propodus.

Remarks. This species was described by Dana (1852) using specimens from Sandwich Islands (= Hawaiian Islands). Unfortunately the types were lost during the Great Chicago Fire in 1871 (see also Evans 1967), so we have selected a neotype to facilitate further studies. The species has been recorded from numerous localities of the Indian and Pacific oceans, but the genetic data have confirmed the existence of some different species that can be separated by subtle morphological characters. Therefore many literature records need revision. Nevertheless, the occurrence of the species is restricted to Hawaii and eastern part of French Polynesia at present.

Galathea spinosorostris is characterized by the carapace lateral margin bearing one small but distinct spine between the anterolateral spine and the anteriormost spine on the branchial margin, non-scale-like some gastric ridges including uninterrupted anterior protogastric ridge, the possession of two epigastric spines (rarely 4–6), one pair of hepatic and parahepatic spines, the presence of three well-developed terminal spines on the antennular basal article, and the possession of epipod only on P1. These characteristics are also shared by *G. algae* Baba, 1969 from Japan, *G. cephyra* n. sp. from New Caledonia and *G. eulimene* n. sp. from the western Indian Ocean. *Galathea spinosorostris* can be easily distinguished from the latter three species by the following characters:

- The P1 movable finger has a row of well-developed marginal spines in *G. spinosorostris*, whereas this finger is unarmed in the other three species.
- The posteriomedian margin of the abdominal somite 6 is convex in *G. spinosorostris*, instead of usually transverse in the other three species.

The genetic divergence of COI between *G. eulimene* and *G. spinosorostris* is large, 17.2%. Unfortunately, sequence data on *G. algae* and *G. cephyra* are not available at present.

Distribution. Hawaii and Marquesas Islands; 1–35 m.

Galathea squamea Baba, 1979

Galathea squamea Baba, 1979a: 526, figs 3, 4 (Noumea, New Caledonia, 20–23 m).—Baba *et al.*, 2008: 77 (compilation).

Material examined. New Caledonia. Chesterfield Islands. CHALCAL 84, Stn D12, 20°31.33'S, 161°06.51'E, 80 m, 15 July 1984: 1 M 2.3 mm (MNHN-IU-2013-8254).—Stn CP12, 20°34.30'S, 158°47.40'E, 67 m, 23 July 1984: 9 M 2.8–3.3 mm, 1 ov. F 3.0–3.1 mm, 7 F 2.4–3.0 mm (MNHN-IU-2013-8289).—Stn CP14, 21°13.50'S, 158°50.20'E, 66 m, 24 July 1984: 8 M 2.9–3.2 mm, 1 ov. F 3.0 mm, 6 F 2.7–3.1 mm (MNHN-IU-2013-8255).—Stn CP15, 21°24.90'S, 159°09.30'E, 60 m, 25 July 1984: 4 M 3.6–3.8 mm (MNHN-IU-2013-8253).—Stn CP16, 21°41.67'S, 159°21.92'E, 53 m, 25 July 1984: 1 F 2.4 mm (MNHN-IU-2013-8264).—Stn D57, 21°29.50'S, 159°16.40'E, 62 m, 25 July 1984: 1 M 3.0 mm (MNHN-IU-2013-8270). CORAIL 2, Stn CP22, 20°33'S, 161°01'E, 85–88 m, 22 July 1988: 1 M 2.8 mm, 1 F 2.7 mm (MNHN-IU-2013-8267).—Stn DW35, 19°22'S, 158°53'E, 52 m, 23 July 1988: 1 M 2.4 mm (MNHN-IU-2013-8271). Senez Reef, 7 m, 7 September 1992: 2 M 2.7–2.8 mm, 3 ov. F 2.6–3.1 mm (MNHN-IU-2013-8265). Ouen Island, Stn 71, 22°20'S, 166°34'E, 22 m, August 1984: 1 ov. F 3.5 mm (MNHN-IU-2013-8282).—Stn 77, 22°25.9'S, 166°31.8'E, 22 m, August 1984: 3 M 3.0–4.0 mm, 2 ov. F 3.0–3.8 mm (MNHN-IU-2013-8288).—Stn 94, 22°31'S, 166°33'E, 17 m, August 1984: 1 F 2.5 mm (MNHN-IU-2013-8275).—Stn 123, 22°30'S, 166°40'E, 21 m, August 1984: 1 ov. F 3.1 mm (MNHN-IU-2013-8277).—Stn 127, 22°31'S, 166°46'E, 55 m, August 1984: 2 M 3.0–3.7 mm, 2 ov. F 3.4–3.5 mm (MNHN-IU-2013-8274).—Stn 161, 22°34'S, 166°38'E, 20 m, August 1984: 1 ov. F 3.2 mm (MNHN-IU-2013-8261).—Stn 243, 22°24'S, 167°01'E, 29 m, August 1984: 1 ov. F 3.2 mm (MNHN-IU-2013-8263).—Stn 248, 22°24'S, 166°47'E, 47 m, August 1984: 1 ov. F 3.3 mm (MNHN-IU-2013-8272). St. Vincent, Stn 164, 22°10'S, 166°09'E, 17 m, no date: 2 F 1.4–2.1 mm (MNHN-IU-2013-8266). Maitre Island, 25 m, 5 September 1978: 1 F 4.0 mm (MNHN-IU-2013-8284).—25 m, 19 September 1978: 1 M 2.6 mm, 1 ov. F 3.2 mm (MNHN-IU-2013-8252).—20 m, June 1992: 4 M 3.1–3.6 mm, 4 ov. F 3.0–3.4 mm (MNHN-IU-2013-8268).—22°19.41'S, 166°20.89'E, 20 m, 9 November 1995: 3 M 1.4–1.6 mm, 2 F 1.4–1.5 mm (MNHN-IU-2013-8258).—Stn 82, 22°19.61'S, 166°24.07'E, 105 m, 14 November 1995: 4 M 1.6–2.5 mm, 6 ov. F 2.4–3.0 mm (MNHN-IU-2013-8262). South Reef, Stn 296, 22°41'S, 166°44'E, 26 m, November 1984: 1 ov. F 3.2 mm (MNHN-IU-2013-8285).—Stn 297, 22°38.9'S, 116°45.6'E, 30 m, November 1984: 2 M 2.8–2.9 mm (MNHN-IU-2013-8260).—Stn 304, 22°39.8'S, 166°47.9'E, 27 m, November 1984: 1 M 2.3 mm, 1 ov. F 2.8 mm (MNHN-IU-2013-8278). Noumea, 14 September 1978: 1 ov. F 3.1 mm (MNHN-IU-2013-8251).—Stn 3, 22°21'S, 162°22'E, 15 m, 21 May 1984: 1 M 2.7 mm (MNHN-IU-2013-8279), 1 M 3.5 mm (MNHN-IU-2013-13993).—Stn 13, 22°19.6'S, 166°26.1'E, 20 m, 1 May 1984: 1 ov. F 3.1 mm (MNHN-IU-2013-8283).—Stn 56, 22°10'S, 166°15'E, 11 m, May 1984: 3 ov. F 3.0–3.8 mm, 1 F 2.8 mm (MNHN-IU-2013-8280).—Stn 269, 22°18'S, 168°18'E, 20 m, November 1984: 2 ov. F 2.1–2.4 mm (MNHN-IU-2013-8276).—22°30'S, 166°26'E, 32 m, 8 November 1995: 1 M 2.4 mm, 1 ov. F 2.3 mm (MNHN-IU-2013-8257). Canards Island, 20 m, 29 March 1978: 2 ov. F 3.2–3.3 mm (MNHN-IU-2013-8287). Lagon, Stn 313, 22°40.3'S, 166°50.1'E, 30 m, November 1984: 2 M 1.8–2.6 mm (MNHN-IU-2013-8259).—Stn 336, 22°41.5'S, 166°51.4'E, 26 m, November 1984: 2 ov. F 3.1–3.2 mm (MNHN-IU-2013-8281).—Lagon, Goeland Island, 10 m, 16 April 1993: 1 F 2.2 mm (MNHN-IU-2013-8256). New Caledonia, 180 m, 30 June 1992: 1 M 2.1 mm, 2 F 2.4–3.0 mm (MNHN-IU-2013-8290-92). Croissant Reef, Stn 533, 20 m, 18 April 1994: 2 M 2.9–3.1 mm, 2 ov. F 2.7–2.8 mm (MNHN-IU-2013-8269). Plotmatre, 20 m, 10 November 1995: 1 M 2.3 mm, 1 ov. F 2.2 mm (MNHN-IU-2013-8286). West Bank, no date: 3 M 1.6–2.3 mm, 3 ov. F 2.0–3.0 mm (MNHN-IU-2013-8273).

Remarks. The material examined agrees with the holotype male from New Caledonia (Baba 1990). However, we have observed a few specimens without epigastric spines (or very minute), as well as a few specimens with one minute parahepatic spine on each side. These specimens agree very well with the typical specimens in other diagnostic respects, and therefore, we regard that these differences represent intraspecific variation.

The genetic divergences of COI between *G. squamea* and all other species are usually larger than 15.0%. The smallest divergence of the same gene is observed in *G. sanctae* (6.3%) from New Caledonia and Vanuatu (Tab. 3)

Distribution. New Caledonia, 7–180 m.

***Galathea submagnifica* Laurie, 1926**

(Fig. 105)

Galathea submagnifica Laurie, 1926: 128, pl. 8, figs 5–10 (Providence, 92–143 m).—Baba *et al.*, 2008: 79 (compilation).

Material examined. Madagascar. ATIMO VATAE, Stn DW3518, 24°50.7'S, 47°28.7'E, 99–101 m, 30 April 2010: 1 M 4.2 mm (MNHN-IU-2013-8340).

La Réunion, MD32, Stn FA25, 21°21.8'S, 55°45.9'E, 90–95 m, 16 August 1982: 1 ov. F 1.8 mm (MNHN-IU-2013-8339).—Stn CP55, 21°05.3'S, 55°12.5'E, 97–110 m, 22 August 1982: 1 ov. F 2.3 mm, 1 F 2.5 mm (MNHN-IU-2013-8338).

Description. *Carapace:* As long as broad; ridges with dense short setae, with scattered long plumose setae; cervical groove distinct, laterally bifurcated. Ridges on gastric, cardiac and branchial regions scale-like or in concentric arcs, with 2 epigastric spines, and 1 parahepatic spine on each side. Mid-transverse ridge interrupted, preceded by shallow cervical groove. Lateral margins slightly convex, with 6 spines: 1 spine in front of and 5 spines behind anterior cervical groove; first anterolateral, well-developed, behind level of lateral limit of orbit, with well-developed spine ventral to between first and second spines; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. Small spine between lateral limit of orbit and anterolateral spine; infraorbital margin with strong spine. Rostrum 1.8–2.0 as long as broad, length 0.7 carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somite 2 with 2 transverse uninterrupted ridges; somites 3 or 4 with anterior transverse ridge only; somites 5 and 6 smooth, posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine slightly smaller than others. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine slightly exceeding distal margin of article 2. Article 2 with distolateral spine slightly longer than distomesial, reaching midlength of article 3. Article 3 with distomesial spine. Article 4 unarmed.

Mxp3: Ischium with small spine on flexor and extensor distal margins; crista dentata with 19–21 denticles. Merus as long as ischium; flexor margin with 2 well-developed spines, proximal stronger than distal; extensor margin with distinct spine. Carpus unarmed.

P1: 2.9 times carapace length, covered with finely setiferous scales, with scattered long setae. Merus 0.9 times length of carapace, 1.3 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.8 length of palm, 1.8 times as long as broad; dorsal and lateral surfaces with some spines; mesial margin with some spines. Palm 1.8 times longer than broad, lateral and mesial margins slightly divergent; spines arranged roughly in dorsolateral and dorsomesial rows; dorsolateral spines continuing along fixed finger; a few small spines scattered on dorsal side. Fingers 0.9 length of palm, distally spooned, gapping, prehensile distal edges close fitting with small blunt teeth; movable finger with 1 proximal spine.

P2–4: Moderately slender, with setose striae and sparse long plumose setae. P2 twice carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.9 length of P3 merus. P2 merus 0.7 carapace length, 3.5 times as long as broad, 1.5 times longer than P2 propodus; P3 merus 3.1 times as long as broad, 1.3 times longer than P3 propodus; P4 merus 3.5 times as long as broad, 1.3 times longer than P2 propodus. Extensor margin of P2–3 meri with row of 5–8 proximally diminishing spines, 1 or 2 spines on P4; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several eminences; lateral sides unarmed, or with 1 small spine. Carpi with 5 or 6 spines on extensor margin on P2–3, 2 spines on P4; lateral surface with 4 or 5 spines sub-parallel to extensor margin; flexor distal margin acute. Propodi 3.1–3.5 times as long as broad; extensor margin with 1 or 2 proximal spines on P2–4; flexor margin with 5 or 6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.7–0.8 that of propodi; flexor margin with 4–6 proximally diminishing teeth, terminal one prominent.

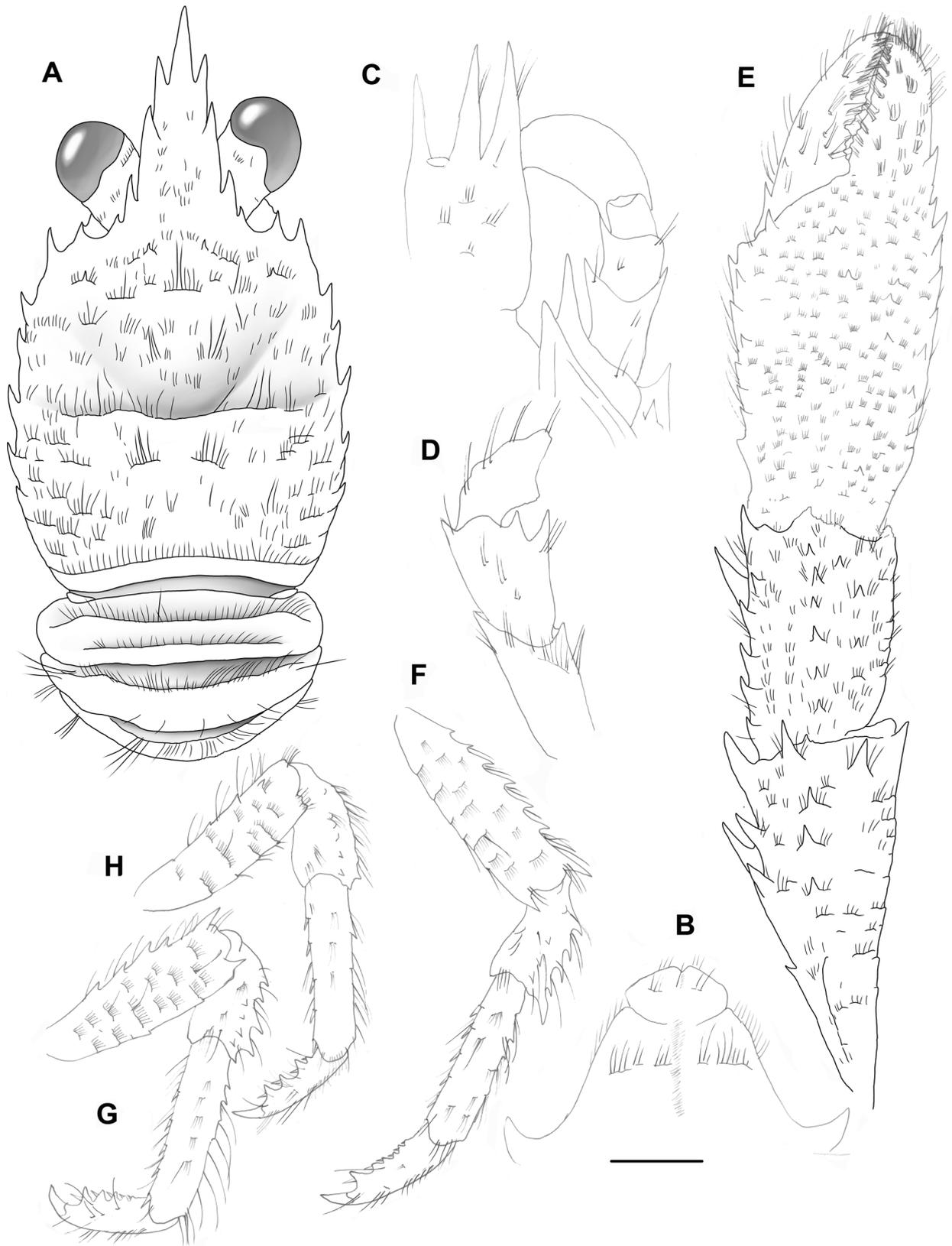


FIGURE 105. *Galathea submagnifica* Laurie, 1926, male, 4.2 mm, Madagascar (MNHN-IU-2013-8340). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Epipods present on P1.

Remarks. Laurie (1926) described *Galathea submagnifica* on the basis of four female specimens caught in Providence Island. The present material from Madagascar and La Reunion agrees very well with the type description. This species is characterized by numerous scale-like ridges on the carapace, and the dorsal surface of the carapace without postcervical spines. *G. furfurea* n. sp. from New Caledonia and South China Sea (Macclesfield Bank) and *G. waiora* n. sp. from French Polynesia are quite similar to *G. submagnifica*.

Galathea submagnifica can be easily distinguished from *G. furfurea* by the following characters:

- The gastric region has two epigastric spines in *G. submagnifica*, rather than four in *G. furfurea*.
- The carapace lateral margin has one small spine between the anterolateral spine and the anteriormost spine on the branchial margin in *G. furfurea*, whereas this spine is absent in *G. submagnifica*.
- The genetic divergences between *G. submagnifica* and *G. furfurea* are 12.9 % (COI) and 9.7% (16S rRNA) (Tab. 3).

Differentiating characters between *G. magnifica* and *G. waiora* are discussed under Remarks for *G. waiora*.

Distribution. Previously known only from Providence Island; newly recorded from Madagascar, La Réunion; 90–143 m.

***Galathea subsquamata* Stimpson, 1858**

(Figs 106, 120I, 121A)

Galathea subsquamata Stimpson, 1858: 90 (Amami-oshima).—Baba, 1989: 130 (Oshima Strait, Amami-oshima, 25–40 m).

Dubious identifications:

Galathea subsquamata.—Henderson, 1888: 118, pl. 12, fig. 4 (Off Tablas Island, Philippines, 183–210 m).—Yokoya, 1933: 58 (S of Inuboe-zaki, 238 m).—Miyake, 1938: 40, fig. 3 (Oshima, Kii Peninsula, 6 m).—Baba, 1977a: 247 (east side of Sibu Strait, Sulu Islands and Ternate, 4–27 m).—Baba, 1979a: 525 (Noumea, New Caledonia, 20–23 m).—Baba, 1982b: 60 (Palau Islands, 0–50 m).—Baba, 1988: 79 (Sulu Archipelago, between Burias and Luzon, shore to 53 m).—Wu *et al.*, 1998: 100, figs 16, 21C (Taiwan).—Komai, 2000: 353 (list).—Davie, 2002: 62 (no record).—Poore, 2004: 232 (compilation).—Macpherson, 2008: 292 (Dampier Archipelago, 2–38 m).—Baba *et al.*, 2008: 79 (compilation).

Material examined. *Neotype*: Japan. Amami-oshima Island. Oshima Strait, Atetsu Bay, Stn 6, 40 m, 4 August 1988: M 4.3 mm (MNHN-IU-2013-15933)

Japan. Amami-oshima Island. Oshima Strait, Atetsu Bay, Stn 6, 40 m, 4 August 1988: 1 ov. F 3.4 mm (MNHN-IU-2013-15934).—Near Tawara, Stn 18, 30 m, 6 August 1988: 1 ov. F 3.6 mm (MNHN-IU-2013-15932).

Mariana Islands. Guam Island. East Agana Bay, 1–2 m, 1 February 1997: 1 F 5.0 mm (UF318).—Apra harbour, Drydock Shoal, 0.5–3.5 m, 24 June 2002: 1 M 3.8 mm (UF2817).—Apra harbour, Sasa Bay, 3.5–5.0 m, 9 July 1997: 1 ov. F 3.7 mm (UF317).

Papua New Guinea. PAPUA NIUGINI, Stn PD06, 05°12.7'S, 145°47.9'E, 10–20 m, 8 November 2012: 2 M 2.6–3.5 mm, 2 ov. F 2.4–3.3 mm (MNHN-IU-2013-13495).—Stn PD14, 05°12.3'S, 145°47.9'E, 10–15 m, 11 November 2012: 1 M 3.4 mm (MNHN-IU-2013-353); 7 M 2.8–3.5 mm, 7 ov. F 3.0–3.9 mm (MNHN-IU-2013-13497).—Stn PD31, 05°05.3'S, 145°48.1'E, 1–6 m, 12–13 December 2012: 1 F 2.1 mm (MNHN-IU-2013-14043).—Stn PD32, 05°04.4'S, 145°48.7'E, 18 m, 17 November 2012: 1 M 3.3 mm (MNHN-IU-2013-13499).—Stn PD35, 05°01.3'S, 145°47.9'E, 1–12 m, 19–20 November 2012: 1 M 2.2 mm (MNHN-IU-2013-496); 1 juv. 1.2 mm (MNHN-IU-2013-726).—Stn PR35, 05°06.3'S, 145°49.3'E, 0 m, 15 November 2012: 1 M 4.4 mm, 1 F 4.5 mm (MNHN-IU-2013-13501).—Stn PR71, 05°10.8'S, 145°49.7'E, 0 m, 21 November 2012: 1 M 2.0 mm, 1 ov. F 3.0 mm, 1 F 5.5 mm (MNHN-IU-2013-13502).—Stn PR76, 05°01.6'S, 145°47.9'E, 2–15 m, 21 November 2012: 1 M 3.8 mm (MNHN-IU-2013-13503).—Stn PB01, 05°11.3'S, 145°49.4'E, 6–10 m, 30 December 2012: 1 M 4.1 mm (MNHN-IU-2013-773).—Stn PB08, 05°11'S, 145°48.4'E, 4–5 m, 30 December 2012: 10 M 1.8–2.5 mm, 3 ov. F 3.2–3.4 mm, 7 F 1.8–2.0 mm (MNHN-IU-2013-376).—Stn PB12, 05°11.8'S, 145°48.8'E, 7–15 m, 30 December 2012: 1 ov. F 3.1 mm (MNHN-IU-2013-13496).—Stn PB17, 05°04.9'S, 145°49.3'E, 26 m, 30 December 2012: 1 M 3.5 mm, 1 ov. F 3.4 mm (MNHN-IU-2013-13500).—Stn PB19, 05°05.1'S, 145°48.6'E, 10 m, 30 December 2012: 4 M 1.9–3.8 mm, 1 ov. F 2.5 mm, 2 F 2.5–3.1 mm (MNHN-IU-2013-13494).—Stn PS15, 05°05.79'S, 145°48.194'E, 12 m, 30 December 2012: 2 M 2.8–4.1 mm (MNHN-IU-2013-13498).

