



A new species and new record of the genus *Cumella* (Cumacea: Nannastacidae) from Korea

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Abstract

The new species, *Cumella levitergus* sp. nov., and the newly recorded species, *Cumella arguta* Gamô, 1962 are described and illustrated. *Cumella scabera* Gamô, 1962 is proposed as a synonym of *C. arguta* in this study. *Cumella levitergus* is obviously distinguished from other known species of *Cumella* by the combination of the following features: 1) the carapace surface is pitted, and has abundant minute alveolate sculpturing, which is round and tightly arranged; 2) the dorsomedian carina is obsolete and not decorated; 3) the flagellum of the male antenna 2 does not extend past the posterior border of the pleonite 4; 4) the carpus of pereopod 1 has 3 setae on the inner margin; 5) the carpus of pereopod 2 is shorter than the length of the dactylus; 6) the uropod exopod is 0.65 times as long as the exopod. A key to the Korean *Cumella* species is also given.

Key words: Taxonomy, Cumacea, Nannastacidae, *Cumella*, new species, synonym, Korea

Introduction

The genus *Cumella* belongs to the family Nannastacidae, which is composed of 24 genera. *Cumella* is a genus of small-bodied cumaceans (1.5 to 2.8 mm) and contains about 71 species worldwide (Băcescu, 1992; Watling and McCann, 1997). In general, most of them are distributed in the American and Indo-West Pacific tropical regions (Petrescu, 1997). Recently, ten species were reported from the Pacific and Atlantic Oceans (Petrescu & Sterrer, 2001; Micca & Roccatagliata, 2002; Petrescu, 2003; Petrescu & Heard, 2004; Mühlenhardt-Siegel, 2005; Gerken, 2005, 2009; Petrescu & Iliffe, 2009; Donath-Hernandez, 2011). Among them, four species have been recorded from Korean waters: *Cumella alveata* Gamô, 1964, *C. glaberata* Gamô, 1962, *C. rigida* Gamô, 1963, and *C. sadoensis* Gamô, 1967 (Lee & Lee, 1999, 2001). In this paper, the new species, *Cumella levitergus* sp. nov., and newly recorded species to Korean fauna, *Cumella arguta* Gamô, 1962 are described and illustrated on the basis of specimens collected from shallow Korean waters. Fortunately, many adult males and females of *C. arguta* were collected from the same localities, which are the Port Jangseungpo, Geojedo Island (34° 5' 54"N, 128° 43' 27"E) and the Port Seogwipo, Jeju Island (33° 14' 16"N, 126° 34' 5"E). The male of *C. arguta* is reported for the first time. A key to the Korean *Cumella* species is also given.

Materials and methods

The specimens were collected mainly using a light-trap (Holmes & O'Connor, 1988; Kim, 1992) in shallow Korean waters, from 1993–2007. The specimens were fixed in 70–80% ethanol. The specimens were dissected in glycerol on a Cobb's aluminum slide. Drawings and measurements were performed with the aid of a drawing tube. Body length was measured from the anterior tip of the carapace to the posterior end of the pleonite 6. Lengths of appendages were measured along the mid-line of each appendage, exclusive of the inflated outer angle. The SEM materials were dehydrated through a graded series of ethanol (80%, 90%, 95%, 100%, 100%) for 20 minutes each, and then dried with HMDS (Hexamethyldisilazane) for 15 minutes. After coating with gold particles in a high vac-