

*MYSIDELLA AUSTRALIANA* SP. NOV. FROM BASS STRAIT, AUSTRALIA  
(CRUSTACEA: MYSIDAE: MYSIDELLINAE)

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**Abstract**

Fenton, G.E., 1990. *Mysidella australiana* sp. nov. from Bass Strait, Australia (Crustacea: Mysidae: Mysidellinae). *Memoirs of the Museum of Victoria* 50(2): 437–441.

*Mysidella australiana* sp. nov. is described from material collected in Bass Strait, southern Australia. Its occurrence represents the first record of this subfamily and genus from the Southern Hemisphere.

**Introduction**

A study of mysid fauna from Bass Strait, southern Australia has revealed a new species belonging to the genus *Mysidella*. The species *M. australiana* sp. nov., described here, represents the first record of the genus from Australian waters and from the Southern Hemisphere. Diagnostic details of the subfamily Mysidellinae and the genus *Mysidella* are given here since they are not readily available.

**Mysidellinae**

**Diagnosis.** (Based on definitions given in Tattersall and Tattersall, 1951 and Li, 1964). Labrum posteriorly produced into a large plate divided by deep incision forming 2 unequal lobes. Mandibles with cutting lobe expanded greatly with straight edge and without teeth. Maxillule with lobes bending strongly inward; outer lobe large with numerous spines; inner lobe small bearing plumose setae. Sixth segment of first thoracic endopod expanded and armed with spines. Carpo-propodus of thoracic legs 3–8 divided by 1–2 transverse articulations. Pleopods of both sexes rudimentary. Exopod of uropod entire; outer margin with setae and no spines. Telson with distal cleft. Female with 3 pairs of brood lamellae.

**Remarks.** The subfamily Mysidellinae, established by Norman 1892, is unusual within the Order Mysidacea since it consists of only the genus *Mysidella* G.O. Sars. This subfamily is easily recognised by the distinctive form of the labrum.

***Mysidella* G.O. Sars**

*Mysidella* G.O. Sars, 1872: 266. Type species *Mysidella typica* G.O. Sars, 1872 by original designation.

**Diagnosis.** (Based on definitions given in Tattersall and Tattersall, 1951 and Li, 1964). Eyes well developed or rudimentary. General body form short and robust. Antennular peduncle of male with setose lobe small and nodular. Antennal scale small, setose along lateral and medial borders; small distal articulation. Maxilla small and feeble, exopod well-developed. Genital appendage of male at base of eighth thoracic legs forwardly directed, long and cylindrical. Endopod of uropod with spines on inner margin. Telson cleft armed with spines.

