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ACANTHASPIDIIDAE (CRUSTACEA: ISOPODA) FROM THE CONTINENTAL SHELF AND SLOPE OF SOUTH-EASTERN AUSTRALIA WITH DESCRIPTION OF TWO NEW SPECIES

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Abstract

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The presence of Acanthaspidiidae off the continental shelf of Australia is recorded. Two new species are described, *Ianthopsis franklinae* sp. nov., and *Ianthopsis kimblae* sp. nov. Material of a third new species whose range is reported is in too poor condition to allow complete description. In addition, acanthaspidiids from the Southern Ocean are reported from the Australian shelf: *Acanthaspidia drygalskii* Vanhöffen, 1914, and *Ianthopsis multispinosa* Vanhöffen, 1914.

Introduction

The family Acanthaspidiidae was established by Menzies (1962). Since many of the included species are incompletely described (e.g. Kussakin, 1982) and did not form a monophyletic unit, Brandt (1991) reviewed the family and synonymized three genera with *Acanthaspidia* Stebbing, 1898. This and *Ianthopsis* Beddard, 1886 are the only genera. Acanthaspidiid isopods occur predominantly in the deep sea but 19 species have been found on the continental shelf around Antarctica. Of these 17 species are endemic suggesting a probable radiation there (Brandt, 1992a). Three species have been reported from the Northern Hemisphere, two in the Atlantic. *A. typhlops* (Sars, 1879) is a comparatively derived species of the northern Atlantic and Pacific and most probably reached there via the deep Atlantic. The second is *I. pulchra* (Hansen, 1916). A study of recent samples from the Kolbeinsey Ridge, north of Iceland, and type material in the Zoological Museum of Copenhagen revealed that this species does not belong in Acanthaspidiidae (Brandt, 1993). The third, *A. hanseni* Birstein, 1963 is confined to the northern Pacific (Kussakin, 1988). The relationship between Antarctica and Australia and the probable origin of some taxa of Antarctic isopods was discussed in Brandt (1992a, b).

The material from south-eastern Australia is part of collections of about 350 species of isopods from slope depths of between 200 and 3150 metres and from shallower Bass Strait. Most collections were made using an epibenthic sled and the general environment was described by Poore et al. (in press). The collections are in the Museum of Victoria, Melbourne (NMV). It is supplemented by small collections from the Australian Museum, Sydney (AM).

Two species of Acanthaspidiidae previously known only from south of the Antarctic Convergence have been identified and descriptions of two new species are presented here. Another species occurs in the samples but unfortunately its condition is too poor to describe.

Acanthaspidia Stebbing, 1898

Acanthaspidia drygalskii Vanhöffen

Acanthaspidia drygalskii Vanhöffen, 1914: 68–69. — Menzies, 1962: 177. — Wolff, 1962: 258. — Kussakin, 1967: 340 [342]. — Brandt, 1991: 210–217, figs 1–5.

Exacanthaspidia rostratus Menzies and Schultz, 1968: 171–174, figs 25, 26.

Material examined. Victoria. 96km S of Point Hicks (38°40.29'S, 149°18.06'E), 2900m, compacted clay, WHOI epibenthic sled, G. C. B. Poore et al. on ORV *Franklin*, 25 Oct 1988 (stn SLOPE 66), NMV J20170 (1); 76km S of Point Hicks (38°29.33'S, 149°19.98'E), 1840m, sandy mud, fine shell, WHOI epibenthic sled, G. C. B. Poore et al. on ORV *Franklin*, 26 Oct 1988 (stn SLOPE 69), NMV J20171, (1).

Distribution. Gauss Station, Bellingshausen Sea (66°S, 89°W), Weddell Sea, Antarctic Indian Ocean; Australia, slope east of Bass Strait, 1840–2900 metres depth.

Remarks. These records extend the distribution outside the Southern Ocean where it was hitherto known only in the Pacific and Indian Ocean sectors. The presence of *A. drygalskii* in deep southern Australian waters is probably the result

of a vicarianee event. This means that *Acanthaspidia* has existed since the Tertiary, before Australia and Antarctiea separated about 55 million years ago and the eircumpolar eurrent became effective in the East Antaretic (Brandt, 1992b; Crame, 1989, 1992).

This species ean be distinguised by the strongly serrated head, pereonites, and a pleotelson whieh is broader than in other species of *Acanthaspidia* (for further characters see Brandt, 1991, 1992a).

Ianthopsis Beddard, 1886

Ianthopsis franklinae sp. nov.

Figures 1–8

Material examined. Holotype. Victoria. 67km S of Point Hicks (38°23.95'S, 149°17.02'E), 1277m, fine mud, WHOI epibenthic sled, 25 Oct 1988 (stn SLOPE 67), NMV J13269 (female, 6.00mm).

Paratypes. Same details as holotype, NMV J13270 (allotype male); NMV J20181 (2).

New South Wales. Off Nowra (35°0.0'S, 151°16.3'E), 1100m, 5m otter trawl, 15 Jul 1986 (stn SLOPE 9), NMV J20175 (1). Off Eden (36°57,1'S, 150°23.4'E), 2000m, epibenthic sled, W. Ponder et al. on ORV *Franklin*, 12 Dec 1986 (stn FR1086-09), AM P42268 (1 juvenile, 2.5mm). E of Broken Bay (33°43'S, 151°46'E), 174m, trawl, 19 Dec 1985, FRV *Kapala* (stn AM K85-21-05), AM P38893 (male), AM P42276 (1).

Victoria. 67km S of Point Hicks (38°21.9'S, 149°20.0'E), 1000m, 23 Jul 1986 (stn SLOPE 32), NMV J20177 (3); (38°31.6'S, 149°23.8'E), 1960m, 8m rectangular midwater trawl (on bottom), 21 Jul 1986 (stn SLOPE 23), NMV J20176 (2); (38°19.6'S, 149°24.3'E), 930m, rock, rubble, clay, sand, biogenic sed., 23 Jul 1986 (stn SLOPE 33), NMV J20178 (3); (38°16.4'S, 149°27.6'E), 800m, coarse shell, biogenic sediment, 23 Jul 1986 (stn SLOPE 34), NMV J20179 (1).

Tasmania. Off Freycinet Peninsula (42°2.2'S, 148°38.7'E), 800m, coarse shelly sand, 27 Jul 1986 (stn SLOPE 45), NMV J20180, (2); 48km ENE of Cape Tourville (42°00.25'S, 148°43.55'E), 1264m, gravel with lumps of sandy mud aggregate, 30 Oct 1988 (stn SLOPE 81), NMV J20182 (8); 48km ENE of Cape Tourville (42°00.25'S, 148°43.55'E), 1264m, gravel with lumps of sandy mud aggregate, 30 Oct 1988 (stn SLOPE 81), NMV J23841 (female).

[All material collected using WHOI epibenthic sled by G. C. B. Poore, M. F. Gomon et al. on ORV *Franklin* unless otherwise noted.]

Description. Adult body length (measured from rostrum to tip of pleotelson) 6–8mm (juveniles 2.5–3.5mm); length 2.5 (female) – 2.6 (precopulatory male) times width (Figs 1; 6) (measurements after Hessler (1979), and Wilson and Hessler (1980)). Body depth about 0.2 times length. Pleotelson width 0.6 (female and male) times body width; as wide as long. Body with very short setules on margins and on long acute spines. Head with slightly serrate, acute anterodorsally bent spine; pereonite 1 with 2 mediolateral spines and 2 spine-like elevations on both sides (not developed in precopulatory male). Pereonites 2–4 with 3 spines (frontomedial and 2 mediolateral). Pereonites 5–7 with 1 medial spine. All pereonites with 2 acute lateral spines. Pereonite 1 medially slightly longer than pereonites 2–7, not fused with head; pleotelson smooth.

Antenna 1 (Figs 1; 6) 0.2 body length, of 8 articles (female), 9 artieles (male); with more aesthetases in male than in female; artiele 1 shorter than 2, 1 broom seta and some simple setae in female (male without setation); artiele 2 1.1 (female) – 1.3 (male) times as long as article 1, with 1 lateral and 3 distal broom and some simple setae; article 3 almost twiee as long as 4, with lateral simple seta (male), none in female; artiele 4 with lateral broom setae; artiele 5 about 4 times as long as 4, in male slightly longer than in female, female without, male with 1 aesthetase; artiele 6 in female only slightly shorter than 5, in male three-quarters as long as 5; following artieles deereasing in length and width, with 1 aesthetase and 2 simple setae eaeh; last artiele with 1 aesthetase, simple setae and 1 short broom seta in both sexes.

Antenna 2 (Fig. 1) conjoint (compare Brandt, 1991), of 23 artieles in female, (broken in paratype male), with short artieles 1 and 2, without setae; artiele 3 almost twiee as long as 2, antennal scale rudimentary, only lateral short blunt spine bearing another 2 long distal setae; artiele 4 about as long as 2, with some setae; artiele 5 as long as 6, both with simple setae on medial and lateral margins, artiele 6 with 2 distodorsal broom setae, 1 medially and 1 laterally; first flagellar article eonjoint (new flagellar artieles are build here during growth), with lateral and medial groups of simple long setae; group of 5 setae medially on almost every flagellar artiele; last article with some simple setae.

Left mandible (Figs 2; 6) with 4 eusps on ineisor proeess in female, (3 in male); right mandible with 5 in both sexes; laeinia mobilis shorter than ineisor in male, in female as long as ineisor, with 4 eusps in male and 3 in female; left spine row of male with 8 members in left and 9 members in right mandible (Figs 2; 6), female with 7 on left and 9 on right mandible; molar proeesses slightly aeuminating, medially eoncave, posterior margin of molar with 4 (left) and 5 (right mandible) setae in both sexes, lateral eutting surfaees of molar proeess with blunt spines

