



The genus *Guernea* Chevreux, 1887 from Korean waters (Crustacea: Amphipoda: Dexaminidae)

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Abstract

Four species of the dexaminid genus *Guernea* are reported from Korean coastal waters. This is the first record of the genus *Guernea* from Korea. Two of the species are identified as new species; *Guernea jejuensis* and *Guernea namhaensis*. The remaining two Japanese species *Guernea ezoensis* Ishimaru, 1987 and *Guernea nullispina* Hirayama, 1985 are new records for Korean waters. The species are fully illustrated and detailed comparisons are made with related species. A key to north Pacific *Guernea* species is also provided.

Key words: Crustacea, Amphipoda, Dexaminidae, *Guernea*, new species, taxonomy, Korea, key, north Pacific

Introduction

The Dexaminidae is a very diverse and large cosmopolitan amphipod family, with 12 genera and close to 120 species worldwide (Barnard & Karaman 1991; Lowry & Stoddart 2003; Myers & LeCroy 2009). Among the genera, *Guernea* Chevreux, 1887 is one of the most speciose of the family along with *Paradexamine* Stebbing, 1899 and *Polycheria* Haswell, 1879. Many dexaminid species are taxonomically poorly known due to a number of factors, such as small body size (*Guernea*), cryptic habit and inquilinous nature (especially species of *Paradexamine*, *Polycheria* and *Tritaeta* associated with ascidians and sponges). There is no doubt that a multitude of species remain to be discovered, especially from poorly sampled regions and habitats.

The Dexaminidae was subdivided into two component subfamilies, the Dexamininae and the Prophliantinae by Barnard (1970) and more recently by Barnard & Karaman (1991). In their study, Bousfield & Kendall (1994) removed the atylids from the Dexaminidae, resurrecting the Atylidae G.O. Sars. They then placed the remaining genera of Dexaminidae within four new subfamilies, the Dexamininae, Dexaminoculinae, Polycheriinae and Prophliantinae. Both of these classifications present quite different generic compositions within their subfamily arrangements (see Myers & LeCroy 2009 for review). In this study, we follow the classification of Bousfield & Kendall (1994).

Presently *Guernea* contains 30 species worldwide (Barnard & Karaman 1991; Thomas & Barnard 1991; Ren 2006). Almost all species of the genus *Guernea* have been reported from the Western Pacific region such as China (Stephensen 1944; Hirayama 1986; Ren 2006), Japan (Hirayama 1985; Ishimaru 1987), Australia (Barnard 1972; Thomas & Barnard 1991), Indian Ocean such as Madagascar (Ledoyer 1979, 1982) and southern Africa (Griffiths 1976) which are all warm-temperate zones. These species are fossorial, usually occurring in fine surface sediments of shallow coastal waters (Bousfield & Kendall 1994), where they most likely deposit feed on detritus. *Guernea* species present a moderate amount of sexual dimorphism, as mature males show modifications for swimming up into the water column at night in search of females for mating. These would include eye enlargement, longer antennae (especially antenna 2), setular tufts (brush setae) present on the antennal peduncles and foliaceous rami of the third uropods. Some minor differences are also apparent in the body shape and gnathopods, especially gnathopod 2, where the entire appendage tends to be longer.