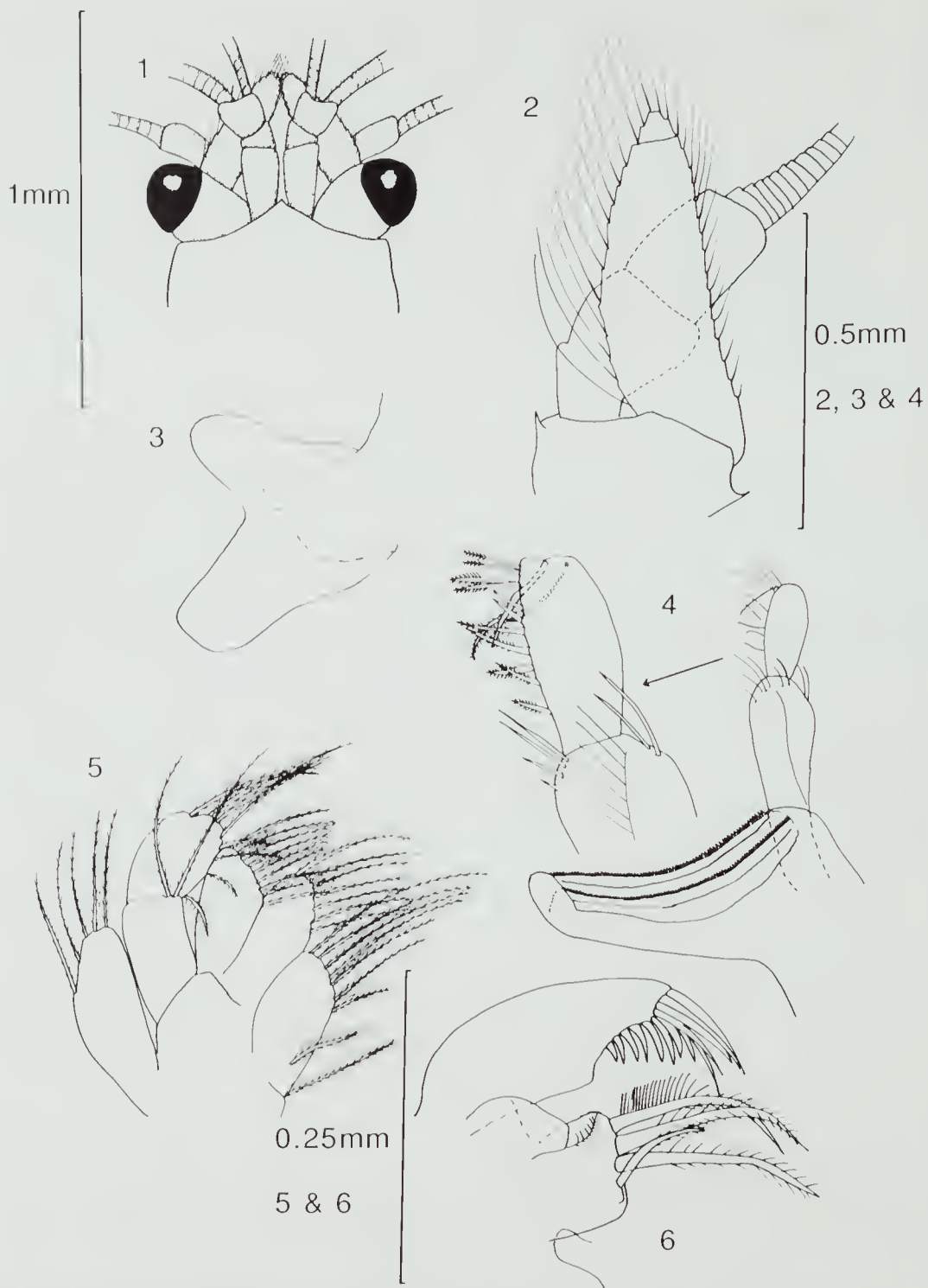
**Remarks.** This genus was established by G.O. Sars in 1872 for two species, *M. typica* from the north-eastern Atlantic and *M. typhlops* from Norway. It was not until 1948 that another species *M. americana* Banner, 1948 from Canada was described. The next two species described were both from Japan, *M. tanakai* Li, 1964 and *M. nana* Murano, 1970. Two further species have been described, *M. minuta* Brattegard, 1973 from the Caribbean coast of Columbia, and *M. biscayensis* Lagardère and Nouvel, 1980 from the Gulf of Gascogne. The addition of *M. australiana* n. sp., described here, brings the total number of species belonging to this genus to eight.

***Mysidella australiana* sp. nov.**

**Figures 1–14**

**Type material.** Holotype: male, 6 mm long, Central Bass Strait, 5 km N of North Point, Tasmania (40°40.3'S, 145°15'E), 33 m, medium shell, grab, sled or trawl (see label), M. Gomon and G.C.B. Poore on FV Sarda, 4 Nov 1980 (stn BSS 115), NMV J11046.

Paratypes. Eastern Bass Strait, 42 km SW of Babel Island, Tasmania (40°13.8'S, 148°39.6'E), 60 m, muddy sand, WHOI epibenthic sled, R. Wilson on RV