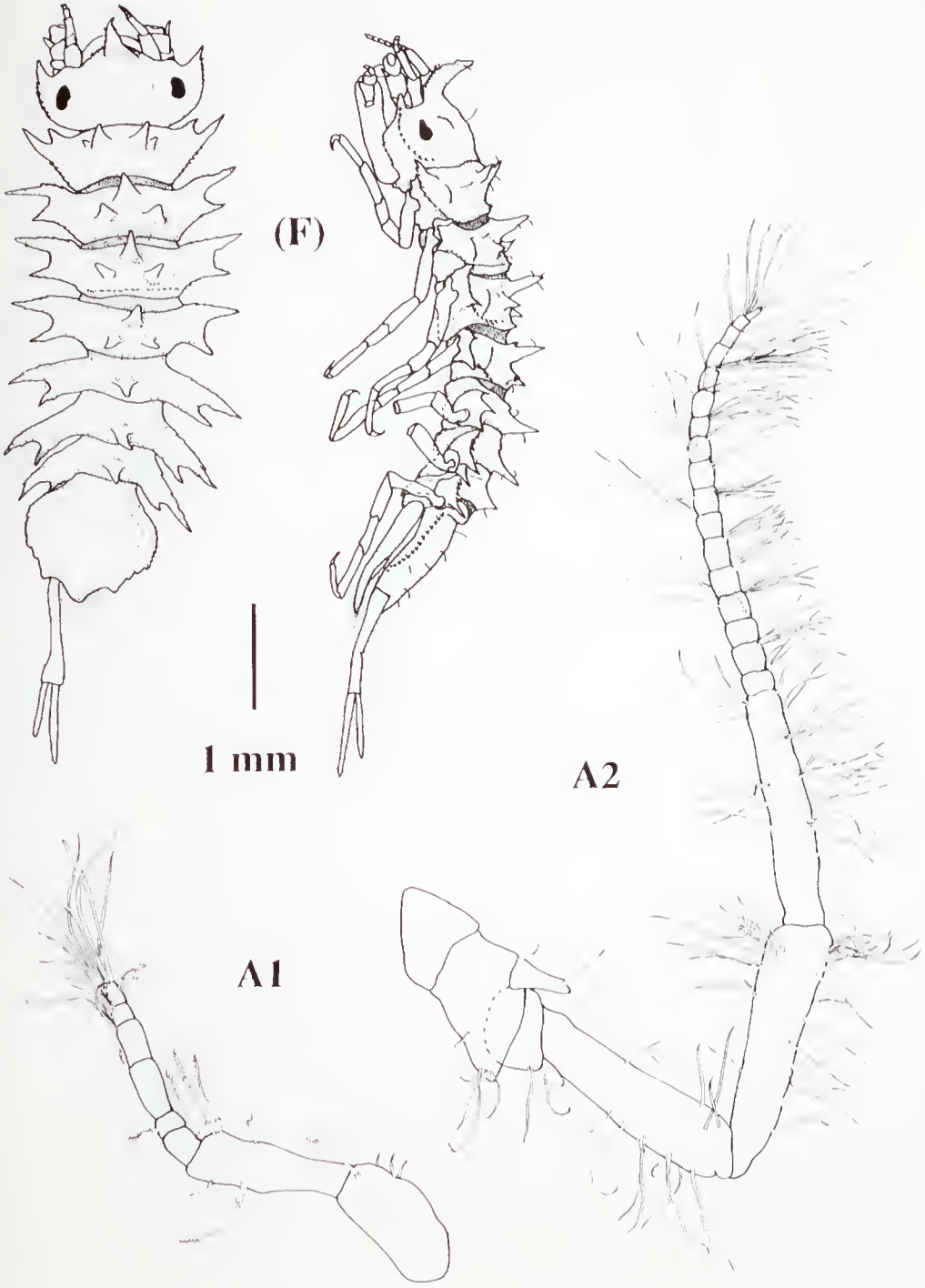


Figure 1. *Ianthopsis franklinae* sp. nov., holotype female in dorsal and lateral view, antenna 1 and antenna 2 of paratype female; NMV J13269.

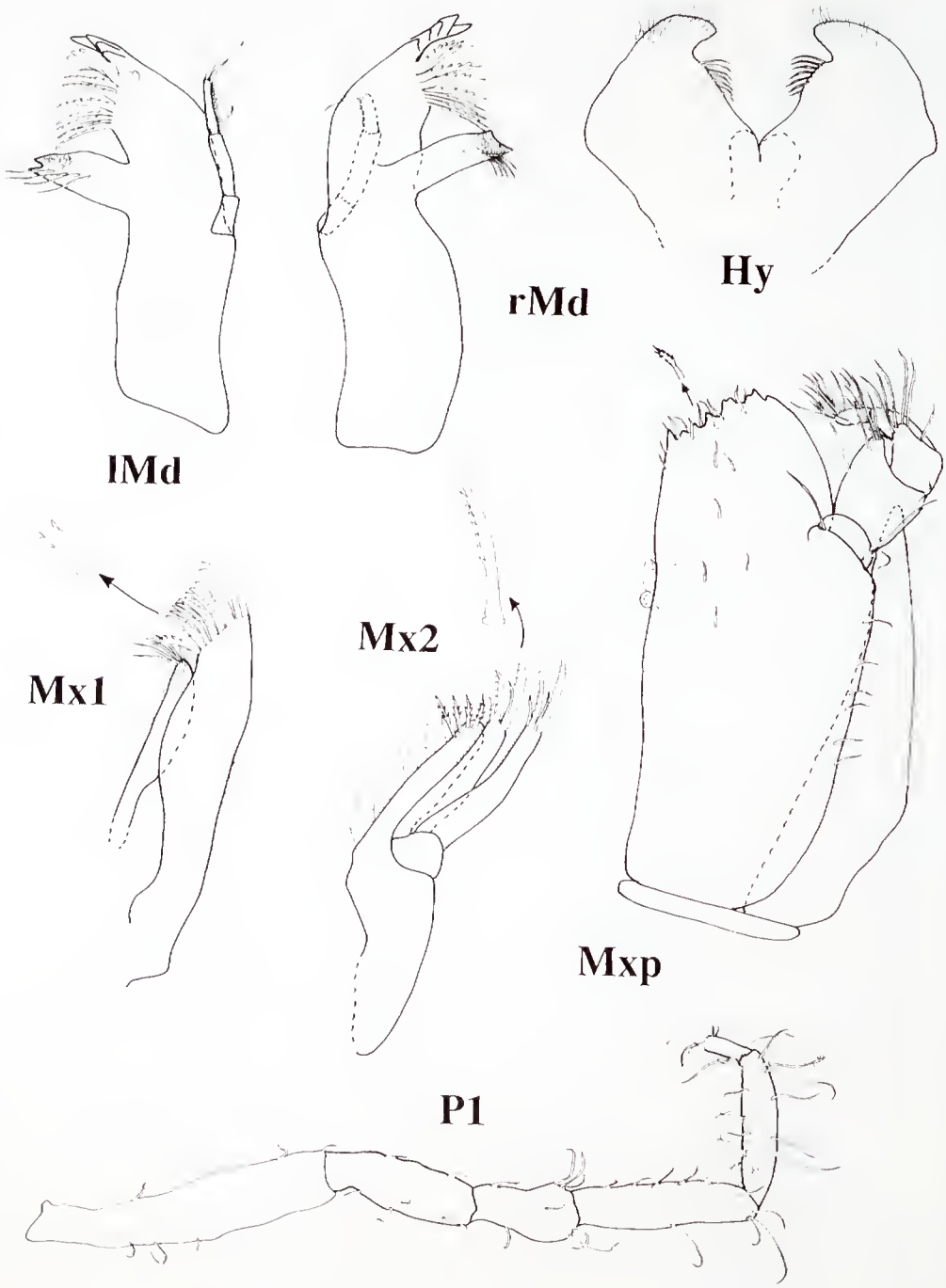


Figure 2. *Ianthopsis franklinae* sp. nov., paratype female, both mandibles, hypopharynx, maxilla 1, maxilla 2, maxilliped, and pereopod 1; NMV J13270.

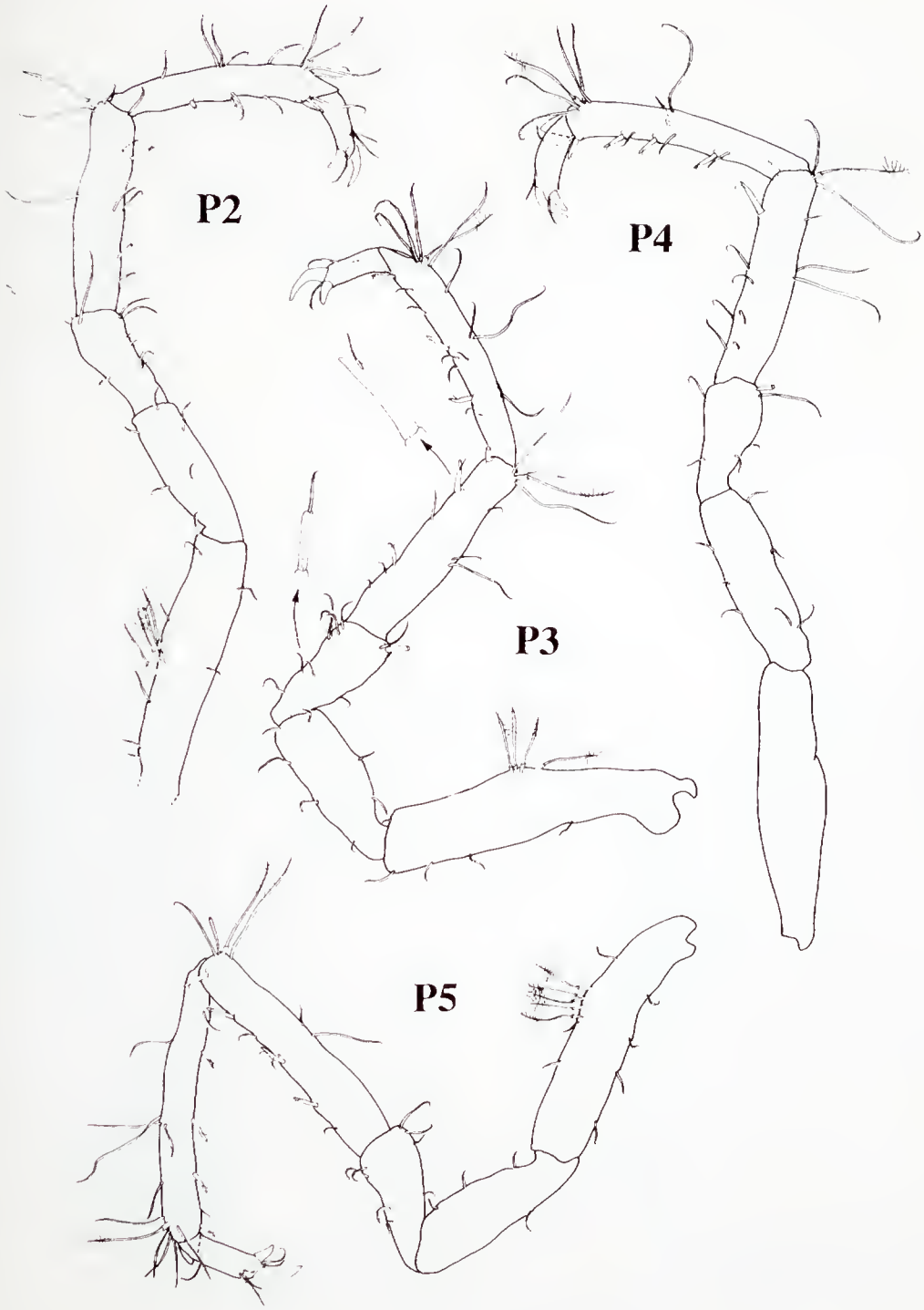


Figure 3. *Ianthopsis franklinae* sp. nov., paratype female, pereopods 2–5; NMV J13270.

