

New Lysianassoid Genera and Species from South-eastern Australia (Crustacea: Amphipoda)

J.K. LOWRY & H.E. STODDART

Australian Museum,
PO Box A285, Sydney South NSW 2000, Australia

ABSTRACT. Two new lysianassoid genera and species (*Gippsia jonesae* and *Thaumodon poorei*) are described from south-eastern Australia. The poorly known genus *Galathella* Barnard & Karaman, 1987, is rediagnosed; two new species (*G. bassiana* and *G. palana*) from south-eastern Australia are described and *G. latipes* (Ledoyer, 1986) from the western Indian Ocean is included. *Galathella* appears to be most closely related to *Centromedon* Sars, 1891, *Gippsia* n.gen. appears to be most closely related to *Ichnopus* Costa, 1853 and *Thaumodon* n.gen. appears to be related to *Concarnes* Barnard & Karaman, 1991.

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As part of our studies revising the world lysianassoid genera we describe two new genera, *Gippsia* and *Thaumodon*, from south-eastern Australia and redescribe the poorly known genus *Galathella* Barnard & Karaman, 1987, based on examination of the original material and new material from deep water near Bass Strait.

Thaumodon belongs in the Lysianassidae. The Lysianassidae comprises taxa with a palp on maxilla 1 and a 6/5 setal-tooth arrangement on the outer plate of maxilla 1. The 6/5 arrangement may be derived from a simple 7/4 arrangement (Fig. 1a) in which eleven distal setal-teeth on the outer plate of maxilla 1 occur in two rows, an apical row of seven setal-teeth (known as ST1 to ST7) and a subapical row of four setal-teeth (known as STA to STD). In the 6/5 arrangement (Fig. 1b) the outer plate becomes slightly narrowed apically so that setal-tooth 1 (ST1) is displaced downwards, which displaces setal-tooth A (STA). This causes STA

to be slightly displaced from STB. More than 60 lysianassoid genera in three family groups have this setal-tooth arrangement. The new genus *Thaumodon* has a modified 6/5 arrangement (Fig. 1c). Setal-tooth 7 is displaced from the outer row so that it sits against STD on the inner row. This has compressed the inner row setal-teeth so that STC is touching STA and STB is pushed behind them. To add to their unusual appearance the inner row setal-teeth are large and all of the setal-teeth are cornified, curved and without cusps.

Thaumodon occurs among seagrasses and wharf pilings and although it resembles a typical lysianassid, the simple first gnathopods are modified into a rasping organ and the mouthpart morphology is highly derived. Nothing is known about the ecology or behaviour of this species, but such information would be valuable in helping to interpret the interesting mouthpart morphology.

Galathella and *Gippsia* belong to the family Uristidae as defined by Lowry & Stoddart (1992) as taxa in which the setal-teeth on the outer plate of maxilla 1 have a 7/4 crown arrangement. The 7/4 crown arrangement is most likely derived from the 6/5 arrangement through a further apical narrowing of the outer plate. The narrowing of the plate displaces setal-tooth 7 (ST7) down the medial face (Fig. 1d). The migration of ST7 can be traced from a position opposite STD in *Kyska* Shoemaker, 1964, to a position beyond STD in *Anonyx* Krøyer, 1838 and *Ichnopus* Costa, 1853. The 7/4 crown arrangement may have arisen more than once, but at this stage it is not possible to detect separate lineages.

Galathella galatheae (Dahl, 1959) was originally described in the genus *Schisturella* Norman, 1900, based on one female specimen from the Kermadec Trench. Barnard & Karaman (1987) established a monotypic genus, *Galathella*, for this species based on rather slim differences from *Schisturella*: an unproduced upper lip and a non-constricted inner ramus on uropod 2 (referred to as uropod 3 in Barnard & Karaman, 1987 and 1991). In fact *Galathella* differs from *Schisturella* in the arrangement of the setal-teeth on the outer plate of maxilla 1 and the first coxa is reduced and tapering, not vestigial as it is in *Schisturella*. New material of *Galathella* from mud bottoms on the continental slope and abyssal plain adjacent to the Bass Strait has allowed us to describe the genus more fully and re-evaluate its relationships with other lysianassoid genera.

The genus *Gippsia* was collected from shallow coarse sand bottoms in south-eastern Australia. It appears to be related to the uristid genus *Ichnopus* but the simple dactylus on gnathopod 1, the shortened outer plate of maxilla 2 and the entire telson distinguish it from this genus. Because of the arrangement of the setal-teeth on maxilla 1, particularly the position of setal-tooth 7 and the setose molar with a very reduced triturating surface, species of *Galathella* and *Gippsia* are considered to be scavengers and/or predators.

In this paper we change the terminology we have previously used to describe setae and spines. This change is based primarily on arguments about the homology of setae and spines presented by Oshel & Steele (1988) and Watling (1989). The terminology mainly follows Watling (1989) with a few modifications. What we have previously referred to as setae are now referred to as slender setae and what we previously referred to as spines are now called robust setae. What we previously referred to mainly as teeth (non-articulating extrusions of the cuticle), are now referred to as spines.

Descriptions have been generated from the taxonomic database program DELTA (Dallwitz & Paine, 1986). All material is lodged in the Australian Museum, Sydney (AM) or the Museum of Victoria, Melbourne (NMV). The following abbreviations are used on the plates: A, antenna; E, epistome and upper lip; EP, epimeron; G, gnathopod; H, head; MD, mandible; MDP, mandibular palp; MP, maxilliped; MPIP, maxilliped inner plate; MPOP, maxilliped

outer plate; MPP, maxilliped palp; MX, maxilla; P, pereopod; ST, setal-tooth; T, telson; U, uropod; UR, urosome; l, left; r, right; lat, lateral.

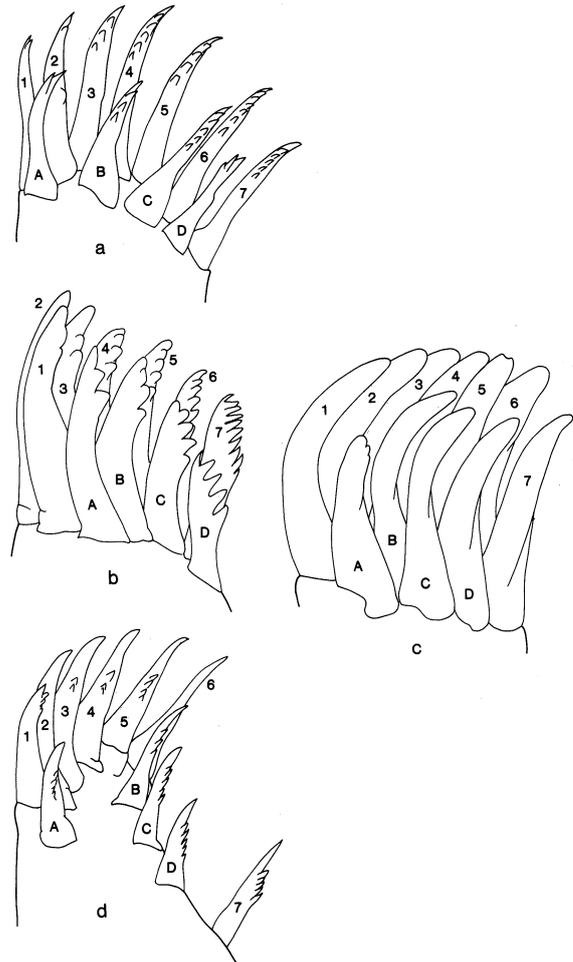


Fig. 1. Setal-teeth of maxilla 1 outer plate. a – 7/4 arrangement; b – 6/5 arrangement; c – modified 6/5 arrangement of *Thaumodon*; d – 7/4 crown arrangement.

Systematics

Lysianassoidea

Lysianassidae

Thaumodon n.gen.

Diagnosis. Antenna 1: female without callynophore, male with weak 1-field callynophore. Antenna 2: peduncular articles 4 and 5 not enlarged in male, flagellum not elongate in male. Mandible: incisors symmetrical, extremely enlarged, both with slightly convex margins; lacinia mobilis absent; accessory setal row present; molar a reduced setose flap; mandibular palp attached extremely proximally. Maxilla 1: outer

plate narrow, with 11 setal-teeth, ST1 to ST7 large, strongly curved, without cusps, ST7 displaced onto inner row; STA to STD compressed, large, strongly curved, without cusps, STB compressed between STA and STC; palp with serrate apical margin. Maxilliped: inner plate with 3 greatly elongate apical setae. Gnathopod 1: simple; dactylus short, rasp-like with a medial row of large teeth and several medial rows of smaller teeth. Peraeopods 3 and 4 in male, merus and carpus with plumose setae along posterior margin. Uropod 3: peduncle short with strongly developed lateral flange; male peduncle and rami with plumose setae. Telson slightly longer than broad, moderately cleft (50%).

Type species. *Thaumodon poorei* n.sp.

Species composition. *Thaumodon* contains only *T. poorei* n.sp.

Etymology. From the Greek nouns *thauma* meaning marvel and *odon* meaning tooth.

Remarks. *Thaumodon* is most similar to *Concarnes* Barnard & Karaman, 1991. They share characters such as the long slender accessory setae, reduced molar, proximal mandibular palp, strong, curved setal-teeth and distally serrate palp of maxilla 1, lack of setae on the outer plate of the maxilliped, simple gnathopod 1 and moderately cleft telson. They differ in that *Thaumodon* has a sexually dimorphic gnathopod 2, a 1-articulate outer ramus on uropod 3 and none of the typical male secondary sexual characters (such as large eyes, callynophore, calceoli, long antenna 2 and plumose setae on uropod 3).

Thaumodon shows some similarity to *Pseudonesimoides* Bellan-Santini & Ledoyer, 1974, in the greatly enlarged mandibular incisor, the reduced molar, the large curved setal-teeth of maxilla 1 and the enlarged apical setae on the inner plate of the maxilliped. However, in other significant characters, such as the chelation of gnathopod 1 and the spination of the inner and outer plates of the maxilliped, these two genera are extremely different.

Thaumodon is distinguished from both these taxa by the setal-teeth of maxilla 1, the apical setae on the inner plate of the maxilliped and the rasp-like dactylus on gnathopod 1.

Thaumodon poorei n.sp.

Figs 2, 3

Type material. HOLOTYPE, female, 14 mm, NMV J25814, 1 PARATYPE, male, 11.5 mm, NMV J3787 and 3 PARATYPES, female, AM P40431: off Crib Point, Western Port, Victoria, Australia, 38°21'S 145°14'E, Smith-McIntyre grab, weed and mud, 7 m, A.J. Gilmour and Marine Studies Group on FV *Melita*, 4 September 1964, stn CPBS-B1. PARATYPE female, NMV J3786, Crawfish Rock, Western Port, Victoria, Australia, Underwater Research Group, 10 November 1968. 4

PARATYPES, NMV J3788, Tankerton Jetty, Western Port, Victoria, 6 m, Underwater Research Group, 22 November 1970.

