

First-instar Juveniles of Six Caprellids in the Genus *Caprella* (Crustacea: Amphipoda) from the Pacific Coast of Southern Hokkaido, Japan

Takashi Hosono^{1,3}, Hideji Tanaka² and Yasunori Sakurai¹

¹Marine Bioresource Science, Division of Marine Bioresource and Environmental Science, Graduate School of Fisheries Science, Hokkaido University, Hakodate, 041-8611 Japan

²COE for Neo-Science of Natural History, Graduate School of Fisheries Sciences, Hokkaido University, Hakodate, 041-8611 Japan

³Ecologically Related Species Section, Tropical Tuna Resources Division, National Research Institute of Far Seas Fisheries, 5-7-1 Shimizu-orido, Shizuoka, 424-8633 Japan (TH)
E-mail: usujiri3@gmail.com

(Received 21 April 2009; Accepted 14 February 2010)

First-instar juveniles of six caprellid amphipods of the genus *Caprella* are described based on specimens collected from the Pacific coast of southern Hokkaido, Japan: *Caprella acanthogaster* Mayer, 1890, *C. alaskana* Mayer, 1903, *C. bispinosa* Mayer, 1890, *C. cristibrachium* Mayer, 1903, *C. mixta* Mayer, 1903, and *C. mutica* Schurin, 1935. Morphological characters of the juveniles are compared with those of the previously described juveniles of six other species distributed along the northern coasts of Japan. We newly identified traits of the flagellum of antenna 1 and the seta at the base of the gill as diagnostic characters for species discrimination among the 12 species. This study makes it possible to identify first-instar juveniles of the 12 species of *Caprella* occurring in northern Japan.

Key Words: Crustacea, Amphipoda, Caprellidae, *Caprella*, first-instar juvenile.

Introduction

Although 71 caprellid species in the genus *Caprella* (Crustacea: Amphipoda) have been recorded in Japanese waters (McCain and Steinberg 1970; Arimoto 1976; Takeuchi 1999), morphological information on juveniles is rather scarce and, therefore, identification of juveniles is difficult. Takeuchi (1989) described all instars of three caprellid species, *Caprella danilevskii* Czerniavski, 1868, *C. generosa* Arimoto, 1977, and *C. okadai* Arimoto, 1930, and revealed that the diagnostic characters of adults, i.e., the relative lengths of the pereonites and the morphology of the propodus of gnathopod 2, were undeveloped in younger instars, especially the first-instar juvenile. Aoki (1992, 1999) compared the morphology of first-instar juveniles of nine species of *Caprella* and identified seven diagnostic characters for species discrimination.

In this paper, we describe the first-instar juveniles of the following six species based on specimens collected from the Pacific coast of southern Hokkaido, Japan: