



Dexaminidae*

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Abstract

Four genera and 11 species of dexaminids are reported from the Great Barrier Reef. Of these, three species (*Dexaminoculus grobbeni* (Spandl, 1923), *Guernea ipilya* Thomas & Barnard, 1991, *G. yamminye* Thomas & Barnard, 1991) have been previously encountered on the Reef, seven species (six *Paradexamine*, one *Polycheria*) are new to science and one species (*Paradexamine micronesicus* Ledoyer, 1979) is reported for the first time from Australian waters. All species are described and illustrated.

Key words: Crustacea, Amphipoda, Dexaminidae, Great Barrier Reef, Australia, taxonomy, new species, *Dexaminoculus grobbeni*, *Guernea ipilya*, *Guernea yamminye*, *Paradexamine aequiserrata*, *Paradexamine exilis*, *Paradexamine levitelson*, *Paradexamine massa*, *Paradexamine micronesicus*, *Paradexamine quadratus*, *Paradexamine saxeta*, *Polycheria goanna*

Introduction

The Dexaminidae is a large, very diverse cosmopolitan family, comprising 18 genera and at least 188 known species worldwide (Ishimaru 1987, Barnard & Karaman 1991, Thomas & Barnard 1991, Lowry & Stoddart 2003). Several of the genera are quite large (e.g. *Guernea*, *Paradexamine*, *Polycheria*) and contain many closely similar, often poorly known, species. For this reason, the taxonomy of a number of these species is somewhat confused and their geographic distributions remain unclear. In addition, in spite of several relatively recent regional publications describing new species of dexaminids (Hirayama 1984, 1985, 1986; Ledoyer 1984; Ishimaru 1987; Myers 1985, 1995; Ortiz & Lalana 1997, 1999; Ren 2006), many areas have not been extensively studied and additional new species undoubtedly remain to be discovered.

The family Dexaminidae was subdivided into two subfamilies, the Dexamininae and the Prophliantinae, by Barnard (1970) and Barnard & Karaman (1991). Later, Bousfield & Kendall (1994) resurrected the family Atylidae G.O. Sars, including four subfamilies (Anatylinae, Atylinae, Lepechinellinae, Nototropiinae), and restricted the Dexaminidae to *Delkarlye*, *Dexamine*, *Dexaminella*, *Dexaminoculus*, *Guernea*, *Haustoriopsis*, *Paradexamine*, *Polycheria*, *Sebadexius*, *Syndexamine* and *Tritaeta*, which they placed in four subfamilies, the Dexamininae, Dexaminoculinae, Polycheriinae and Prophliantinae. The generic composition of the subfamilies of Dexaminidae differs between these two competing classifications. Because we are not carrying out any phylogenetic analyses of world dexaminoid taxa, we make no attempt here to classify below the level of family.