Description. Based on holotype female, 14 mm and paratype male, 11.5 mm. *Head and body:* with scattered setae. *Head:* deeper than long, lateral cephalic lobe large, broad, distally truncated; rostrum absent; eyes oval, not enlarged in adult male. *Antenna 1:* short, 0.14 × body; peduncular article 1 short, length 1.4 × breadth, with small midmedial spine; peduncular article 2 short, 0.46 × article 1; peduncular article 3 long, 0.25 × article 1; accessory flagellum long, 0.7 × primary flagellum, 6-articulate, article 1 short, 1.2 × article 2 (male short, 1.4 ×); flagellum 9-articulate (male 9), without callynophore in female (weak 1-field callynophore in male), without flagellar robust setae, calceoli absent in female and male. *Antenna 2:* subequal in length to antenna 1 in female and male; peduncle without brush setae in female or male, weakly geniculate between peduncular articles 3–4, article 3 short, peduncular articles 4 and 5 not enlarged in female or male; flagellum 8-articulate (male 7), calceoli absent in female and male.

Mouthpart bundle: subquadrate. *Epistome* and *upper lip:* separate, epistome slightly produced, rounded, upper lip slightly produced, rounded. *Mandible:* incisors symmetrical, very large, with slightly convex margins; lacinia mobilis absent; accessory setal row, left and right rows each with 3 long, slender, simple setae; intermediate setae absent; molar a reduced finely setose flap; mandibular palp attached extremely proximally; article 1 short, length 1.6 × breadth; article 2 slender, length 5.8 × breadth, 2 × article 3, with 8 distal A2-setae, without D2-setae; article 3 slender, blade-like, long, length 3.75 × breadth, without A3-setae, without D3-setae (male 3), with 3 apical E3-setae. *Maxilla 1:* inner plate narrow, with 2 pappose setae; outer plate with 11 setal-teeth in modified 6/5 arrangement, setal-teeth without cusps, ST1 to ST7 large, slender, curved, smooth, without cusps, ST7 contiguous with ST6; STA large, slender, curved, slightly displaced from STB and contiguous with STC, STB large, slender, curved, without cusps, STC large, slender, curved, slightly displaced from STB and contiguous with STA and STD, without cusps, STD large, slender, curved, contiguous with STB-STC and ST7, without cusps; palp large, 2-articulate, with serrate apical margin, without subterminal setae, robust flag seta present on distolateral corner, distomedial margin serrate. *Maxilla 2:* inner plate broad, outer plate narrow, inner plate length 1 × outer plate. *Maxilliped:* inner plate large, subrectangular, with 3 apical long robust setae, oblique setal row reduced with 3 simple setae; outer plate medium size, subovate, without apical slender setae, without apical robust setae, medial setae absent, submarginal setae vestigial; palp large, 4-articulate, article 2 slender, length 2.3 × breadth, article 3 long, slender, dactylus reduced, with 2 terminal and 1 subterminal setae, unguis present.

Gnathopod 1: simple; coxa large, about as long as



Fig. 2. *Thaumodon poorei* n.gen., n.sp. holotype, female, 14 mm, NMV J25814; whole animal, paratype female, 15 mm, AM P40431; Western Port, Victoria, Australia. Scales represent 0.5 mm.

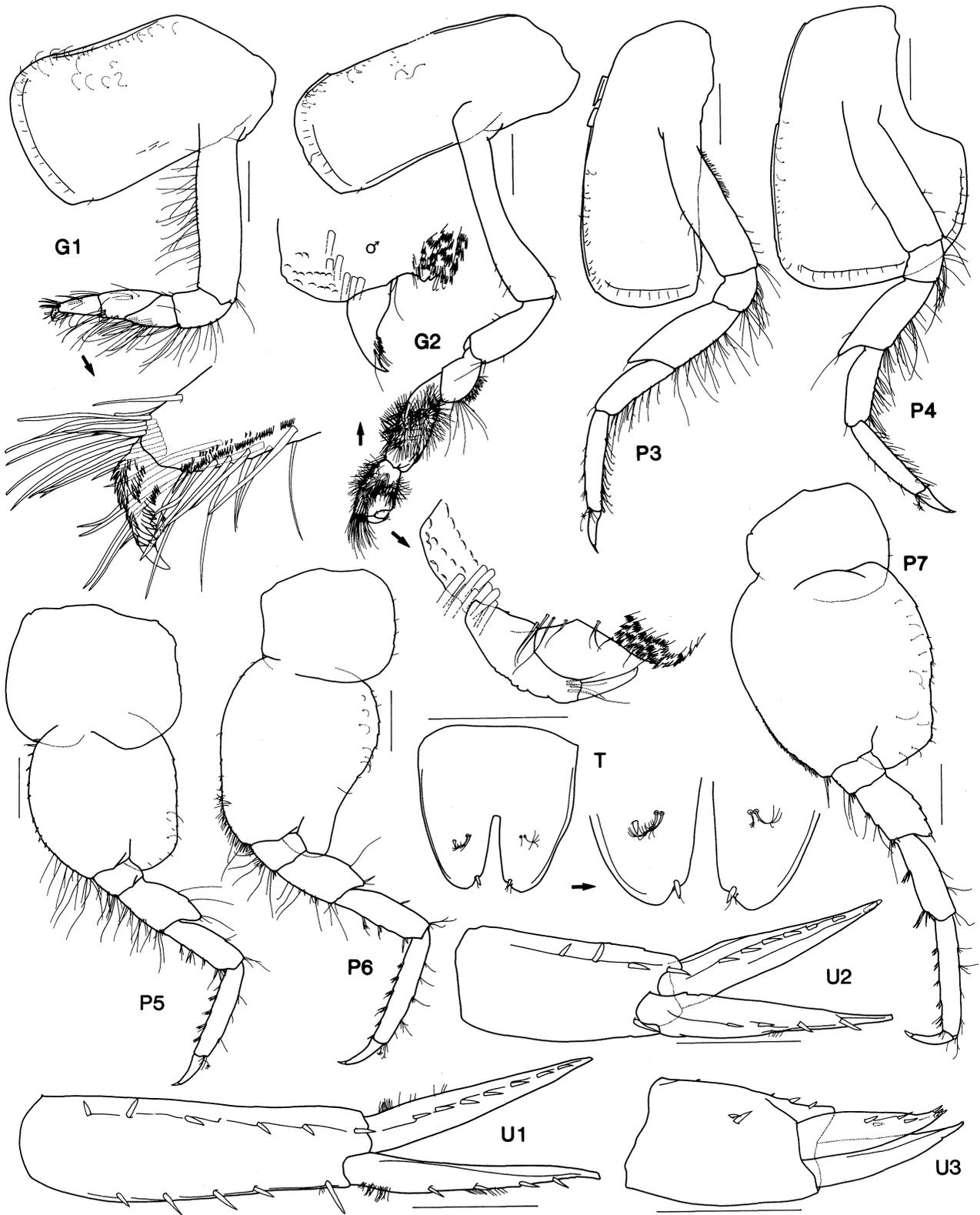


Fig. 3. *Thaumodon poorei* n.gen., n.sp. holotype, female, 14 mm, NMV J25814, paratype male, 11.5 mm, NMV J3787, Western Port, Victoria, Australia. Scales represent 0.5 mm.

coxa 2, anterior margin concave, anteroventral corner produced, rounded, posterior margin straight; basis long, slender, length $3.9 \times$ breadth, anterior margin smooth, with simple setae; ischium long, length $1.7 \times$ breadth; merus, posterior margin with long simple setae; carpus subrectangular, long, length $2.2 \times$ breadth, longer than ($1.6 \times$) propodus, with patch of very fine setae near posterior margin; propodus small, subtriangular, tapering distally, posterior margin serrate, straight, with 4 simple robust setae, palm absent; dactylus rasp-like. *Gnathopod 2*: grossly subchelate in female, minutely subchelate in male; coxa large, subequal in size to coxa 3; ischium long, length $2.6 \times$ breadth; carpus long, length $2.8 \times$ breadth, posterior margin straight; propodus subrectangular, short, length $1.7 \times$ breadth, palm transverse, with concave, smooth margin, posterodistal corner without robust setae; dactylus reaching corner of palm, posterior margin smooth.

Peraeopod 3: coxa large; merus-carpus without plumose setae in male and female; propodus with 12 slender setae along posterior margin, with 2 distal locking setae; dactylus short, slender. *Peraeopod 4*: coxa with large posteroventral lobe, anterior margin slightly rounded, posterior margin slightly sloping anteriorly; merus-carpus without plumose setae in male and female; propodus with 12 slender setae along posterior margin, with 2 distal locking setae; dactylus short, slender. *Peraeopod 5*: coxa bilobate, posterior lobe slightly produced ventrally; basis expanded with posterior margin minutely crenate; merus slightly expanded posteriorly; propodus with 10 robust setae along anterior margin, with 1 distal locking seta; dactylus short, slender. *Peraeopod 6*: coxa small, not lobate posteriorly; basis expanded posteriorly with sinusoidal posterior margin; merus slightly expanded posteriorly; propodus with 5 pairs of robust setae along anterior margin, with 1 distal locking seta, with 10 slender setae along posterior margin; dactylus short, slender. *Peraeopod 7*: basis expanded posteriorly, posterior margin almost straight, minutely crenate, posteroventral corner subquadrate, posteroventral margin sloping inward; merus slightly expanded, convex posterior margin with 4 robust setae; propodus with 6 pairs of robust setae and 2 distal locking setae, with 5 groups of slender setae along posterior margin; dactylus short, slender.

Oostegites: from gnathopod 2 to peraeopod 5. *Gills*: from gnathopod 2 to peraeopod 6, with strong horizontal pleating.

Pleonites 1 to 3: dorsally smooth. *Epimeron 1*: anteroventral corner rounded. *Epimeron 3*: posteroventral corner broadly rounded. *Urosomites*: dorsally smooth. *Uropod 1*: with long fine setae; peduncle with 5 dorsolateral, 1 apicolateral, 4 dorsomedial and 1 apicomедial robust setae; rami subequal in length; outer ramus with 7 lateral robust setae; inner ramus with 4 medial robust setae. *Uropod 2*: with long fine setae; peduncle with 3 dorsolateral, 1 apicolateral and 1 apicomедial robust setae; rami subequal in length; outer ramus with 5 lateral robust setae; inner ramus with 3 lateral and 1 medial robust setae; inner ramus

with weak constriction. *Uropod 3*: peduncle short, length $1.5 \times$ breadth, with dorsolateral flange, with 5 dorsolateral and 2 dorsomedial robust setae, without midlateral slender or robust setae, without distoventral robust setae, without plumose setae in female or male; rami lanceolate, subequal in length; outer ramus 1-articulate, article 1 without robust setae; inner ramus with 3 lateral and 3 medial robust setae; slender plumose setae absent in female and male. *Telson*: as long as broad, length $1 \times$ breadth, moderately cleft (49%), with 1 dorsal robust seta on each lobe, without dorsal slender setae, distal margins rounded, with 1 marginal penicillate seta on each lobe, without marginal simple setae, with 1 marginal robust setae on each lobe.

Etymology. This species is named for Dr Gary Poore, carcinologist at the Museum of Victoria, in recognition of his exceptional achievements in making known the south-eastern Australian peracaridan fauna.

Remarks. The robust, highly cornified mouthparts of *T. poorei* suggest a tough diet such as sponges. The non-cuspidate setal-teeth on the outer plate of maxilla 1 are unusual in lysianassoids. According to Dr W. Rudman (pers. comm.) Australian Museum, dorid opisthobranchs which feed on spiculate sponges have no cusps on their teeth whereas chromodorids, which feed on non-spiculate sponges, have cuspidate teeth.

Distribution. *Thaumodon poorei* is currently known only from Western Port, Victoria, south-eastern Australia.

Uristidae

Galathella Barnard & Karaman

Galathella Barnard & Karaman, 1987: 866.—Barnard & Karaman, 1991: 488.

Diagnosis. *Head*: lateral cephalic lobe apically rounded. *Antenna 1*: peduncular article 1 without posterodistal tooth; callynophore well developed in female and male, without posterodistal simple or robust setae. Upper lip/epistome separate. *Mandible*: molar setose, with reduced distal triturating surface; mandibular palp with proximal A3-setae, with slender, blade-like article 3. *Maxilla 2*: outer plate longer than inner plate, without extremely elongate setae. *Maxilliped*: outer plate distomedially rounded. *Gnathopod 1*: simple to weakly subchelate; coxa slightly shorter than coxa 2, tapering distally; ischium long, carpus very long. *Peraeopods 3 and 4*: males without plumose setae on posterior margin of merus and carpus. *Epimeron 3*: posteroventrally produced. *Telson*: moderately to deeply cleft.

Type species. *Schisturella galathea* Dahl, 1959, original designation.

Species composition. *Galathella* contains *G. bassiana* n.sp., *G. galatheae* (Dahl, 1959), *G. latipes* (Ledoyer, 1986) and *G. palana* n.sp.

Remarks. Of those genera with a tapering first coxa only *Centromedon* Sars, 1891 and *Galathella* have a 7/4 crown setal-tooth arrangement on the outer plate of maxilla 1. *Centromedon* differs from *Galathella* as follows: the lateral cephalic lobe is subacute; there is no calynophore in the female; the molar is less developed; the mandibular palp has no proximal A3-setae; and the posteroventral corner of epimeron 3 is produced into a large spine.

Similarities between the two genera are striking. The parallel development of gnathopod 1 within each genus is particularly noticeable. Each genus has species in which gnathopod 1 is simple with long carpus and propodus, weakly subchelate with the palm extremely

acute, or strongly subchelate with nearly transverse palms. Species of *Centromedon* are currently known from northern hemisphere Arctic and temperate regions and lower latitudes in abyssal depths. Species of *Galathella* are currently known from southern hemisphere tropical and temperate regions in shallow to abyssal depths.

All lysianassoid species which have a 7/4 crown setal-tooth arrangement, and for which the life style is known, spend at least part of their life history as scavengers or micropredators (e.g., Dahl, 1979; Sainte-Marie, 1984; Sainte-Marie & Lamarche, 1985; Lowry & Stoddart, 1992). It is therefore highly probable that species in *Galathella* are demersal scavengers and/or micropredators.

Distribution. Kermadec Trench (7000 m), south-eastern Australia (600 to 1850 m), south-western Pacific Ocean; Iles Glorieuses, western Indian Ocean (28 m).

Key to the species of *Galathella*

1. Gnathopod 1 weakly to strongly subchelate 2
 — Gnathopod 1 simple *G. palana* n.sp.
2. Telson deeply cleft 3
 — Telson moderately cleft, about 45% *G. bassiana* n.sp.
3. Maxilla 1 palp with short conate terminal setae; peraeopod 7, merus slightly expanded, margins subparallel *G. galatheae*
 — Maxilla 1 palp with long conate terminal setae; peraeopod 7, merus expanded, posterior margin rounded *G. latipes*

Galathella bassiana n.sp.

Figs 4–6

Type material. HOLOTYPE, female, ovigerous (2 eggs), 3.2 mm, NMV J37595 and PARATYPE, female, AM P42287: 48 km ENE of Cape Tourville, Tasmania, Australia, 42°00.25'S 148°43.55'E, gravel with lumps of sandy mud aggregate, 1264 m, epibenthic sled, G.C.B. Poore, 30 October 1988, stn SLOPE 81. 1 PARATYPE, NMV J37596, south of Point Hicks, Victoria, Australia, 38°25.90'S 148°58.60'E to 38°26.60'S 148°57.10'E, muddy sandstone, 1850 m, epibenthic sled, G.C.B. Poore *et al.* on RV *Franklin*, 22 July 1986, Cruise CSIRO FR5/86, stn SLOPE 25. 2 PARATYPES, NMV J37597, south of Point Hicks, Victoria, Australia, 38°25.00'S 149°0.00'E, compacted clay, 1500 m, epibenthic sled, G.C.B. Poore *et al.* on RV *Franklin*, 22 July 1986, Cruise CSIRO FR5/86, stn SLOPE 27. 1 PARATYPE, NMV J37598, south of Point Hicks, Victoria, Australia, 38°21.90'S 149°20.00'E to 38°21.40'S 149°20.90'E, 1000 m, epibenthic sled, G.C.B. Poore *et al.* on RV *Franklin*, 23 July 1986, Cruise CSIRO FR5/86, stn SLOPE 32. 7 PARATYPES, NMV J37599, south of Point Hicks, Victoria, Australia, 38°19.60'S 149°24.30'E

to 38°19.00'S 149°27.30'E, rock, rubble, clay, sand, biogenic sediment, 930–951 m, epibenthic sled, M.F. Gomon *et al.* on RV *Franklin*, 23 July 1986, Cruise CSIRO FR5/86, stn SLOPE 33. 3 PARATYPES, NMV J37600, south of Point Hicks, Victoria, Australia, 38°16.40'S 149°27.60'E to 38°17.70'S 149°26.10'E, coarse shell, biogenic sediment, 800 m, epibenthic sled, M.F. Gomon *et al.* on RV *Franklin*, 23 July 1986, Cruise CSIRO FR5/86, stn SLOPE 34. 3 PARATYPES, AM P42290, off Freycinet Peninsula, Tasmania, Australia, 42°2.20'S 148°38.70'E, coarse shelly sand, 800 m, epibenthic sled, M.F. Gomon *et al.* on RV *Franklin*, 7 July 1986, Cruise CSIRO FR5/86, stn SLOPE 45. 1 PARATYPE, NMV J37601, 76 km south of Point Hicks, Victoria, Australia, 38°29.33'S 149°19.98'E, sandy mud, fine shell, 1840 m, epibenthic sled, G.C.B. Poore, 26 October 1988, stn SLOPE 69.

Diagnosis. Maxilla 1 palp with long, conate setae. Gnathopod 1 weakly subchelate. Telson moderately cleft.

Description. Based on holotype female, 3.2 mm; male not known. *Head and body:* without setae. *Head:* slightly longer than deep, ventrally truncated with straight

ventral margin, lateral cephalic lobe large, strongly projecting, apically rounded; rostrum absent; eyes apparently absent. *Antenna 1*: short, $0.18 \times$ body; peduncular article 1 medium length, length $1.5 \times$ breadth, with small midmedial swelling; peduncular article 2 short, $0.21 \times$ article 1; peduncular article 3 short, $0.13 \times$ article 1; accessory flagellum long, $0.61 \times$ primary flagellum, 3-articulate, article 1 long, $2.4 \times$ article 2; flagellum 6-articulate, with weak 2-field callynophore in female, with 1 bifurcate robust seta on each of flagellar articles 2–4, calceoli absent in female. *Antenna 2*: subequal in length to antenna 1; peduncle without brush setae, peduncular article 1 enlarged, not covering article 2, weakly geniculate between peduncular articles 3–4, article 3 long, $0.75 \times$ article 4, peduncular articles 4 and 5 not enlarged in female, not known for male; flagellum 6-articulate, calceoli absent in female.

Mouthpart bundle: subquadrate. *Epistome* and *upper lip*: separate, epistome almost straight, upper lip slightly produced, apically rounded. *Mandible*: incisors symmetrical, large, with slightly convex margins; lacinia mobilis a long slender cuspidate peg; accessory setal row, left and right rows each with 3 short, slender, simple setae; intermediate setae absent; molar setose with reduced distal triturating surface; mandibular palp attached midway; article 1 short, length $1.3 \times$ breadth; article 2 slender, length $5.9 \times$ breadth, $2.1 \times$ article 3, with 7 submarginal posterodistal A2-setae, without D2-setae; article 3 slender, blade-like, long, length $3.9 \times$ breadth, with 1 proximal A3-seta, with 5 distal D3-setae and 3 apical E3-setae. *Maxilla 1*: inner plate narrow, with 2 pappose setae; outer plate extremely narrow with 10 setal-teeth in modified 7/4 crown

arrangement, ST1 to ST3 large, stout, weakly to multicuspidate, ST4–ST5 large, slender, 6-cuspidate, ST6 absent, left and right ST7 symmetrical, displaced down medial face, elongate, slender, multicuspidate medially, STA large, slender, 3-cuspidate, STB large, slender, 4-cuspidate, STC large, slender, 5-cuspidate, STD slender, 6-cuspidate; palp large, 2-articulate, with 3 long terminal robust setae, with 1 subterminal seta, robust flag seta present on distolateral corner, distomedial margin serrate. *Maxilla 2*: inner plate narrow, outer plate broader, inner plate length $0.61 \times$ outer plate. *Maxilliped*: inner plate large, subrectangular, with 3 apical nodular setae, oblique setal row strong with 11 pappose setae; outer plate small, subovate, with 1 apical pappose seta, with 1 apical robust seta, medial setae small, blunt, submarginal setae long, simple; palp large, 4-articulate, article 2 slender, length $2.7 \times$ breadth, $1.4 \times$ article 3, article 3 long, slender, length $2.6 \times$ breadth, dactylus well-developed, with 2 subterminal setae, unguis present.

