

Taxonomy and Ecology of Two New Interstitial Cytheroid Ostracoda (Crustacea) from Shimoda, Central Japan

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Two new interstitial cytheroid ostracods are described from a small sandy beach in Shimoda, central Japan: *Microloxoconcha ikeyai* sp. nov. (Cytheromatidae) and *Parvocythere japonica* sp. nov. (Parvocytheridae). This is the first record of the genus *Parvocythere* Hartman, 1959 from Japan. By sampling every two months through a year along a transect extending from the shoreline landward across the study area, the optimal zone for each species was found. The peaks of individual density for *M. ikeyai* and *P. japonica* lie seaward and landward, respectively. Both species show a wide tolerance to changes in salinity, but they do not live where fine sand (mode of grain size less than 1/8 mm) is the dominant particle size. In assays of phototaxis, *M. ikeyai*, which has a naupliar eye, showed negative phototaxis.

Key Words: Crustacea, Ostracoda, *Microloxoconcha*, *Parvocythere*, new species, ecology, interstitial, optimal zone, phototaxis, Japan.

Introduction

Interest in the marine interstitial fauna in Japan was first awakened by Itô (1985). Through exhaustive studies he introduced the higher taxa that are represented in the interstitial fauna and exerted a strong influence on Japanese researchers subsequently working on marine interstitial invertebrates. Tsukagoshi (2004), for example, reviewed previous research on interstitial Ostracoda from Japan. He not only pointed out the scarcity of studies in this area, but also drew attention to the rich diversity to be found among the undescribed interstitial ostracods.

About 200 species (including fossil species) of interstitial Ostracoda, belonging to two orders and 17 families, have been reported worldwide. This represents a small proportion of all known ostracods, which comprise about 33,000 species (including fossil species; Horne *et al.* 2002), and is a reflection of the relative paucity of descriptive studies on the interstitial ostracod fauna. In Japan and adjacent areas, more than 1,000 species of epifaunal marine and non-marine ostracods, including fossil species, are known (Ikeya *et al.* 2003), but only a small number of marine interstitial ostracod species: *Microcythere cuneata* Schornikov, 1974, *M. devexa* Schornikov, 1974, *M. littoralis* Schornikov, 1974, *M. robusta* Schornikov, 1974, and *M. rotundata* Schornikov, 1974 from the southern part of the Kurile Islands (see Schornikov 1974); *Cobanocythere? japonica* Schornikov, 1975 and *Platymicrocythere*