

## Annotated checklist of stenopodidean shrimps (Crustacea: Decapoda) from the Dampier Archipelago

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**Abstract** – A total of four species of stenopodidean shrimps (one spongicolid and three stenopodids) were collected during the Western Australian Museum Expedition to the Dampier Archipelago in 1999. Of these, *Microprosthema validum* (Stimpson, 1860) and *Stenopus hispidus* (Olivier, 1811) are common species through the tropical and subtropical regions of the Indo-West Pacific. The remaining two species of *Odontozona* Holthuis, 1946, cannot be assigned to any of the 13 previously described species of the genus.

### INTRODUCTION

The shallow water stenopodidean shrimp fauna of the Eastern Indian Ocean has been poorly studied. Through the courtesy of Diana S. Jones, I was able to examine the stenopodidean specimens collected during the Western Australian Museum Expedition to the Dampier Archipelago in 1999. In this small collection, four species belonging to two families and three genera were recognized. The annotated checklist of these species is provided herein. Two species of *Odontozona* Holthuis, 1946 are considered as undescribed. They are designated as "sp." in this report because detailed descriptions and full illustrations of these species are required in the future to enable them to be named scientifically.

### MATERIALS AND METHODS

Restricted synonymies are presented for the two described species. The abbreviations used in the text are as follows: cl, postorbital carapace length; WAM, the Western Australian Museum; ovig. for ovigerous.

### LIST OF SPECIES

#### Infraorder STENOPODIDEA

#### Family Spongicolidae Schram, 1986

#### *Microprosthema* Stimpson, 1860

#### *Microprosthema validum* Stimpson, 1860

*Microprosthema valida* Stimpson, 1860: 45.

*Stenopusculus crassimanus* Richters, 1880: 168, pl. 18, figs 27–29.

*Stenopus robustus* Borradaile, 1910: 260, pl. 16, fig. 4.

*Microprosthema validum*, Holthuis, 1946: 50, pl. 3, fig. h. – Baba *et al.*, 1968: 174, fig. 1. – de Saint Laurent and Cleva, 1981: 167, fig. 7.

#### Material examined

**Western Australia, Dampier Archipelago.** WAM C 28057 (1 female, cl 3.7; 1 female ovig., cl 4.0 mm), stn DA3/99/38, Malus I. (20°30.90'S, 116°40.22'E), coll. M. Hewitt, 27.08.1999; WAM C 25901 (1 male, cl 2.3 mm; 1 female ovig., cl 2.5 mm), stn DA1/98/35, Legendre I. (20°23.62'S, 116°51.96'E), 0.0–1.1 m, coll. M. Hewitt *et al.*, 29.10.1998.

#### Distribution

Type locality: Amami-Oshima Island, northern Ryukyu Islands, Japan (Stimpson, 1860). Also known from various localities in the tropical and subtropical regions of the Indo-West Pacific (Red Sea, Mauritius, Chagos Archipelago, Gulf of Manaar, Malaysia, Indonesia, and Australia) (Holthuis, 1946).

#### Remarks

Until now, 10 species of *Microprosthema* have been recognized, three of which occur in the Indo-West Pacific: *M. validum*; *M. plumicorne* (Richters, 1880); and *M. scabricaudatum* (Richters, 1880) (see Holthuis, 1946; Goy, 1987; Martin, 2002). The specimens examined herein agree with the previous descriptions of *M. validum* (Richters, 1880; Borradaile, 1910; Holthuis, 1946; Baba *et al.*, 1968; de Saint Laurent and Cleva, 1981). In Australian waters, only one species, *M. validum*, has been recorded, from the Northern Territory, Queensland, and New South Wales (Davie, 2002). Thus, the

present specimens represent the first occurrence of *M. validum* in Western Australian waters.

#### Family Stenopodidae Claus, 1872

#### *Odontozona* Holthuis, 1946

#### *Odontozona* sp. 1

##### Material examined

**Western Australia, Dampier Archipelago.** WAM C 29313 (1 female ovig., cl 4.4 mm), stn DA2/99/59, Malus I. (22°32.23'S, 116°41.63'E–22°32.09'S, 116°41.16'E), 17–19 m, coll. S. Slack-Smith and M. Hewitt, 22.08.1999; WAM C 29314 (1 male, cl 3.4 mm), stn DA2/99/73, Enderby I. (20°40.14'S, 116°27.69'E–20°39.93'S, 116°27.96'E), 12.5 m, coll. S. Slack-Smith and M. Hewitt, 24.07.1999.