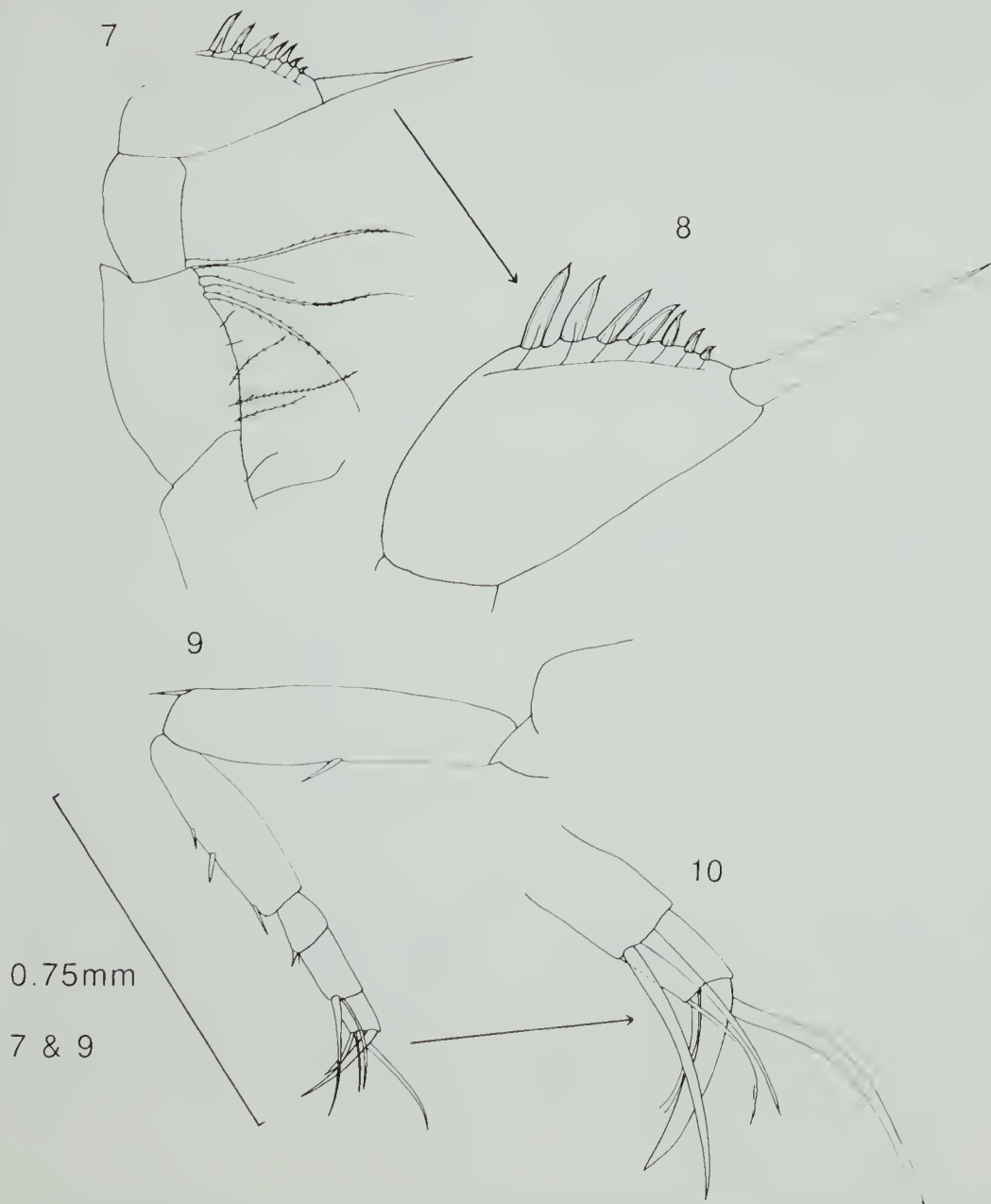


Figures 1-6. *Mysidella australiana* sp. nov.: fig. 1, anterior of male; fig. 2, antennal scale; fig. 3, labrum; fig. 4, mandible; fig. 5, maxilla; fig. 6, maxillule.

Tangaroa, 14 Nov 1981 (stn BSS-S 165), NMV J11047 (3 females, 1 male).