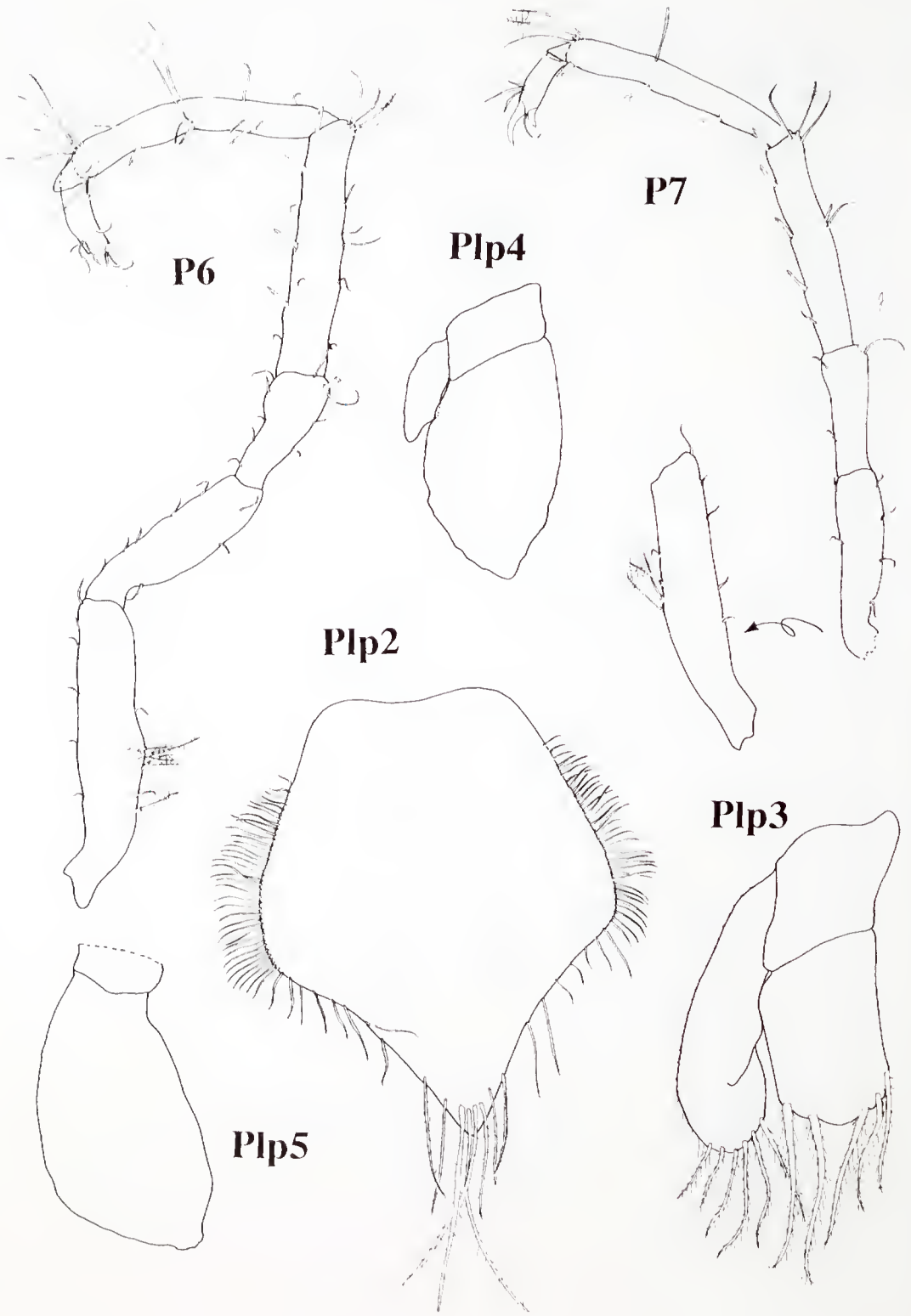


Figure 4. *Ianthopsis franklinae* sp. nov., paratype female, pereopods 6 and 7, pleopods 2–5; NMV J13270.

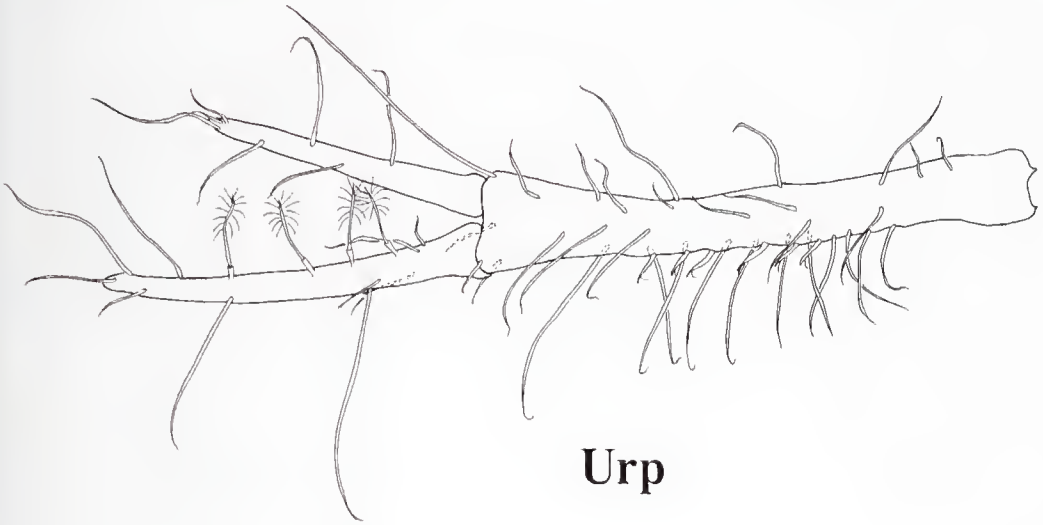


Figure 5. *Ianthopsis franklinae* sp. nov., paratype female, uropod; NMV J13270.

and notches; condyle length 0.1 mandibular body length, length of palp 0.4 mandibular body length. Palp article 1 without setation; article 2 longer than article 1, with 1 simple seta; palp article 3 slightly longer than 1.

Hypopharynx (Figs 2; 6) of 2 inner and 2 outer lobes, outer lobe medially concave and covered by many short simple setae.

Maxilla 1 (Figs 2; 6) inner endite half as wide as outer endite in both sexes; outer endite of male and female with 12 strong spine-like setae, some spinulose; inner endite with 4 strong setae in female (3 in male) and many slender long simple ones.

Maxilla 2 (Figs 2; 6) inner endite only slightly shorter and broader than medial and outer endites, with 4 distal strong spinulose spine-like setae in female, medial and outer endites with 4 strong spine-like, medially serrated setae of varying lengths.

Maxilliped (Figs 2; 6) basis twice as long as wide in both sexes, with few setae in distomedial half of basis, 3 coupling hooks, and 8 (female), or 6 (male) short fan-like setae distally. Palp article 1 as long as last; palp article 2 broadest, slightly shorter than 3; article 3 and 4 about subequal in length; article 5 narrowest, half as long as 4. Epipod slender and acuminating, length 4.1 times width and 0.7 times total basis length.

Pereopod 1 (Figs 2–4; 7) basis 0.17 (male) and 0.14 (female) times body length; pereopods 2–7 bases length to body length ratio in female about 0.2 respectively. Pereopod 1 (Figs 2; 7) length 0.6 times body length in both sexes; carpus: basis ratio about 0.6 in female and 0.9 in male; dactylus: propodus ratio 0.5 in both sexes. Dactylus bearing 2 distal claws with 2 sensillae between, anterior claw about twice as long as posterior one. Pereopod 2 (Figs 3; 7) length 0.7 body length in both sexes. Carpus: basis ratio 0.8 in both sexes; dactylus 0.3 propodus length in both sexes, as in preceding pereopod. Pereopod 3 (Figs 3; 7) length 0.8 body length; carpus: basis ratio 0.8; dactylus length 0.4 propodus length, otherwise as in preceding pereopods. Pereopod 4 (Figs 3; 7) length 0.8 body length; carpus: basis ratio 0.8; dactylus as in preceding pereopod. Pereopod 5 (Figs 3; 8) length 0.8 body length; carpus: basis ratio 0.9; dactylus as in preceding pereopod. Pereopod 6 (Figs 4; 7) of female (male broken) length 0.9 body length; carpus: basis 0.8; dactylus as in preceding pereopod. Pereopod 7 (Figs 4; 7) of female (male broken) length 0.8 body length; carpus: basis ratio 0.8; dactylus as in preceding pereopod.

Male pleopod 1 (Fig. 8) (precopulatory male) narrowing over distal third; length 2.3 proximal width, distal width 0.3 proximal width; apex

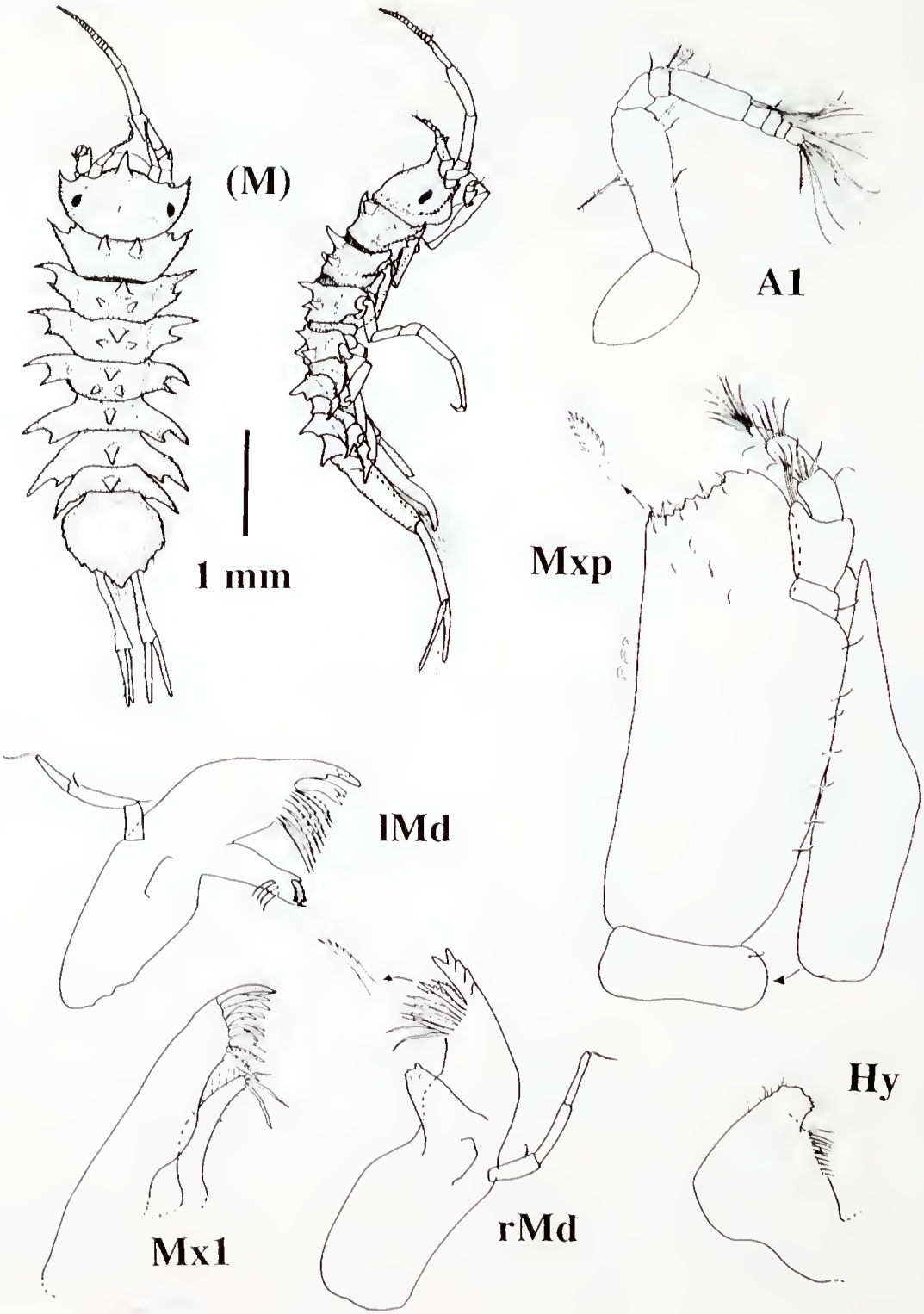


Figure 6. *Ianthopsis franklinae* sp. nov., paratype male in dorsal and lateral view, antenna 1, both mandibles, hypopharynx, maxilla 1, maxilliped; AM P38893.