Gnathopod 1: subchelate; coxa large, slightly shorter than coxa 2, tapering distally, anterior margin straight, posterior margin distally angled towards anterior margin; basis long, slender, length $4.6 \times$ breadth, anterior margin smooth, with simple setae; ischium long, length $2.1 \times$ breadth; merus, posterior margin with patch of short setae and a few simple setae; carpus subrectangular, very long, length $4 \times$ breadth, longer than $(1.4 \times)$ propodus, with patch of very fine setae near posterior margin and long simple setae along posterior margin; propodus large, subrectangular, length $3.1 \times$ breadth, margins subparallel, posterior margin smooth, straight, with simple, slender setae, palm extremely acute, margin straight, smooth, posterodistal corner with 1 medial and

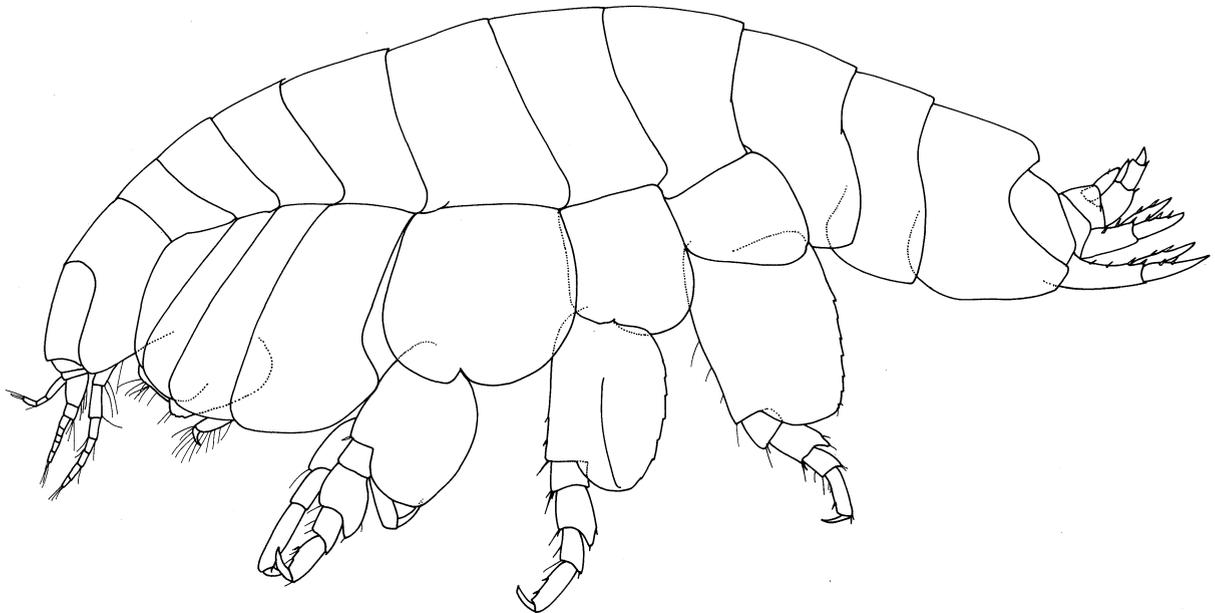


Fig. 4. *Galathella bassiana* n.sp., holotype female, 3.2 mm, NMV J37595, continental slope off Bass Strait, Victoria, Australia.

1 lateral robust setae; dactylus complex, with large subterminal spine and row of about 30 medial conate setae near anterior margin.

Gnathopod 2: minutely subchelate; coxa large, subequal in size to coxa 3; ischium long, length 3 × breadth; carpus long, length 3.7 × breadth, posterior margin straight; propodus subrectangular, long, length 2 × breadth, palm transverse, with concave, serrate margin, posterodistal corner with 1 medial robust seta; dactylus reaching corner of palm, posterior margin serrate.

Peraeopod 3: coxa large; merus weakly expanded anteriorly; merus-carpus without plumose setae in female; propodus with 3 robust setae along posterior margin, with 2 distal locking setae; dactylus short, slender. *Peraeopod 4*: coxa deeper than wide, with weak posteroventral lobe, anterior margin slightly rounded,

posterior margin slightly sloping anteriorly; merus weakly expanded anteriorly; merus-carpus without plumose setae in female; propodus with 2 robust setae along posterior margin, with 2 distal locking setae; dactylus short, slender. *Peraeopod 5*: coxa equilobate; basis expanded with posterior margin minutely crenate; merus expanded with rounded posterior margin; propodus with 3 robust setae along anterior margin, with 2 distal locking setae; dactylus short, slender. *Peraeopod 6*: coxa small, slightly lobate posteriorly; basis expanded posteriorly with minutely crenate posterior margin; merus expanded with rounded posterior margin; propodus with 4 robust setae along anterior margin, with 2 distal locking setae; dactylus short, slender. *Peraeopod 7*: basis expanded posteriorly, posterior margin almost straight, minutely crenate, posteroventral corner rounded, posteroventral margin rounded; merus slightly expanded posterodistally

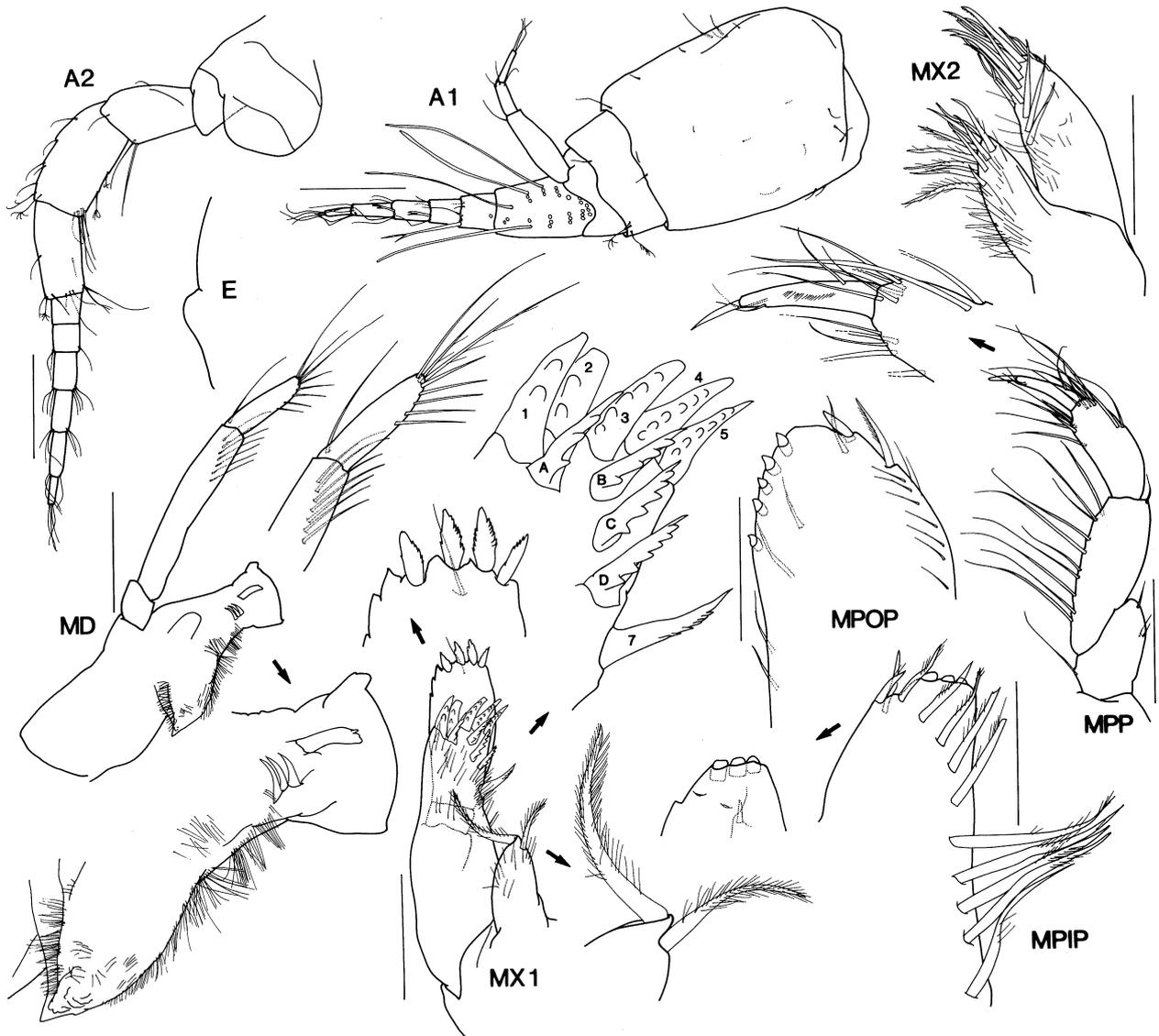


Fig. 5. *Galathella bassiana* n.sp., holotype female, 3.2 mm, NMV J37595, continental slope off Bass Strait, Victoria, Australia. Scales for MPOP, MPIP represent 0.05 mm, remainder represent 0.1 mm.

with 2 robust setae; propodus with 3 robust setae along anterior margin, with 2 distal locking setae, without setae along posterior margin; dactylus short, slender.

Oostegites: from gnathopod 2 to pereopod 5. *Gills*: from gnathopod 2 to pereopod 7, not pleated.

Pleonites 1 to 3: pleonite 3 truncated dorsodistally. *Epimeron 1*: anteroventral corner broadly rounded. *Epimeron 3*: posteroventral corner produced, narrowly rounded. *Urosomites*: dorsally smooth; urosomite 3 without small dorsolateral seta. *Uropod 1*: without fine setae; peduncle with 3 dorsolateral, 1 apicolateral, 2

dorsomedial and 1 apicomедial robust setae; outer ramus slightly longer than inner ramus; outer ramus with 2 dorsal robust setae, inner ramus with 2 dorsal robust setae. *Uropod 2*: without fine setae; peduncle with 2 dorsolateral, 1 apicolateral and 1 apicomедial robust setae; outer ramus slightly longer than inner ramus; outer ramus with 3 dorsal robust setae, inner ramus with 2 dorsal robust setae; inner ramus without constriction. *Uropod 3*: peduncle short, length 1.75 × breadth, without dorsolateral flange, with 1 apicolateral and 1 apicomедial robust setae, without midlateral slender or