Other material. Type locality, NMV J17261 (4). Central Bass Strait, 100 km SSE of Cape Liptrap, Victoria (39°45.9'S, 145°33.3'E), 74 m, muddy fine sand, R. Wilson on RV Tangaroa, 13 Nov 1981 (stn BSS

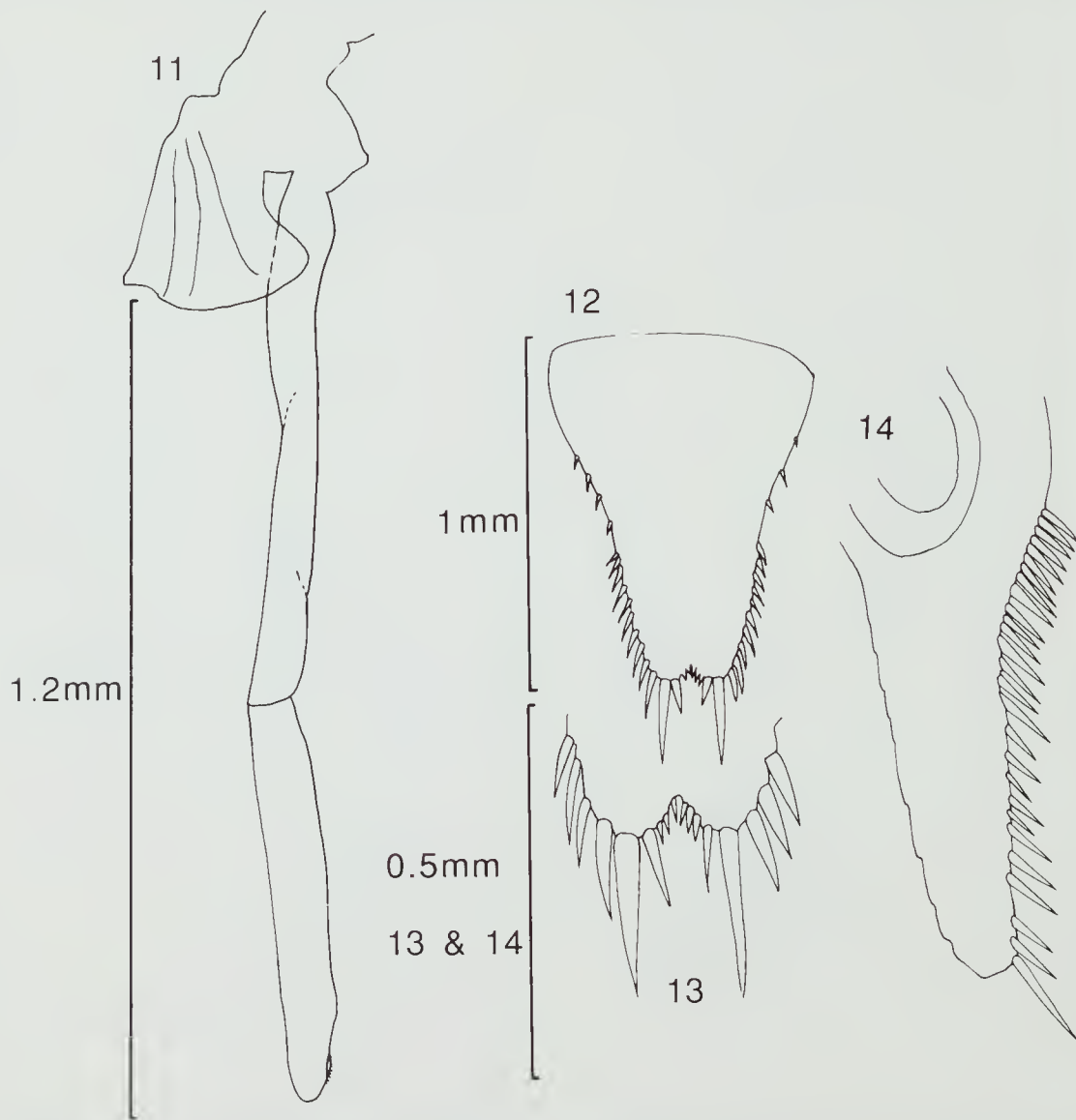
156), NMV J11243 (6); Western Bass Strait, 30 km ESE of Cape Otway, Victoria (38°56.4'S, 143°51.0'E), 79 m, fine sand, Smith-McIntyre grab or WHOI sled, R. Wilson on RV Tangaroa, 19 Nov 1981 (stn BSS-Q 654), NMV J5402 (3). Plus other material from BSS stations 118 and 184.



Figures 7–10. *Mysidella australiana* sp. nov.: fig. 7, first thoracic endopod; fig. 8, terminal segment of first thoracic endopod; fig. 9, sixth thoracic leg; fig. 10, dactylus of sixth thoracic leg.

*Description.* Description of male holotype with female characters given (where appropriate) from paratype material. General body form compact and robust. Eyes spherical, extending to end of second segment of antennular peduncle, cornea occupies approximately half stalk in dorsal view; pigment red in alcohol (Fig. 1). Carapace with acute apex extending over eye-stalk slightly; anterolateral edges rounded; posterior edge dorsally emarginate exposing last thoracic segment. Antennular peduncle of male

with setose lobe small and nodular; peduncle of both sexes of similar size. Antennal scale lanceolate in shape, extending beyond antennular peduncle; with distal articulation, setose medial and lateral borders (Fig. 2). Labrum large, obtusely rounded in front; posteriorly produced into 2 unequal lobes (Fig. 3). Mandible with cutting lobe expanded and flattened without teeth; mandibular palp small (Fig. 4). Maxillule with lobes inwardly curved; outer lobe large bearing 13–15 spines; inner lobe with 4–5 plumose setae



Figures 11–14. *Mysidella australiana* sp. nov.: fig. 11, genital appendage; fig. 12, telson; fig. 13, cleft of telson; fig. 14, endopod of uropod.



(Fig. 6). Maxilla small, terminal endopod bearing plumose setae (Fig. 5). First thoracic limb: propodus of endopod expanded, larger than carpus; outer distal margin armed with row of 7 spines (Fig. 7); strong terminal claw approximately same length as propodus (Fig. 8). Thoracic legs 3–8 mostly missing in specimens, 6th thoracic leg as in Figs 9 and 10. Male genital appendage present on base of 8th thoracic limb: long cylindrical and directed forward (Fig. 11). Female with 3 pairs of brood lamellae. Pleopods of both sexes rudimentary and simple. Telson triangular, approximately 1.5 times as long as broad; shallow apical cleft occupying only 4% of the total length of telson. Lateral margins with hiatus separating 10 closely spaced spines arming the distal half and 3–4 widely spaced proximally. Two spines arm each apical lobe, outer spines twice as long as the inner (Fig. 12). Cleft armed with 3 spines on either side (Fig. 13). Uropods: endopod bearing row of approximately 27 spines on inner margin extending from statocyst to apex (Fig. 14). Exopod slightly longer than endopod. Both endopod and exopod setose along lateral and medial borders.

Adult length 4.5–6.0 mm, measured from the tip of the rostrum to the end of the exopod of the uropods.

*Etymology.* For Australia.

*Distribution.* Known only from Bass Strait, Australia, where it was collected at depths between 32–95 m and from a range of sediment types i.e. from muddy sand to medium shelly sand.

*Remarks.* *Mysidella australiana* sp. nov. is easily distinguished from the other species in the genus by the presence of seven spines on the outer distal margin of the propodus of the first thoracic endopod. Most species in the genus have three, but *M. typhlops* has four and *M. nana*, five spines (Brattegard, 1973; Lagardère and Nouvel, 1980). *M. australiana* sp. nov., therefore, with respect to this feature, bears a greater resemblance to *M. nana* than to other species of *Mysidella*. However, the telson of *M. nana* is quite different from that of *M. australiana* sp. nov. in that it has a deep cleft armed with 22 spines compared to the shallow cleft with 2–3 spines of *M. australiana* sp. nov.

The telson of *M. australiana* sp. nov. is distinctive with a hiatus separating the numerous closely spaced spines on the distal half from the widely spaced spines on the proximal half. All other species have spines occupying the distal half of the telson only. Also, the telson of *M. australiana* sp. nov. has a very shallow apical cleft occupying approximately 1/24 of the length of the telson. The cleft is deeper in all other species (occupying between 1/5–1/12 of the telson length) except *M. typhlops*, where the cleft is also shallow occupying 1/19 of the telson. *M. typhlops* is, however, distinctive since it is the only species in the genus with rudimentary eyes.

#### Acknowledgements

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