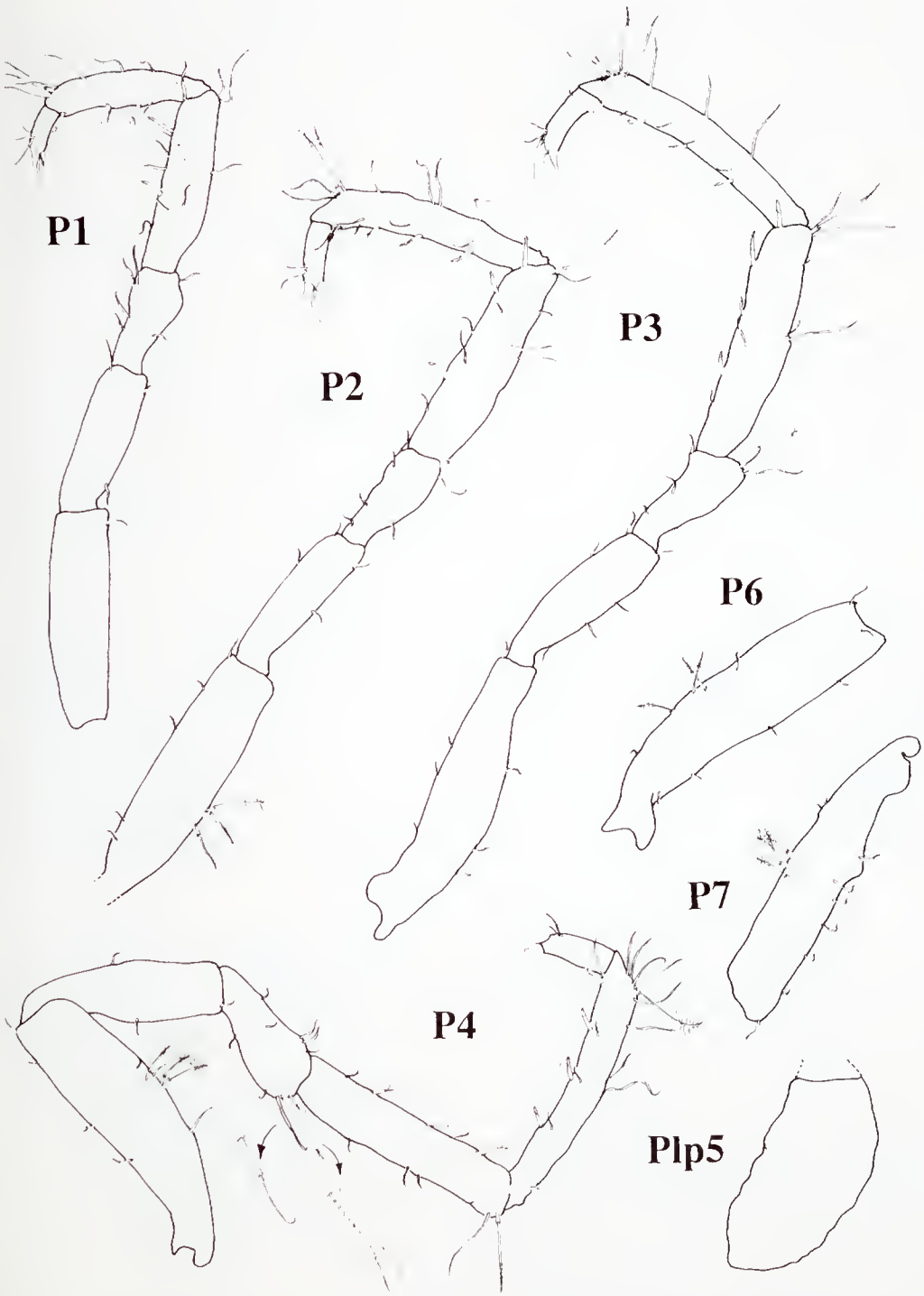


Figure 7. *Ianthopsis franklinae* sp. nov., paratype male, pereopods 1–4, bases of pereopods 6 and 7, pleopod 5; AM P38893.

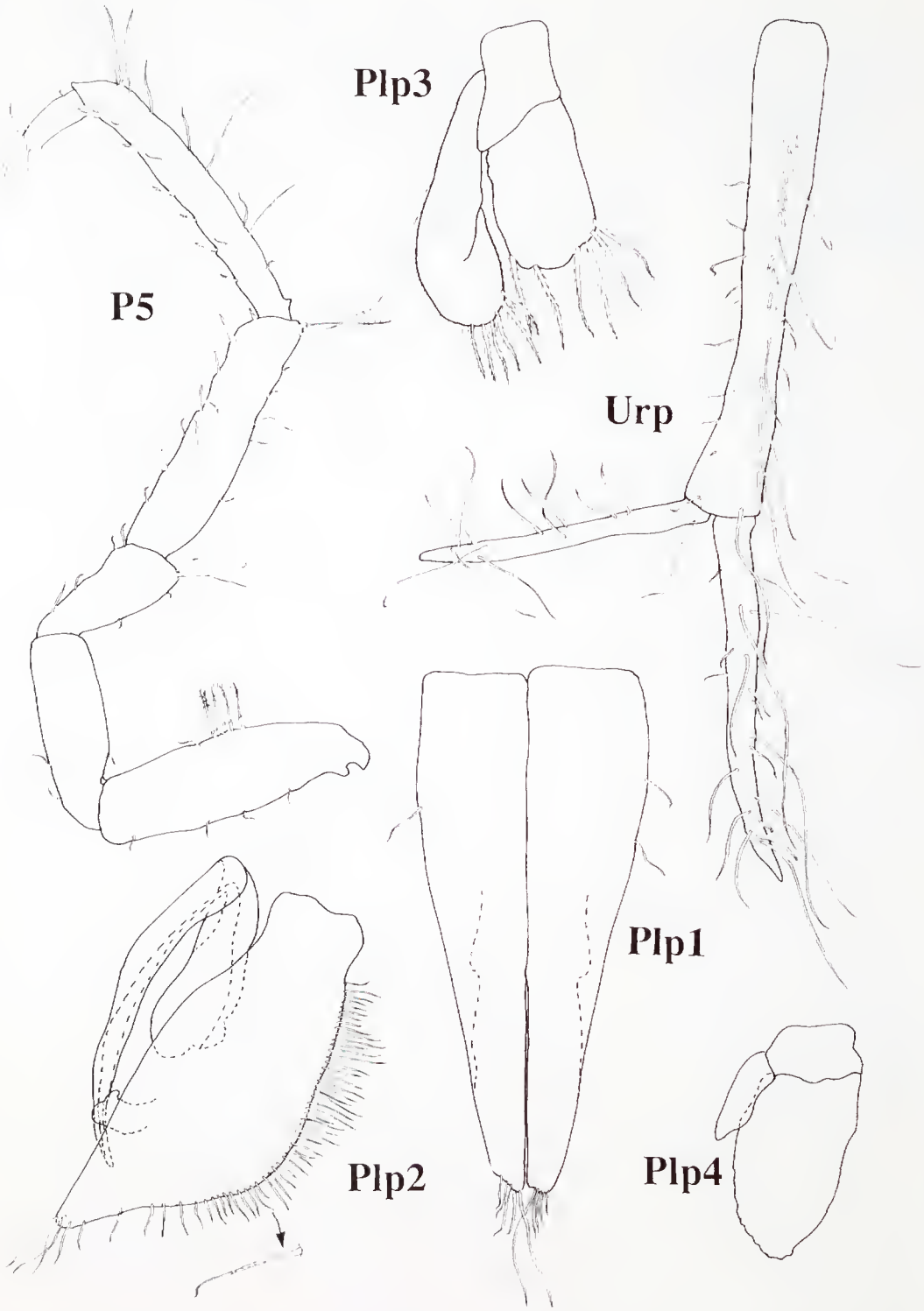


Figure 8. *Ianthopsis franklinae* sp. nov., paratype male, pereopod 5, pleopods 1–4, uropod; AM P38893.

almost straight; apical row of long simple setae, some proximolateral simple setae.

Male pleopod 2 (Fig. 8) (precopulatory male) peduncle length 2.5 width; lateral margin slightly rounded with many whip setae. Endopod inserting half length of peduncle; stylet not yet fully developed, shorter than peduncle. Exopod small, bilobed, without tuft of fine setae.

Female pleopod 2 (Fig. 4) anterior surface without setae, with slight medial furrow, lateral margins of pleopod with simple, distal tip with 8 long plumose setae, bearing only few setules; 1.2 times as long as wide.

Pleopod 3 (Figs 4; 8) of both sexes distomedial margin of exopod surrounded with fine setules. Endopod with 6 distal plumose setae in male and 5 in female, exopod more slender than endopod, distally with 6 plumose setae. Pleopod 4 (Figs 4; 8) of both sexes with short, rectangular peduncle. Exopod narrower and less than half as long as endopod, both rami without setae. Pleopod 5 (Figs 4; 7) of both sexes an oval lobe without setae.

Uropod (Figs 5; 8) 10 times as long as wide. Peduncle surrounded by many long simple setae, most laterally, female also with lateral row of sensory setae. Endopod 0.8 peduncle length, with proximolateral row of 4 broom setae in female (male without), exopod 0.8 times as long as endopod, long simple setae on both rami.

Distribution. South-eastern Australia (35°–42°S), 800–1277 metres depth.

Etymology. For ORV *Franklin*, the oceanographic vessel from which these samples were taken.

Remarks. Ianthopsis franklinae has a pattern of spines similar to that of *Ianthopsis multispinosa* Vanhöffen, 1914 but differs in the possession of small eyes (lacking in *I. multispinosa*). Moreover, the spines are smaller and more slender in the new species. The lateral epimera are longer and more pronounced and the lateral pleotelsonic margins are more deeply serrated in *I. multispinosa* than in the new species. All other known species of *Ianthopsis* bear no, very small, or fewer spines than the new species.

Ianthopsis kimblae sp. nov.