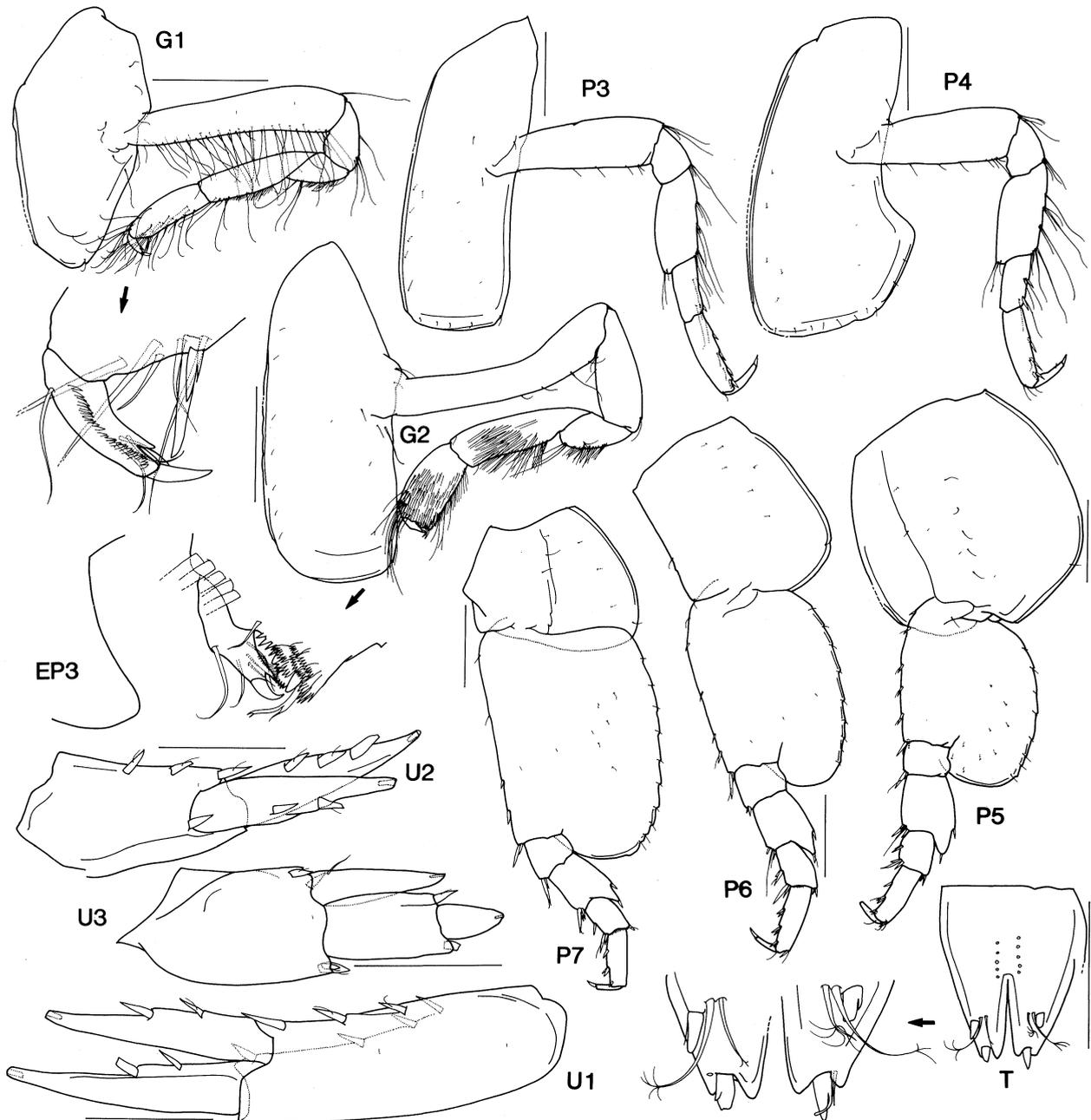


Fig. 6. *Galathella bassiana* n.sp., holotype female, 3.2 mm, NMV J37595, continental slope off Bass Strait, Victoria, Australia. Scales represent 0.1 mm.

robust setae, with 2 distoventral robust setae, with 1 simple seta; rami lanceolate, inner ramus shorter than (about 0.68 ×) outer ramus; outer ramus 2-articulate, article 2 short, article 1 with 1 lateral and 1 medial robust setae; inner ramus without robust setae; slender plumose setae absent in female. *Telson*: longer than broad, length 1.2 × breadth, moderately cleft (44%), with 1 dorsal robust seta on each lobe, without dorsal slender setae, distal margins incised, with 1 marginal penicillate seta on each lobe, without marginal simple setae, with 1 marginal robust seta on each lobe.

Etymology. Name refers to Bass Strait, between Victoria and Tasmania.

Remarks. *Galathella bassiana* differs from *G. palana* as follows: mandibular molar with very reduced distal triturating surface; gnathopod 1 subchelate, palm extremely acute with 2 posterodistal robust setae; and a moderately cleft telson. *Galathella bassiana* differs from *G. galathea* and *G. latipes* mainly in the moderately cleft telson.

Galathella bassiana and *G. palana* occur in the same geographic area, but they are separated by depth. *Galathella bassiana* occurs in 800 to 1850 m depth and *G. palana* occurs in 600 to 1000 m depth.

Distribution. *Galathella bassiana* occurs on the continental slope off south-eastern Australia in 800 to 1850 m depth.

Galathella palana n.sp.

Figs 7–9

Type material. HOLOTYPE, female, ovigerous (3 eggs), 4.6 mm, NMV J14771 and PARATYPE, female, 4.0 mm, AM P42288: off Freycinet Peninsula, Tasmania, Australia, 42°2.20'S 148°38.70'E, coarse shelly sand, 800 m, epibenthic sled, M.F. Gomon *et al.* on RV *Franklin*, 7 July 1986, Cruise CSIRO FR5/86, stn SLOPE 45. 4 PARATYPES, NMV J37602, south of Point Hicks, Victoria, Australia, 38°16.40'S 149°27.60'E to 38°17.70'S 149°26.10'E, coarse shell, biogenic sediment, 800 m, epibenthic sled, M.F. Gomon *et al.* on RV *Franklin*, 23 July 1986, Cruise CSIRO FR5/86, stn SLOPE 34. 3 PARATYPES, NMV J14613, south of Point Hicks, Victoria, Australia, 38°19.10'S 149°14.30'E, coarse sand, 600 m, epibenthic sled, M.F. Gomon *et al.* on RV *Franklin*, 24 July 1986, Cruise CSIRO FR5/86, stn SLOPE 39. 5 PARATYPES, NMV J37603 and 5 PARATYPES, AM P42291: off Freycinet Peninsula, Tasmania, Australia, 42°0.20'S 148°37.70'E, coarse shelly sand, 720 m, epibenthic sled, M.F. Gomon *et al.* on RV *Franklin*, 27 July 1986, Cruise CSIRO FR5/86, stn SLOPE 46. 2 PARATYPES, NMV J37604, 54 km east-south-east of Nowra, New South Wales, Australia, 34°52.72'S 151°15.05'E, mud, fine sand, fine shell, 996 m, epibenthic sled, G.C.B. Poore *et al.*, 22 October 1988, stn SLOPE 53.

Diagnosis. Maxilla 1 palp with long, conate setae. Gnathopod 1 simple. Telson deeply cleft.

Description. Based on holotype female, 4.6 mm; paratype male, 4.0 mm. *Head and body*: without setae. *Head*: slightly longer than deep, ventrally truncated with straight ventral margin, lateral cephalic lobe large, broad, strongly projecting, apically rounded; rostrum small; eyes apparently absent. *Antenna 1*: peduncular article 1 medium length, length 1.5 × breadth, with small midmedial swelling; peduncular article 2 short, about 0.2 × article 1; peduncular article 3 short, 0.1 × article 1; accessory flagellum long, 0.53 × primary flagellum, 3-articulate, article 1 long, 1.2 × article 2; flagellum 7-articulate (male 9), with weak 2-field callynophore in female (strong 2-field callynophore in male), without flagellar robust setae, calceoli absent in female (5 present in adult male). *Antenna 2*: slightly longer than antenna 1; peduncle without brush setae (weak brush setae in male), strongly geniculate between peduncular articles 3–4, article 3 long, 1 × article 4 (male strongly geniculate between peduncular articles 3–4, article 3 long, 1 × article 4) peduncular articles 4 and 5 not enlarged in female or male; flagellum 8-articulate (male 14), calceoli absent in female (about 12 present in adult male).

Mouthpart bundle: subquadrate. *Epistome* and *upper lip*: separate, epistome straight, upper lip produced, apically rounded. *Mandible*: incisors symmetrical, large, with slightly convex margins; lacinia mobilis a long slender cuspidate peg; accessory setal row, left and right rows each with 3 short, slender, simple setae; intermediate setae absent; molar setose with reduced distal triturating surface; mandibular palp attached distally; article 1 short, length 1.2 × breadth; article 2 slender, length 5 × breadth, 1.9 × article 3, with 8 submarginal posterodistal A2-setae (male 9), without D2-setae; article 3 slender, blade-like, long, length 3.4 × breadth, with 1 proximal A3-seta (male 1), with 8 distal D3-setae (male 11) and 2 apical E3-setae. *Maxilla 1*: inner plate narrow, with 2 pappose setae; outer plate extremely narrow with 11 setal-teeth in 7/4 crown arrangement, ST1 to ST3 large, stout, weakly to multicuspidate, ST4 large, slender, 6-cuspidate, ST5 large, slender, 7-cuspidate, ST6 large, slender, 7-cuspidate, left and right ST7 symmetrical, displaced down medial face, elongate, slender, multicuspidate medially, STA large, slender, displaced from STB, 3-cuspidate, STB large, broad, 6-cuspidate, STC large, broad, multicuspidate, STD broad, multicuspidate; palp large, 2-articulate, with 3 long terminal robust setae, with 1 subterminal seta, robust flag seta present on distolateral corner, distomedial margin serrate. *Maxilla 2*: inner plate narrow, outer plate broader, inner plate length 0.52 × outer plate. *Maxilliped*: inner plate large, subrectangular, with 3 apical nodular setae, oblique setal row strong with 10 pappose setae; outer plate small, subovate, with many fine apical setae, with 2 apical robust setae, medial setae small, blunt, submarginal setae long, simple; palp large, 4-articulate, article 2 slender, length 3.1 × breadth, 1.5 × article 3, article 3 long, slender, length 2.7 × breadth, dactylus well-developed, with 3 subterminal setae, unguis present.

Gnathopod 1: simple; coxa large, slightly shorter than

coxa 2, tapering distally, anterior margin slightly concave, anteroventral corner rounded, posterior margin distally angled towards anterior margin; basis long, slender, length $5 \times$ breadth, anterior margin smooth, with simple setae; ischium long, length $1.8 \times$ breadth; merus, posterior margin with a few simple setae; carpus subrectangular, very long, length $5.1 \times$ breadth, longer than ($1.7 \times$) propodus, with patch of very fine setae near posterior margin and long simple setae along posterior margin; propodus large, subrectangular, length $2.8 \times$ breadth, tapering distally, posterior margin smooth, straight, with 1 simple robust seta and simple, slender setae, palm absent; dactylus simple, with subterminal spine. *Gnathopod 2*: minutely subchelate; coxa large, subequal in size to coxa 3; ischium long, length $2.9 \times$ breadth; carpus long, length $3.2 \times$ breadth, posterior margin broadly lobate; propodus subrectangular, long, length $2 \times$ breadth, palm transverse, with straight, serrate margin, posterodistal corner with 1 medial robust seta; dactylus reaching corner of palm, posterior margin smooth.

Peraeopod 3: coxa large; merus weakly expanded anteriorly; merus-carpus without plumose setae in male and female; propodus with 2 robust setae along posterior margin, with 2 distal locking setae; dactylus short, slender. *Peraeopod 4*: coxa deeper than wide, with weak posteroventral lobe, anterior margin slightly rounded, posterior margin slightly sloping anteriorly; merus weakly expanded anteriorly; merus-carpus without plumose setae in male and female; propodus with 3 robust setae along posterior margin, with 2 distal locking setae; dactylus short, slender. *Peraeopod 5*: coxa equilobate; basis expanded with posterior margin minutely crenate; merus expanded with rounded posterior margin; propodus with

2 robust setae along anterior margin, with 2 distal locking setae; dactylus short, slender. *Peraeopod 6*: coxa small, slightly lobate posteriorly; basis expanded posteriorly with minutely crenate posterior margin; merus expanded with rounded posterior margin; propodus with 3 robust setae along anterior margin, with 2 distal locking setae; dactylus short, stocky. *Peraeopod 7*: basis expanded posteriorly, posterior margin slightly rounded, minutely crenate, posteroventral corner rounded, posteroventral margin rounded; merus slightly expanded posterodistally with 3 robust setae; propodus malformed on holotype, paratype with 4 robust setae on anterior margin, with 2 distal locking setae, without setae along posterior margin; dactylus short, stocky.

Oostegites: from gnathopod 2 to peraeopod 5. *Gills*: from gnathopod 2 to peraeopod 7, not pleated.

Pleonites 1 to 3: pleonite 3 truncated dorsodistally. *Epimeron 1*: anteroventral corner broadly rounded. *Epimeron 3*: posteroventral corner produced, narrowly rounded. *Urosomites*: dorsally smooth; urosomite 3 with 1 small dorsolateral seta. *Uropod 1*: without fine setae; peduncle with 5 dorsolateral, 1 apicolateral, 3 dorsomedial and 2 apicomедial robust setae; outer ramus slightly shorter than inner ramus; outer ramus with 2 dorsal robust setae, inner ramus with 2 dorsal robust setae. *Uropod 2*: without fine setae; peduncle with 3 dorsolateral, 1 apicolateral, 1 dorsomedial and 1 apicomедial robust setae; outer ramus slightly shorter than inner ramus; outer ramus with 3 lateral robust setae; inner ramus with 2 lateral and 1 medial robust setae; inner ramus without constriction. *Uropod 3*: peduncle short, length $1.6 \times$ breadth, without dorsolateral flange, with 1 apicolateral and 2 apicomедial robust setae, without midlateral slender

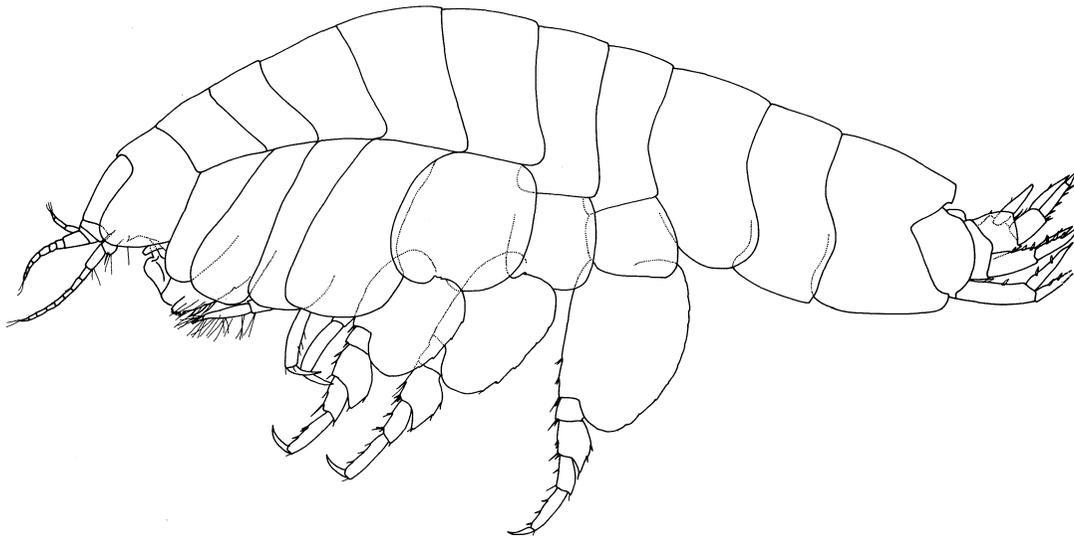


Fig. 7. *Galathella palana* n.sp., paratype female, 4.0 mm, AM P42288, continental slope off Bass Strait, Victoria, Australia.

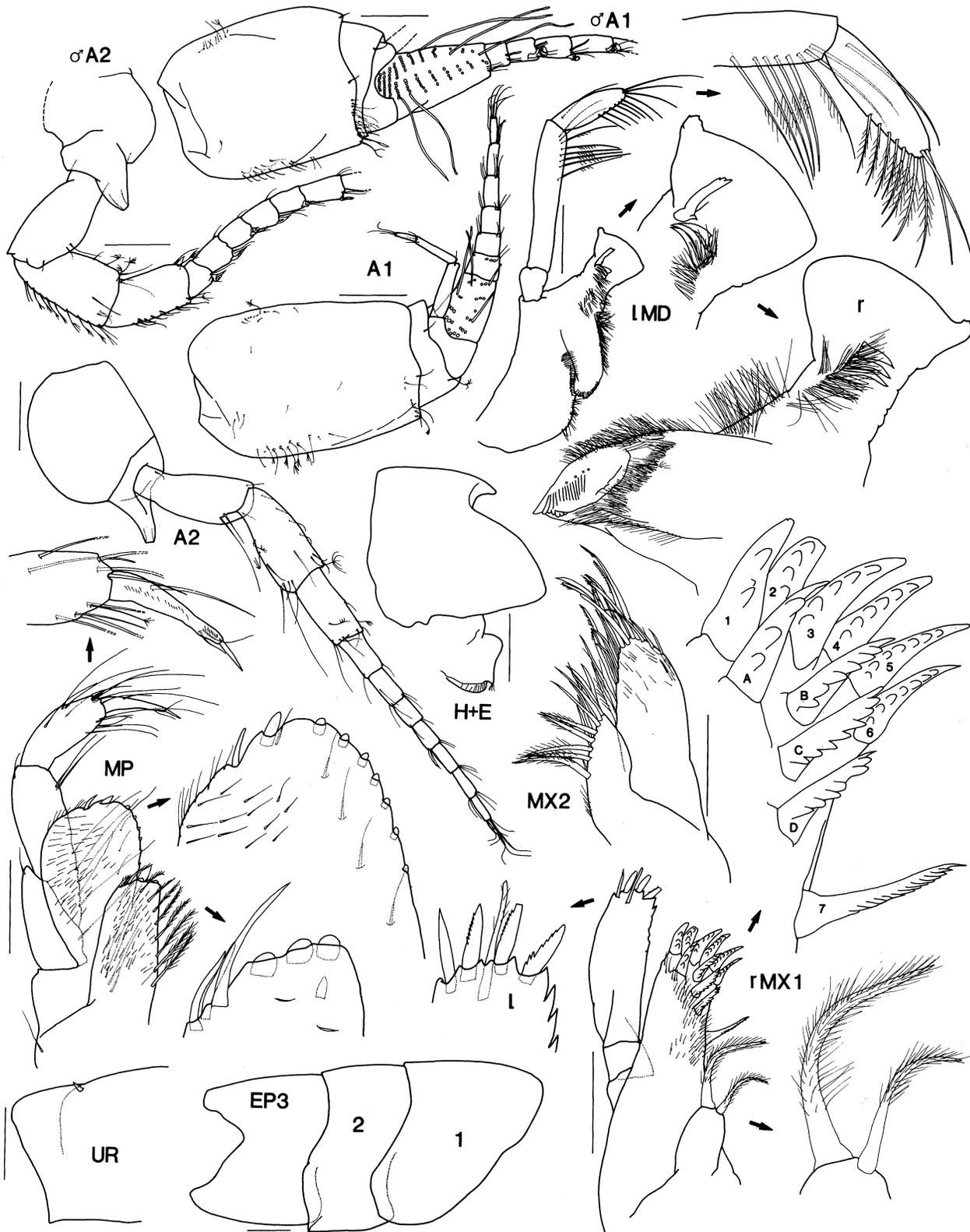


Fig. 8. *Galathella palana* n.sp., holotype female, 4.6 mm, NMV J14771; paratype male, 4.0 mm, NMV J14613; continental slope off Bass Strait, Victoria, Australia. Scale for UR represents 0.2 mm, remainder represent 0.1 mm.

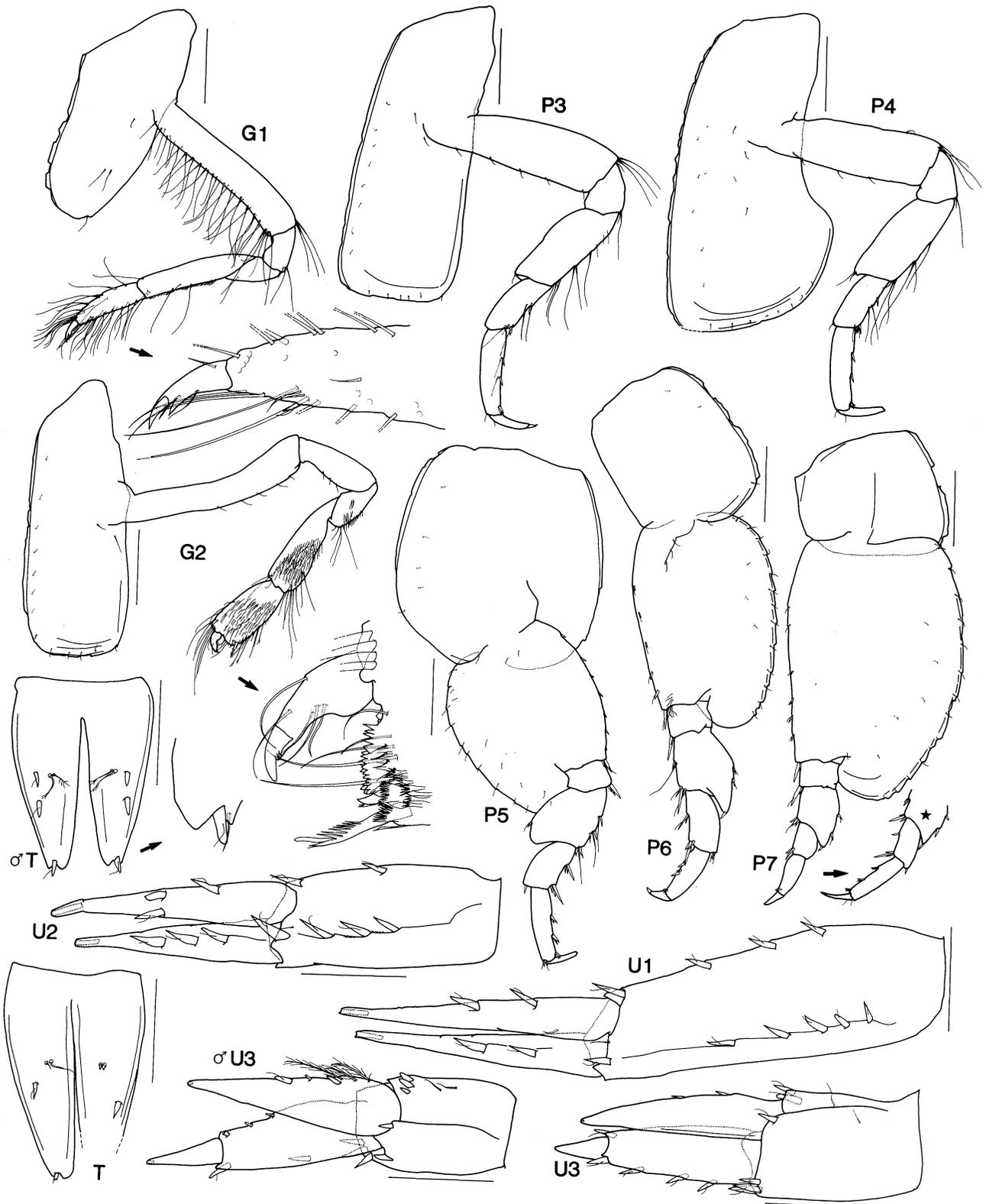


Fig. 9. *Galathella palana* n.sp., holotype female, 4.6 mm, NMV J14771; ★ paratype female, 4.0 mm, NMV J37602 (distal articles of holotype P7 are re-growth); continental slope off Bass Strait, Victoria, Australia. Scales for U1-3, T represent 0.1 mm, remainder represent 0.2 mm.

or robust setae, with 3 distoventral robust setae, with 2 simple setae; rami lanceolate, inner ramus shorter than (about 0.88 ×) outer ramus; outer ramus 2-articulate, article 2 short, article 1 with 4 lateral and 1 medial robust setae (male with 1 lateral, 3 medial); inner ramus with 2 lateral robust setae (male with 3 lateral); slender plumose setae absent in female (present in male). *Telson*: longer than broad, length 1.5 × breadth, deeply cleft (87%), with 1 dorsal robust seta on each lobe, without dorsal slender setae, distal margins incised, with 1 marginal penicillate seta on each lobe, without marginal simple setae, with 1 marginal robust seta on each lobe.

Etymology. Named for the village of Palana on Flinders Island, Bass Strait.

Remarks. *Galathella palana* differs from other species in the genus in having a simple gnathopod 1. In addition it differs from *G. bassiana* in having a deeply cleft telson.

Distribution. *Galathella palana* occurs on the continental slope off south-eastern Australia in 600 to 1000 m depth.

Gippsia n.gen.

Diagnosis. *Head*: lateral cephalic lobe large, broad, subacute. *Antenna 1*: peduncular article 1 without posterodistal tooth; callynophore well-developed in female and male, without posterodistal simple or robust setae. Upper lip/epistome fused. *Mandible*: molar setose, with reduced distal triturating surface; mandibular palp without proximal A3-setae, with slender, blade-like article 3. *Maxilla 2*: outer plate shorter than inner plate, with extremely elongate setae. *Maxilliped*: outer plate distomedially rounded. *Gnathopod 1* simple; coxa about as long as coxa 2, not tapering distally; ischium and carpus short. [Peraeopods 3 and 4: males, plumose setae on posterior margin of merus and carpus not known]. Epimeron 3: posteroventrally produced. Telson entire.

Type species. *Gippsia jonesae* n.sp.

Species composition. *Gippsia* contains *G. jonesae* n.sp.

Etymology. Named for the Gippsland area of Victoria.

Remarks. *Gippsia* appears to be most closely related to *Ichnopus*. The main differences are: in *Gippsia* the molar has a reduced triturating surface; the outer plate of maxilla 2 is shorter than the inner plate; the ischium of gnathopod 1 is short; and the telson is entire.

Gippsia jonesae n.sp.

Figs 10, 11

Type material. HOLOTYPE, female, 3.0 mm (ovigerous, 1 egg), NMV J22344 and PARATYPE, female, NMV J22345: 15.3 km east-south-east of eastern edge of Lake Tyers, Victoria, Australia, 37°53.39'S 148°15.40'E, Smith-McIntyre grab, coarse sand, 43 m, N. Coleman, 4 June 1991, stn MSL-EG 70. PARATYPE, male, 2.0 mm, NMV J22346, 15.5 km south-east of Point Ricardo, Victoria, Australia, 37°53.14'S 148°28.94'E, Smith-McIntyre grab, medium sand, 45 m, N. Coleman, 4 June 1991, stn MSL-EG 81. PARATYPE, NMV J26744, 7.3 km south-south-west of Cape Conran, Eastern Bass Strait, Victoria, Australia, 37°52.65'S 148°42.15'E, Smith-McIntyre grab, coarse sand, 49 m, N. Coleman, February 1991, stn MSL-EG 117. PARATYPES, 1 female, 3.0 mm, 1 male, AM P42289, 15.3 km east-south-east of eastern edge of Lake Tyler, Eastern Bass Strait, Victoria, Australia, 37°53.39'S 148°15.40'E, Smith-McIntyre grab, coarse sand, 43 m, N. Coleman, February 1991, stn MSL-EG 97. PARATYPE, NMV J26747, 15.3 km east-south-east of eastern edge of Lake Tyler, Eastern Bass Strait, Victoria, Australia, 37°53.39'S 148°15.40'E, Smith-McIntyre grab, coarse sand, 43 m, N. Coleman, February 1991, stn MSL-EG 98.

Description. Holotype female, 3.0 mm, paratype male, 2.0 mm. *Head and body*: without setae. *Head*: deeper than long, lateral cephalic lobe large, broad, subacute; rostrum absent; eyes indistinct, irregularly reniform, colour unknown, not enlarged in adult male. *Antenna 1*: medium length; peduncular article 1 short, length 1.1 × breadth; peduncular article 2 short, 0.34 × article 1; peduncular article 3 short, 0.05 × article 1; accessory flagellum long, 0.51 × primary flagellum, 3-articulate, article 1 long, 1.2 × article 2 (male long, 2.1 × article 2), not forming cap; flagellum 7-articulate (male 6), with strong 1-field callynophore in female (strong 2-field callynophore in male), without flagellar robust setae, calceoli absent in female and male. *Antenna 2*: subequal in length to antenna 1 in female and male; peduncle without brush setae in female and male, weakly geniculate between peduncular articles 3–4, article 3 short, 0.48 × article 4 (male weakly geniculate between peduncular articles 3–4, article 3 short, 0.25 × article 4), peduncular articles 4 and 5 not enlarged in female or male; flagellum 6-articulate (male 5), calceoli absent in female and male.

Mouthpart bundle: subquadrate. *Epistome* and *upper lip*: fused, bilobate. *Mandible*: incisors symmetrical, large, with slightly convex margins; lacinia mobilis a cuspidate peg; accessory setal row, left row with 3, right row with 4 short, slender, serrate setae; intermediate setae absent; molar setose with rudimentary distal triturating surface; mandibular palp attached distally; article 1 short, length 1 × breadth; article 2 slender, length 4.3 × breadth, 1.6 × article 3, with 3 distal A2-setae (male 3), without D2-setae; article 3 slender, blade-like, long, length 3.1 × breadth, without A3-setae, with 1 distal D3-seta (male 1) and 3 apical E3-setae. *Maxilla 1*: inner plate narrow, with 2 pappose setae; outer plate

extremely narrow with 11 setal-teeth in 7/4 crown arrangement, ST1 to ST3 large, slender, multicuspidate, ST4 large, slender, 8-cuspidate, ST5 large, slender, 9-cuspidate, ST6 large, slender, 14-cuspidate, ST7 displaced down medial face, large, slender, 27-cuspidate medially, STA large, slender, displaced from STB,

multicuspidate, STB long, slender, 7-cuspidate, STC long, slender, 6-cuspidate, STD long, slender, 6-cuspidate; palp large, 2-articulate, with 3 short terminal conate setae, with 1 subterminal seta, robust flag seta present on distolateral corner, distomedial margin serrate. *Maxilla 2*: inner plate narrow, outer plate broader,

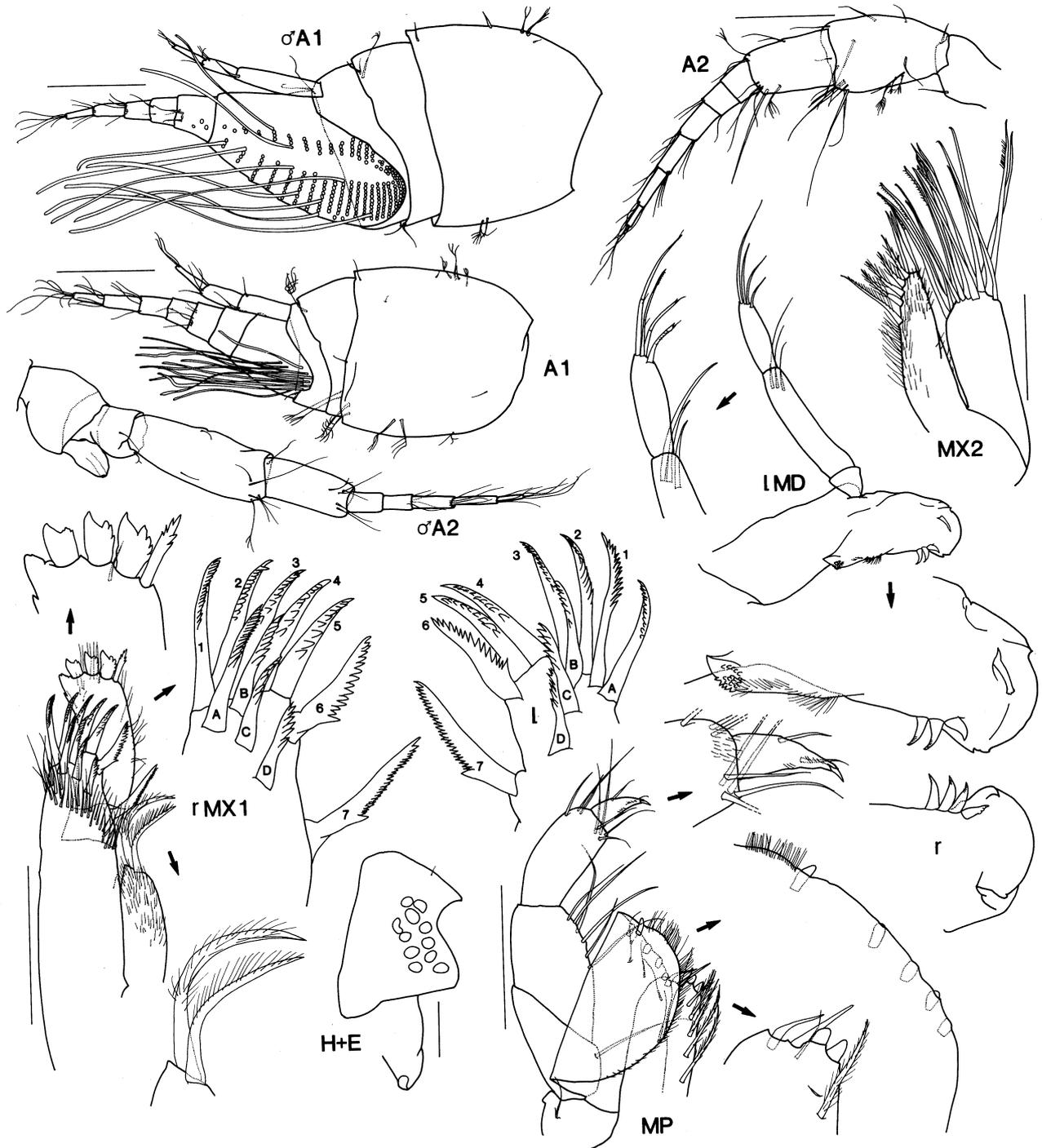


Fig. 10. *Gippisia jonesae* n.gen., n.sp., holotype female, 3.0 mm, NMV J22344; paratype male, 2.0 mm, NMV J22346; off Gippsland, Victoria, Australia. Scale for H+E represents 0.2 mm, remainder represent 0.1 mm.

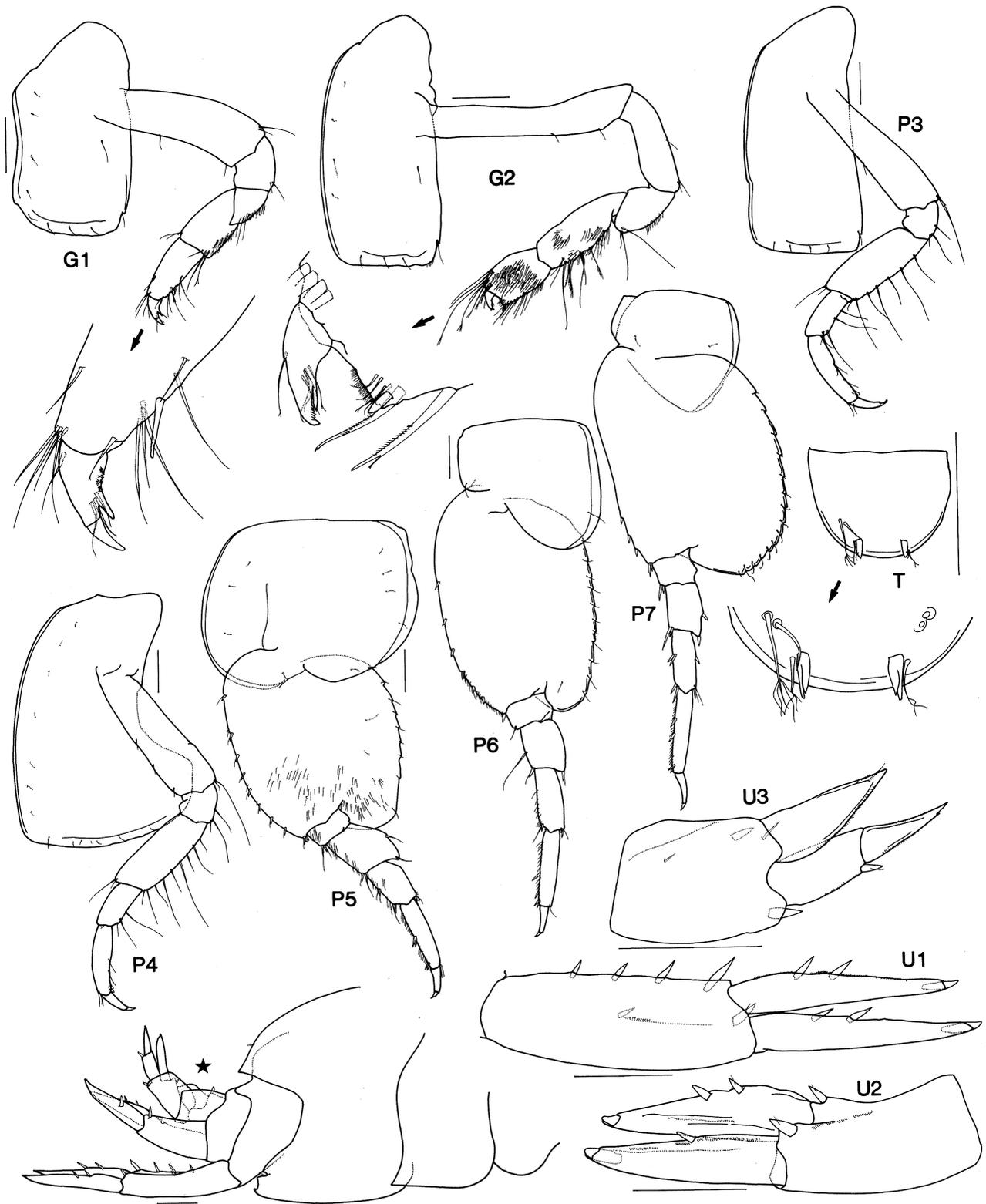


Fig. 11. *Gippisia jonesae* n.gen., n.sp., holotype female, 3.0 mm, NMV J22344; ★ paratype female, 3.0 mm, AM P42289; off Gippsland, Victoria, Australia. Scales represent 0.1 mm.

inner plate length $1.3 \times$ outer plate, outer plate with extremely elongate slender setae. *Maxilliped*: inner plate large, subrectangular, with 2 apical nodular setae, oblique setal row strong with 5 pappose setae; outer plate medium size, subovate, without apical slender setae, with 1 apical robust seta, medial setae small, blunt, submarginal setae long, simple; palp large, 4-articulate, article 2 very broad, length $1.8 \times$ breadth, $1.2 \times$ article 3, article 3 long, broad, length $2.2 \times$ breadth, dactylus well-developed, with 2 subterminal setae, unguis present.

Gnathopod 1: simple; coxa large, about as long as coxa 2, anterior margin slightly concave, anteroventral corner rounded, posterior margin straight; basis long, slender, length $2.9 \times$ breadth, anterior margin smooth, with simple setae; ischium short, length $1.4 \times$ breadth; merus, posterior margin with patch of short setae; carpus subrectangular, short, length $1.9 \times$ breadth, longer than ($1.1 \times$) propodus, with patch of very fine setae near posterior margin; propodus large, subrectangular, length $2.1 \times$ breadth, margins slightly converging distally, posterior margin smooth, straight, with 1 simple robust seta; dactylus simple, with subterminal spine. *Gnathopod 2*: minutely subchelate; coxa large, subequal in size to coxa 3; ischium long, length $3 \times$ breadth; carpus long, length $2.8 \times$ breadth, posterior margin straight; propodus subquadrate, short, length $1.5 \times$ breadth, palm transverse, with straight, serrate margin, posterodistal corner with 1 (male 1) medial robust seta; dactylus reaching corner of palm, posterior margin smooth proximally with serrate tip.

Peraeopod 3: coxa large; merus weakly expanded anteriorly; merus-carpus without plumose setae in male and female; propodus with 2 slender setae along posterior margin, with 1 distal locking seta; dactylus short, slender. *Peraeopod 4*: coxa deeper than wide, with large posteroventral lobe, anterior margin slightly rounded, posterior margin slightly sloping anteriorly; merus weakly expanded anteriorly; merus-carpus without plumose setae in male and female; propodus with 2 slender setae along posterior margin, with 1 distal locking seta; dactylus short, slender. *Peraeopod 5*: coxa equilobate; basis expanded with posterior margin minutely crenate; merus expanded with rounded posterior margin; propodus with finely setose anterior margin, with 2 robust setae along anterior margin, with 2 distal locking setae; dactylus short, slender. *Peraeopod 6*: coxa small, slightly lobate posteriorly; basis expanded posteriorly with minutely crenate posterior margin; merus not expanded posteriorly; propodus with finely setose anterior margin, with 2 robust setae along anterior margin, with 2 distal locking setae; dactylus short, slender. *Peraeopod 7*: basis expanded posteriorly, posterior margin slightly rounded, crenate, posteroventral corner rounded, posteroventral margin rounded; merus not expanded posteriorly, with 2 robust setae; propodus with finely setose anterior margin, with 2 robust setae along anterior margin, 2 distal locking setae, without setae along posterior margin; dactylus short, slender.

Oostegites: from gnathopod 2 to peraeopod 5. *Gills*: from gnathopod 2 to peraeopod 6, not pleated.

Pleonites 1 to 3 dorsally smooth. *Epimeron 1*: anteroventral corner rounded. *Epimeron 3*: posteroventral corner produced, with minute bicuspidate notch. *Urosomites*: dorsally smooth; urosomite 3 with small dorsolateral seta. *Uropod 1*: without fine setae; peduncle with 1 dorsolateral, 1 apicolateral, 3 dorsomedial and 1 apicomедial robust setae; rami subequal in length; outer ramus with 2 dorsal robust setae, inner ramus with 2 dorsal robust setae. *Uropod 2*: without fine setae; peduncle with 1 apicolateral and 1 apicomедial robust setae; rami subequal in length; outer ramus with 1 dorsal robust seta, inner ramus with 2 dorsal robust setae; inner ramus without constriction. *Uropod 3*: peduncle short, length $1.4 \times$ breadth, without dorsolateral flange, with 1 apicomедial robust seta, without midlateral slender or robust setae, with 1 distoventral robust seta, without plumose setae in female or male; rami lanceolate, inner ramus shorter than ($0.79 \times$) outer ramus; outer ramus 2-articulate, article 2 long, article 1 with 1 lateral robust seta; inner ramus without robust setae; slender plumose setae absent in female and male. *Telson*: shorter than broad, length $0.75 \times$ breadth, entire, without dorsal robust setae, without dorsal slender setae, distal margin rounded, with 2 marginal penicillate setae, without marginal simple setae, with 2 marginal robust setae.

Etymology. Named for Diana Jones, carcinologist at the Western Australian Museum, for her contribution to the systematics of Australian crabs and barnacles.

Remarks. For reasons put forward in the remarks under *Galathella* it is highly probable that *Gippsia jonesae* is a demersal scavenger and/or micropredator.

Distribution. *Gippsia jonesae* is known from off the central Victorian coast, Australia, in 40 to 50 m depth.

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