



## Lysianassidae\*

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### Abstract

Seven genera and eleven species of lysianassid amphipods are recorded from the Great Barrier Reef, Queensland, Australia. Six species are new to science. Six of the eleven species are considered to be scavengers. The Great Barrier Reef lysianassid fauna is more similar to that of the tropical Indo-West Pacific than to that of temperate Australia.

**Key words:** Crustacea, Amphipoda, Lysianassidae, Lysianassinae, Tryphosinae, Great Barrier Reef, Australia, taxonomy, new species, *Azotostoma fusta*, *Paralysianopsis padoz*, *Pseudambasia acuticaudata*, *Riwo mizeui*, *Shoemakerella barnardi*, *Tryphosella bet*, *Tryphosella cameloides*, *Tryphosella charlotteae*, *Tryphosella flynnana*, *Tryphosella seasana*, *Waldeckia enoei*

### Introduction

In this paper we report seven genera and eleven species (including six new species) from the Great Barrier Reef. These are among the first tropical lysianassids reported from Australia.

The lysianassids from the Great Barrier Reef show more similarity to other tropical Indo-West Pacific lysianassid faunas than to the southern Australian fauna (eg. *Azotostoma fusta* J.L. Barnard, 1965 from the Caroline Islands and Madagascar; *Waldeckia enoei* Stephensen, 1931 from Indonesia; *Pseudambasia acuticaudata* (Ledoyer, 1984) from New Caledonia; *Riwo mizeui* Lowry & Stoddart, 1995 and *Paralysianopsis padoz* Lowry & Stoddart, 1995 from Madang Lagoon, Papua New Guinea). The presence of the genus *Shoemakerella* Pirlot, 1936 in north-eastern Australia (previously known from the western Atlantic Ocean) indicates an older, less well understood, connection (Myers 1991).

*Shoemakerella* was previously known only from the tropical western Atlantic Ocean, living on the Caribbean plate, which was once part of the Pacific Ocean (Malfait & Dinkelman 1972). There are a number of examples of this type of distribution. One of the best documented examples is the cirrolanid isopod genus *Bathynomus* A. Milne Edwards, 1879 (see Lowry & Dempsey 2006) which is known only from the Indo-West Pacific and the tropical western Atlantic. At species level *Eurythenes thurstoni* Stoddart & Lowry, 2004, is known only from the western South Pacific and the tropical western North Atlantic (Stoddart & Lowry 2004).

Six of the eleven lysianassids in this study (*Paralysianopsis padoz*, *Riwo mizeui*, *Tryphosella bet* **sp. nov.**, *T. cameloides* **sp. nov.**, *T. flynnana* **sp. nov.** and *T. seasana* **sp. nov.**) were taken in baited traps and are considered to be scavengers. Two other species (*Tryphosella charlotteae* **sp. nov.** and *Waldeckia enoei* belong to genera that contain scavengers). Although Keable (1995) found that cirrolanid isopods dominated the scavenging guild at Lizard Island, lysianassoid amphipods were abundant and regularly obtained in his traps. Lowry & Smith (2003) reported similar results in their study of scavenging crustaceans along the Great Barrier Reef (GBR).