Figures 9–17

Material examined. Holotype. New South Wales. 44km E of Nowra (34°55.79'S, 151°08.06'E), 429m, muddy coarse shell, WHOI epibenthic sled, 22 Oct 1988 (stn SLOPE 56), NMV J13271 (male, 3.0mm).

Paratypes. Same details as holotype, NMV J13272 (female allotype, 2.9mm), NMV J20188 (129 females, 2.5–3mm; 45 males, 1.8–2.8mm; 5 manceas, 1.0–1.2mm), NMV J36436 (female), NMV J36437 (male), NMV J36438 (female ovig.).

Other material. New South Wales. Off Eden (37°07.3'S, 150°20.2'E), 520m, grey coarse shell, 20 Jul 1986 (stn SLOPE 19), NMV J20184 (4); (37°0.6'S, 150°20.7'E), 363m, coarse shell, 21 Jul 1986 (stn SLOPE 22), NMV J20191 (10); Off Nowra (34°57.9'S, 151°8.0'E), 503m, bryozoa and shell, 14 Jul 1986 (stn SLOPE 2), NMV J20183 (8).

Victoria. S of Point Hicks (38°14.8'S, 149°9.3'E), 200m, coarse sand, gravel, 24 Jul 1986 (stn SLOPE 41), NMV J20186 (3); (38°17.70'S, 149°11.30'E), 400m, coarse sand, gravel, mud, many sponges, 24 Jul 1986 (stn SLOPE 40), NMV J20185 (138); NMV J23842 (male A).

Tasmania. Eastern Bass Strait, 60km E of North Point, Flinders I. (39°41.7'S, 148°39.5'E), 115m, muddy sand, naturalist's dredge, G. C. B. Poore on HMAS *Kimbla*, 27 Mar 1979 (stn BSS 32), NMV J20189 (2); 63km E of North Point, Flinders I. (39°44.8'S, 148°40.6'E), 124m, R. Wilson on RV *Tangaroa*, 14 Nov 1981 (stn BSS 167), NMV J20190, (19); 50km NE of Babel I. (39°40.3'S, 148°46.5'E), 293m, rock, coarse sand, naturalists' dredge, G. C. B. Poore on HMAS *Kimbla*, 27 Mar 1979 (stn BSS 33), NMV J20192 (2).

[All material collected using WHOI epibenthic sled by G. C. B. Poore, M. F. Gomon et al. on RV *Franklin* unless otherwise noted.]

Description. Adult body (Figs 9; 14; figure 17 shows the dorsal view of an ovigerous female) 3mm long, 3.2 times as long as wide, 0.2 times as deep as long. Pleotelson almost as broad as body width, as long as wide. Dorsum of body lacking setae. Pereonite 1 narrower and slightly longer than pereonites 2–4, not fused with head; pereonite 3 broadest in female, all of the same width in male; pereonites 5–7 of female slightly narrower, lateral margins slightly bent posteriorly; pleotelson smooth, with 2 shallow concavities at insertion of uropods.

Antenna 1 (Figs 10; 14) 0.2 body length in both sexes, of 8 articles in male (6 in female) more aesthetascs in male than in female. First article shorter than second, with some simple and broom setae; article 2 as long as 1, also with 4 broom and simple setae; article 3 slightly longer than 4, with lateral simple seta; article 4 with lateral and medial simple setae; article 5 longer than 4, articles 6 and 7 of male with 1 aesthetasc and 1 simple seta, (1 aesthetasc, 5 simple setae and 1 short broom seta in smaller female); article 8 (present in male only) with 1 aesthetasc, simple setae and a short broom seta.

Antenna 2 (Figs 10; 14) conjoint, of 23 articles in male (articles 1–4 broken off, not illustrated); article 2 of female (first not illustrated) short, quadrangular, without setation; article 3 of female 3 times as long as 2, with some simple

setae, antennal scale a lateral small spinulose spine; article 4 of female half as long as 3, with some simple setae; articles 5 and 6 of male about subequal in length, with lateral and medial simple setae, especially distally on 6; flagellar article 1 conjoint, with lateral and medial groups of simple long setae; following flagellar articles about subequal in length, with many long simple setae; last article with tuft of long simple setae.

Left mandible (Figs 10; 14) with 4 distinct cusps on incisor process in female (5 in male); right mandible with 5 in female (6 in male); lacinia mobilis shorter than incisor, with 4 cusps; left spine row with 6, right with 7 members; molar process broad, quadrangular, with medial indented grinding surface, posterior margin of molar with 4–5 lateral setae; condyle length 0.1 mandibular body length; palp article 1 shortest, article 2 slightly longer than 1; article 3 longest, slender, with 1–2 distal spines (article 3 broken off both mandibles of female), length of palp 0.7 mandibular body length.

Hypopharynx (Fig. 14) of 2 inner and 2 outer lobes, outer medially concave and covered with many short simple setae.

Maxilla 1 (Figs 10; 14) inner endite 0.4 width of outer endite; outer endite with 8–10 strong, smooth spine-like setae; inner endite with 3 strong simple setae and many slender simple ones (inner endite of female broken off).

Maxilla 2 (Figs 10; 14) innermost endite shortest, with 4–5 distal strong spine-like setae; medial and outer endites with 4 strong spine-like, medially serrated setae of varying lengths.

Maxilliped (Figs 11; 14) basis 2.7 times as long as wide, with 2 coupling hooks and 7–8 short fan-like setae distally, with lateromedial or distal (male) simple setae. Palp article 1 as long as last; article 2 broadest and longest; article 3 slightly shorter than 4; article 5 narrowest, with some apical simple setae. Epipod 3.7 times as long as wide, and 0.9 total basis length.

Pereopods (Figs 12; 15) bases length to body length ratio about 0.2 in both sexes. Pereopod 1 (Figs 12; 15) length 0.7 body length; carpus: basis ratio about 0.6; dactylus: propodus 0.5; dactylus with 2 simple short setae and 2 distal claws and 2 sensillae between; anterior claw about twice as long as posterior one. Pereopod 2 (Figs 12; 15) length 0.8 body length in both sexes. Carpus 0.7 basis length. Pereopod 3 (Figs 12; 15) length 0.8 body length in female. Carpus 0.8 basis length; dactylus length half of propodus length. Pereopod 4 (Figs 12; 15) length 0.8 body length in female. Carpus 0.8 basis length; dactylus length 0.4 propodus length. Pereopod 5 (Figs 12; 15) length of 0.9 body length in female. Carpus 0.9 basis length; dactylus length 0.4 propodus length. Pereopod 6 (Figs 12; 15) length 1.1 body length in female. Carpus as long as basis; dactylus length 0.4 propodus length. Pereopod 7 (Figs 12; 15) length 1.1 body length in female. Carpus as long as basis; dactylus length 0.4 propodus length.

Male pleopod 1 (Fig. 11) (precopulatory male) narrowing beyond four-fifths of length; length 4.2 times proximal width, distal width 0.5 proximal width; apex acuminating, with some short and 2 long setae.

Male pleopod 2 (Fig. 11) (precopulatory male), peduncle 2.1 times as long as wide; lateral margin slightly rounded, with 33 whip setae of different lengths and 5 distolateral plumose setae, which bear only few setules. Endopod inserting more proximally than halfway along; stylet slender, slightly longer than peduncle; 0.8 length of peduncle. Exopod small single lobe, without tuft of fine setae.

Female pleopod 2 (Fig. 16) anterior surface without setae, lateral margins surrounded with whip setae, distally with some plumose setae; 1.2 times as long as wide.

Pleopod 3 (Figs 11; 16) medial and lateral margins of exopod surrounded with fine setules. Endopod with 3 distal plumose setae, exopod slightly longer and more slender than endopod, distally with 5 plumose setae and laterally with fine setules. Pleopod 4 (Figs 11; 16) peduncle short, quadrangular; endopod slightly shorter than exopod and more slender; both rami without setae. Pleopod 5 (Figs 11; 16) an oval lobe without setae.

Uropod (Figs 11; 16) peduncle of male with spine-like structures; peduncle and rami with many long whip setae; peduncle and endopod not fused; endopod 0.54 as long as peduncle; exopod 0.9 endopod length.

Distribution. South-eastern Australia(35°–39°S); 115–520 metres depth.

Etymology. For HMAS *Kimbla* from which early sampling in Bass Strait was made.

Remarks. *Ianthopsis kimblae* can be distinguished from the other species of the genus by its much longer and broader pleotelson. *I. kimblae* is characterised by a rounded rostrum, much smaller than in other species. Most similar are *I. beddardi* (Studer, 1884) and *I. bovalli* (Studer, 1884), which can be distinguished from the new species by a longer rostrum. *I. beddardi* bears

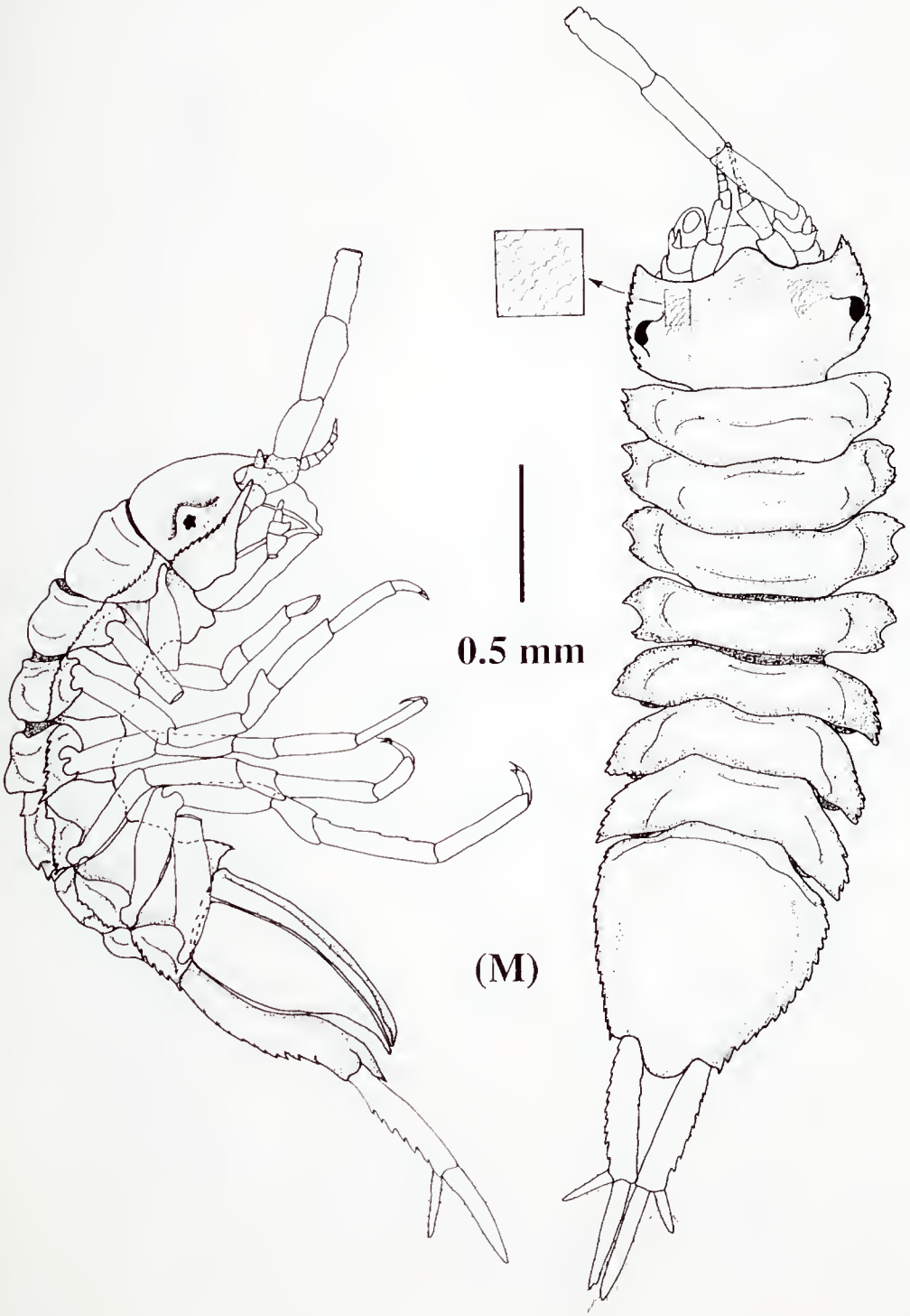


Figure 9. *Ianthopsis kimblae* sp. nov., holotype male in dorsal and lateral view; NMV J13271.

