



## Phoxocephalidae\*

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### Abstract

Nine species from three genera of Phoxocephalidae (Crustacea: Amphipoda) are reported from the Great Barrier Reef, Queensland, Australia. Seven species are new to science including five species of *Birubius* Barnard & Drummond, 1976: *Birubius banksi* **sp. nov.**, *Birubius casuarina* **sp. nov.**, *Birubius kingae* **sp. nov.**, *Birubius oti* **sp. nov.** and *Birubius parvus* **sp. nov.**; one species of *Limnoporeia* Fearn-Wannan, 1968: *Limnoporeia cooki* **sp. nov.** and one species of *Metaphoxus* Bonnier, 1896: *Metaphoxus varanus* **sp. nov.** *Limnoporeia woorake* Barnard & Drummond, 1978 is reported for the first time from the Great Barrier Reef and more records of *Birubius batei* (Haswell, 1879) are reported, prompting the designation of a neotype for the species. These records expand the number of phoxocephalid species previously recorded from the Great Barrier Reef.

**Key words:** Crustacea, Amphipoda, Phoxocephalidae, Great Barrier Reef, Australia, taxonomy, new species, neotype, *Birubius banksi*, *Birubius batei*, *Birubius casuarina*, *Birubius kingae*, *Birubius oti*, *Birubius parvus*, *Limnoporeia cooki*, *Metaphoxus varanus*, *Limnoporeia woorake*

### Introduction

The Phoxocephalidae is a strictly marine amphipod family found in all oceans and depths. Most species are benthic, with almost one third of the known species occurring in Australian waters. To date, only two species of Phoxocephalidae have been described or recorded from Queensland waters. *Birubius wallisae* Taylor & Poore, 2001 was described from Moreton Bay and a collection, misidentified by K.H. Barnard as *Pontharpinia rostrata* (Dana, 1853) was reported from the Great Barrier Reef Expedition 1928–1929. This record is now considered as *Birubius batei* (Haswell, 1879) and *Pontharpinia? barnardi* Pirlot, 1932 (refer to Barnard & Drummond (1978) and Lowry & Stoddart (2003) for explanation and further discussion).

The relatively small number of phoxocephalids described to date from the Great Barrier Reef (GBR) is as much a reflection of the geographic focus of previous work done on the family, as it is on their abundance in that part of Australia. Barnard & Drummond's (1978) work documenting the Phoxocephalidae of Australia described 88 species from 26 genera; however none were described from Queensland. Their material was mostly from surveys conducted in Western Port, Crib Point and Port Phillip Bay (Victoria) between 1964 and 1974. Other material studied was from benthic surveys conducted in New South Wales off Sydney. Since the early 1970's, phoxocephalid material has been collected from localities in Queensland, including the Great Barrier Reef, but to date has remained undescribed in museum collections.

This paper reports on Phoxocephalidae from the first survey aimed at documenting the amphipod fauna of the Great Barrier Reef to 50 m depth. This material collected during a 2005 workshop held at the Lizard Island Research Station together with material previously lodged in the Australian Museum and Museum Victoria