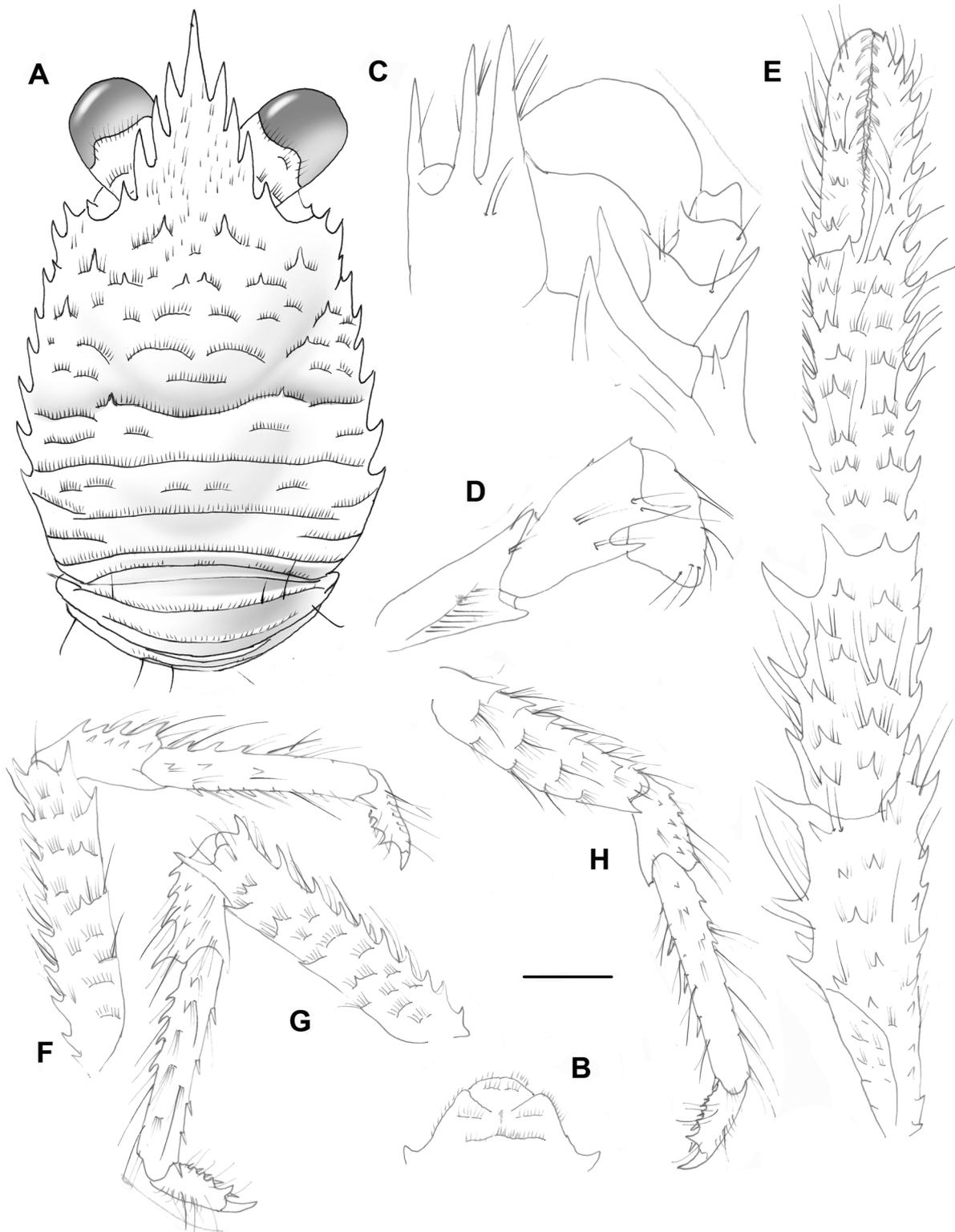


FIGURE 106. *Galathea subsquamata* Stimpson, 1858, neotype, male, 4.3 mm, Japan, Oshima Strait (MNHN-IU-2013-15933). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, left P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Description. *Carapace:* As long as broad; ridges with dense short setae, without long setae; cervical groove laterally bifurcated; ridges on gastric and anterior branchial regions scale-like or in concentric arcs; epigastric and

proto gastric regions with 2 median spines; 1 parahepatic, 1 or 2 anterior branchial, and 1 postcervical spine on each side. Mid-transverse ridge laterally interrupted, preceded by shallow cervical groove, followed by 4 or 5 transverse ridges, 1 or 2 of them uninterrupted. Lateral margins slightly convex medially, with 8 spines: 2 spines in front of and 6 spines behind anterior cervical groove; 1 well-developed first anterolateral spine, second spine minute, located at midlength between first anterolateral spine and anterior cervical groove; additional spine ventral to between first and second anterolateral spine; 3 spines on anterior branchial margin, and 3 spines on posterior branchial margin, last smaller than others. External limit of orbit ending in small spine, with 1 frontal spine; infraorbital margin with 1 strong spine. Rostrum moderately elongate, triangular, 1.7–1.8 times as long as broad, 0.6 carapace length and breadth 0.3–0.4 that of carapace, nearly horizontal in lateral view; distance between distalmost lateral incisions 0.3 distance between proximalmost lateral incisions; dorsal surface with small setiferous ridges; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, with sparse short setae, anterior margin sharply angular.

Sternum: Plastron about as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 transverse ridges on tergite, anterior ridge more distinctly elevated than posterior ridge; somites 5 and 6 with 2 uninterrupted or medially interrupted ridges, posteromedian margin of somite 6 nearly straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Article 1 with 3 well-developed spines, distodorsal larger; distomesial spine somewhat smaller and more slender than distolateral. Ultimate article with a few setae, not in tuft, on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine longer than distomesial and overreaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with small distal spine on flexor margin; extensor margin with small but distinct distal spine; crista dentata with 21–23 denticles. Merus shorter than ischium; flexor margin with 2 strong spines of subequal size, proximal one located at midlength, distal one at terminal end; extensor margin with 2 spines. Carpus unarmed.

P1: 2.7–3.0 times carapace length, with numerous short and long setae. Merus 1.0–1.2 times length of carapace, 1.7 times as long as carpus, with spines arranged roughly in rows, mesial and distal spines strong. Carpus 0.8–0.9 length of palm, 1.9–2.4 times as long as broad; dorsal surface with spines arranged roughly in longitudinal rows; mesial margin with 3 or 4 strong spines. Palm 2.1–3.1 times longer than broad, lateral and mesial margins subparallel; spines arranged roughly in rows, dorsolateral row of spines continued on to whole lateral margin of fixed finger. Fingers 0.8–1.1 length of palm, each finger with two rows of teeth distally spooned; fingers with row of small spine on dorsal side.

P2–4: Moderately slender, with numerous long setae. P2 2.0–2.1 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.7–0.8 length of P3 merus); P2 merus 0.8–0.9 carapace length, 4.2–4.9 times as long as broad, 1.5–1.6 times longer than P2 propodus; P3 merus 4.0–4.8 times longer than broad, 1.3 times longer than P3 propodus; P4 merus 2.7–3.2 times as long as broad, as long as P4 propodus. Extensor margins with row of 9 or 10 proximally diminishing spines on P2–3, 3 on P4; lateral surface with 1 or 2 small spines on P2–3, 5 or 6 on P4; flexor margin distally ending in spine followed proximally by small spines and several tubercles or eminences. Carpi with 4 or 5 spines on extensor margin on P2–3, 1–3 small spines on P4; lateral surface with 4 or 5 spines sub-parallel to extensor margin on P2–4; flexor distal margin with small distal spine. Propodi 4.5–5.5 times as long as broad; extensor margin with 3 or 4 spines on proximal half on P2–4; flexor margin with 5 or 6 slender movable spines. Dactyli distally ending in well-curved strong spine, 0.4–0.5 length of propodi; flexor margin with 5 proximally diminishing teeth.

Epipods on P1–3.

Coloration. Base color greenish. Carapace and abdomen with some whitish flecks. Carapace ridges and spines reddish or brownish. P1 with rounded large white spots, encircled by dark brown, on distal part of merus, carpus and palm; proximal third of fingers greenish, distal two-thirds white; spines with red tips. P2–4 with numerous small white spots on merus and carpus; distal orange spot on merus; distal half of propodus whitish.

Remarks. Stimpson (1858) described *Galathea subsquamata* on the basis of material from “Ousima” (= Amami-oshima Island, northern Ryukyu Islands). The type material of the species was lost in the Great Fire of Chicago in 1871 (Evans 1967). We have obtained new material from the type locality (Amami-oshima Island, Oshima Strait) (see Baba 1989) and have selected a neotype to facilitate further studies. *Galathea aculeata*

Haswell, 1882 has been placed in the synonymy of *G. subsquamata*, but these two species are easily distinguished by the presence of one postcervical spine on each side of the carapace in *G. subsquamata*, which is always absent in *G. aculeata*. Unfortunately, we have studied a small portion of the material previously identified as *G. subsquamata*. Therefore, a revision of the individuals of this species cited along Japan, Taiwan, Philippines and other localities in the Western Pacific, would be desirable.

The closest relative of *G. subsquamata* is *G. cymo* n. sp. from Vanuatu, New Caledonia and Chesterfield Islands but the two can be easily distinguished by the following characters:

- The anterior branchial region is armed with one or two spines in *G. subsquamata*, rather than unarmed in *G. cymo*.
- Epipods are present on P1–3 in *G. subsquamata*, instead of only P1 in *G. cymo*.
- The genetic divergences between the two species are 20.0% (COI) and 4.3% (16S rRNA) (Tab. 3).

Distribution. Known with certainty from the Ryukyu Islands, Japan, Mariana Islands, and Papua New Guinea; 0–32 m.

***Galathea tagaloa* n. sp.**

(Figs 107, 121B)

Material examined. *Holotype:* Fiji. BORDAU 1, Stn DW1493, 18°43.02'S, 178°23.74'W, 429–440 m, 11 March 1999: 1 M 5.1 mm (MNHN-IU-2013-8089).

Paratypes: Vanuatu. BOA 1, Stn CP2414, 15°41.28'S, 167°02.897'E, 309–402 m, 5 September 2005: 1 M 6.7 mm, 1 ov. F 5.5 mm (MNHN-IU-2013-8103). SANTO, Stn AT58, 15°33.0'S, 167°19.3'E, 364–390 m, 03 October 2006: 1 M 6.5 mm (MNHN-IU-2013-13983).

Fiji Islands. BORDAU 1, Stn CP1395, 16°45.13'S, 179°59.20'E, 423–500 m, 23 February 1999: 1 F 5.0 mm (MNHN-IU-2013-8099).—Stn CP1406, 16°39.47'S, 179°36.93'E, 360–380 m, 25 February 1999: 1 ov. F 5.3 mm (MNHN-IU-2013-8093).—Stn DW1421, 17°07.95'S, 178°59.25'W, 403–406 m, 28 February 1999: 1 M 4.7 mm (MNHN-IU-2013-8091).—Stn CP1444, 17°11.13'S, 178°41.41'W, 398–409 m, 03 March 1999: 1 M 4.6 mm, 1 ov. F 5.1 mm (MNHN-IU-2013-8102).—Stn CP1467, 18°11.80'S, 178°35.80'W, 417–427 m, 06 March 1999: 2 M 4.7–4.8 mm, 3 ov. F 4.5–5.4 mm (MNHN-IU-2013-8098).—Stn DW1492, 18°43.12'S, 178°22.63'W, 430–450 m, 11 March 1999: 1 ov. F 5.1 mm (MNHN-IU-2013-8097).—Stn DW1493, 18°43.02'S, 178°23.74'W, 429–440 m, 11 March 1999: 1 ov. F 4.9 mm (MNHN-IU-2013-8096).—Stn CP1500, 18°41.74'S, 178°26.20'W, 366–389 m, 12 March 1999: 1 M 4.5 mm, 1 ov. F 4.3 mm (MNHN-IU-2013-8090).—Stn CP1501, 18°39.68'S, 178°29.90'W, 350–357 m, 12 March 1999: 3 M 4.7–5.1 mm, 2 F 4.2–4.6 mm (MNHN-IU-2013-8092).

Tonga Islands. BORDAU 2, Stn CP1525, 21°17'S, 174°59'W, 349–351 m, 02 June 2000: 2 ov. F 3.4–3.5 mm (MNHN-IU-2013-8095).—Stn CP1561, 19°52'S, 174°40'W, 383–393 m, 08 June 2000: 1 M 5.5 mm (MNHN-IU-2013-8101).—Stn CP1572, 19°42'S, 174°31'W, 391–402 m, 11 June 2000: 1 ov. F 4.9 mm (MNHN-IU-2013-8094), 1 ov. F 3.1 mm (MNHN-IU-2013-8100).

Etymology. The name refers to *Tagaloa*, the ocean-god, that according the Samoan tradition created the Fiji islands. The name is considered as a substantive in apposition.

Description. *Carapace:* As long as broad; transverse ridges with sparse long setae among numerous short fine setae; cervical groove distinct, laterally bifurcated; most ridges on gastric region uninterrupted, with some scattered scale-like ridges; epigastric region with 8 or 9 spines; protogastric with 4 or 5 small median spines; 3 or 4 small hepatic spines on each side near anterolateral spine, sometimes 1 or 2 very near lateral margin; 1 or 2 small parahepatic spines lateral to anterior protogastric ridge; anterior branchial region with distinct ridges, sometimes with 1 or 2 minute spines on each side. Anterior mesogastric ridge not extending laterally to anteriormost of branchial marginal spines; anterior metogastric ridge not extending laterally to anterior branchial ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges. Lateral margins slightly convex medially, with 7 spines: first anterolateral, well-developed, second very small but distinct, located at midlength between first spine and anterior cervical groove, with small spine ventral to between first and second; 2 spines on anterior branchial margin, and 3 spines on posterior branchial margin. Small outer orbital spine;

infraorbital margin with 1 strong spine, and 1 or 2 spines; sometimes 1 small spine between orbital and anterolateral spines. Rostrum triangular, 2.0–2.1 times as long as broad, length 0.6 that of, breadth 0.3–0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some thick long plumose setae; lateral margin with 4 deeply incised sharp spines.

Pterygostomial flap rugose, with sparse short setae, anterior margin bluntly angular.

Sternum: About as long as broad, lateral limits divergent posteriorly.

Abdomen: Somites 2–3 each with 2 uninterrupted and 1 scale-like transverse ridges on tergite, anterior ridge more elevated than posterior ridge; somite 4 with 2 ridges, posterior ridge medially interrupted; somites 5 and 6 each with 2 medially interrupted ridges; posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 2 well-developed spines, distodorsal and distolateral spines, distodorsal larger; distomesial spine distinct but very small; 2 small spines along lateral margin. Ultimate article moderately elongate, twice longer than broad, with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with distomesial spine reaching distal margin of article 2. Article 2 with 2 well-developed distal spines, distomesial spine slightly longer than distolateral reaching end of article 3, additional small spine at midlength of mesial margin. Articles 3 and 4 unarmed.

Mxp3: Basis with several denticles on mesial ridge, distalmost larger. Ischium with well-developed spine on flexor distal margin; crista dentata with 22 or 23 denticles. Merus shorter than ischium; flexor margin with 3 spines, proximal stronger than others; extensor margin with 1 or 2 spines, distal spine well-developed. Carpus unarmed.

P1: 4.4 times carapace length, with numerous finely setiferous scales, with scattered long thick plumose setae. Merus 1.6 times length of carapace, 2.0 times as long as carpus, with spines arranged roughly in rows, dorsomesial and ventromesial spines stronger; distal spines prominent. Carpus 0.7 length of palm, 2.3 times as long as broad; dorsal surface with small spines arranged roughly in 2 longitudinal rows; mesial spines slightly stronger than dorsal spines. Palm 2.7 times longer than broad, lateral and mesial margins with small spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side. Fingers 0.7 length of palm, each finger distally with two rows of teeth, spooned, mesial margin of movable finger and lateral margin of fixed finger unarmed.

P2–4: Moderately long and slender, with setose striae and long plumose setae. P2 2.1 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.8 carapace length, 4.5 times as long as broad, 1.2 times longer than P2 propodus; P3 merus 3.5 times longer than broad, 1.0–1.1 times longer than P3 propodus; P4 merus 3.5 times as long as broad, 1.1 length of P4 propodus. Extensor margins of meri with row of 8–10 proximally diminishing spines; flexor margins distally ending in strong spine followed proximally by 1 or 2 small spines and several tubercles or eminences. Carpi with 5 or 6 spines on extensor margin, distalmost longer than distal second; lateral surface with 1 or 2 small spines and acute granules sub-parallel to extensor margin on P2–4; flexor distal margin sometimes with small spine. P2, P3 and P4 propodi 6.5, 6 and 5 times as long as broad, respectively; extensor margin with 3 or 4 small proximal spines on P2–4; flexor margin with 5 or 6 slender movable spines on P2–4. Dactyli subequal in length, distally ending in well-curved strong spine, length 0.5 that of propodi; flexor margin with 5 or 6 proximally diminishing teeth, terminal one prominent.

Epipods on P1.

Coloration. Base color light orange. Ridges on carapace and abdomen reddish.

Remarks. *Galathea tagaloa* is closely related to *G. pubescens* Stimpson, 1858 from Japan to New Caledonia from which it can be distinguished by the following characters:

- The rostrum is twice longer than wide in *G. tagaloa*, whereas it is clearly less than twice in *G. pubescens*.
- The carapace has numerous anterior branchial and postcervical spines in *G. pubescens*, whereas these spines are absent (rarely 1 or 2 minute spines) in *G. tagaloa*.
- The genetic divergences between *G. pubescens* and *G. tagaloa* are 16.2% (16S rRNA) and 19.3% (COI) (Tab. 2).

Distribution. Fiji, Tonga Islands, Vanuatu, 309–450 m.

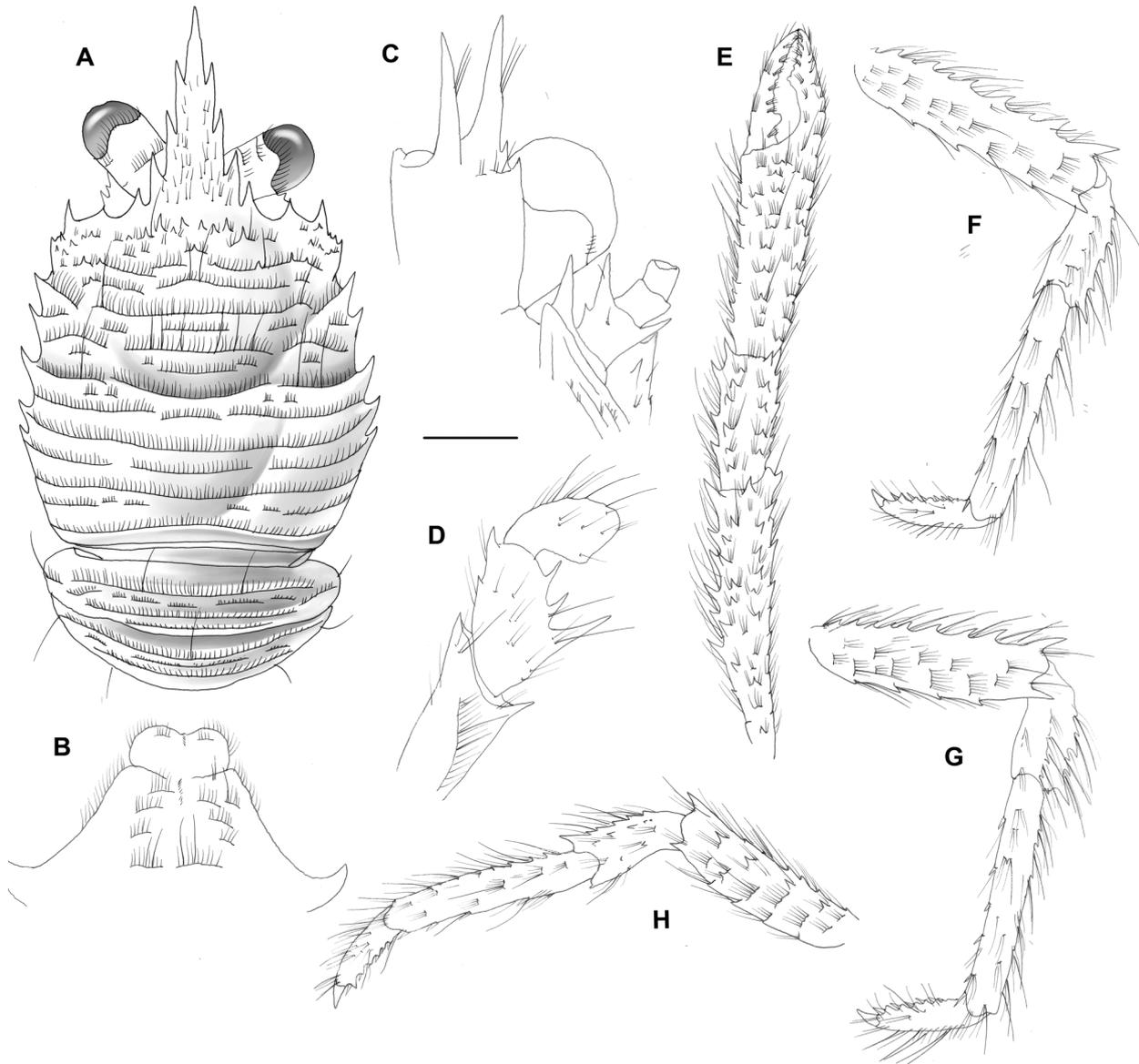


FIGURE 107. *Galathea tagaloa* n. sp., holotype, male, 5.1 mm, Fiji (MNHN-IU-2013-8089). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, left P4, lateral view. Scale: A, F–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

***Galathea tagaro* n. sp.**
(Figs 108, 121C)

Material examined. *Holotype:* Vanuatu. SANTO, Stn AT82, 15°31.6'S, 167°12.4'E, 58–59 m, 12 October 2006: 1 F 4.7 mm (MNHN-IU-2013-8365).

Paratypes: Vanuatu. SANTO, Stn AT54, 15°32.1'S, 167°14.1'E, 68–79 m, 2 October 2006: 1 ov. F 3.7 mm (MNHN-IU-2013-8366).

Solomon Islands. SALOMON 1, Stn DW1840, 10°17.0'S, 161°43.0'E, 97–223 m, 06 October 2001: 1 M 3.1 mm (MNHN-IU-2013-8367).— SALOMON 2, Stn CP2193, 8°24.4'S, 159°26.7'E, 362–432 m, 24 October 2004: 1 M 3.5 mm, 1 ov. F 2.2 mm (MNHN-IU-2013-8382).

Etymology. The name *Tagaro*, is the Creator in the Vanuatu religion. The name is considered as a substantive in apposition.