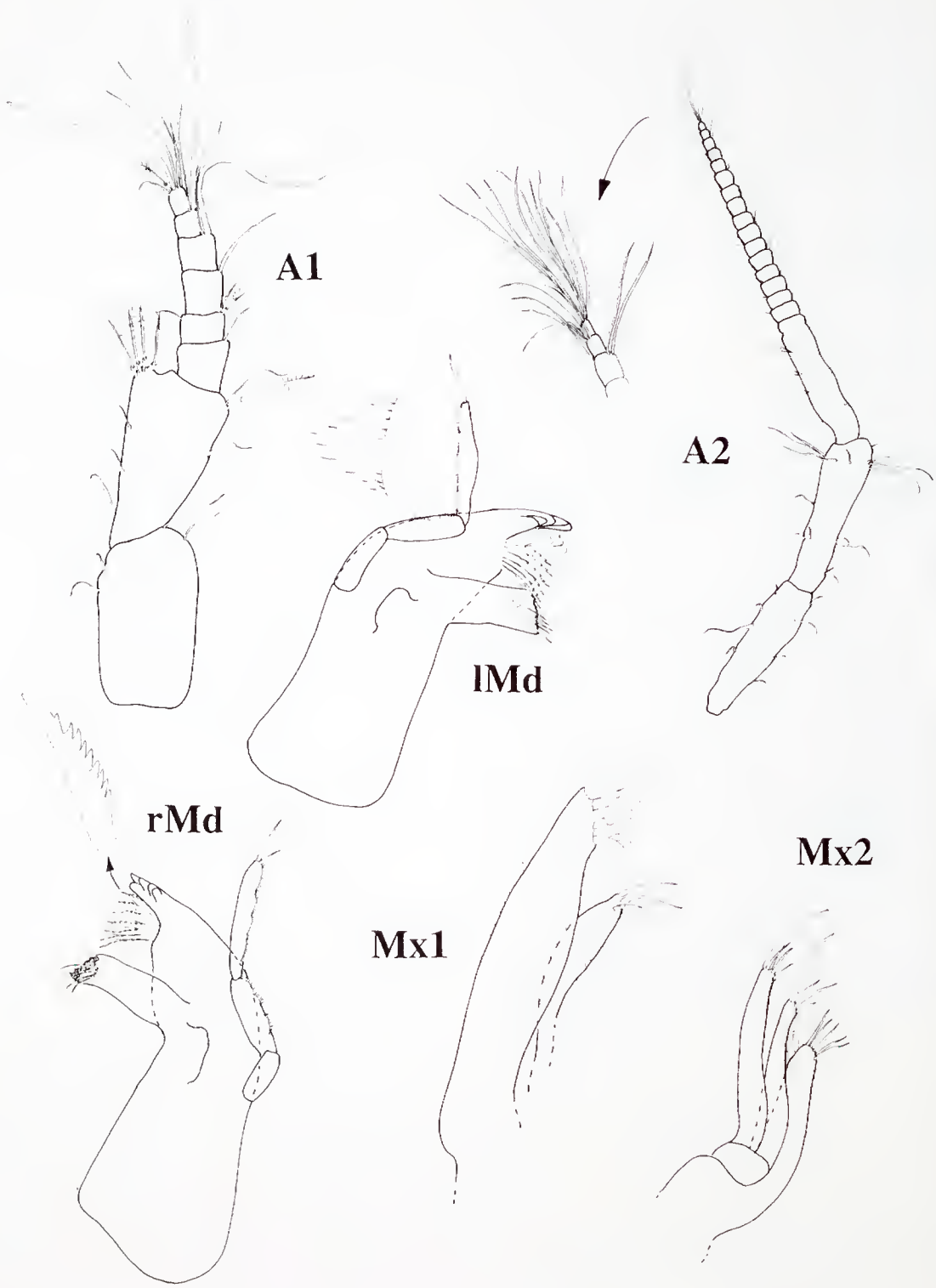


Figure 10. *Ianthopsis kimblae* sp. nov., paratype male, antenna 1, antenna 2 (proximal articles broken off), both mandibles, maxilla 1, maxilla 2; NMV J13272.

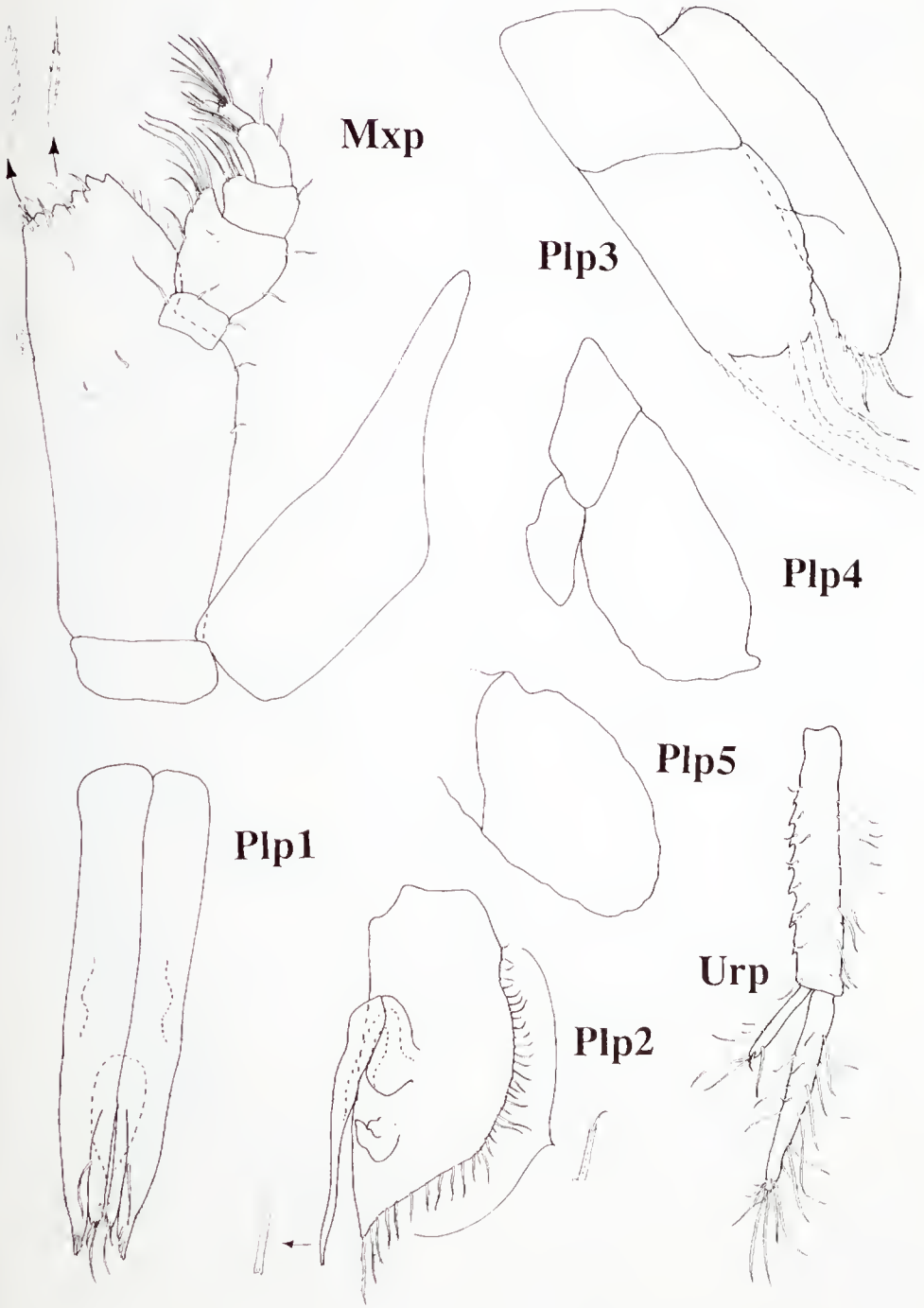


Figure 11. *Ianthopsis kimblae* sp. nov., paratype male, maxilliped, pleopods I–5, uropod; NMV J13272.

