



Two new species of *Richardina* A. Milne-Edwards, 1881 (Crustacea: Decapoda: Stenopodidea: Stenopodidae), representing the first occurrences of the genus from the Pacific

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Abstract

More than a century after the description of *Richardina fredericii* Lo Bianco, 1903, two new species of the stenopodid genus *Richardina* A. Milne-Edwards, 1881, are described and illustrated. *Richardina ohtsukai* n. sp. was collected from the Nansei Islands, southwestern Japan at depths of 655 – 730 m and *R. parvioculata* n. sp. was collected from off Tosa Bay, western Japan at a depth of 517 m. To our knowledge, these are the first occurrences of the genus from the Pacific and greatly extend its known geographical range, as the genus *Richardina* is previously known only from the Atlantic Ocean and Mediterranean Sea. Species of *Richardina* are very similar to each other with few morphological differences. *R. ohtsukai* is unique in having additional movable spines on the dorsal margins of the dactyli of the fourth and fifth pereopods. *R. parvioculata* is distinguished from congeners by way of its generally reduced armament of the carapace and pleon as follows: it lacks the median row of spines on the posterior margin of the cervical groove, has a relatively large eyestalk and small-sized cornea, and blunt spines on the dorsolateral carinae of the telson.

Key words: Crustacea, Decapoda, Stenopodidea, Stenopodidae, *Richardina*, new species, Pacific, Nansei Islands, Tosa Bay, Japan

Introduction

The species of Stenopodidae occurring on rocks, coral reefs or sometimes associated with other marine invertebrates are generally small in size and have cryptic habits. Owing to several recent taxonomic and faunal studies on the crustaceans of the deep waters around the western Pacific, our knowledge of stenopodidean shrimp fauna of this region has increased. During the benthic faunal survey around Shikoku, western Japan, conducted by the RV *Hakuho-maru* of the Ocean Research Institute, University of Tokyo, otter trawl samplings were made. At station KH02-3, one male and one ovigerous female specimen of an undescribed species of the genus *Richardina* A. Milne-Edwards, 1881 were collected. Furthermore the benthic faunal survey around the Nansei Islands, southwestern Japan, conducted by the TV *Toyoshio-maru* of Hiroshima University, collected a large number of another undescribed species of *Richardina* among the stations near Amami-oshima Island and Kerama Islands. In addition to their geographical distribution, several morphological characteristics also distinguish these specimens from the other members of the genus.

To our knowledge, these new species are the first representative of the genus found to occur in the Pacific Ocean. The stenopodid genus *Richardina* has been known only from the Atlantic Ocean and Mediterranean Sea by the following two species (Table 1), *R. spinicincta* A. Milne-Edwards, 1881 from depths of 455–1230 m in the North Atlantic, such as the waters off Ireland, Gulf of Gascogne, the Bay of Biscay, and around the Gulf of Mexico (A. Milne-Edwards 1881; Kemp 1910; Holthuis 1946; Zariquiey Alvarez 1968; Goy 1982;