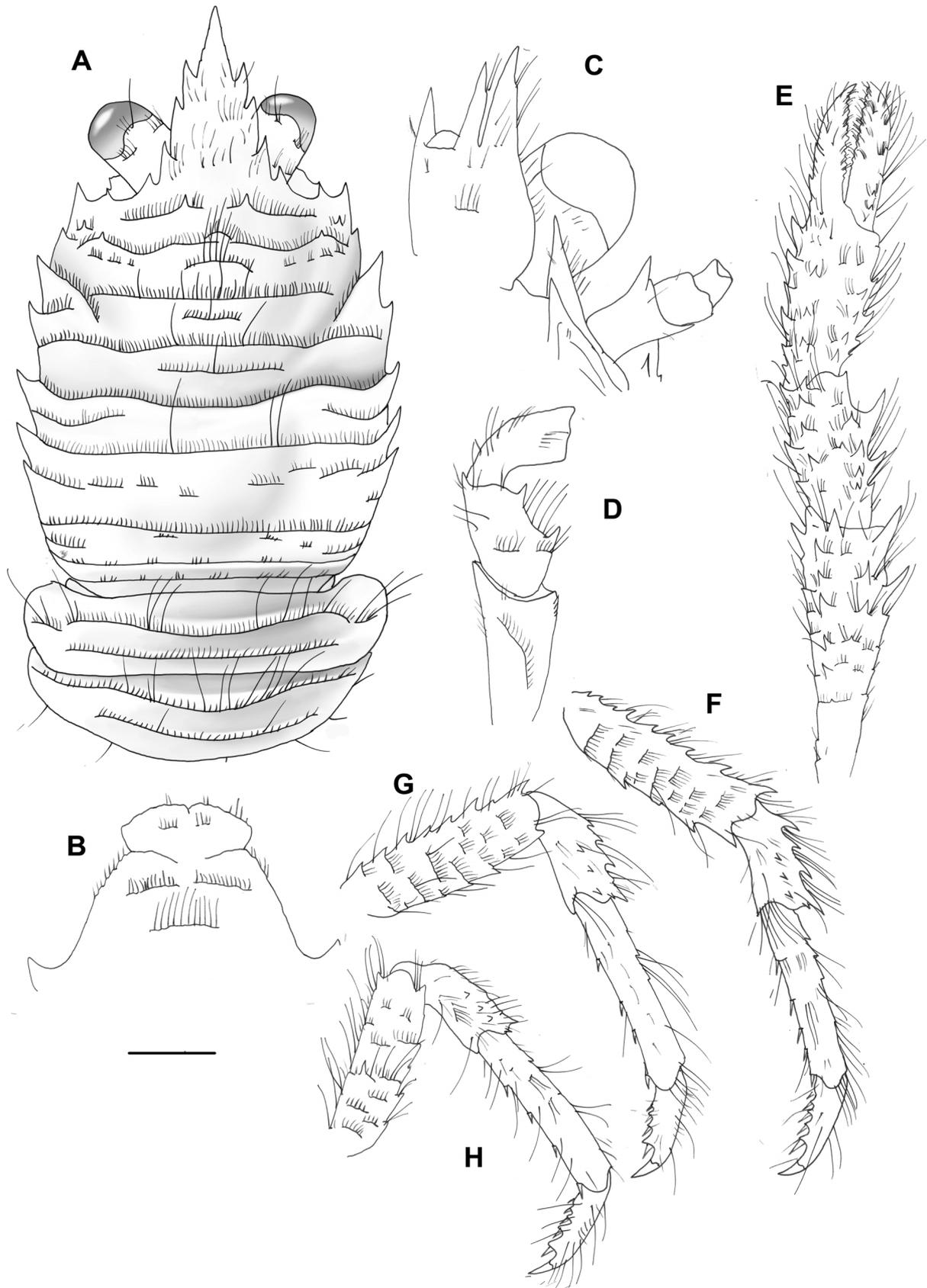


FIGURE 108. *Galathea tagaro* n. sp., holotype, male, 4.7 mm, Vanuatu (MNHN-IU-2013-8365). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomial flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Description. *Carapace*: as long as broad; transverse ridges with dense short setae, and some scattered long plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with 7 transverse ridges: 1 epigastric ridge with 2 epigastric spines and medially interrupted; 2 protogastric ridges, anterior ridge medially interrupted, with 1 small parahepatic spine on each side, posterior median ridge short, arcuate, with some long plumose setae; 2 mesogastric ridges, anterior ridge uninterrupted but not extending laterally to anteriormost of branchial marginal spines, posterior ridge median and short; 2 metogastric ridges, anterior ridge uninterrupted (rarely medially interrupted), extending laterally to anterior branchial ridges, posterior ridge well-developed. One small hepatic spine on each side, near first (anterolateral) marginal spine. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 6 ridges. Lateral margins well convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second, small, at midlength between anterolateral spine and anterior cervical groove, accompanying another spine ventral to between first and second; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. Small spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum 1.6 as long as broad, length 0.5 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.35 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some setose scales; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 uninterrupted transverse ridges on tergite; somites 5 and 6 each with short scale-like ridges. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.5 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine smaller than others. Ultimate article with tuft of setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching distal margin of article 2. Article 2 longer than wide, with 2 well-developed subequal distal spines, reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with small spine on flexor and extensor distal margins; crista dentata with 17–19 denticles. Merus shorter than ischium; flexor margin with 2 subequal spines; extensor margin with small distal spine. Carpus unarmed.

P1: 1.7 times carapace length, covered with finely setiferous scales, with numerous long setae. Merus 0.7 times carapace length, 3.7 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.5 length of palm, 2.1 times as long as broad; dorsal and lateral surfaces with some spines; mesial margin with 3 or 4 spines (distal second strong). Palm twice longer than broad, lateral and mesial margins slightly convex; spines arranged roughly in dorsolateral and dorsomesial rows, some small spines scattered on dorsal side. Fingers as long as palm, fixed and movable fingers with 2 or 3 proximal spines each; each finger distally with two rows of teeth, spooned.

P2–4: moderately slender, with setose striae and sparse long plumose setae. P2 1.6 times carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P3 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.6 carapace length, 3.7 times as long as broad, 1.2 times longer than P2 propodus. Extensor margin with row of 8 or 9 proximally diminishing spines on P2–3, 1 distal spine on P4; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several eminences, lateral sides with 1 spine on P4. Carpi with 4 or 5 spines on extensor margin on P2–3, 2 spines on P4, distalmost sometimes absent or smaller than distal second; lateral surface with 3 spines sub-parallel to extensor margin; flexor distal margin acute. Propodi 4.5–4.8 times as long as broad; extensor margin with 0–1 proximal spines; flexor margin with 4 movable spines. Dactyli distally ending in well-curved strong spine, length 0.6–0.7 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods absent on pereopods.

Coloration. Base color greenish, with numerous whitish and brownish flecks. P1–4 with transverse whitish and greenish or brownish bands.

Remarks. *Galathea tagaro* is quite similar to *G. consobrina* De Man, 1902. Differentiating characters among the relevant species are discussed under Remarks of *G. consobrina*.

No genetic data are available for *G. tagaro*.

Distribution. Solomon Islands, Vanuatu, 58–432 m.

***Galathea tanegashimae* Baba, 1969**

(Fig. 121D)

Galathea tanegashimae Baba, 1969b: 16, fig. 4 (southern Kyushu, Japan, 15–30 m).—Lewinsohn, 1981: 182 (Somalia).—Tirmizi & Javed, 1993: 42, 65–66, figs 17, 28 (E Indian Ocean, 77 m).—Ahyong, 2007: 14, fig. 7 (Lord Howe Rise, 72–82 m).—Baba *et al.*, 2008: 80 (compilation).—Baba *et al.*, 2009: 127, figs. 107–109 (Taiwan).—Macpherson & Cleva, 2010: 62, color figs 3G, H (Mayotte, 3–30 m).—Dong & Li, 2010: 20, fig. 12 (South China Sea, 5–10 m).—Poore *et al.*, 2011: 334, pl. 12A (color photo, Madagascar).—Poupin *et al.*, 2013a: 16, fig. 7b, c (color) (Mayotte, 3–30 m).—Poupin *et al.*, 2013b: 6 (Europa island, Mozambique Channel).

Galathea spinosorostris.—Baba, 1990: 959 (Madagascar, 14–340 m).

Material examined. Japan. Okinawa. Iriomote Island, Nakano Beach, 24.4323°N, 123.7916°E, 19 m, 9 July 2010: 1 M 2.7 mm, 1 ov. F 2.8 mm (UF26912); 1 ov. F 3.3 mm (UF26911).

Philippines. MUSORSTOM 3, Stn DR104, 13°56'N, 120°22'E, 13 m, 1 June 1985: 2 ov. F 2.6–3.1 mm (MNHN-IU-2013-13931).

Papua New Guinea. Milne Bay Province, Louisiade Archipelago, Clavados Channel, 11°03.09'S, 152°28.62'E, 5–10 m, 1 June 1998: 2 M 2.5–3.2 mm, 1 F 2.2 mm (UF5403). PAPUA NIUGINI, Stn PR4, 05°10.1'S, 145°50.5'E, 30 m, 7 November 2012: 1 ov. F 2.3 mm (MNHN-IU-2013-14011).—Stn PR22, 05°17.8'S, 145°46.9'E, 3–10 m, 12 November 2012: 1 M 2.7 mm, 2 ov. F 2.3–2.6 mm, 1 F 2.1 mm (MNHN-IU-2013-14006).—Stn PR24, 05°12.3'S, 145°48.8'E, 0 m, 12 November 2012: 1 M 2.4 mm (MNHN-IU-2013-14040).—Stn PR25, 05°04.7'S, 145°48.9'E, 7 m, 13 November 2012: 2 M 2.3–2.7 mm, 1 ov. F 2.2 mm, 2 F 2.6–3.0 mm (MNHN-IU-2013-14008).—Stn PR63, 05°01.1'S, 145°48'E, 2–13 m, 19 November 2012: 1 M 2.0 mm (MNHN-IU-2013-722).—Stn PB01, 05°11.3'S, 145°49.4'E, 6 m, 30 December 2012: 1 M 3.0 mm, 1 ov. F 2.8 mm (MNHN-IU-2013-14042); 1 M 2.0 mm, 3 ov. F 2.1–2.8 mm (MNHN-IU-2013-21).—Stn PB02, 05°12.1'S, 145°49.3'E, 17 m, 30 December 2012: 1 M 2.5 mm (MNHN-IU-2013-772); 2 M 2.1–2.3 mm (MNHN-IU-2013-193); 4 M 1.8–2.7 mm, 5 ov. F 2.6–3.2 mm, 2 F 2.2–2.5 mm (MNHN-IU-2013-14029).—Stn PB04, 05°10.1'S, 145°50.5'E, 30 m, 30 December 2012: 1 M 2.8 mm, 1 ov. F 2.9 mm (MNHN-IU-2013-14012).—Stn PB06, 05°09.9'S, 145°50.4'E, 20 m, 30 December 2012: 1 M 2.3 mm, 1 F 2.6 mm (MNHN-IU-2013-14024); 1 ov. F 2.6 mm (MNHN-IU-2013-14017); 1 M 2.3 mm (MNHN-IU-2013-14032); 1 M 2.6 mm, 1 ov. F 2.0 mm (MNHN-IU-2013-390).—Stn PB07, 05°10.8'S, 145°49.8'E, 22 m, 30 December 2012: 1 ov. F 2.2 mm (MNHN-IU-2013-14013); 1 M 2.4 mm, 2 ov. F 2.5–2.7 mm (MNHN-IU-2013-14021); 1 F 2.2 mm (MNHN-IU-2013-14031); 1 M 2.0 mm (MNHN-IU-2013-378); 1 M 2.0 mm (MNHN-IU-2013-14034). Stn PB09, 05°12.3'S, 145°48.8'E, 2–3 m, 30 December 2012: 2 M 1.5–1.7 mm, 2 F 1.6–2.0 mm (MNHN-IU-2013-14000).—Stn PB11, 05°12.5'S, 145°49.1'E, 13 m, 30 December 2012: 7 M 1.7–3.0 mm, 10 ov. F 2.4–3.1 mm, 3 F 1.5–1.8 mm (MNHN-IU-2013-14003).—Stn PB12, 05°11.8'S, 145°48.8'E, 7–15 m, 30 December 2012: 1 M 2.3 mm (MNHN-IU-2013-375); 1 M 2.0 mm, 2 ov. F 2.3–3.0 mm (MNHN-IU-2013-14022); 1 M 2.1 mm (MNHN-IU-2013-14018).—Stn PB14, 05°13.8'S, 145°48'E, 15 m, 30 December 2012: 3 M 2.0–2.6 mm, 2 ov. F 2.5–2.8 mm, 4 F 2.0–2.5 mm (MNHN-IU-2013-14036).—Stn PB15, 05°04.7'S, 145°48.9'E, 5 m, 30 December 2012: 1 F 1.5 mm (MNHN-IU-2013-14004); 2 M 2.2–3.3 mm, 2 ov. F 3.0–3.1 mm, 1 F 2.6 mm (MNHN-IU-2013-14025).—Stn PB16, 05°04.7'S, 145°48.8'E, 5 m, 30 December 2012: 3 M 2.5–2.8 mm, 7 ov. F 2.0–2.9 mm (MNHN-IU-2013-14019).—Stn PB17, 05°04.9'S, 145°49.3'E, 26 m, 30 December 2012: 2 M 1.8–3.1 mm, 1 F 2.0 mm, 2 juv. 1.4–1.5 mm (MNHN-IU-2013-14027).—Stn PB18, 05°06.3'S, 145°49.1'E, 26 m, 30 December 2012: 2 M 2.9–3.1 mm (MNHN-IU-2013-14039).—Stn PB21, 05°01.4'S, 145°48'E, 5 m, 30 December 2012: 2 M 2.2–2.9 mm, 2 ov. F 2.2–3.0 mm (MNHN-IU-2013-14014).—Stn PB23, 04°59.5'S, 145°47.7'E, 13 m, 30 December 2012: 11 M 1.8–3.0 mm, 4 ov. F 3.0–3.3 mm, 5 F 2.0–3.0 mm (MNHN-IU-2013-14010).—Stn PB26, 04°59.1'S, 145°47.7'E, 22 m, 30 December 2012: 2 M 2.4–2.6 mm (MNHN-IU-2013-14028); 3 M 2.2–3.1 mm, 1 ov. F 2.8 mm (MNHN-IU-2013-14026).—Stn PB27, 05°03.9'S, 145°48.8'E, 12 m, 30 December 2012: 19 M 2.2–3.0 mm, 18 ov. F 2.0–2.9 mm, 4 F 2.1–2.5 mm (MNHN-IU-2013-14001).—Stn PB28, 05°11.9'S, 145°49.6'E, 10 m, 30 December 2012: 11 M 1.8–3.6 mm, 6 ov. F 2.2–3.3 mm, 9 F 1.6–2.7 mm (MNHN-IU-2013-14007).—Stn PB29, 05°18'S, 145°46.1'E, 17 m, 30 December 2012: 2 M 2.2–2.8 mm, 2 F 1.7–2.0 mm (MNHN-IU-2013-14016).—Stn PB31, 05°09.4'S, 145°50'E, 31 m, 30 December 2012: 13 M 1.6–2.5 mm, 8 ov. F 2.0–2.6 mm, 12 F 1.8–2.7 mm (MNHN-IU-2013-14002).—Stn PB37, 05°15.9'S, 145°47.1'E, 10 m, 30 December 2012: 2 M 2.4–3.0 mm, 2 F 2.5–2.9 mm (MNHN-IU-2013-14030).—Stn PD45, 05°07.9'S, 145°48.9'E, 8 m, 30 December 2012, 1 ov. F 2.7 mm (MNHN-IU-2013-14041).—Stn PS04, 05°10.022'S, 145°50.09'E, 12 m, 30 December 2012: 2 ov. F 2.5–2.6 mm (MNHN-IU-2013-14037).—Stn PS06, 05°09.959'S, 145°50.432'E, 15 m, 30 December 2012: 1 M 2.0 mm

(MNHN-IU-2013-385); 1 ov. F 2.0 mm (MNHN-IU-2013-14023); 1 M 2.6 mm (MNHN-IU-2013-14033); 1 M 2.0 mm (MNHN-IU-2013-14015); 1 ov. F 1.9 mm (MNHN-IU-2013-14035); 1 juv. 1.3 mm (MNHN-IU-2013-14038).—Stn PS07, 05°10.783'S, 145°49.778'E, 13 m, 30 December 2012: 1 ov. F 2.0 mm (MNHN-IU-2013-14009).—Stn PS23, 05°04.573'S, 145°49.209'E, 21 m, 30 December 2012: 5 M 1.7–2.6 mm, 1 ov. F 2.0 mm, 8 F 1.6–1.9 mm (MNHN-IU-2013-14020).—Stn PS31, 05°08.167'S, 145°49.417'E, 10 m, 30 December 2012: 5 M 1.8–2.2 mm, 1 F 2.2 mm (MNHN-IU-2013-14005).

Vanuatu. SANTO, Stn DB1, 15°33.1'S, 167°17.8'E, 15–25 m, 10 September 2006: 1 M 3.2 mm, 6 ov. F 2.0–3.1 mm (MNHN-IU-2013-14060).—Stn DB8, 15°34.6'S, 167°13.8'E, 12 m, 12 September 2006: 19 M 1.9–3.0 mm, 17 ov. F 2.2–3.0 mm, 3 F 1.8–1.9 mm (MNHN-IU-2013-14088); 3 M 1.9–2.6 mm, 2 ov. F 2.2–2.5 mm, 1 F 2.2 mm (MNHN-IU-2013-14109).—Stn DB12, 15°36.6'S, 167°10.1'E, 10–18 m, 13 September 2006: 1 M 2.8 mm, 1 ov. F 2.7 mm (MNHN-IU-2013-14161).—Stn DB20, 15°30.5'S, 167°01.4'E, 20–25 m, 15 September 2006: 21 M 1.8–2.9 mm, 22 F 1.8–2.4 mm (MNHN-IU-2013-14072).—Stn DB25, 15°37.7'S, 167°11.3'E, 10 m, 16 September 2006: 4 M 2.1–2.6 mm, 5 ov. F 2.0–2.5 mm (MNHN-IU-2013-14085).—Stn NR9, 15°37.6'S, 167°08.8'E, 8 m, 16 September 2006: 1 ov. F 2.5 mm (MNHN-IU-2013-14123).—Stn DB29, 15°38.9'S, 167°05.1'E, 15 m, 17 September 2006: 34 M 1.8–3.1 mm, 27 ov. F 2.0–2.7 mm, 5 F 1.5–1.8 mm (MNHN-IU-2013-14062).—Stn ZR4, 15°33.1'S, 167°09.6'E, 45 m, 17 September 2006: 1 ov. F 2.7 mm (MNHN-IU-2013-14137).—Stn DB33, 15°34.7'S, 167°13.8'E, 14–25 m, 18 September 2006: 12 M 1.8–2.3 mm, 4 ov. F 2.6–3.0 mm (MNHN-IU-2013-14111).—Stn NB12, 15°33.1'S, 167°09.6'E, 20 m, 19 September 2006: 7 M 1.8–3.9 mm, 7 ov. F 2.3–3.4 mm (MNHN-IU-2013-14081).—Stn FR24, 15°33.1'S, 167°09.6'E, 1–30 m, 20 September 2006: 1 M 2.6 mm (MNHN-IU-2013-14101).—Stn DB46, 15°28.8'S, 167°15.2'E, 2–3 m, 20 September 2006: 6 M 1.6–2.5 mm, 7 ov. F 1.9–2.5 mm (MNHN-IU-2013-14125).—Stn DB48, 15°38.7'S, 167°5.2'E, 10–17 m, 21 September 2006: 9 M 2.1–3.2 mm, 11 ov. F 1.8–2.6 mm, 7 F 1.4–1.8 mm (MNHN-IU-2013-14090).—Stn DS49, 15°38.7'S, 167°05.2'E, 10–17 m, 21 September 2006: 3 M 2.2–2.5 mm, 2 ov. F 2.0–2.4 mm (MNHN-IU-2013-14077).—Stn FR26, 15°31.7'S, 167°09.5'E, 3–33 m, 21 September 2006: 1 M 2.2 mm, 1 ov. F 2.3 mm (MNHN-IU-2013-14154).—Stn DB53, 15°28.8'S, 167°15.2'E, 5 m, 22 September 2006: 1 M 2.5 mm, 2 ov. F 2.0–2.3 mm (MNHN-IU-2013-14059).—Stn NR21, 15°26.8'S, 167°15.1'E, 3–22 m, 22 September 2006: 1 M 2.4 mm (MNHN-IU-2013-14134).—Stn DB58, 15°24.6'S, 167°14.3'E, 6–43 m, 23 September 2006: 1 M 2.6 mm, 3 ov. F 2.1–2.9 mm, 1 F 2.0 mm (MNHN-IU-2013-14135).—Stn DB61, 15°32.3'S, 167°16.9'E, 41 m, 25 September 2006: 1 M 2.5 mm, 1 ov. F 2.4 mm, 1 F 2.4 mm (MNHN-IU-2013-14084).—Stn DB63, 15°26.9'S, 167°15.8'E, 21 m, 25 September 2006: 15 M 2.5–3.0 mm, 14 ov. F 2.3–3.2 mm, 2 F 2.1–2.2 mm (MNHN-IU-2013-14066).—Stn DB65, 15°25.8'S, 167°13.0'E, 13 m, 26 September 2006: 17 M 1.9–2.7 mm, 13 ov. F 2.0–2.6 mm (MNHN-IU-2013-14073).—Stn DB67, 15°22.9'S, 167°13.1'E, 7 m, 26 September 2006: 4 M 1.7–2.2 mm, 5 ov. F 1.9–2.3 mm, 3 F 1.7–1.9 mm (MNHN-IU-2013-14087).—Stn DB71, 15°21.6'S, 167°12.5'E, 7 m, 27 September 2006: 7 M 1.7–2.3 mm, 3 ov. F 2.3–2.5 mm, 3 F 2.2–2.5 mm (MNHN-IU-2013-14064).—Stn DB75, 15°22.9'S, 167°11.9'E, 20 m, 28 September 2006: 2 M 2.3–2.5 mm (MNHN-IU-2013-14141).—Stn ZB6, 15°36.8'S, 167°01.3'E, 30 m, 28 September 2006: 8 M 1.9–2.3 mm, 5 ov. F 1.9–2.2 mm, 5 F 1.5–1.7 mm (MNHN-IU-2013-14102).—Stn FB40, 15°22.9'S, 167°11.7'E, 9 m, 29 September 2006: 2 M 1.7–2.0 mm, 2 F 1.6–1.8 mm (MNHN-IU-2013-14086).—Stn AT50, 15°36.8'S, 167°14.1'E, 140–153 m, 30 September 2006: 1 M 2.2 mm (MNHN-IU-2013-14122).—Stn FB43, 15°28.4'S, 167°14.9'E, 19 m, 30 September 2006: 8 M 2.0–3.0 mm, 5 ov. F 2.3–2.6 mm, 2 F 1.6–2.3 mm (MNHN-IU-2013-14112).—Stn DB80, 15°37.1'S, 167°07.5'E, 18 m, 2 October 2006: 13 M 2.0–2.7 mm, 17 ov. F 2.2–3.0 mm, 1 F 2.2 mm (MNHN-IU-2013-14075).—Stn DB83, 15°43.4'S, 167°15.0'E, 6 m, 3 October 2006: 1 M 2.6 mm (MNHN-IU-2013-14157).—Stn DB86, 15°38.5'S, 167°15.1'E, 13 m, 4 October 2006: 1 M 2.0 mm (MNHN-IU-2013-14160); 2 M 2.1–2.2 mm, 3 ov. F 2.5–2.6 mm, 2 F 2.1–2.5 mm (MNHN-IU-2013-14078).—Stn FB52, 15°42.7'S, 167°15.1'E, 7 m, 5 October 2006: 3 M 2.1–2.5 mm, 1 ov. F 3.0 mm (MNHN-IU-2013-14091).—Stn FB56, 15°35.2'S, 167°02.1'E, 3–18 m, 7 October 2006: 3 M 2.1–2.5 mm, 1 ov. F 2.3 mm (MNHN-IU-2013-14083).—Stn FB64, 15°35.4'S, 166°59.2'E, intertidal, 10 October 2006: 1 M 2.5 mm, 1 ov. F 2.6 mm (MNHN-IU-2013-14136).—Stn FB68, 15°35.4'S, 166°59.7'E, 11 m, 11 October 2006: 3 M 2.1–2.5 mm, 1 ov. F 2.2 mm, 1 F 1.8–1.9 mm (MNHN-IU-2013-14079).—Stn FB72, 15°36.1'S, 166°58.5'E, 16 m, 12 October 2006: 2 M 2.4–2.7 mm, 5 ov. F 2.1–2.5 mm, 1 F 2.0 mm (MNHN-IU-2013-14080).—Stn FB92, 15°33.6'S, 167°16.6'E, 2–4 m, 14 October 2006: 1 M 3.0 mm, 3 ov. F 2.3–3.4 mm (MNHN-IU-2013-13989); 1 ov. F 3.2 mm (MNHN-IU-2013-13988).—Stn FS96, 15°33.1'S, 167°09.6'E, 35 m, 14 October 2006: 1 ov. F 2.5 mm (MNHN-IU-2013-14105).—Stn EP34, 15°33.3'S, 167°12.9'E, 40–60 m, 14 October 2006: 2 F 1.2–1.3 mm (MNHN-IU-2013-14124).—Stn EP35, 15°34.9–35.1'S,

167°13.9–14.1'E, 10–51 m, 15 October 2006: 1 M 2.1 mm, 3 F 1.6–1.8 mm (MNHN-IU-2013-14113).—Stn FB83, 15°32.6'S, 167°17.4'E, 8–20 m, 15 October 2006: 3 M 2.7–2.8 mm, 2 ov. F 2.5–2.6 mm (MNHN-IU-2013-14076).—Stn LD35, 15°32.7–32.8'S, 167°11.5–11.6'E, 3–8 m, 16 October 2006: 1 ov. F 2.0 mm (MNHN-IU-2013-14159).—Stn ZB9, 15°40.6'S, 167°05.1'E, 5–7 m, 2 October 2006: 14 M 1.7–2.2 mm, 13 ov. F 1.8–2.4 mm, 8 F 1.5–1.7 mm (MNHN-IU-2013-14071).—Stn ZR12, 15°36.7'S, 167°02.0'E, 2–30 m, 5 October 2006: 3 M 1.9–2.6 mm, 1 ov. F 2.5 mm, 3 F 2.0–2.1 mm (MNHN-IU-2013-14082).