##### Distribution

Known only from the Dampier Archipelago, Western Australia.

##### Remarks

Morphologically, this undescribed species of *Odontozona* is similar to *O. spinosissima* Kensley, 1981, known only by the female holotype from off South Africa (southwestern Indian Ocean), by having a densely spinose carapace and dorsally sculptured abdominal somites. However, the rostrum is dorsally sinuous distally and there is an indistinct postcervical groove on the carapace, which are features that readily distinguish the Dampier Archipelago species from *O. spinosissima*. In *O. spinosissima*, the rostrum is horizontal throughout its length, and the postcervical groove on the carapace is distinct (Kensley, 1981). Further, the ambulatory pereopods of the present species from the Dampier Archipelago are more robust than those of *O. spinosissima*.

#### *Odontozona* sp. 2

##### Material examined

**Western Australia, Dampier Archipelago.** WAM C 28069 (1 male, cl 2.7 mm), stn DA3/99/44, Rosemary I. (20°29.59'S, 116°34.45'E), 2.5–6.0 m, coll. M. Hewitt, 29.08.1999; WAM C 29311, 1 male (cl 2.6 mm), stn DA2/99/06, C. Legendre (20°21.69'S, 116°52.40'E–20°21.23'S, 116°52.36'E), 33–36 m, coll. S. Slack-Smith and M. Hewitt, 14.07.1999; WAM C 29312, 1 male (cl 2.4 mm), stn DA2/99/50, Enderby I. (20°37.10'S, 116°20.99'E–20°37.28'S, 116°21.08'E), 24.0–25.0 m, coll. S. Slack-Smith and M. Hewitt, 20.07.1999; WAM C 29316 (1 male, cl 3.2 mm), stn DA2/99/91, Rosemary I. (20°30.48'S, 116°36.53'E–20°30.27'S, 116°36.86'E), 9–10 m, coll. S. Slack-Smith and M. Hewitt, 26.07.1999.

##### Distribution

Known only from the Dampier Archipelago, Western Australia.

##### Remarks

The present undescribed species of *Odontozona* appears closest to the Eastern Pacific species, *O. rubra* Wicksten, 1982, on account of several distinctive characters. For instance, the distinct cervical and postcervical grooves on the carapace bear a cincture of numerous small spines, the abdominal somites are dorsally sculptured, the antennal scaphocerite is dorsally unarmed, and the palm of the third pereopod is armed with a row of spines. The Dampier Archipelago species is discriminated from *O. rubra*, however, by the larger but smaller number of spines on the cervical groove of the carapace, and the ventral margin of the third and fourth abdominal pleura being armed with strong teeth.

#### *Stenopus* Latreille, 1819

#### *Stenopus hispidus* (Olivier, 1811)

*Palaemon hispidus* Olivier, 1811: 666.

*Stenopus hispidus*. – Holthuis, 1946: 12, pl. 1, figs a–g. – Yaldwyn, 1968: 278.

##### Material examined

**Western Australia, Dampier Archipelago.** WAM C 29315 (1 male, cl 7.7 mm), stn DA2/99/85, Brigadier I. (20°26.38'S, 116°39.76'E–20°26.09'S, 116°40.10'E), 28–29 m, coll. S. Slack-Smith and M. Hewitt, 26.07.1999.

##### Distribution

Widespread from tropical and subtropical regions of the Indo-Pacific as well as the Atlantic Ocean (Holthuis, 1946; Manning and Chace, 1990).

##### Remarks

*Stenopus hispidus* is the common shrimp of coral reefs. Yaldwyn (1968) reviewed the distributional range of *S. hispidus* in Australian waters. At that time, the record of *S. hispidus* from the Indian Ocean coast of Australia was poor but, more recently, it has been recorded from Rottneest Island, on the western coast of Australia, across northern Australia, to southern New South Wales (Jones, 1990; Jones and Morgan, 1993; 1994).

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