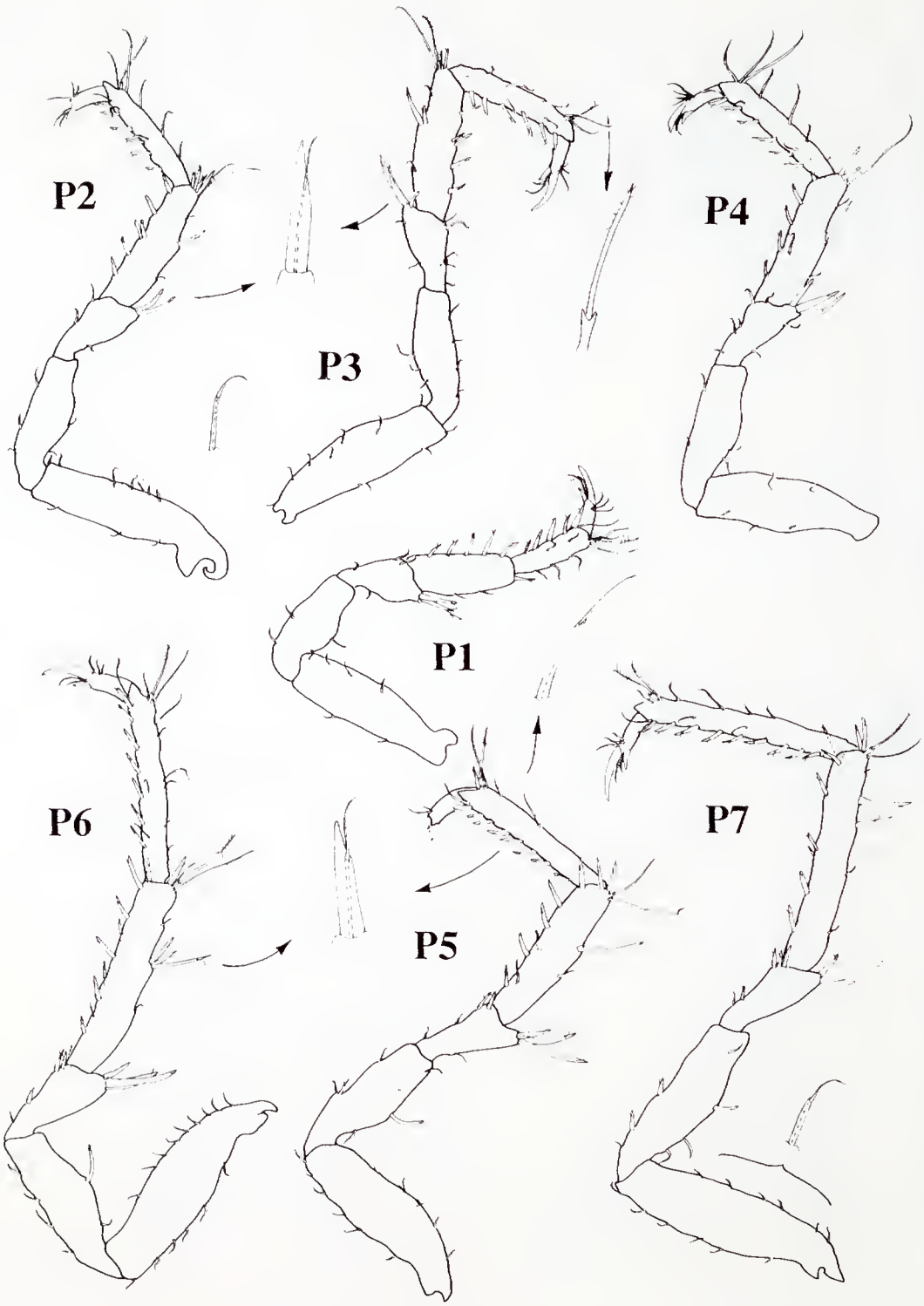


Figure 12. *Ianthopsis kimblae* sp. nov., paratype male, pereopods 1–7; NMV J13272.

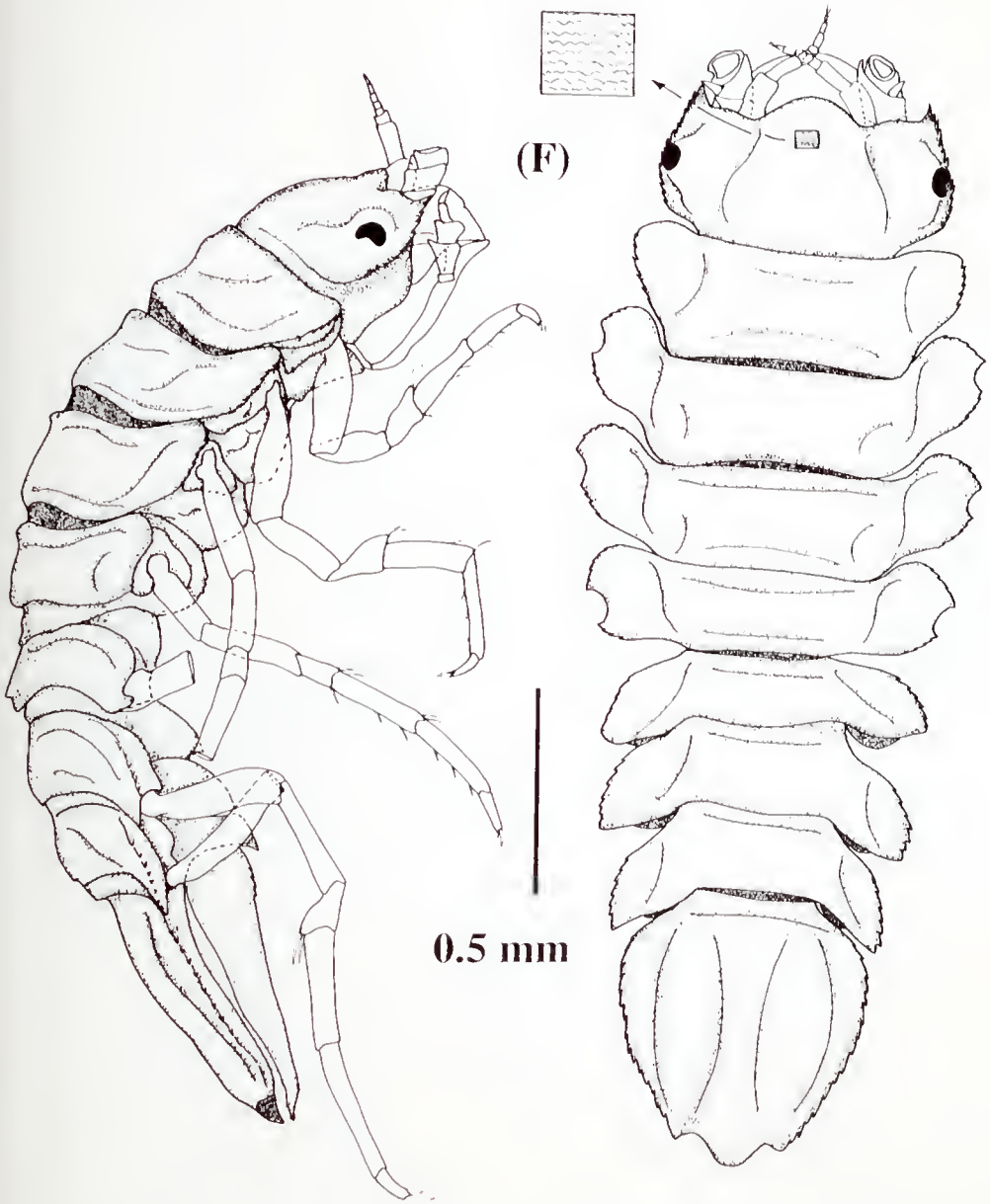


Figure 13. *Ianthopsis kimblae* sp. nov., allotype female in dorsal and lateral view; NMV J13272.

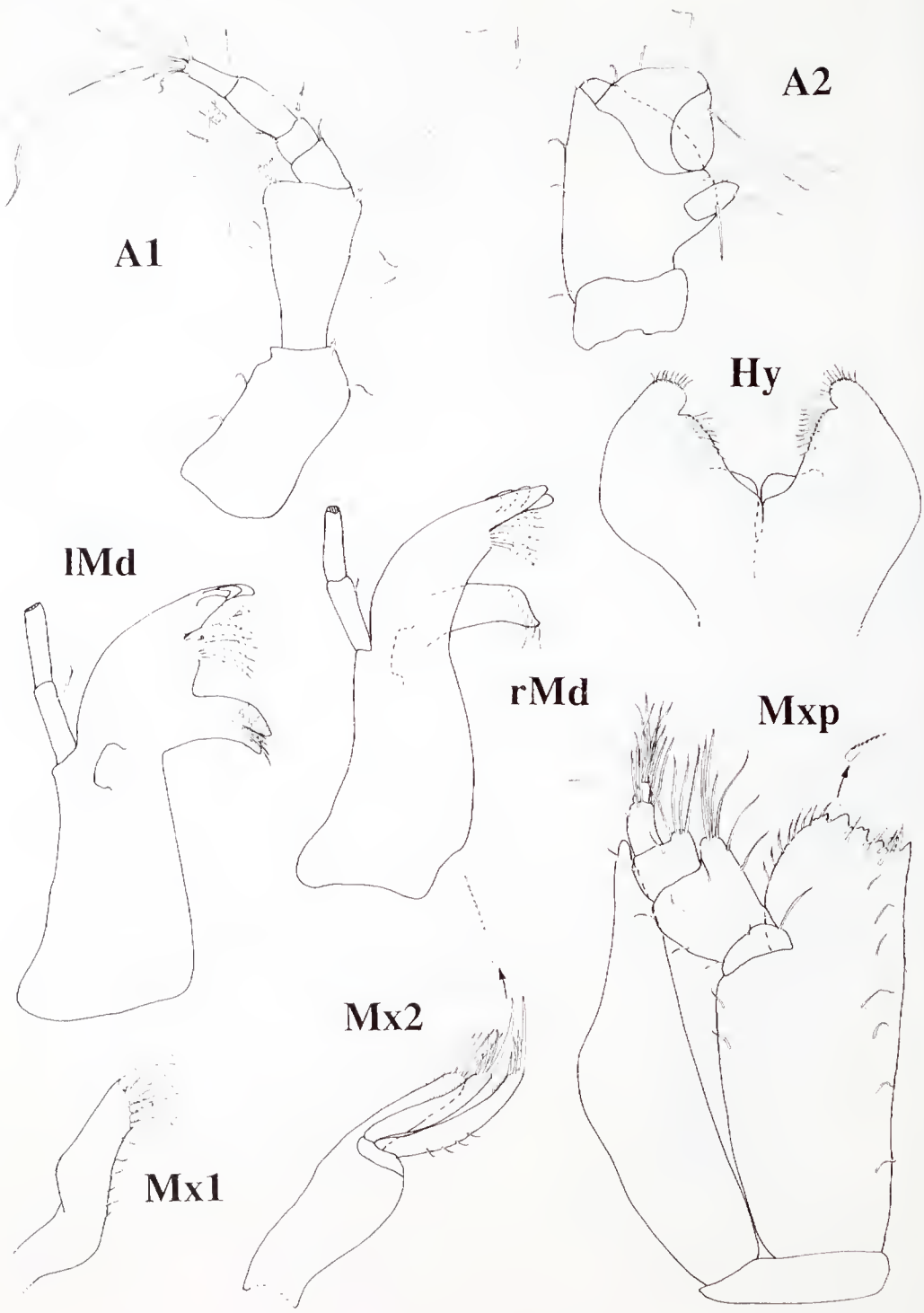


Figure 14. *Ianthopsis kimblae* sp. nov., paratype female, antenna 1, proximal articles of antenna 2, both mandibles, hypopharynx, maxilla 1, maxilla 2, maxilliped; NMV J13272.