Australia. Queensland. Lizard Island, 14.6966°S, 145.4642°E, 1–10 m, 8 February 2009: 1 M 2.0 mm, 1 F 1.8 mm (UF20201).—2–15 m, 13 February 2009: 2 M 1.7–2.5 mm, 1 F 2.1 mm (UF17046).—14.4718°S, 145.5064°E, no depth, 14 February 2009: 1 M 3.0 mm, 4 ov. F 2.6–3.6 mm (UF18159); 1 M 3.2 mm (UF18160); 1 ov. F 2.6 mm (UF18161); 1 F 2.1 mm (UF18162); 5 M 1.4–2.6 mm (UF18163); 1 ov. F 4.0 mm (UF18162); 1 M 2.4 mm (UF18165); 3 M 1.5–2.3 mm, 4 ov. F 2.1–2.6 mm, 1 F 2.0 mm (UF18166).—14.4544°S, 145.5043°E, no depth, 14 February 2009: 1 M 2.2 mm (UF18142); 1 F 1.5 mm (UF18143); 1 M 2.0 mm (UF18147); 1 F 2.3 mm (UF18151).—14.4514°S, 145.3139°E, no depth, 15 February 2009: 1 ov. F 3.4 mm (UF18193); 3 M 1.9–2.5 mm, 1 ov. F 2.0 mm, 2 F 1.8–2.1 mm (UF18194).—14.6515°S, 145.4607°E, no depth, 17 February 2009: 1 F 2.4 mm (UF18210).—14.6068°S, 145.6311°E, 25–30 m, 20 February 2009: 1 M 2.5 mm (UF17258); 1 M 2.4 mm (UF17242); 1 ov. F 3.4 mm (UF17249); 1 F 1.9 mm (UF17250); 1 M 2.4 mm (UF17259); 1 F 1.9 mm (UF17271); 1 ov. F 2.4 mm (UF17272); 1 ov. F 2.3 mm (UF17296); 1 M 1.5 mm (UF17333); 1 M 2.1 mm (UF17373); 1 M 2.3 mm (UF17375); 5 M 1.5–3.1 mm, 6 ov. F 2.2–3.3 mm, 2 F 1.3–1.5 mm (UF17385); 1 M 3.5 mm (UF17387); 3 M 1.5–2.5 mm, 2 ov. F 1.8–1.9 mm, 1 F 1.9 mm (UF20197).—14.6504°S, 145.4621°E, no depth, 21 February 2009: 3 M 1.2–2.3 mm (UF18318); 1 ov. F 3.4 mm (UF18306); 2 M 2.3–3.0 mm (UF18307); 1 M 2.4 mm, 2 ov. F 2.6–3.7 mm (UF18262).—14.6926°S, 145.4684°E, no depth, 22 February 2009: 1 ov. F 3.0 mm (UF18336).—Stn 2, 15 m, 24 February 2009: 1 F 2.5 mm (UF17492); 1 M 3.0 mm (UF17539); 1 ov. F 3.3 mm (UF17541); 2 ov. F 2.6–2.8 mm (UF18875).

New Caledonia. Grotte Merlet, 20–30 m, 19 January 1973: 1 ov. F 2.5 mm (MNHN-IU-2013-13925); 1 M 2.5 mm (MNHN-IU-2013-13926); 1 M 2.8 mm (MNHN-IU-2013-13927).—Isle of Pines, August 1993: 1 ov. F 4.0 mm (MNHN-IU-2013-14131).—Touho, 20°47'S, 165°13'E, no depth, 28 September 1993: 1 ov. F 3.4 mm, 1 F 1.2 mm (MNHN-IU-2013-14169).—Koumac, 12 m, 7 October 1993: 1 M 1.9 mm, 1 F 2.2 mm (MNHN-IU-2013-14114).—20 m, 6 October 1993: 1 M 3.1 mm (MNHN-IU-2013-14165).—12 m, 7 October 1993: 1 ov. F 2.4 mm (MNHN-IU-2013-14063).—intertidal, 7 October 1993: 1 M 2.8 mm (MNHN-IU-2013-14149). South Reef, Stn 551, 23°00'S, 166°59'E, 9 m, 15 July 1985: 1 ov. F 2.4 mm (MNHN-IU-2013-14070). Loyalty Islands. MUSORSTOM 6, Stn DW431, 20°22.25'S, 166°10.00'E, 21 m, 18 February 1989: 2 ov. F 2.5–2.7 mm (MNHN-IU-2013-14093).—Stn DW435, 20°20.56'S, 166°07.83'E, 32 m, 18 February 1989: 1 ov. F 3.5 mm (MNHN-IU-2013-14094). Lagon North, Stn DW1139, 19°23.6'S, 163°47'E, 39 m, October–November 1989: 1 M 2.4 mm, 1 ov. F 2.5 mm (MNHN-IU-2013-14129). SMIB 5, Stn DW99, 23°24.70'S, 168°05.40'E, 58 m, 14 September 1989: 1 ov. F 2.9 mm (MNHN-IU-2013-14133). Loyalty Islands. PLOUVEAL, Stn DW1226, 20°32'S, 166°24'E, 21 m, 9 September 1992: 2 M 2.5–3.0 mm, 1 ov. F 3.0 mm (MNHN-IU-2013-14120).—Stn DW1231, 20°31.2'S, 166°22.9'E, 23 m, 9 September 1992: 2 M 2.9–3.4 mm (MNHN-IU-2013-14057).—Stn DW1222, 20°28'S, 166°30'E, 15 m, 12 September 1992: 3 M 2.6–3.1 mm, 1 ov. F 3.4 mm (MNHN-IU-2013-14152); 1 M 3.8 mm (MNHN-IU-2013-14156). Laregnere Reef, 12–16 m, 3 May 1993: 3 M 2.2–3.0 mm, 4 ov. F 2.5–3.8 mm (MNHN-IU-2013-14058). Mbere Reef, 22°19.9'S, 166°13.2'E, 10 m, 5 May 1993: 2 M 2.4–3.6 mm, 1 ov. F 2.4 mm (MNHN-IU-2013-14140). New Caledonia. Stn LF7, 20°47.27'S, 167°07.34'E, 8–10 m, 28 November 1995: 1 M 2.0 mm (MNHN-IU-2013-14148). Stn LF10, 20°56.30'S, 167°20.85'E, 18 m, 29 November 1995: 1 ov. F 2.7 mm (MNHN-IU-2013-14147). Touho, 10 m, 8 September 1993: 1 M 3.0 mm, 1 ov. F 2.9 mm (MNHN-IU-2013-14151). 5–7 m, 9 September 1993: 3 M 2.9–3.3 mm, 2 ov. F 3.0–3.1 mm (MNHN-IU-2013-14119).—20°47'S, 165°13'E, 35 m, 17 September 1993: 1 ov. F 2.2 mm (MNHN-IU-2013-14163).—20°47'S, 165°13'E, 5–20 m, 19 September 1993: 1 M 3.3 mm, 1 F 2.3 mm (MNHN-IU-2013-14150); 1 F 2.4 mm (MNHN-IU-2013-14121); 1 ov. F 3.0 mm (MNHN-IU-2013-14118); 1 M 2.5 mm, 1 ov. F 3.3 mm (MNHN-IU-2013-14146). Surprises Atoll, SURPRISES, Stn DW1395, 18°17.6'S, 163°01.9'E, 34–36 m, 13 May 1999: 2 ov. F 2.3–2.4 mm (MNHN-IU-2013-14144). Lifou Island. LIFOU, Stn 1429, 20°47.5'S, 167°07.1'E, 8–18 m, 3–5 November 2000: 1 M 1.8 mm (MNHN-IU-2013-14065).—Stn 1458, 20°46.7'S, 167°03.1'E, 17–24 m, 4 November 2000: 10 M 2.0–2.8 mm, 1 ov. F 3.4 mm, 7 F 2.0–2.5 mm (MNHN-IU-2013-14074).—Stn 1459, 20°47.0'S, 167°03.0'E, 55–80 m, 05 November 2000: 6 M 2.0–2.3 mm, 4 ov. F 2.0–2.6 mm, 7 F 1.8–2.2 mm (MNHN-IU-2013-14095).—Stn 1434,

20°52.5'S, 167°08.1'E, 5–20 m, 6 November 2000: 2 M 2.1–2.3 mm, 1 ov. F 2.6 mm, 1 F 2.1 mm (MNHN-IU-2013-14097).—Stn 1430, 20°47.5'S, 167°07.1'E, 20–25 m, 9 November 2000: 8 M 1.6–3.0 mm, 5 ov. F 2.1–2.6 mm, 5 F 1.8–2.1 mm (MNHN-IU-2013-14061).—Stn 1436, 20°55.5'S, 167°04.2'E, 10–20 m, 10 November 2000: 1 M 2.3 mm (MNHN-IU-2013-14145).—Stn 1463, 20°55.05'S, 167°03.35'E, 20–30 m, 10 November 2000: 4 M 1.5–2.2 mm (MNHN-IU-2013-14139).—Stn 1464, 20°54.5'S, 167°05.9'E, 35–50 m, 14 November 2000: 2 M 1.5–2.2 mm, 1 ov. F 2.4 mm (MNHN-IU-2013-14099).—Stn 1446, 20°50.8'S, 167°09.7'E, 36–40 m, 16 November 2000: 1 M 2.0 mm (MNHN-IU-2013-14100).—Stn 1448, 20°45.8'S, 167°01.65'E, 20 m, 17 November 2000: 3 M 2.0–2.4 mm, 3 F 1.5–2.1 mm (MNHN-IU-2013-14103).—Stn 1449, 20°45.8'S, 167°01.65'E, 17 m, 17 November 2000: 1 M 2.3 mm, 2 F 1.8–2.2 mm (MNHN-IU-2013-14098); 1 M 2.0 mm (MNHN-IU-2013-13921).—Stn 1451, 20°47.3'S, 167°06.8'E, 10–21 m, 19 November 2000: 3 M 2.9–4.3 mm, 1 ov. F 3.3 mm (MNHN-IU-2013-14153); 1 ov. F 2.8 mm (MNHN-IU-2013-13922).—Stn 1452, 20°54.6'S, 167°02.1'E, 2–25 m, 22 November 2000: 2 M 2.4–2.8 mm, 2 ov. F 2.1–2.7 mm, 1 F 2.4 mm (MNHN-IU-2013-14104).—Stn 1454, 20°56.65'S, 167°02.0'E, 15–18 m, 23 November 2000: 1 ov. F 2.2 mm (MNHN-IU-2013-14128).—Stn 1455, 20°56.8'S, 167°02.7'E, 15–20 m, 25 November 2000: 1 ov. F 1.9 mm, 2 F 1.8–2.0 mm (MNHN-IU-2013-14116); 1 M 2.0 mm, 1 ov. F 2.1 mm, 1 F 1.8 mm (MNHN-IU-2013-14096).—Stn 1457, 20°46.8'S, 167°02.75'E, 5–10 m, 27 November 2000: 4 ov. F 2.4–2.6 mm (MNHN-IU-2013-13933); 1 ov. F 2.5 mm (MNHN-IU-2013-13934); 1 M 2.5 mm (MNHN-IU-2013-13935); 1 ov. F 2.4 mm (MNHN-IU-2013-14069); 1 ov. F 2.6 mm (MNHN-IU-2013-13920).—Stn 1421, 20°52.4'S, 167°08.5'E, 4 m, 27 November 2000: 4 F 1.5–3.0 mm (MNHN-IU-2013-14168).

South China Sea. Macclesfield Bank, Stn 12, 15°47'N, 113°55'E, 24–42 m, May 1892: 2 ov. F 3.2–3.7 mm (NHMUK).

Maldives Islands. Magoodhoo Island, 3.078913°N, 72.962112°E, 18–23 m, 5 May 2014: 1 F 2.4 mm (UF39561), 2 M 2.2–2.8 mm, 5 F 2.0–3.1 mm (UF39563). 3.07°N, 72.96°E, 10 m, 9 May 2014: 1 ov. F 3.2 mm (UF39594).—NW of Bileiydhoo Island, 3.1206°N, 72.9797°E, 3–30 m, 10 May 2014: 1 ov. F 2.8 mm (UF39621).—Dharanboodhoo Island, 3.0613°N, 72.9311°E, 10–30 m, 12 May 2014: 1 F 1.6 mm (UF39635).—Dhign Reef, 3.0803°N, 72.9827°E, 10–30 m, 13 May 2014: 1 M 2.4 mm, 2 ov. F 2.0–2.4 mm, 4 F 1.7–2.0 mm (UF39657).—3.0803°N, 72.9827°E, 5 m, 13 May 2014: 1 juv. 1.2 mm (UF39663), 1 M 1.7 mm (UF39667).

Seychelles. Cruise Reves 2, Stn 7, 4°51.8'S, 55°59.6'E, 50–55 m, 3 September 1980: 2 M 2.5–2.6 mm (MNHN-IU-2013-14164).

Madagascar. ATIMO VATAE, Stn TS2, 25°01.3'S, 47°00.5'E, 18 m, 29 April 2010: 2 ov. F 2.5–3.3 mm (MNHN-IU-2013-14166).—Stn TB1, 24°59.8'S, 47°05.7'E, 22 m, 30 April 2010: 1 M 2.1 mm (MNHN-IU-2013-13932); 1 F 3.1 mm (MNHN-IU-2010-2743); 1 F 3.2 mm (MNHN-IU-2013-14127).—Stn TB2, 25°01.3'S, 47°00.5'E, 18 m, 1 May 2010: 1 M 2.5 mm (MNHN-IU-2013-14106); 1 ov. F 2.6 mm (MNHN-IU-2013-14067).—Stn TB3, 25°01.3'S, 47°00.5'E, 18 m, 1 May 2010: 1 ov. F 2.5 mm (MNHN-IU-2013-14167).—Stn TV7, 25°01.3'S, 47°00.2'E, 12–16 m, 2 May 2010: 1 ov. F 4.2 mm (MNHN-IU-2010-2747); 2 M 2.0–3.0 mm (MNHN-IU-2013-14089).—Stn CP3549, 25°16.9'S, 46°31.3'E, 53–54 m, 4 May 2010: 1 ov. F 3.4 mm (MNHN-IU-2013-14155).—Stn DW3563, 25°37'S, 46°18'E, 347–355 m, 6 May 2010: 2 M 1.9–2.7 mm (MNHN-IU-2013-14130).—Stn TB5, 25°02.2'S, 47°00.4'E, 23 m, 7 May 2010: 1 M broken (MNHN-IU-2010-2742).—Stn CP3579, 25°54.5'S, 45°33.2'E, 65–66 m, 9 May 2010: 3 M 3.0–3.4 mm, 2 ov. F 2.8–3.3 mm (MNHN-IU-2013-14056).—Stn TR16, 24°59.5'S, 47°05.6'E, 15–17 m, 9 May 2010: 1 ov. F 3.0 mm (MNHN-IU-2013-14142).—Stn TP20, 25°05.1'S, 46°55.4'E, 30 m, 12 May 2010: 1 F 2.6 mm (MNHN-IU-2013-14143).—Stn DW3605, 24°54.5'S, 44°51.0'E, 56–57 m, 13 May 2010: 1 M 3.5 mm, 1 ov. F 3.0 mm (MNHN-IU-2013-13924); 1 ov. F 3.6 mm (MNHN-IU-2013-14162).—Stn DW3606, 25°48.4'S, 44°51.1'E, 44–46 m, 13 May 2010: 1 M 2.4 mm (MNHN-IU-2013-14092).—Stn DW3607, 25°45.7'S, 44°52.0'E, 40–41 m, 13 May 2010: 2 M 3.0–3.1 mm (MNHN-IU-2013-14126).—Stn DW3609, 25°34.3'S, 44°55.2'E, 32 m, 13 May 2010: 1 ov. F 3.3 mm (MNHN-IU-2013-14068).—Stn CP3624, 25°38.1'S, 45°57.0'E, 63 m, 15 May 2010: 2 M 3.0–3.2 mm, 2 ov. F 2.7–3.0 mm (MNHN-IU-2013-14115).—Stn TA23, 25°25.0'S, 44°15.0'E, 20–27 m, 22 May 2010: 2 M 2.2–3.3 mm (MNHN-IU-2013-14110).—Stn TA41, 24°50.2'S, 47°10.7'E, 14–22 m, 7–9 June 2010: 1 ov. F 2.6 mm (MNHN-IU-2013-14117).—Stn TA52, 25°02.4'S, 46°59.6'E, 6–12 m, 11/16 June 2010: 1 ov. F 3.0 mm (MNHN-IU-2013-14138). Nosy Be, W of Hellville, 13.4194°S, 48.2605°E, 6–9 m, 17 May 2008: 1 M 3.8 mm (UF14413).

Mozambique. MAINBAZA, Stn DW3168, 26°11.93'S, 35°02.85'E, 87–90 m, 16 April 2009: 26 M 2.4–3.6 mm, 10 ov. F 2.8–3.2 mm (MNHN-IU-2013-14055).

Mayotte Island. BENTHEDI, Stn R19, 12°46.2'S, 45°15'E, 3 m, 22 March 1977: 1 F 2.1 mm (MNHN-IU-2013-14107).—Stn R106, 12°25.5'S, 46°16.3'E, 18–24 m, 9 April 1977: 1 F 2.3 mm (MNHN-IU-2013-14132).—Stn 110FL, 12°25.6'S, 46°16.2'E, 24 m, 10 April 1977: 1 ov. F 2.5 mm (MNHN-IU-2013-14108).

Scattered Islands. Juan de Nova Island, 17.0222°S, 42.6895°E, 7 m, 29 April 2009: 1 ov. F 3.0 mm (UF20746); 1 ov. F 2.3 mm (UF20731).—17.0145°S, 42.8028°E, 10–20 m, 28 April 2009: 1 ov. F 3.2 mm (UF20663). Europa Island, 22.3447°S, 40°3289°E, 16 m, 24 April 2009: 1 M 1.7 mm (UF20515). Glorieuses Island, 11.5909°S, 47.2851°E, 7–14 m, 4 May 2009: 1 ov. F 2.9 mm (UF20872).

Coloration. Variable, brownish, greenish or orangish overall. Juncture area between palm and fingers white forming a “X”- marking always present (see also Baba *et al.* 2009).

Remarks. *Galathea tanegashimae* is a widely distributed species. The material examined agrees with the original description and subsequent accounts (Baba *et al.* 2008, 2009). The presence of hepatic and parahepatic spines is constant in all specimens examined. We have not observed morphological and significant genetic differences among specimens from different localities.

The genetic divergences with other species are always higher than 15.8% (COI) and 11.2% (16S rRNA) (Tab. 2).

Distribution. Previously recorded from Japan (southern Kyushu), Taiwan, South China Sea, eastern Indian Ocean, Lord Howe Rise; 5–82 m. Present material includes Japan (Okinawa), Philippines, South China Sea (Macclesfield Bank), Vanuatu, Papua New Guinea, Australia (Queensland), New Caledonia, Maldives Islands, Seychelles Islands, Mayotte Island, Scattered Islands, Mozambique, Madagascar; 0–153 m, in sponges, corals (*Pocillopora* spp.), rocks, sand.

***Galathea ternatensis* De Man, 1902**

(Figs 109, 121E)

Galathea orientalis var. *ternatensis* De Man, 1902: 714 (Ternate).

Dubious identifications:

Galathea ternatensis.—Melin, 1939: 67, figs 39–42 (east of channel between Hahajima and Chichijima, Bonin Islands, 180–210 m).—Miyake & Baba, 1963: 405, fig. 1, 2 (Tomioka, Amakusa, Japan, 20–40 m).—Haig, 1974: 447 (Western Australia).—Baba, 1977a: 245 (Dutch New Guinea and Maldives, 33–46 m).—Baba, 1979a: 525 (Noumea, New Caledonia, 20–23 m).—Baba, 1988: 80 (Sulu Archipelago, Sibuyan Sea north of Cebu, 18–46 m).—Baba, 1989: 130 (Oshima Strait, Amami-oshima, 35 m).—Baba, 1990: 960 (Madagascar, 25–115 m).—Tirmizi & Javed, 1993: 83, fig. 37 (stn AB43-63, AB-22A, and Mozambique Channel, 62–65 m).—Davie, 2002: 62 (no record).—Baba *et al.*, 2008: 80 (in part, compilation).—Macpherson & Cleva, 2010: 63, color figs 3I, J (Madagascar, 24–25 m).—Dong & Li, 2010: 21, fig. 13 (South China Sea, 21–92 m).—Poore *et al.*, 2011: 334, pl. 12D (color photo, Madagascar).—Osawa & Safaie, 2014: 266, fig. 1A (North of Lavan Island, Hormozgan Province, Iran, Persian Gulf, 30–50 m).

Material examined. *Syntype*: Indonesia. Moluccas. Ternate: 3 ov. F 2.8–3.6 mm (SMF4560).

Philippines. MUSORSTOM 2, Stn CP47, 13°33'N, 122°10'E, 81–84 m, 26 November 1980: 1 ov. F 3.7 mm (MNHN-IU-2013-13660). MUSORSTOM 3, Stn CP134, 12°01'N, 121°57'E, 92–95 m, 5 June 1985: 2 ov. F 2.8–3.6 mm (MNHN-IU-2013-13672).—Stn CP142, 11°47'N, 123°01'E, 26–27 m, 6 June 1985: 2 M 2.8–4.1 mm (MNHN-IU-2013-13658).

Solomon Islands. SALOMON 1, Stn CP1809, 9°48.385'S, 160°51.193'E, 39–53 m, 3 October 2001: 2 M 3.9–4.5 mm, 2 ov. F 3.1–4.0 mm (MNHN-IU-2013-13659).—Stn CP1810, 9°47.684'S, 160°50.525'E, 53 m, 3 October 2001: 1 M 3.0 mm (MNHN-IU-2013-13656); 6 M 2.8–4.0 mm, 4 ov. F 2.9–3.8 mm (MNHN-IU-2013-13655); 1 M 2.5 mm (MNHN-IU-2013-13657).

Papua New Guinea. PAPUA NIUGINI, Stn PR25, 05°04.7'S, 145°48.9'E, 7 m, 13 November 2012: 1 M 3.1 mm, 1 ov. F 3.2 mm (MNHN-IU-2013-13665).—Stn PR39, 05°10.2'S, 145°50.3'E, 0 m, 15 November 2012: 1 M 3.5 mm (MNHN-IU-2013-13664); 1 ov. F 3.0 mm (MNHN-IU-2013-497).—Stn PR47, 05°11.2'S, 145°48.4'E, 0 m, 16 November 2012: 7 M 2.0–2.8 mm, 13 ov. F 2.0–3.0 mm, 2 F 1.8–2.5 mm (MNHN-IU-2013-13662); 1 M 3.0 mm, 1 ov. F 2.3 mm (MNHN-IU-2013-656).—Stn PR53, 05°08.1'S, 145°49.4'E, 20 m, 17 November 2012: 1 F 2.5 mm (MNHN-IU-2013-13666); 1 M 2.5 mm, 2 ov. F 3.0–3.1 mm (MNHN-IU-2013-13667).—Stn PR78, 05°08'S, 145°49.3'E, 2–32 m, 22 November 2012: 2 M 2.1–2.8 mm, 7 ov. F 2.4–3.0 mm, 3 F 1.8–1.9 mm (MNHN-IU-2013-13669).—Stn PD49, 05°08.2'S, 145°49.2'E, 2–5 m, 26–27 November 2012: 2 M 2.3–2.7 mm, 2 F 3.0–3.2 mm

(MNHN-IU-2013-13661).—Stn PR143, 05°11.8'S, 145°49.2'E, 23 m, 30 November 2012: 3 ov. F 2.9–3.2 mm (MNHN-IU-2013-13668).—Stn PR155, 05°09.9'S, 145°50.4'E, 1–22 m, 2 December 2012: 1 M 2.3 mm, 1 ov. F 3.0 mm (MNHN-IU-2013-13670).—Stn PR203, 05°10.3'S, 145°48.5'E, 1–19 m, 7 December 2012: 3 ov. F 3.0–3.2 mm (MNHN-IU-2013-13663).—Stn PR242, 05°10.2'S, 145°50.4'E, 4–24 m, 12 December 2012: 2 ov. F 2.2–2.4 mm, 2 F 2.5–3.3 mm (MNHN-IU-2013-13671).

Description. *Carapace:* As broad as long; transverse ridges with dense short setae, without long setae; cervical groove distinct, laterally bifurcated. Gastric region with some transverse ridges: 2 epigastric ridges, anterior unarmed, uninterrupted, medially convex, posterior median, short; 2 protogastric ridges, anterior one uninterrupted without parahepatic spines, posterior ridge with some lateral scales; 2 mesogastric ridges, anterior one uninterrupted and not extending laterally to anteriormost of branchial marginal spines, posterior ridge median, short; 2 metagastric ridges, anterior one uninterrupted, continuing laterally to anteriorbranchial ridge, posterior ridge scale-like. Hepatic region with small spine near first lateral (anterolateral) spine. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 5 transverse ridges, 2–4 ridges uninterrupted. Lateral margins slightly convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second, small, at midlength between anterolateral spine and anterior cervical groove, without spine ventral to between first and second; 2 spines on anterior branchial region, last small, and 3 spines on posterior branchial margin. Small spine on lateral limit of orbit; infraorbital margin with strong spine. Rostrum 1.8–1.9 times as long as broad, length 0.6 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with numerous small scale-like setose ridges; lateral margin with 4 deeply incised teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 or 3 uninterrupted and 1 or 2 interrupted transverse ridges on tergite; somite 5 with 2 uninterrupted ridges; somite 6 with 2 medially interrupted ridges, posteromedian margin straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine slightly exceeding distal margin of article 2. Article 2 with 2 distal spines, distolateral spine slightly longer than distomesial, and reaching midlength of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor margins ending in small spine, extensor margin ending in blunt angle; crista dentata with 20 or 21 denticles. Merus shorter than ischium; flexor margin with 3 spines, proximal spine slightly longer than others, median spine smaller than distal; extensor margin ending in small spine. Carpus unarmed.

P1: 2.5–3.4 times carapace length, with numerous setiferous scales, and some scattered long setae. Merus 1.2 times carapace length, 1.7–2.7 times as long as carpus, with some spines, dorsomesial and distal spines stronger than others. Carpus 0.8–0.9 length of palm, 2.3–2.7 times as long as broad; dorsal surface with some small spines; mesial margin with row of spines, distal second stronger than others. Palm 2.4–2.7 times longer than broad, lateral and mesial margins subparallel; small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers 0.7–1.0 times palm length, each finger with two rows of teeth distally spooned; fingers unarmed.

P2–4: long and slender, with some setose striae and sparse long plumose and non-plumose setae. P2 1.9–2.0 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8–0.9 length of P2 merus, P4 merus 0.7 length of P3 merus); P2 merus 0.8 carapace length, 4.6–4.7 times as long as broad, 1.2–1.4 times longer than P2 propodus. P3 merus 4.0 times as long as broad, 1.2 times longer than P3 propodus. P4 merus 3.3 times as long as broad, as long as P4 propodus. Extensor margin with row of 8–11 proximally diminishing spines on P2–3, 1 or 2 spines on P4; ventral margins distally ending in strong spine, lateral sides with 2 or 3 spines on P4 only. Carpi with 2–5 spines on extensor margin on P2–3, 1 small distal spine on P4; lateral surface with 3 or 4 acute granules subparallel to extensor margin; flexor distal margin acute. Propodi 4.5–6.0 times as long as broad; extensor margin with 0–2 minute proximal spines; flexor margin with 4 or 5 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.5–0.6 that of propodi; flexor margin with 5 or 6 proximally diminishing teeth, terminal one prominent.

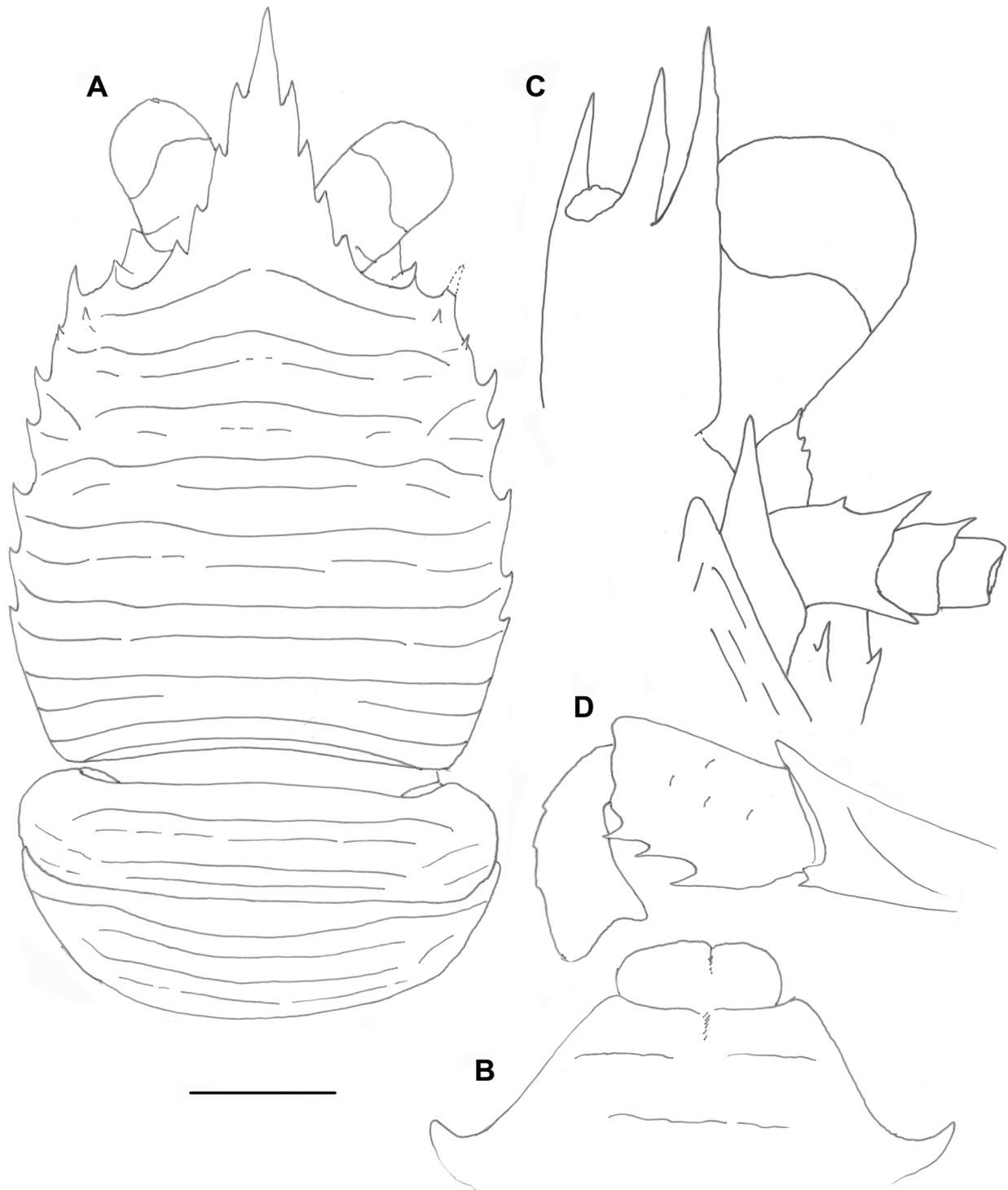


FIGURE 109. *Galathea ternatensis* De Man, 1902, syntype, ovigerous female, 3.3 mm, Indonesia, Moluccas (SMF4560). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of left Mxp3, lateral view (setae not figured). Scale: A = 1 mm; B–D = 0.5 mm.

Epipods present on P1.

Coloration. Base color light orange. Numerous small red and white spots scattered on carapace and abdomen; ridges reddish; carapace spines whitish. P1 with white distal stripe on palm; spines whitish. P2–4 with distal white band on merus and propodus.

Remarks. *Galathea ternatensis* is characterized by the following features: an interrupted the mesogastric ridge is interrupted; epigastric spines are absent; the gastric ridges are not scale-like; the carapace lateral margin has one small but distinct spine between the anterolateral spine and the anteriormost spine on the branchial margin; the antennular basal article has three well-developed terminal spines; and epipodis present only on P1. These characters are shared with other related species: *G. boisseliera* n. sp., *G. eione* n. sp., *G. melobosis* n. sp., *G. patriciae* n. sp., *G. providentia* Laurie, 1926, and *G. ternatensis*, 1902. *Galathea ternatensis* and *G. melobosis* are easily differentiated from the other four species by the anterior metagastric ridge, continuing laterally to the anterior branchial ridges in *G. ternatensis* and *G. melobosis*, and not continuing laterally in the other species. The genetic divergence among *G. ternatensis* and *G. boisseliera*, *G. eione*, and *G. providentia* are larger than 16.7% (COI) and 6.3% (16S rRNA) (Tab. 2).

Galathea ternatensis can be differentiated from *G. melobosis* by the number of transverse ridges on the abdominal somites. There are four ridges in *G. ternatensis* and two in *G. melobosis*. The genetic divergence between the two species is 16.6% (COI) and 5.8% (16S rRNA) (Tab. 2).

The existence of some new species, closely related with *G. ternatensis*, recommends a careful study of the material previously identified as *G. ternatensis* (see above, dubious identifications). Unfortunately, we have only revised a small portion of these specimens and we can't identified them accurately with the information provided by the authors. A similar problem exists with the material identified as *G. providentia*.

Distribution. Indonesia (Moluccas, Ternate), Philippines, Papua New Guinea, Solomon Islands; 0–95 m.

***Galathea tongi* n. sp.**

(Figs 110, 121F)

Material examined. *Holotype:* Kiribati. Line Islands. Tabuaeran Atoll, 3.8051°N, 159.3021°W, 10–23 m, 13 August 2005: ov. F 3.1 mm (UF10707).

Paratypes: Mariana Islands. Agriham Island, 8 m, 30 May 1992: 1 M 2.5 mm, 1 F 2.6 mm (UF2598).—Agrihan Island, reef slope, 20 m, 30 May 1992: 1 ov. F 3.0 mm (UF2601).—Guam Island. 13.5167°N, 144.8°E, 10–25 m, 27 June 2003: 1 M 2.8 mm (UF4173).—Guam Island. East Agana Bay, 1 m, 1 February 1997: 1 F 2.8 mm (UF319).—Guam Island: 1 M 2.3 mm (UF27250).

Kiribati. Line Islands. Tabuaeran Atoll, SSW side of atoll, 3.8051°N, 159.3021°W, 10–23 m, 13 August 2005: 3 M 2.1–3.3 mm, 3 ov. F 2.1–2.2 mm (UF10682).—3.8681°, 159.3742°, 10.5 m, 15 August 2005: 1 M 3.4 mm, 1 ov. F 2.7 mm (UF10728); 1 ov. F 2.7 mm (UF10733); 1 F 2.7 mm (UF10726). Kingman Reef, 6.3796°N, 162.3648°W, 12 m, 28 August 2005: 1 F 2.1 mm (UF10727).—6.3801°N, 162.4137°W, 10.5 m, 30 August 2005: 1 ov. F 3.2 mm (UF10453). Palmyra Atoll, 5.8693°N, 162.0757°W, 9–15 m, 18 August 2005: 1 ov. F 2.9 mm (UF10699).—Millennium Island, 9.91°S, 150.21°W, 7 m, 6 November 2013: 1 F 1.9 mm, 1 juv. 1.6 mm (UF38490), 1 ov. F 3.3 mm (UF3869).—29.91°S, 150.21°W, 12 m, 5 November 2013: 1 M 2.8 mm, 1 F 2.5 mm (UF39426).—Starbuck Island, 5.64°S, 155.88°W, 1 m, 26 October 2013: 2 M 2.7–2.8 mm, 2 F 2.3–2.5 mm (UF39147).—5.64°S, 155.88°W, 16 m, 26 October 2013: 16 M 2.7–4.0 mm, 13 ov. F 3.1–3.9 mm, 5 F 2.3–2.8 mm (UF39399).—Fint Island, 11.4311°S, 151.8248°W, 10 m, 18 October 2013: 1 M 3.3 mm (UF39179), 7 M 1.8–3.8 mm, 9 ov. F 2.6–3.9 mm, 5 F 1.8–2.7 mm (UF39430).

French Polynesia. Tuamotu Archipelago. Hao Atoll, 18.0826°S, 141.068°W, 34 m, 17 January 2013: 1 M 2.0 mm (UF35298). Tenarunga Atoll, 21.3562°S, 136.531°W, 14.6 m, 25 January 2013: 1 M 2.2 mm (UF35363). Society Islands. Moorea Island, 17.4764°S, 149.8306°W, 5–20 m, 18 July 2006: 1 F 2.1 mm (UF9923).—17.4836°S, 149.8581°W, 22 m, 24 July 2006: 1 M 3.2 mm (UF9758).—17.479°S, 149.7643°W, 29 m, 17 October 2008: 1 M 2.8 mm (UF15696); 1 ov. F 3.0 mm (UF15686).—17.568°S, 149.884°W, 22 m, 20 October 2008: 1 ov. F 3.2 mm (UF15911).—17.487°S, 149.8772°W, 5–7 m, 10 November 2009: 1 F 2.6 mm (UF23958).—November 2009: 1 F 1.8 mm (UF24135). Gambier Islands. Temoe Atoll, 23.3574°S, 134.4934°W, 21 m, 9 February 2013: 1 M 1.9 mm (UF35516); 1 M 1.7 mm (UF35517).—23.329°S, 134.506°W, 20 m, 9 February 2013: 1 M 2.6 mm (UF35524).

Etymology. This species is dedicated to the President Anatole Tong of Kiribati, for his global leadership in ocean conservation.

Description. *Carapace:* slightly broader than long; dorsal surface nearly horizontal from anterior to posterior;

transverse ridges with dense short setae, and some moderately long simple setae; cervical groove distinct, laterally bifurcated. Gastric region with 5 transverse ridges: 1 epigastric ridge medially interrupted, with 2 spines; 2 mesogastric ridges, anterior ridge medially interrupted by 1 arcuate scale (very rarely uninterrupted), posterior one scale-like; 2 metagastric scale-like ridges. One small parahepatic spine, and one hepatic spine, near anterolateral spine, on each side. Anterior branchial region with distinct scale-like ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 3 or 4 ridges, two of them uninterrupted. Lateral margins slightly convex, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, at same level of lateral limit of orbit, second small, with spine ventral to between first and second spines; 2 spines on anterior branchial region, and 3 spines on posterior branchial margin, last small. Spine on lateral limit of orbit, 1 small spine between orbital and anterolateral spine in some specimens; infraorbital margin with strong spine. Rostrum 1.3 as long as broad, length 0.6 postorbital carapace length and breadth 0.4 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute.

Sternum: 0.9 times as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–3 with 2 transverse uninterrupted ridges; somites 4–6 smooth; somite 6 with posteromedian margin straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.3 times longer than broad, maximum corneal diameter 0.7 rostrum width.

Antennule: Article 1 with 3 well-developed distal spines, distodorsal larger, distomesial spine smaller. Ultimate article with a few short fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching distal margin of article 2. Article 2 with 2 subequal distal spines, barely reaching midlength of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with small spine on flexor and extensor distal margins; crista dentata with 22–25 denticles. Merus shorter than ischium; flexor margin with 2 subequal well-developed spines; extensor margin with 2 spines. Carpus with 2 or 3 granules along extensor margin.

P1: 2.9 times carapace length, covered with finely setiferous scales, with numerous long simple setae (not figured). Merus as long as carapace, 1.7 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus as long as palm, 1.9–2.0 times as long as broad; dorsal and lateral surfaces with some spines; mesial margin with 3 or 4 spines (distal second strong). Palm twice longer than broad, lateral and mesial margins subparallel; spines arranged roughly in dorsolateral and dorsomesial rows, continuing along fixed and movable fingers, respectively; a few small spines scattered on dorsal side. Fingers as long as palm, each finger distally with two rows of teeth, spooned.

P2–4: moderately slender, with setose striae and sparse long plumose setae. P2 equal or less than twice carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.8 length of P2 merus); P2 merus 0.8 carapace length, 2.8 times as long as broad, 1.3 times longer than P2 propodus; P3 merus 3.4 times as long as broad, 1.3 times longer than P3 propodus; P4 merus 2.7 times as long as broad, as long as P2 propodus. Extensor margin of P2–3 meri with row of 6–9 proximally diminishing spines, 5 spines on P4; ventral margins distally ending in strong spine followed proximally by 0–1 spines and several eminences; lateral sides unarmed. Carpi with 4 or 5 spines on extensor margin on P2–3, 1–3 spines on P4; lateral surface with 2–4 small spines or acute granules sub-parallel to extensor margin; flexor distal margin acute. P2–4 propodi 4.4–4.5 times as long as broad; extensor margin with 3–5 proximal spines on P2–4; flexor margin with 4 or 5 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.5 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods present on P1.

Coloration. Base color translucent whitish or light orange, with numerous minute red spots on carapace and abdomen. Carapace with some whitish bands on each branchial region. P1 with reddish band on distal part of merus, carpus and palm; finger cutting edges whitish; spines red. P2–4 each with distal red band on merus and white band on distal part of propodus; spines red.

Remarks. *Galathea tongi* **n. sp.** is closely related to *G. leporis* **n. sp.** from Indonesia, Papua New Guinea, Vanuatu, and New Caledonia, from which it can be distinguished by the following characters:

- The P2 merus is 3 times longer than broad in *G. tongi*, instead of 4 times in *G. leporis*.

- The P2 is twice or less than twice as long as the carapace in *G. tongi*, rather than more than twice in *G. leporis*.
- The genetic divergences between *G. tongi* and *G. leporis* are 18.2 % (COI) and 13.4% (16S rRNA) (Tab. 2).

Distribution. Mariana Islands, Kiribati (Line Islands), French Polynesia (Gambier Islands, Society Islands, Tuamotu Archipelago), 1–34 m.

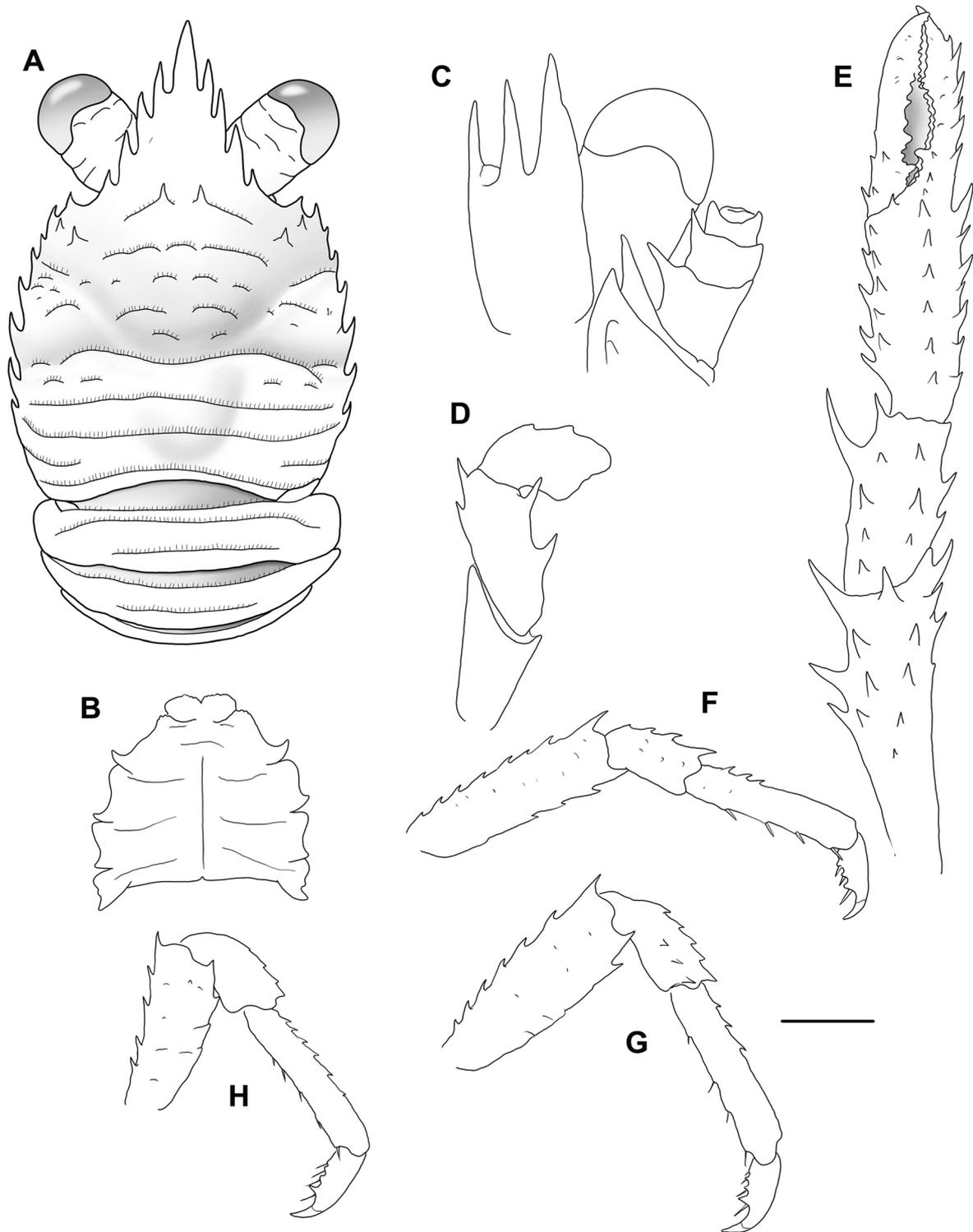


FIGURE 110. *Galathea tongi* n. sp., holotype, ovigerous female, 3.3 mm, Kiribati, Line Islands (UF10707). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view (setae not figured). Scale: A, E–H = 1 mm; B–D = 0.5 mm.

***Galathea tribulosa* n. sp.**

(Figs 51D–F, 111)

Material examined. *Holotype*: Solomon Islands. SALOMON 2, Stn CP2287, 08°39.84'S, 157°23.505'E, 253–255 m, 6 November 2004: 1 ov. F 4.2 mm (MNHN-IU-2013-15857).

Paratypes: Solomon Islands. SALOMON 1, Stn CP1860, 09°22'S, 160°31'E, 620 m, 7 October 2001: 1 M 3.8 mm (MNHN-IU-2013-15859). SALOMON 2, Stn CP2210, 07°33.5'S, 157°42.3'E, 240–305 m, 26 October 2004: 1 ov. F 5.8 mm (MNHN-IU-2013-15858).—Stn CP2287, 08°39.84'S, 157°23.505'E, 253–255 m, 6 November 2004: 1 ov. F 6.2 mm (MNHN-IU-2013-15860).

Etymology. From the Latin *tribulosus*, thorny, in reference to the acute and thin rostrum.

Description. *Carapace*: 1.2 times longer than broad; transverse ridges with dense short setae, without long setae; cervical groove distinct, laterally bifurcated. Gastric region with some transverse ridges: 1 epigastric ridge, scale-like, with 6 small spines; 2 protogastric ridges, anterior ridge uninterrupted, medially convex, with 2 parahepatic spines on each side, posterior scale-like; 2 mesogastric ridges, anterior ridge uninterrupted and not extending laterally to anteriormost of branchial marginal spines, posterior ridge scale-like; 2 metogastric ridges, anterior ridge uninterrupted, not continuing laterally to anteriorbranchial ridge, posterior ridge short. Hepatic region with 1 or 2 small spines. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove. Posterior branchial region with 6 transverse ridges, 2 ridges uninterrupted. Lateral margins subparallel, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, well-developed, slightly behind level of lateral limit of orbit, 1 small spine at midlength between anterolateral spine and anterior cervical groove, with small spine ventral to between first and second; 3 spines on anterior branchial region, and 2 spines on posterior branchial margin. Small spine on lateral limit of orbit, 1 small frontal spine between orbit and first anterolateral spine; infraorbital margin with some small spines. Rostrum narrow, 2.5 times as long as broad, length 0.6 postorbital carapace length and breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface horizontal, with numerous small scale-like setose ridges; lateral margin with 4 shallowly incised teeth, distal pair minute and clearly smaller than previous pair.

Pterygostomian flap rugose, unarmed, ridges with short setae, anterior margin acute; upper margin, near linea anomurica, with numerous small teeth.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 or 3 uninterrupted and 1 or 2 interrupted ridges; somite 5 with 2 uninterrupted ridges, somite 6 with 2 medially interrupted ridges. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.9 rostrum width.

Antennule: Article 1 with 2 well-developed distal spines, distodorsal larger, distomesial obsolescent; 3 small spines along lateral margin. Ultimate article with a few long fine setae in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine not reaching end of article 2. Article 2 with 2 distal spines, distolateral spine longer than distomesial, and barely reaching end of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with flexor margins ending in small spine, extensor margin ending in acute angle; crista dentata with 20 or 21 denticles. Merus as long as ischium; flexor margin with 3 spines, proximal spine clearly longer than others, median spine smaller than distal; extensor margin ending in small spine. Carpus unarmed.

P1: 3.8 times carapace length, with numerous setiferous small scales, and some scattered long setae. Merus 1.6 times carapace length, 2.0 times as long as carpus, with numerous spines, dorsomesial and distal spines stronger than others. Carpus 0.7 length of palm, 4.0 times as long as broad; dorsal surface with some small spines; mesial margin with row of spines. Palm 4.4 times longer than broad, lateral and mesial margins subparallel; small spines arranged roughly in dorsal, dorsolateral and dorsomesial rows. Fingers unarmed, 0.7 times palm length, each finger distally with two rows of teeth, spooned.

P2–4: long and slender, with some setose striae and sparse long setae. P2 2.4 times carapace length. Meri successively shorter posteriorly (P3 merus 0.7 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus as long as carapace, 6.8 times as long as broad, 1.2 times longer than P2 propodus. P3 merus 5.2 times as long as broad, 1.1 times longer than P3 propodus. P4 merus 4.2 times as long as broad, 0.9 times longer than P4 propodus. Extensor margin with row of 9 proximally diminishing spines on P2–3, 6 spines on P4; ventral margins distally ending in strong spine, lateral sides with row of small spines on P2–4. Carpi with 6 or 7 spines on extensor margin

on P2–4; lateral surface with 5 or 6 small spines sub-parallel to extensor margin; flexor distal margin acute. Propodi equally broad on P2–4, 7.7 (P2), 7.2 (P3), 6.7 (P4) times as long as broad; extensor margin with 1–4 small proximal spines; flexor margin with 7 or 8 slender movable spines, distal two spines with another smaller spine mesial to them. Dactyli distally ending in well-curved strong spine, length 0.5 that of propodi; flexor margin with 7 or 8 proximally diminishing teeth, distal one clearly larger than penultimate.

Epipods present on P1.

Remarks. The new species most closely resembles *G. inconspicua* Henderson, 1885; differentiating characters are discussed under Remarks of *G. inconspicua*.

Distribution. Solomon Islands, 240–620 m.

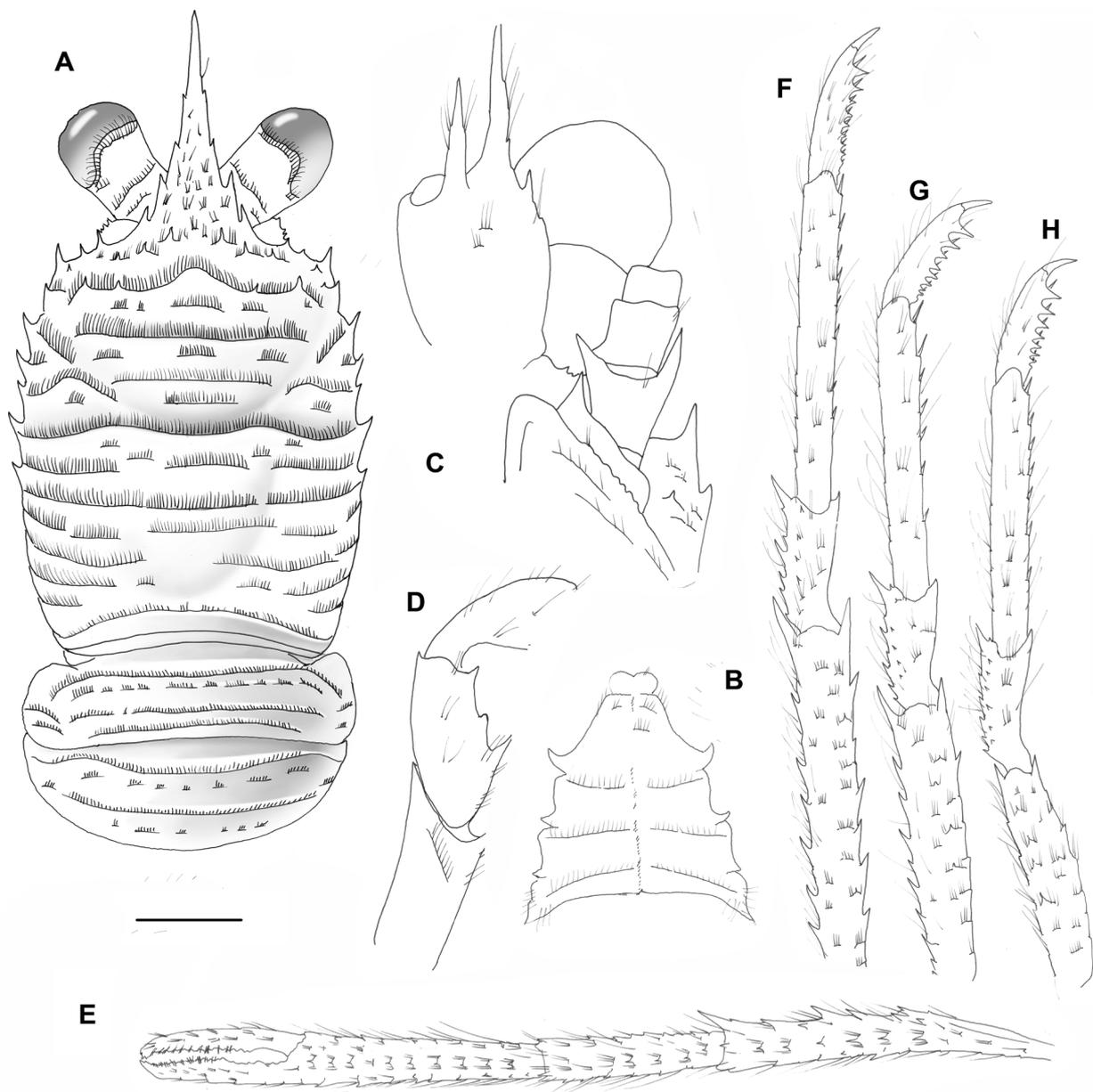


FIGURE 111. *Galathea tribulosa* n. sp., holotype, ovigerous female, 4.2 mm, Solomon Islands (MNHN-IU-2013-15857). A, carapace and abdomen, dorsal view; B, sternal plastron; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, left P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, right P4, lateral view. Scale: A, F–H = 1 mm; E = 2 mm; B–D = 0.5 mm.

***Galathea villosa* n. sp.**

(Fig. 112)

Material examined. *Holotype*: Mozambique. MAINBAZA, Stn CP3133, 25°10.07'S, 35°10.56E, 200–201 m, 10 Abril 2009: M 3.3 mm (MNHN-IU-2008-10226).

Paratypes: Mozambique. MAINBAZA, Stn CC3150, 19°30.58'S, 36°46.72'E, 261–264 m, 13 April 2009: 1 F 2.9 mm (MNHN-IU-2013-9758).—Stn CC3160, 23°57'70"S, 35°39'59"E, 206–210 m, 15 April 2009: 1 ov. F 5.6 mm (MNHN-IU-2013-13976).—Stn CC3175, 25°32.70"S, 33°12.09"E, 155–165 m, 17 April 2009: 1 M 2.5 mm, 3 ov. F 3.0–3.4 mm (MNHN-IU-2013-13975); 1 ov. F 3.2 mm (MNHN-IU-2008-10228).

Madagascar. Stn CH45, 16°20.5'S, 46°09'E, 310–350 m, 7 November 1972: 1 F 2.6 mm (MNHN-Ga704).—Stn CH44, 15°25.7'S, 46°01'E, 200–210 m, 7 November 1972: 2 M 3.4–4.8 mm, 1 F 3.5 mm (MNHN-Ga719).—Stn 52, 15°21'S, 46°12.5'E, 150 m, 8 November 1972: 1 M 4.7 mm (MNHN-Ga718, MNHN-IU-2013-9697).—13°22'S, 47°38'E, 0–200 m, 4 December 1974: 1 M 5.6 mm (MNHN-Ga1485, MNHN-IU-2013-14275). MIRIKI, Stn CP3188, 12°31'S, 48°22'E, 298–301 m, 27 June 2009: 1 F 6.3 mm (MNHN-IU-2010-1115).—Stn CP3261, 15°35'S, 45°43'E, 197–217 m, 10 July 2009: 1 ov. F 4.3 mm (MNHN-IU-2010-1323).—Stn CP3282, 14°52'S, 46°58'E, 215–261 m, 13 July 2009: 1 M 4.1 mm (MNHN-IU-2010-1015).

Vanuatu. MUSORSTOM 8, Stn CP1087, 15°10.18'S, 167°14.07'E, 394–421 m, 6 October 1994: 1 ov. F 5.0 mm (MNHN-IU-2013-15935).

Etymology. From the Latin *villosus*, hairy, in reference to the numerous setae on the body.

Description. *Carapace*: As long as broad; transverse ridges with dense moderately long setae; some additional long and thick iridescent setae scattered on each region; cervical groove distinct, laterally bifurcated; most ridges on gastric region interrupted, with some scattered scale-like ridges; epigastric region with 10–15 spines; 2–6 small hepatic spines on each side; 1–4 small parahepatic spines on each side lateral to anterior protogastric ridge; some additional small spines on protogastric, anterobranchial and laterobranchial regions in some specimens; anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 6 ridges. Lateral margins slightly convex medially, with 7–12 spines: 2 spines in front of and 5–10 spines behind anterior cervical groove; first anterolateral, well-developed, at level of orbit, second very small but distinct, located at midlength between first spine and anterior cervical groove, with small spine ventral to between first and second; 2–5 spines on anterior branchial margin, and 3–5 spines on posterior branchial margin. Small outer orbital spine; infraorbital margin with strong spine. Rostrum lanceolate, 1.9–2.0 times as long as broad, length 0.6 that of, breadth 0.3 that of carapace; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface nearly horizontal in lateral view, with some uniramous setae; lateral margin with 4 moderately incised sharp teeth.

Pterygostomian flap rugose, with sparse short setae, anterior margin bluntly angular.

Sternum: About as long as broad; lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 3–4 uninterrupted transverse ridges on tergite, anterior ridge slightly more elevated than posterior ridge; somites 5 and 6 each with 2 medially interrupted ridges. Males with G1 and G2.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 2 well-developed distodorsal and distolateral spines, distodorsal larger; distomesial spine obsolescent; 1–3 small spines on lateral margin. Ultimate article with a few long fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with distomesial spine barely reaching or exceeding distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine longer than distomesial and reaching end of article 3. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed spine on flexor distal margin; crista dentata with 20 or 21 denticles. Merus shorter than ischium; flexor margin with 3 spines, proximal stronger than others; extensor margin with 1 or 2 well-developed distal spine. Carpus unarmed.

P1: 3.2–3.5 times carapace length, with numerous finely setiferous scales, with long thick iridescent setae. Merus 1.4 times length of carapace, 1.9–2.0 times as long as carpus, with spines arranged roughly in rows, dorsomesial spines stronger; distal spines prominent. Carpus 0.7 length of palm, 2.4–2.7 times as long as broad; dorsal surface with small spines arranged roughly in longitudinal rows; mesial row of well-developed spines. Palm 2.5–3.2 times longer than broad, lateral and mesial margins with small spines arranged roughly in dorsolateral and

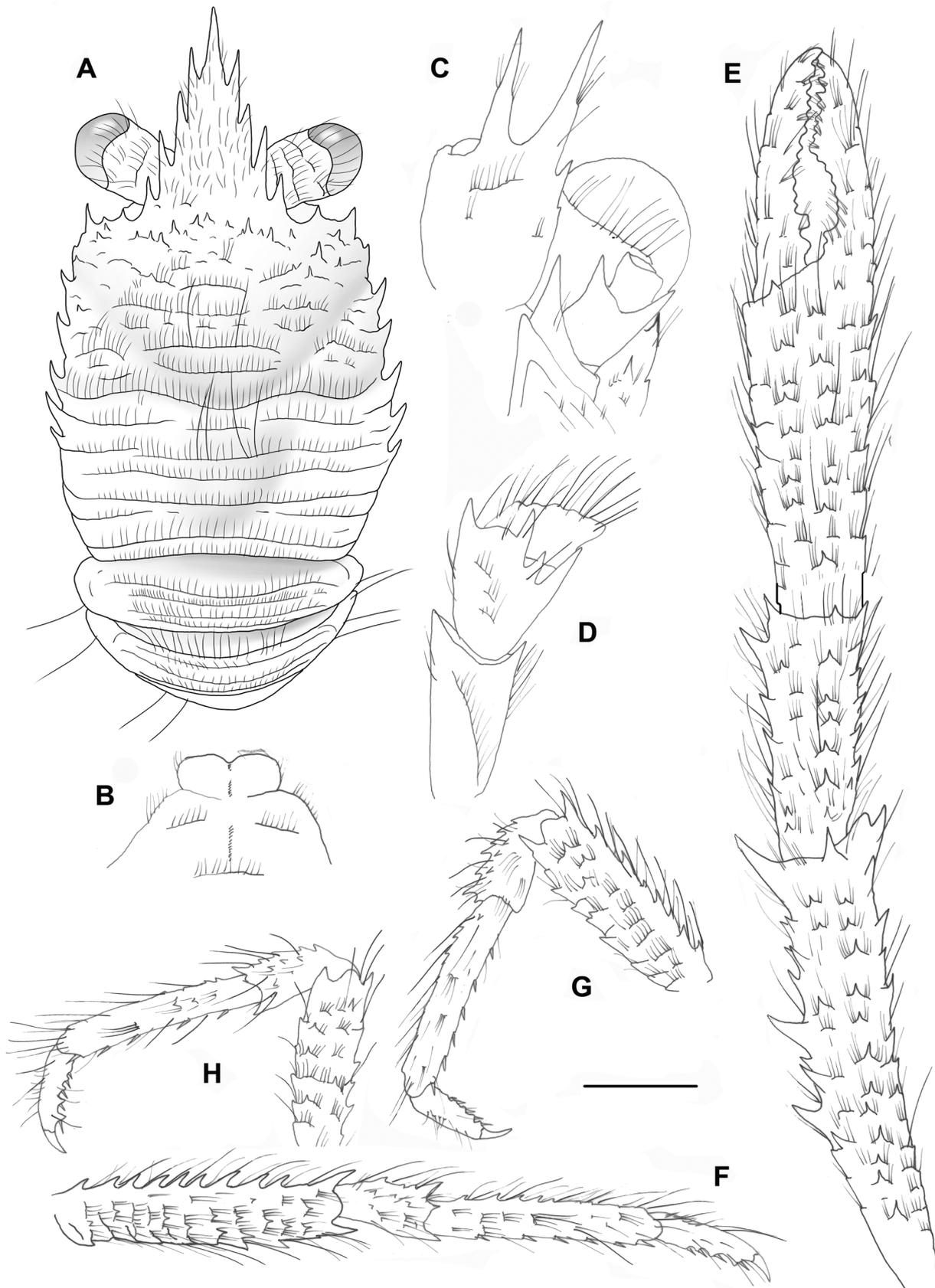


FIGURE 112. *Galathea villosa* n. sp., holotype, male, 3.3 mm, Mozambique (MNHN-IU-2008-10226). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, left P3, lateral view; H, left P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

dorsomesial rows, some small spines scattered on dorsal side. Fingers 0.7–0.8 length of palm, each finger distally with two rows of teeth, spooned; mesial margin of movable finger and lateral margin of fixed finger unarmed.

P2–4: Moderately long and slender, with setose striae and some long iridescent setae. P2 2.0–2.2 times carapace length. Meri successively shorter posteriorly (P3 merus 0.8 length of P2 merus, P4 merus 0.8 length of P3 merus); P2 merus 0.7–0.9 carapace length, 6.0 times as long as broad, 1.2–1.4 times longer than P2 propodus; P3 merus 4.0 times longer than broad, 1.1 times longer than P3 propodus; P4 merus 2.8–3.1 times as long as broad, 1.1 length of P4 propodus. Extensor margins of meri with row of 8–10 proximally diminishing spines on P2–3, 5 spines on P4; flexor margins distally ending in strong spine followed proximally by 1–4 small spines and several tubercles or eminences; lateral sides with some minute spines on P2–4. Carpi with 5–7 spines on extensor margin, distalmost longer than distal second; lateral surface with 3–5 small spines and acute granules sub-parallel to extensor margin on P2–4; flexor distal margin with small spine. Propodi 5.2–6.0 times as long as broad; extensor margin with 4–7 small proximal spines on P2–4; some proximal spines on lateral side of P2–4; flexor margin with 5–7 slender movable spines on P2–4. Dactyli distally ending in well-curved strong spine, length 0.4–0.6 that of propodi; flexor margin with 4 or 5 proximally diminishing teeth, terminal one prominent.

Epipods on P1.

Remarks. The present specimens referred to *Galathea villosa* **n. sp.** exhibit notable variation in some morphological characters. For instance, the walking legs are more slender in the ovigerous female from Vanuatu than in those from Madagascar. The genetic divergences between the specimens from these two localities are not very large (< 5%). Therefore we have considered these morphological differences as intra-specific variability until the collection of additional material from Vanuatu confirms its taxonomic status.

Galathea villosa **n. sp.** belongs to the group of species which is characterized by the presence of more than four or more epigastric spines and often spinules on hepatic and branchial regions on the carapace, the lateral margin of the carapace bearing one small but distinct spine between the anterolateral spine and the anteriormost spine of the branchial margin, and the antennular basal article having only two well-developed terminal spines (the distomesial spine minute or obsolescent). *Galathea villosa* is very close to *G. crinita* **n. sp.** from New Caledonia and Chesterfield Islands but the two can be easily distinguished by the following characters:

- The dorsal surface of the carapace has numerous long thick iridescent setae in *G. villosa*, whereas these long setae are very scarce in *G. crinita*.
- The P2 merus is 5–6 times as long as broad in *G. villosa*, being 3–4 times in *G. crinita*.
- The genetic divergence between both species is 16.2% (COI) (Tab. 2).

Distribution. Madagascar, Mozambique, and Vanuatu, 150–421 m.

***Galathea waiora* n. sp.**

(Fig. 113)

Material examined. *Holotype*: French Polynesia. Society Islands. Moorea Island, 17.5044°S, 149.7584°W, 105 m, 7 February 2012: M 2.3 mm (UF34121).

Etymology. *Waiora* is the Polynesian goddess of health. The name is considered as a substantive in apposition.

Description. *Carapace*: As long as broad; ridges with short fine setae, with some scattered long setae; cervical groove slightly distinct, laterally bifurcated; gastric and anterior branchial regions only with scale-like or in concentric arcs; 4 median epigastric spines. Posterior branchial region with 2 transverse interrupted ridges. Lateral margins convex medially, with 5 spines: 1 spine in front of and 4 spines behind anterior cervical groove; first anterolateral, accompanying another spine ventral to between first and cervical groove; 2 spines on anterior branchial margin, and 2 spines on posterior branchial margin. External orbital limit ending in small spine; infraorbital margin with 1 spine. Rostrum broad triangular, 1.6 times as long as broad, length 0.7 postorbital carapace length and breadth 0.4 that of carapace, nearly horizontal in lateral view; distance between distalmost lateral incisions 0.25 distance between proximalmost lateral incisions; dorsal surface with some short setae; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, unarmed, anterior margin acute.

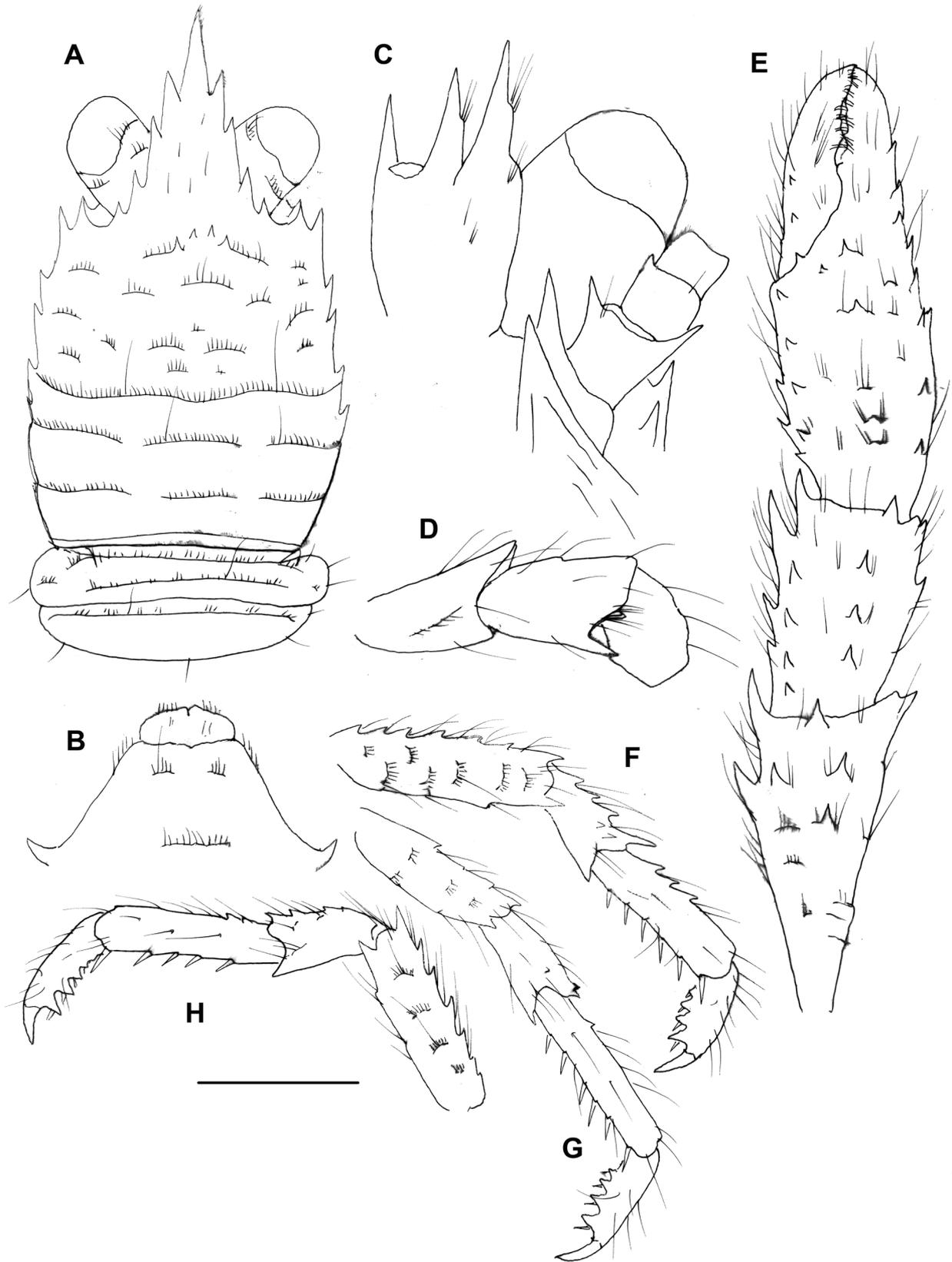


FIGURE 113. *Galathea waiora* n. sp., holotype, male, 2.3 mm, French Polynesia (UF34121). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; D, ischium, merus and carpus of right Mxp3, lateral view; E, right P1, dorsal view; F, right P2, lateral view; G, right P3, lateral view; H, left P4, lateral view. Scale: A, E–H = 1 mm; B–D = 0.5 mm.

Sternum: As long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somite 2 with 2 transverse ridges, anterior ridge more distinctly elevated than posterior ridge; somites 3–6 smooth, posteromedian margin of somite 6 straight. Males with G1 and G2.

Eyes: Ocular peduncles 1.2 times longer than broad, maximum corneal diameter 0.6 rostrum width.

Antennule: Article 1 with 3 well-developed spines, distodorsal larger; distomesial spine smaller than others. Ultimate article with a few short fine setae on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine reaching end of article 2. Article 2 with 2 distal spines, distolateral spine larger than distomesial, exceeding midlength of article 3. Article 3 with small distomesial spine. Article 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor and flexor margins ending in spine; crista dentata with 18 denticles. Merus equally long as ischium; flexor margin with 1 strong median spine and one minute distal spine; extensor margin with minute distal spine. Carpus unarmed.

P1: 2.8 times carapace length. Merus as long as carapace, 1.5 times as long as carpus, with spines arranged roughly in rows, distal spines prominent. Carpus as long as palm, 1.5 times as long as broad; dorsal surface with some spines arranged roughly in longitudinal rows; mesial margin with 2 strong spines. Palm 1.5 times longer than broad, lateral and mesial margins subparallel; spines arranged roughly in rows; dorsolateral row continuing on to lateral margin of fixed finger. Fingers as long as palm, each finger distally with two rows of teeth, spooned; proximal half of movable finger with row of dorsomesial spines.

P2–4: Moderately slender, with setose striae and sparse long plumose setae. P2 twice carapace length. Meri successively shorter posteriorly (P3 merus 0.9 length of P2 merus, P4 merus 0.9 length of P3 merus); P2 merus 0.7 carapace length, 3.5 times as long as broad, 1.5 times longer than P2 propodus. Extensor margin with row of 7 proximally diminishing spines on P2–3, 3 small spines on P4; ventral margins distally ending in strong spine followed proximally by 0–2 spines and several eminences. Carpi with 3 or 4 spines on extensor margin on P2–4; lateral surface with 2 or 3 spines or acute granules sub-parallel to extensor margin; flexor distal margin acute. P2–4 propodi 3.5 times as long as broad; extensor margins with 1–4 proximal spines; flexor margin with 5 or 6 slender movable spines. Dactyli distally ending in well-curved strong spine, length 0.8 that of propodi; flexor margin with 4 proximally diminishing teeth, terminal one prominent.

Epipods on P1.

Remarks. *Galathea waiora* n. sp. appears closest to *G. submagnifica* Laurie, 1926 from the southwestern Indian Ocean and *G. furfurea* n. sp. from New Caledonia and South China Sea (Macclesfield Bank).

Galathea submagnifica Laurie, 1926 is easily distinguished from the other two species by the presence of two epigastric spines on the carapace, rather than four in the other species.

Galathea furfurea and *G. waiora* can be differentiated by the following characters:

- There is one parahepatic spine on each side in *G. furfurea*, whereas this spine is absent in *G. waiora*.
- The carapace lateral margin has one small spine between the anterolateral spine and the anteriormost spine of the branchial margin in *G. furfurea*, whereas this spine is absent in *G. waiora*.

No genetic data are available for *G. waiora*.

Distribution. French Polynesia, Moorea Island, 105 m.

***Galathea whiteleggii* Grant & McCulloch, 1906**

(Fig. 114)

Galathea whiteleggii Grant & McCulloch, 1906: 45, pl. 4, figs 2, 2a (off Wata Mooli (= Wattamolla) and Port Jackson, NSW, 99–108 m).—Davie, 2002: 62 (no record).—Baba, 2005: 245 (key, synonymies).—Baba *et al.*, 2008: 81 (compilation).

Not *Galathea whiteleggii*.—Dong & Li, 2010: 22, fig. 14 (South China Sea, 46–105 m) (= *Galathea halia* n. sp.).

Dubious identifications:

Galathea whiteleggii.—McNeill, 1968: 33 (Great Barrier Reef, off Low Island, 22 m).—Haig, 1973: 278, fig. 2g (off Dunwich, Moreton Bay Queensland, 7.3 m).—Poore, 2004: 232, fig. 63h (compilation).

Galathea whiteleggei.—Tirmizi, 1966: 186, fig. 9 (South Arabian Sea, 38 m).—Tirmizi & Javed, 1993: 57, fig. 25 (Bay of Bengal, 2417 m (depth remains questionable)).

Material examined. *Syntypes*. New South Wales. 5.5–6.5 Km off Wattamolla, 34.17°S, 151.18°E, 99 m, 22 March 1898: 2 F 3.0–3.1 mm (AM-G2394)

Description. *Carapace*: As long as broad; transverse ridges with dense short or moderately long fine setae, without long plumose setae; cervical groove distinct, laterally bifurcated. Gastric region with 8 transverse ridges; 2 epigastric ridges, anterior one medially convex anteriorly, with 2 median spines, posterior ridge scale-like and placed medially; 2 protogastric ridges, anterior one uninterrupted and not reaching carapace margins; 2 mesogastric ridges, anterior one uninterrupted and not extending laterally to anteriormost branchial spines, posterior ridge scale-like; 2 metogastric ridges, anterior one uninterrupted, continuing laterally to anteriorbranchial ridges, posterior ridge short. Anterior branchial region with distinct ridges. Mid-transverse ridge uninterrupted, preceded by shallow cervical groove, followed by 5 ridges, 4 of them uninterrupted. Lateral margins well convex medially, with 7 spines: 2 spines in front of, and 5 spines behind, anterior cervical groove; first anterolateral, second small, located at midlength between first spine and anterior cervical groove; 2 spines on anterior branchial margin, and 3 spines on posterior branchial margin, last small; additional spine ventral to between first and second lateral spine. External orbital limit ending in small spine; infraorbital margin with 1 spine. Rostrum broad triangular, 1.7 times as long as broad, length 0.5 postorbital carapace length and breadth 0.3 that of carapace, nearly horizontal in lateral view; dorsal surface with small setiferous ridges; lateral margin with 4 deeply incised sharp teeth.

Pterygostomial flap rugose, with sparse short setae, anterior margin spiniform.

Sternum: Plastron about as long as broad, lateral extremities gently divergent posteriorly.

Abdomen: Somites 2–4 each with 2 transverse ridges on tergite, with 2 additional interrupted ridges between, anterior ridge more distinctly elevated than posterior ridge; somite 5 with 1 or 2 uninterrupted and 1 medially interrupted ridges; somite 6 with some scale-like ridges.

Eyes: Ocular peduncles 1.5 times longer than broad, maximum corneal diameter 0.8 rostrum width.

Antennule: Basal article of antennular peduncle with 3 well-developed spines, distodorsal larger; distomesial spine also well-developed, subequal in length to but somewhat more slender than distolateral. Ultimate article with a few fine setae not in tuft on distodorsal margin.

Antenna: Article 1 with ventral distomesial spine exceeding distal margin of article 2. Article 2 with 2 well-developed distal spines, distolateral spine barely reaching end of article 3, distomesial spine subequal to distolateral. Articles 3 and 4 unarmed.

Mxp3: Ischium with well-developed distal spine on flexor margin; extensor margin with small but distinct distal spine; crista dentata with 21 or 22 denticles. Merus shorter than ischium; flexor margin with 3 spines of subequal size, proximal one located at midlength, distal one at terminal end; extensor margin with small distal spine, additional small spine at midlength. Carpus unarmed.

P1–4: missing in both syntypes.

Epipods on P1.

Remarks. *Galathea whiteleggii* was described on the basis of two specimens collected from New South Wales, Australia. Since then, the species has been recorded from other localities: Queensland (McNeill 1968; Haig 1973), southern Arabian Sea (Tirmizi 1966), Bay of Bengal (Tirmizi & Javed 1993), South China Sea (Dong & Li 2010). The accounts and illustrations provided by above authors clearly suggest that their specimens belong to different species. As described above, *G. whiteleggii* is characterized by the absence of hepatic and parahepatic spines on the carapace. These spines (one or both) are present in the material collected by the above mentioned authors, indicating that they are not *G. whiteleggii*. We did not examine those published specimens, and then identities of vast majority of them remain to be verified. Nevertheless, the specimens reported from the South China Sea by Dong & Li (2010) could be referred to *G. halia* **n. sp.**

Galathea whiteleggii resembles *G. atua* n.sp. from the French Polynesia, however, *G. whiteleggii* is easily differentiated from this species by the following features:

- The anterior metogastric ridge is uninterrupted, continuing laterally to anteriorbranchial ridges, in *G. whiteleggii*, whereas this ridge is laterally interrupted in *G. atua*.
- The *Mxp3* merus has three spines along the flexor margin in *G. whiteleggii*, instead of 2 spines in *G. atua*.
- There are four uninterrupted transverse ridges behind the mid-transverse ridge of the carapace in *G. whiteleggii*, rather than two in *G. atua*.

No genetic data are available for *G. whiteleggii*.

Distribution. Australia, New South Wales, 99–108 m.

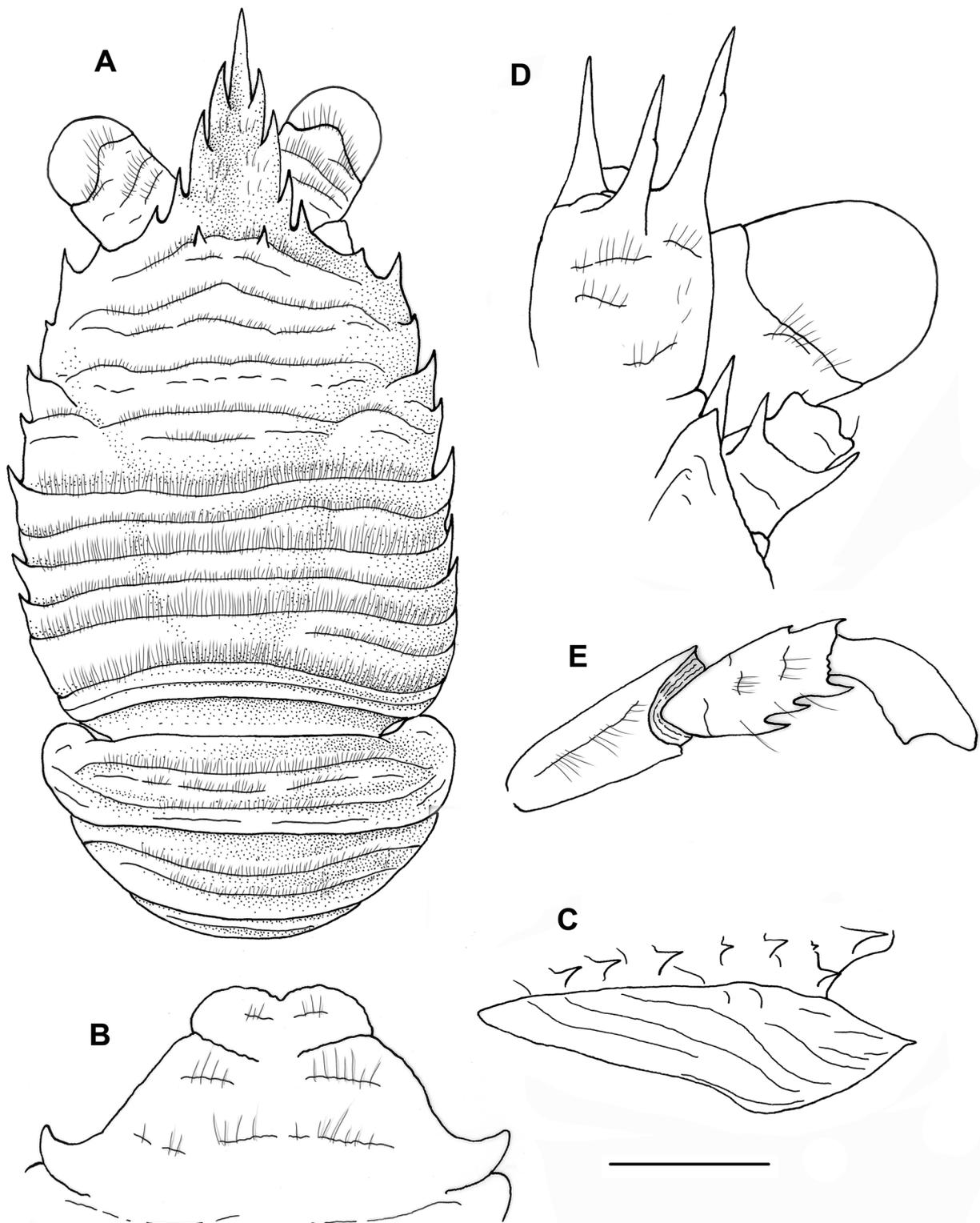


FIGURE 114. *Galathea whiteleggii* Grant & McCulloch, 1906, syntype, female, 3.0 mm, Australia, New South Wales (G2394). A, carapace and abdomen, dorsal view; B, thoracic sternites 3 and 4; C, right pterygostomian region, lateral view; D, left part of cephalothorax, ventral view, showing antennular and antennal peduncles, and anterior part of pterygostomian flap; E, ischium, merus and carpus of right Mxp3, lateral view. Scale: A, C = 1 mm; B, D, E = 0.5 mm.

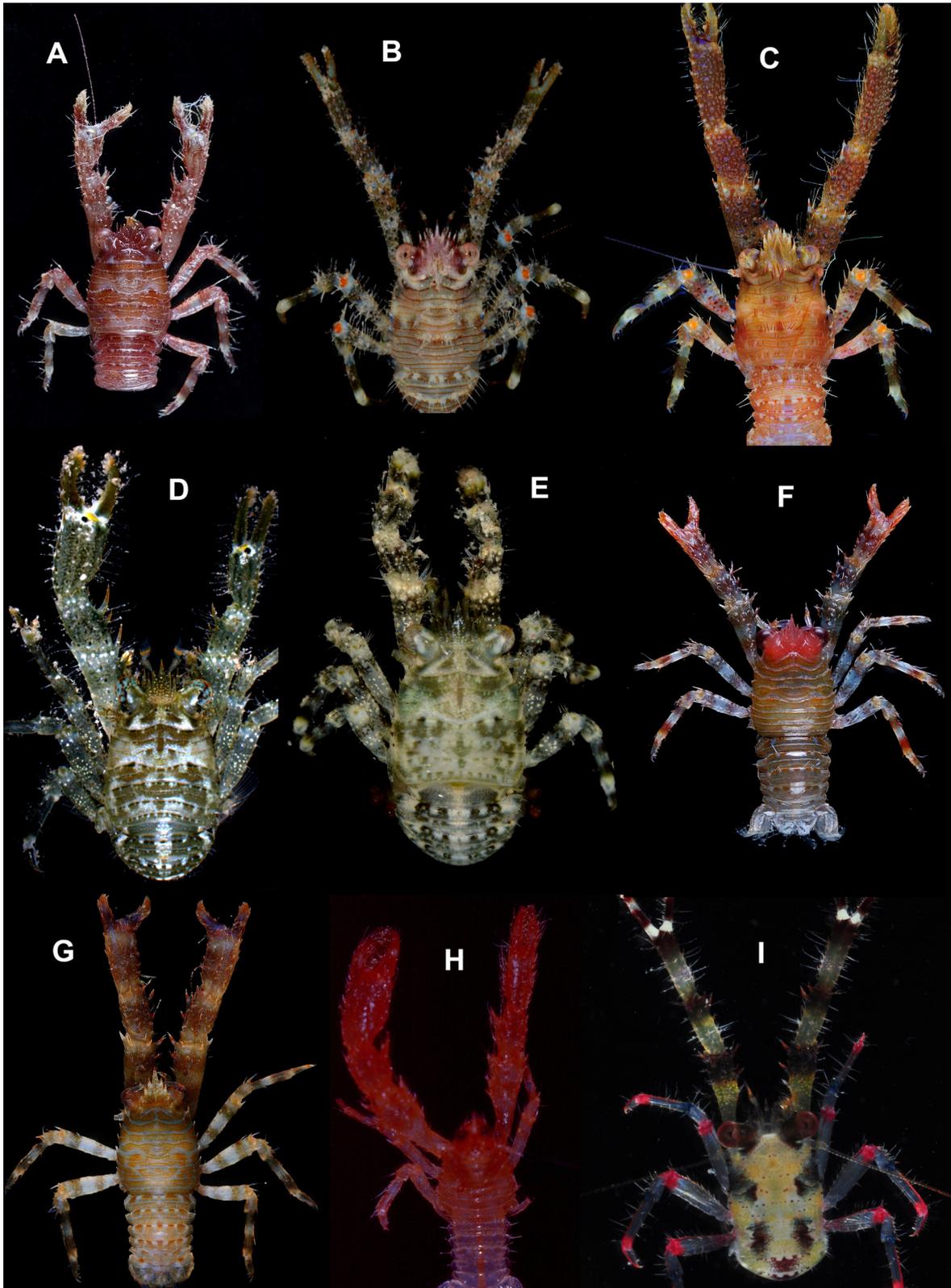


FIGURE 115. Dorsal view. A, *Galathea acis* n. sp., Vanuatu, male 3.7 mm (MNHN-IU-2013-15899). B, *Galathea aegyptiaca* Paul'son, 1875, Red Sea, female 4.2 mm (UF37107). C, *Galathea aegyptiaca* Paul'son, 1875, Madagascar, male 3.4 mm (MNHN-IU-2010-2739). D, *Galathea aequata* n. sp., French Polynesia, male 4.1 mm (UF15761). E, *Galathea ahyongi* n. sp., Red Sea, Saudi Arabia, ovigerous female 3.5 mm (UF36149). F, *Galathea amamiensis* Miyake & Baba, 1966, Vanuatu, female 2.9 mm (MNHN-IU-2013-8182). G, *Galathea amamiensis* Miyake & Baba, 1966, Papua New Guinea, female 3.1 mm (MNHN-IU-2013-356). H, *Galathea autahi* n. sp., French Polynesia, male 4.8 mm (MNHN-IU-2013-13569). I, *Galathea bimaculata* Miyake & Baba, 1966, Papua New Guinea, ovigerous female 2.5 mm (MNHN-IU-2013-13907).

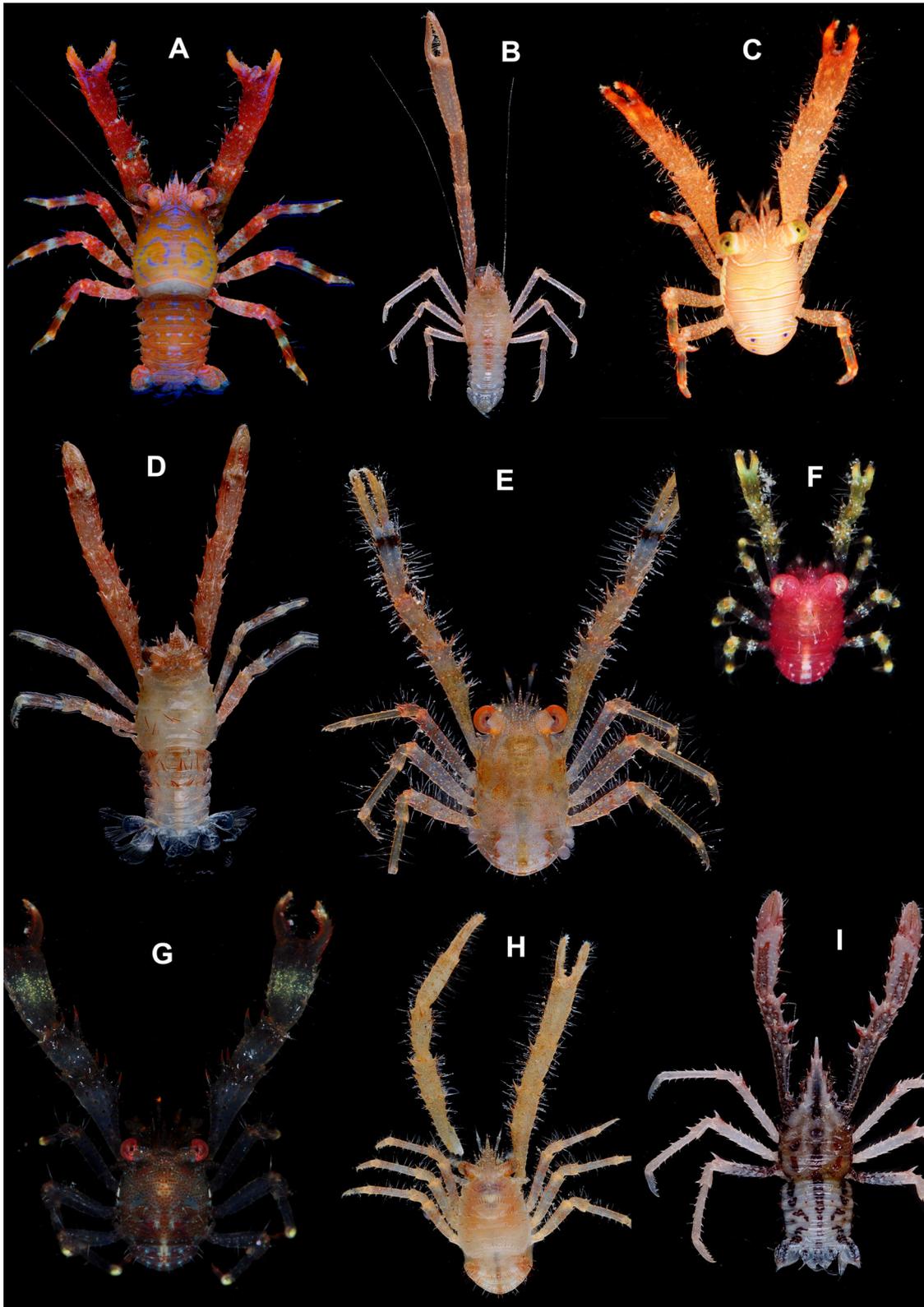


FIGURE 116. Dorsal view. A, *Galathea boucheti* **n. sp.**, Madagascar, holotype, male 4.0 mm (MNHN-IU-2013-8110). B, *Galathea caesariata* **n. sp.**, Vanuatu, holotype, male 5.0 mm (MNHN-IU-2013-15938). C, *Galathea celiae* **n. sp.**, Red Sea, male 2.8 mm (UF32860). D, *Galathea consobrina* De Man, 1902, Vanuatu, female 3.2 mm (MNHN-IU-2013-8386). E, *Galathea cymo* **n. sp.**, Vanuatu, ovigerous female 4.0 mm (MNHN-IU-2013-13343). F, *Galathea erythrina* **n. sp.**, Red Sea, holotype, female 1.3 mm (UF36824). G, *Galathea eulimene* **n. sp.**, Red Sea, Saudi Arabia, male 3.1 mm (UF35961). H, *Galathea galene* **n. sp.**, ovigerous female 5.4 mm (MNHN-IU-2013-9878). I, *Galathea gladiola* **n. sp.**, Vanuatu, holotype, female 4.5 mm (MNHN-IU-2013-8436).

