The Albuneidae (Crustacea, Anomura) of the Dampier Archipelago, Western Australia

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Abstract – The albuneid fauna of Western Australia is summarized with two species, Paralbunea davriti (Serene and Umali, 1965) and Squillalbunea mariellae (Serene, 1973), being recorded as new to the Western Australian fauna south of 20°S. Both of these species, as well as Albunea occulta Boyko, 2002, are recorded as new to the Dampier Archipelago, bringing the total number of albuneids known from this region to four. Western Australian distribution maps for the three taxa represented by new material are provided.

INTRODUCTION

Eleven species of albuneids have previously been reported from Western Australia: Austrolepidopa trigonops Efford and Haig, 1968, A. caledonia Boyko and Harvey, 1999, Leucolepidopa suna Efford, 1969, Paralbunea davriti (Serène and Umali, 1965), Squillalbunea mariellae (Serène, 1973), Stemonopa insignis Efford and Haig, 1968, Albunea speciosa Dana, 1852, A. elioti Benedict, 1903, A. groeningi Boyko, 2002, A. occulta Boyko, 2002, and A. thurstoni Henderson, 1893 (see Boyko, 2002). This represents an impressive 23% (11/47) of all recognized Recent albuneid taxa and includes several of the rarest albuneids (e.g., S. insignis and L. suna). However, only four records of albuneids occurring in Western Australia south of 20°S were previously known: two records of A. speciosa (22°41’S, 113°38’E [WAM C 23398], 22°43.50’S, 113°39.50’E [WAM C 23399]), one record of A. occulta (20°54’S, 115°39’E; WAM C 23392) (Boyko, 2002), and a single record of Albunea groeningi, from near Rosemary Island (WAM C 23386; Boyko, 2002). Albunea groeningi represents the only albuneid specimen reported from the Dampier Archipelago.

A small collection of albuneids obtained during the 1999 Dampier Archipelago Survey of the Western Australian Museum-Woodside Petroleum Partnership are reported herein, adding a further two species, P. davriti and S. mariellae, to the Western Australian fauna south of 20°S. Both these species, plus A. occulta, are now to the Dampier Archipelago fauna. The only albuneids that might be considered “common” (i.e., known from more than a very few records) in Western Australia are P. davriti, A. groeningi and A. occulta.

It should be noted that the key given by Boyko (2002: 230) for species of Albunea is in error in that the thickness of the setae in couplet 16 was inadvertently reversed. The couplet should be written as follows:

16. Male telson with indented median ridge lined with thin setae ........................................... 17
   – Male telson with inflated median ridge lined with thick setae ........................................... 20

MATERIALS AND METHODS

Abbreviations used in the text are as follows: cl, carapace length as measured from the midpoint of the anterior margin (including rostrum, if any) to the midpoint of the posterior concavity; mm, millimeters; n. mls, nautical miles; stn, station; WAM, Western Australian Museum, Perth.

SYSTEMATICS

Paralbunea Serène, 1977

Paralbunea davriti (Serène and Umali, 1965)
Paralbunea davriti. – Serène, 1979: 97.

Material examined

Western Australia, Dampier Archipelago. WAM C 26237 (1 male, cl 5.9 mm), stn DA2/99/24, ~ 5.5 n. mls N of Lady Nora I. (20°21.79’S, 116°38.05’E to 20°22.00’S, 116°37.81’E), rock and sand bottom, 38.5 m, 17.07.1999; WAM C 26238 (1 male, cl 6.7 mm), stn DA2/99/25, ~ 5.1 n. mls N of Rosemary I. (20°22.29’S, 116°35.56’E to 20°22.62’S, 116°35.44’E), muddy sand bottom, 39.0 m, 17.07.1999; WAM C 26242 (1 female, cl 10.5 mm), stn DA2/99/55, ~ 3.2 n. mls NW of Roly Rock (20°28.45’S, 116°27.43’E to
20°27.98'S, 116°27.54'E), mud, sand and rocky rubble bottom, 37.5-38.0 m, 21.07.1999; WAM C 26246 (1 male, cl 8.6 mm), stn DA2/99/87, ~ 2.2 n. mls ENE of E point of Brigadier I. (20°25.48'S, 116°39.07'E to 20°25.23'S, 116°39.32'E), fine sand bottom, 33.0-33.5 m, 26.07.1999.

Bathymetric Range
Within Dampier Archipelago, depth range 33.0-39.0 m; over entire range, 6.1-45.5 m (Boyko, 2002).

Distribution
Southern Japan southward to Western Australia and eastward to New Caledonia, the Marshall Islands and Tahiti (Boyko, 2002).

Squallalbunea Boyko, 2002

Squallalbunea mariellae (Serène, 1973)
Squallalbunea mariellae. – Boyko, 2002: 215, figs 70, 71.

Material examined
Western Australia, Dampier Archipelago. WAM C 35466 [ex C 26237] (1 male, cl 5.9 m), stn DA2/99/24, ~ 5.5 n. mls N of Lady Nora I. (20°21.79'S, 116°38.05'E to 20°22.00'S, 116°37.81'E), rock and sand bottom, 38.5 m, 17.07.1999; WAM C 26245 (1 unsexable, unmeasurable specimen [fragments]), stn DA2/99/58, ~ 1 n. m. NNE of Roly Rock (20°29.11'S, 116°30.78'E to 20°29.35'S, 116°30.55'E), coarse shelly gravel and rock bottom, 25.0-25.5 m, 21.07.1999; WAM C 26247 (1 male, cl 6.1 mm), stn DA2/99/89, ~ 1.85 n. mls N of Gordon Pt, Rosemary I. (20°27.33'S, 116°34.39'E to 20°27.17'S, 116°34.72'E), coarse shell and rubble bottom, 27.0-28.0 m, 26.07.1999.

Bathymetric Range
Within Dampier Archipelago, depth range 25.0-38.5 m; over entire range, to depth of 82.3 m (Boyko, 2002).

Distribution
Indonesia; Western Australia and Queensland, Australia; and the Marquises Islands (Boyko, 2002).

Albunea Weber, 1795

Albunea occultus Boyko, 2002

Material examined
Western Australia, Dampier Archipelago. WAM C 26240 (1 male, cl 12.6 mm) stn DA2/99/42, ~ 2.4 n. mls SW of SW point of Goodwyn I. (20°34.16'S, 116°30.11'E to 20°33.67'S, 116°30.01'E), rock and fine sand bottom, 14-16 m, 20.07.1999.
Figure 2  Distribution of *Squillalbunea mariellae* (Serène, 1973) in Western Australia. Data from Boyko (2002) and herein.

Figure 3  Distribution of *Albunea occulta* Boyko, 2002 in Western Australia. Data from Boyko (2002) and herein.
Remarks
Although described as Albunea occultus by Boyko (2000), the ending of the species name must be changed from -us to -a to reflect agreement with the feminine genus name Albunea.

Bathymetric Range
Within Dampier Archipelago, depth range 14.0–16.0 m; over entire range, in depths to 82 m (Boyko, 2002).

Distribution
Southern Japan southward to the eastern and western coasts of Australia (Boyko, 2002).

CONCLUSIONS
The specimens obtained from the Dampier Archipelago survey bring the total number of species known in this region to four but, given the typically low densities of albuneids in all regions of the world, it is possible that there may be more of the 11 known Western Australian species living in the Archipelago that remain unsampled.

Although the albuneid fauna of the Indo-West Pacific is now much better known than previously (Boyko, 2002), there are still many questions about these sand crabs that remain to be answered. We have a good understanding of the taxonomic richness of the family, but the distributions and depth ranges of individual species, to say nothing of the biological activities of albuneids in general, remain poorly known. Only through regional faunal studies, such as the Dampier Archipelago survey, can we hope to assemble a clearer picture of the distributional patterns of sand crabs throughout the Indo-Pacific, which will allow the eventual targeting of promising regional areas for the study of their biology and ecology.

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REFERENCES