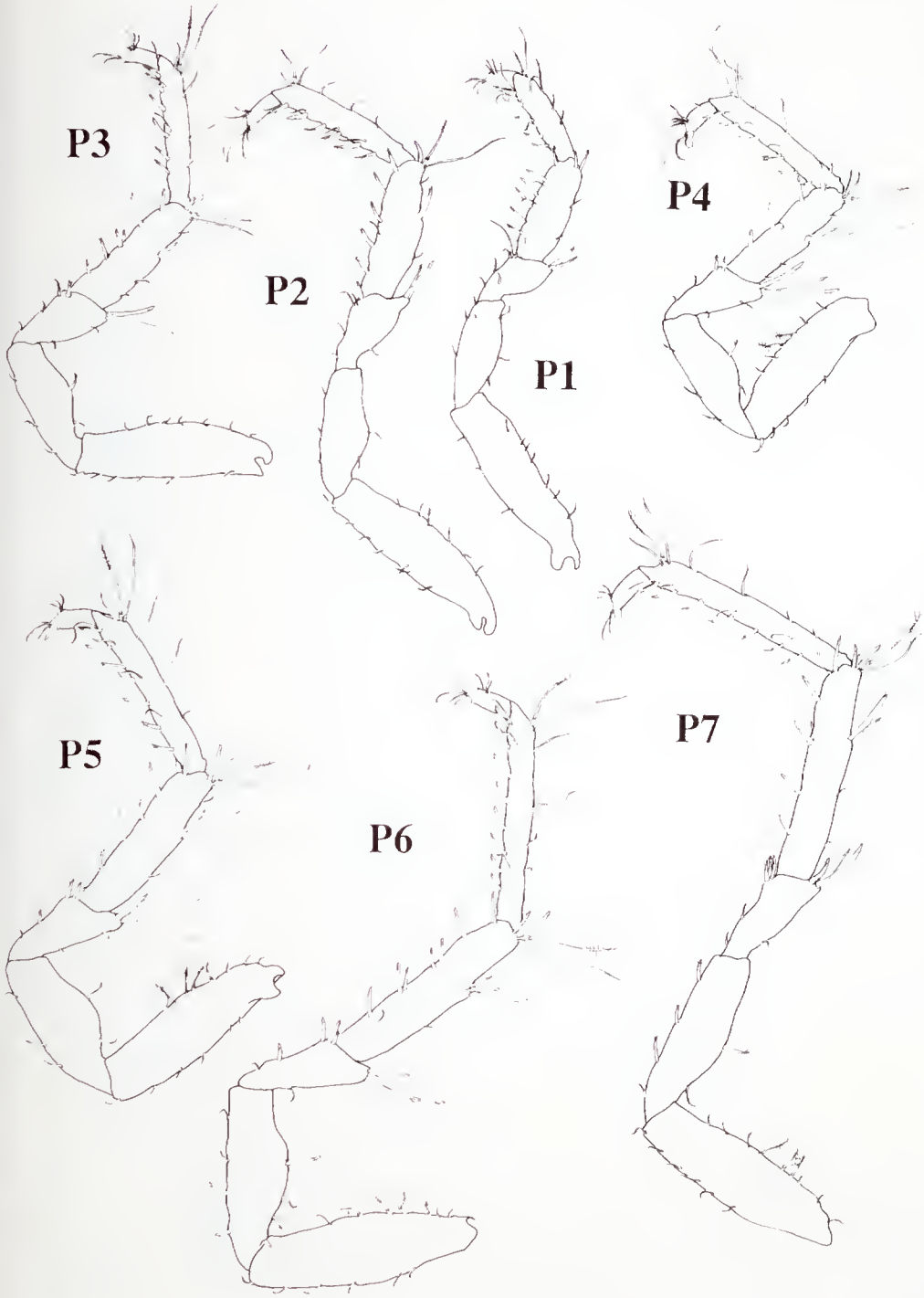


Figure 15. *Ianthopsis kimblae* sp. nov., paratype female, pereopods 1–7; NMV J13272.

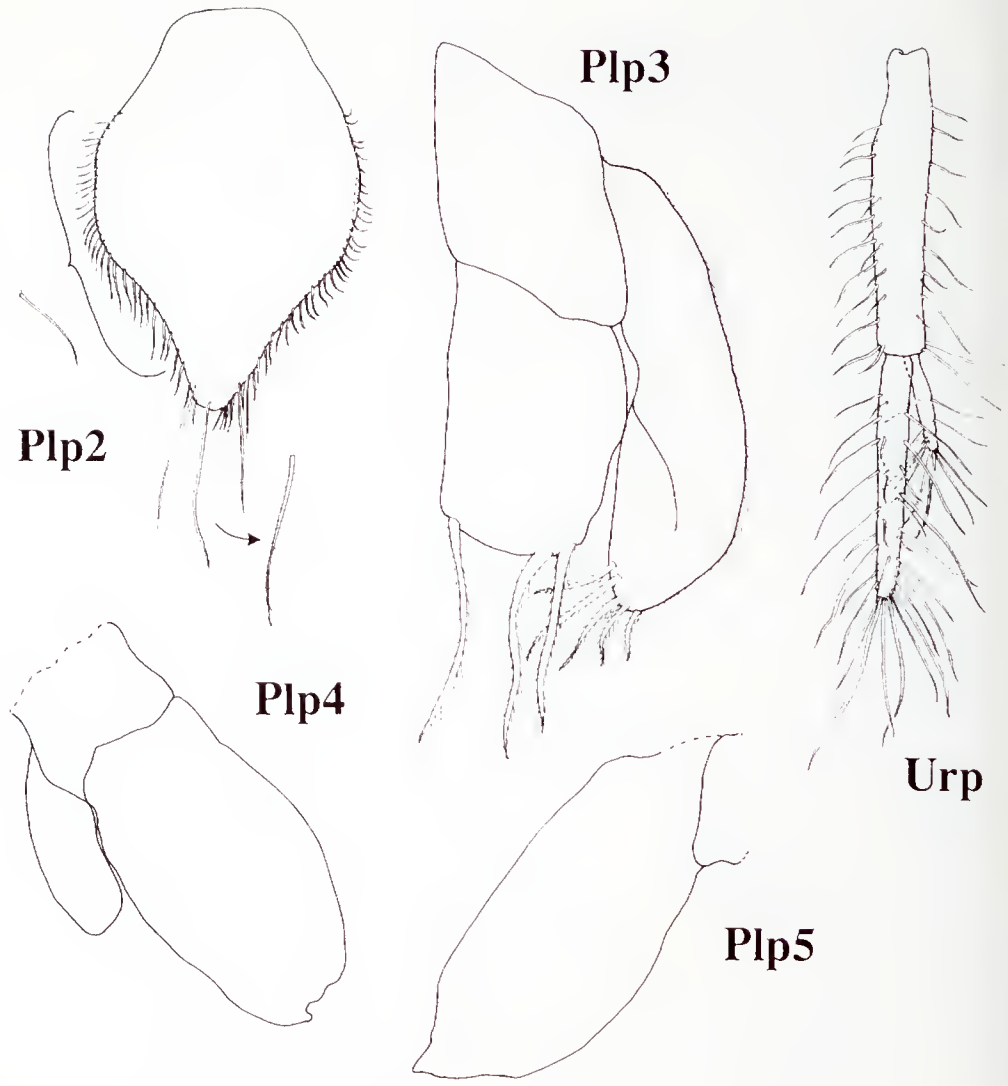
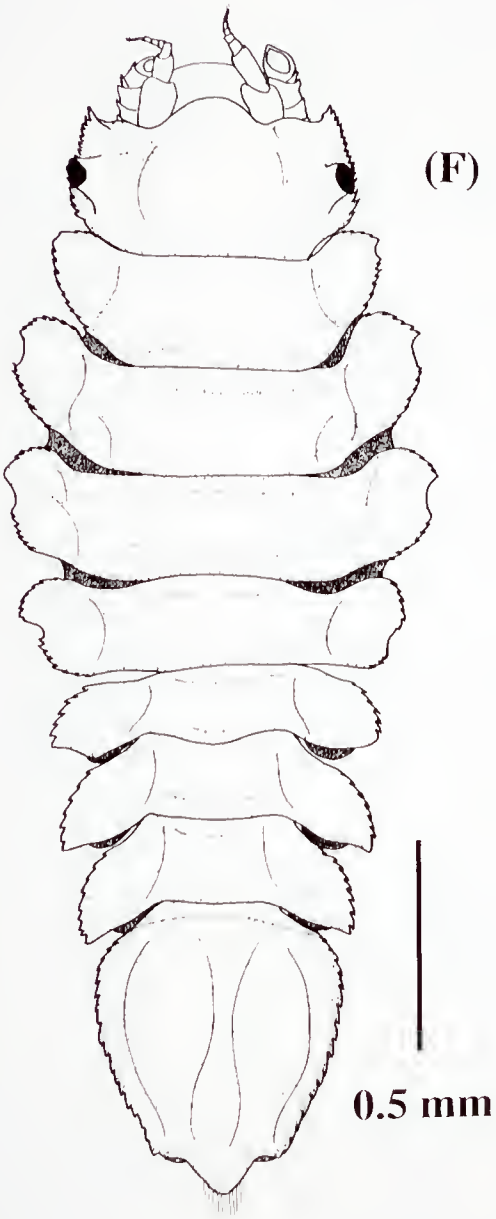


Figure 16. *Ianthopsis kimblae* sp. nov., paratype female, pleopods 2–5, uropod; NMV J13272.



igure 17. *Ianthopsis kimblae* sp. nov., paratype female, ovigerous specimen in dorsal view; NMV J13272.

small dorsal spines on all pereonites and *I. bovalli* has some spines on the first four pereonites whereas the new species is almost smooth except for low elevations. The other species with a smooth body surface have either a longer rostrum, like *I. ruseri* Vanhöffen, 1914 and *I. nodosa* Vanhöffen, 1914, or possess long setae on the dorsum, e.g. *I. laevis* Menzies, 1962.

Ianthopsis multispinosa Vanhöffen

Ianthopsis multispinosa Vanhöffen, 1914: 541–542. — Wolff, 1962: 258. — Kussakin, 1967: 340 [342]. — Brandt, 1991: 240–248, figs 24–29.

Material examined. Victoria. S of Point Hicks (38°25.9'S, 148°58.6'E), 1850m, muddy sandstone, 22 Jul 1986 (stn SLOPE 25), NMV J20172 (1); 76km S of Point Hicks (38°29.33'S, 149°19.98'E), 1840m, sandy mud, fine shell, 26 Oct 1988 (stn SLOPE 69), NMV J20173 (1), NMV J20174 (1) [both collected using WHOI epibenthic sled by G. C. B. Poore et al. on ORV *Franklin*].

Distribution. Gauss Station, Bellingshausen Sea, Antarctic Indian Ocean, Weddell Sea, Davis Sea; Australia, eastern Bass Strait, about 1850 metres depth.

Remarks. These records extend the distribution outside the Southern Ocean for the first time. Its distribution is best explained by continental drift vicariance.

No other species of this genus bears as long and acute spines as *I. multispinosa.*

Ianthopsis sp.

Material examined. Victoria. S of Point Hicks (38°14.8'S, 149°9.3'E), 200m, coarse sand, gravel (stn SLOPE 41), NMV J20194 (1); (38°17.7'S, 149°11.3'E), 400m, coarse sand, gravel, mud, many sponges (stn SLOPE 40), NMV J20193 (10), NMV J23844 (male A), NMV J23843 (female B) [both collected using WHOI epibenthic sled by M. F. Gomon et al. on ORV *Franklin*, 24 Jul 1986].

Distribution. Australia, eastern Bass Strait, 200–400 metres depth.

Remarks. This is almost certainly a new species with a spine pattern very similar to that in *Ianthopsis multispinosa.* Nevertheless, the new species is much smaller than *I. multispinosa* and its dorsal spines are shorter and more slender, even compared to juveniles. Two juveniles of 1.5mm length each, one male of 2mm length and 4 females of 2, 3, 2.6, and 3.2mm length have been found. The whole material is in too poor condition to describe.

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