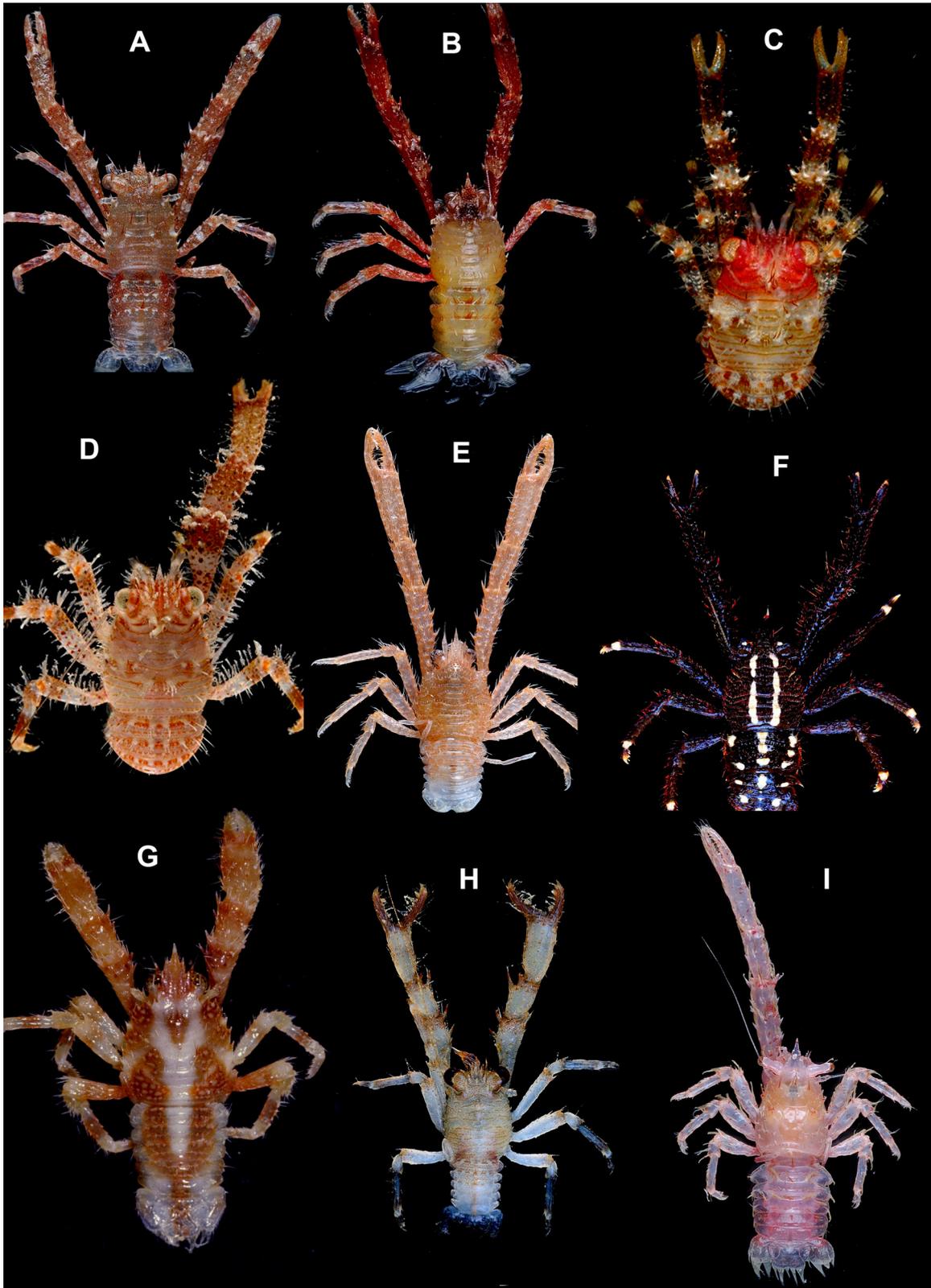


FIGURE 117. Dorsal view. A, *Galathea halia* n. sp., Vanuatu, ovigerous female 3.2 mm (MNHN-IU-2013-8110). B, *Galathea halia* n. sp., Vanuatu, ovigerous female 3.2 mm (MNHN-IU-2013-13528). C, *Galathea imitata* n. sp., Western Australia, ovigerous female 3.2 mm (UF21915). D, *Galathea imitata* n. sp., Western Australia, male 3.6 mm (UF22483). E, *Galathea inconspicua* Henderson, 1885, Vanuatu, male 5.1 mm (MNHN-IU-2013-8507). F, *Galathea inflata* Potts, 1915, Papua New Guinea, ovigerous female 6.3 mm (MNHN-IU-2013-509). G, *Galathea lemniscata* n. sp., New Caledonia, Chesterfield islands, holotype, female 4.8 mm (MNHN-IU-2013-15873). H, *Galathea leporis* n. sp., Papua New Guinea, male 4.3 mm (MNHN-IU-2013-370). I, *Galathea longioculata* n. sp., Vanuatu, holotype, female 4.8 mm (MNHN-IU-2013-15979).

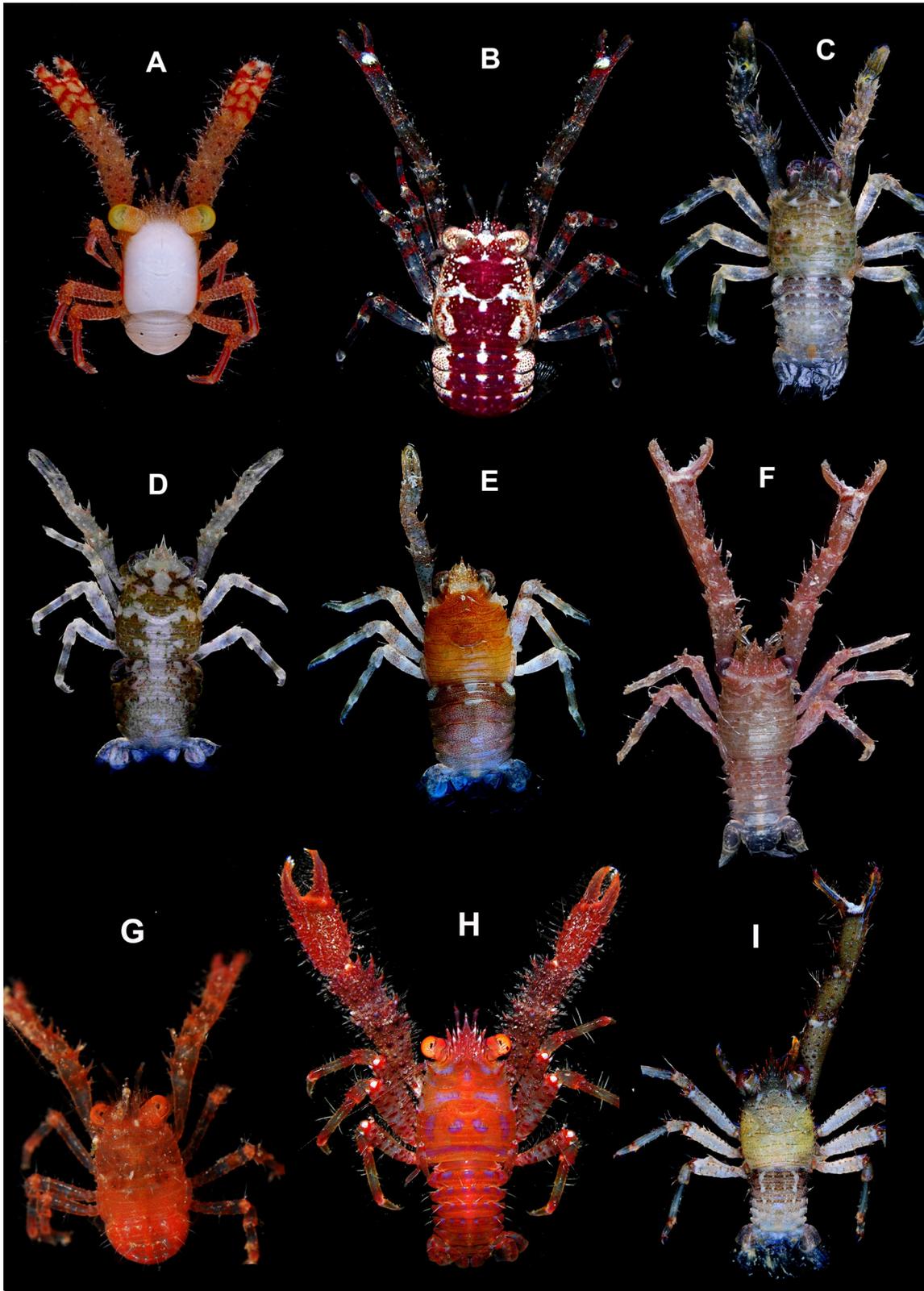


FIGURE 118. Dorsal view. A, *Galathea maculiabdominalis* Baba, 1972, Vanuatu, male 2.4 mm (MNHN-IU-2013-8344). B, *Galathea mariae* n. sp., French Polynesia, ovigerous female 3.0 mm (UF15523). C, *Galathea mauritiana* Bouvier, 1914, Madagascar, female 2.5 mm (IU-2013-9740). D, *Galathea minima* n. sp., Papua New Guinea, ovigerous female 2.8 mm (MNHN-IU-2013-704). E, *Galathea minima* n. sp., Papua New Guinea, ovigerous female 2.5 mm (MNHN-IU-2013-654). F, *Galathea ohshimai* Miyake & Baba, 1967, Vanuatu, male 2.2 mm (MNHN-IU-2013-13881). G, *Galathea parvula* n. sp., holotype, ovigerous female 2.9 mm (UF38286). H, *Galathea paulayi* n. sp., French Polynesia, male 4.7 mm (UF15618). I, *Galathea peitho* n. sp., Papua New Guinea, male 4.0 mm (MNHN-IU-2013-372).

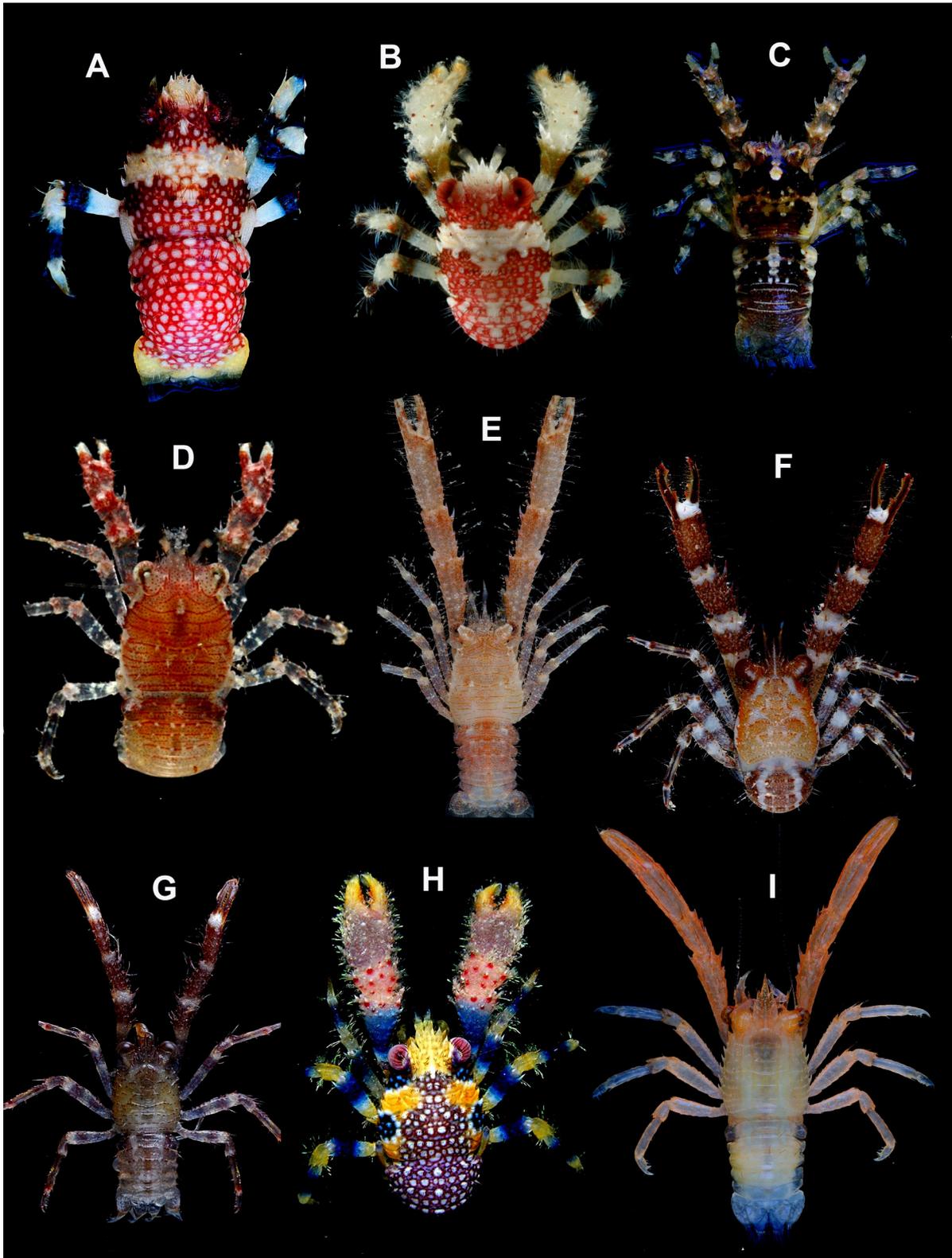


FIGURE 119. Dorsal view. A, *Galathea pilosa* De Man, 1888, Papua New Guinea, ovigerous female 4.5 mm (MNHN-IU-2013-1055). B, *Galathea pilosa* De Man, 1888, Maldives, male 3.6 mm (UF39675). C, *Galathea platycheles* Miyake, 1953, Madagascar, female 2.2 mm (MNHN-IU-2013-13822). D, *Galathea platycheles* Miyake, 1953, Western Australia, ovigerous female 1.9 mm (UF22402). E, *Galathea politula* n. sp., Vanuatu, holotype, M 3.5 mm (MNHN-IU-2013-9707). F, *Galathea polydora* n. sp., Vanuatu, male 3.3 mm, (MNHN-IU-2013-9871). G, *Galathea polydora* n. sp., Vanuatu, ovigerous female 2.5 mm (MNHN-IU-2013-13476). H, *Galathea polyphemus* n. sp., French Polynesia, male 4.4 mm (UF15427). I, *Galathea providentia* Laurie, 1926, Madagascar, female 3.0 mm (MNHN-IU-2013-13802).

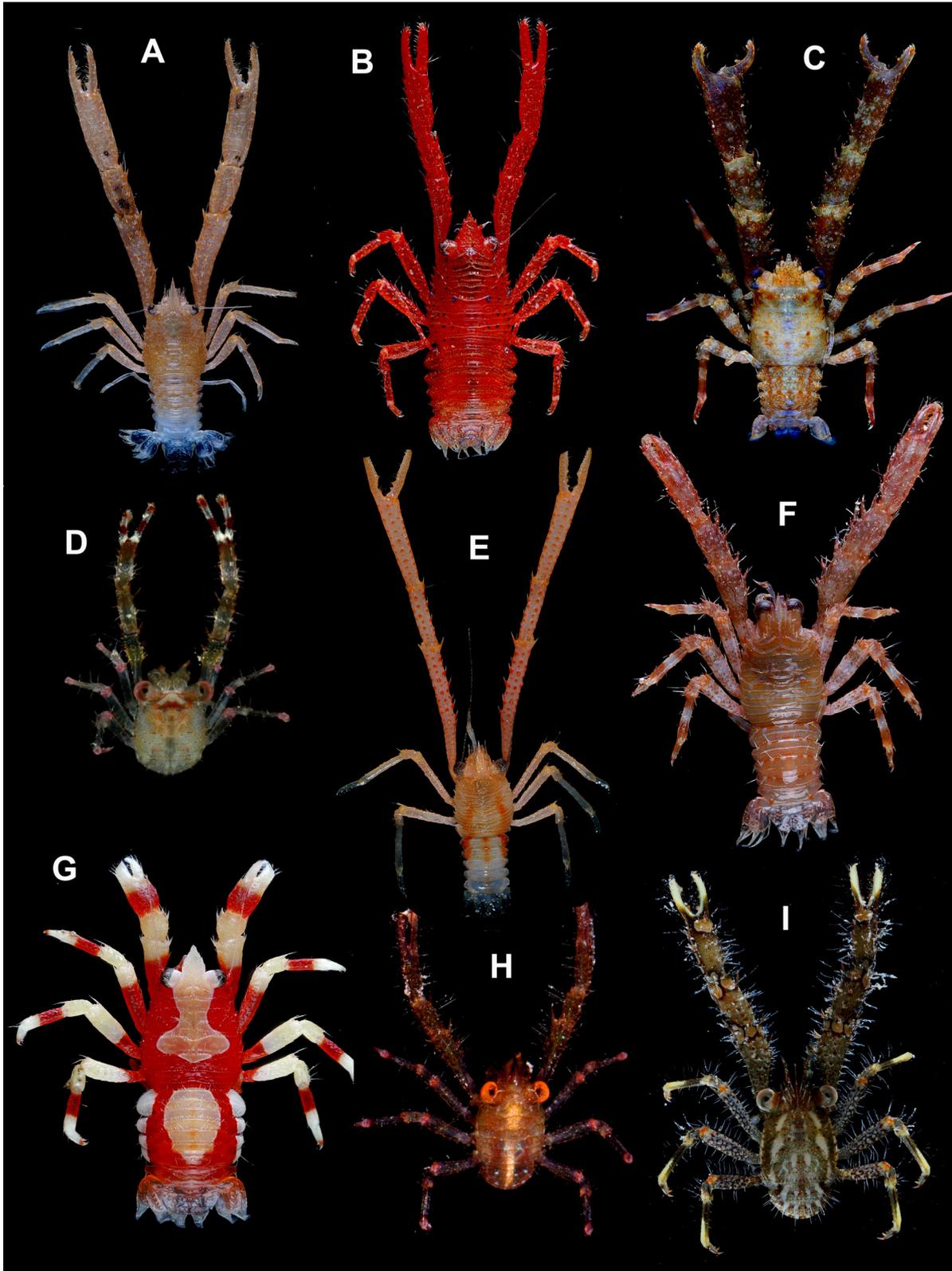


FIGURE 120. Dorsal view. A, *Galathea pubescens* Stimpson, 1858, Vanuatu, male 6.2 mm (MNHN-IU-2013-15948). B, *Galathea punctata* n. sp., Vanuatu, ovigerous female 5.0 mm (MNHN-IU-2013-8491). C, *Galathea rubrispina* n. sp., Papua New Guinea, holotype, male 2.4 mm (MNHN-IU-2013-377). D, *Galathea schnabelae* n. sp., Maldives, holotype, male 3.3 mm (UF40283). E, *Galathea scolopia* n. sp., Papua New Guinea, male 3.8 mm (MNHN-IU-2011-4479). F, *Galathea senta* n. sp., Vanuatu, ovigerous female 3.4 mm (MNHN-IU-2013-14361). G, *Galathea sinensis* Dong & Li, 2010, Vanuatu, ovigerous female 5.7 mm (MNHN-IU-2013-8229). H, *Galathea spinosorostris* Dana, 1852, Hawaii, female 2.2 mm (UF12200). I, *Galathea subsquamata* Stimpson, 1858, Papua New Guinea, male 3.8 mm (MNHN-IU-2013-13503).

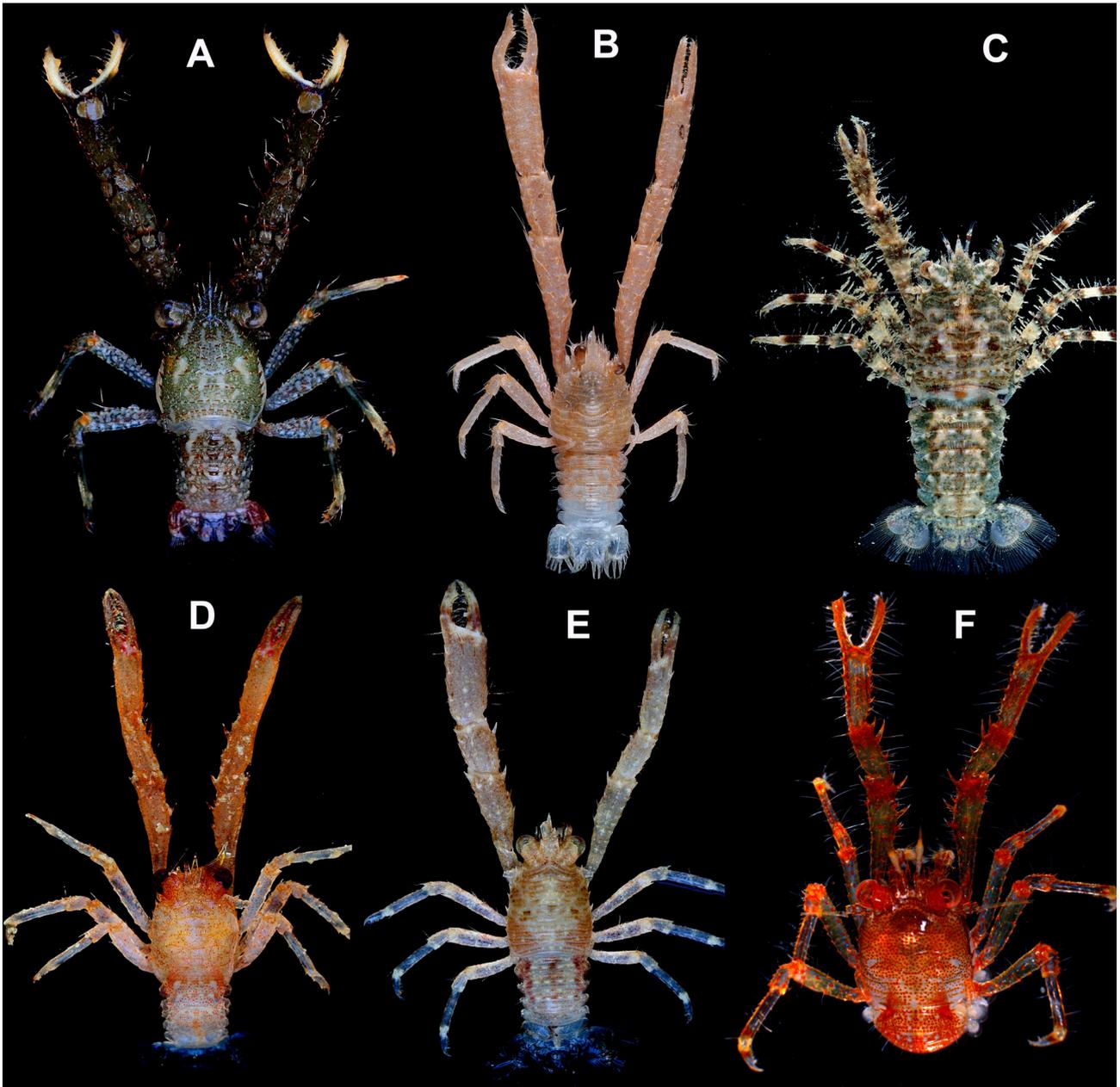


FIGURE 121. Dorsal view. A, *Galathea subsquamata* Stimpson, 1858, Papua New Guinea, male 3.4 mm (MNHN-IU-2013-353). B, *Galathea tagaloa* n. sp., Vanuatu, M 6.5 mm (MNHN-IU-2013-13983). C, *Galathea tagaro* n. sp., Vanuatu, holotype, female 4.7 mm (MNHN-IU-2013-8365). D, *Galathea tanegashimae* Baba, 1969, Papua New Guinea, male 2.3 mm (MNHN-IU-2013-375). E, *Galathea ternatensis* De Man, 1902, Papua New Guinea, male 3.5 mm (MNHN-IU-2013-13664). F, *Galathea tongi* n. sp., French Polynesia, ovigerous female 3.0 mm (UF15686).

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