



Redescription of the alpheid shrimp *Betaeus levifrons* Vinogradov, 1950 (Crustacea, Decapoda, Alpheidae) from Peter the Great Bay, Russian coast of the Sea of Japan

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Abstract

The originally poorly described alpheid shrimp *Betaeus levifrons* Vinogradov, 1950 is redescribed based on several adult specimens collected in the Vostok Bay (part of Peter the Great Bay) situated near Nakhodka City, about 90 km south-west from the type locality of the species, the Zolotoi Rog Bay, the Sea of Japan. The specimens were collected with the yabby pump from burrows on sandy-gravel bottom and appears to be associated with the burrowing mud-shrimps *Upogebia major* (De Haan, 1841) and *U. issaeffi* (Balss, 1914) (Upogebiidae).

Key words: Crustacea, Decapoda, Alpheidae, *Betaeus*, shrimp, Sea of Japan, Peter the Great Bay, Russia

Introduction

Reviewing the decapod crustaceans of the Russian Far East Dr. L.G. Vinogradov (1950) described two alpheid shrimps, *Betaeus levifrons* Vinogradov, 1950 and *Betaeus vladivostokensis* Vinogradov, 1950, from the Zolotoi Rog Bay, Vladivostok City, the Sea of Japan. Both species have never been reported since the original description and moreover their type material was possibly lost. Descriptions of both species provided by Vinogradov (1950) are inadequate for modern standard (see Vinogradov 1950: 198, figs. 31, 32); nevertheless it is possible to recognize some diagnostic features of both species. *Betaeus levifrons* is undoubtedly a species belongs to the genus *Betaeus* Stimpson, 1860 and probably distantly related to *B. granulimanus* Yokoya, 1927. On the other hand, *Betaeus vladivostokensis* clearly belongs to *Alpheus* Fabricius, 1798 having a distinct rostrum and swollen orbital hoods (Nomura & Komai 2000).

A shallow-water sampling with a bait suction pump (yabby pump) produced several mature individuals of *Betaeus levifrons* near the scientific station “Vostok” of the Institute of Marine Biology, in the Vostok Bay, near Nakhodka City, about 90 km south-west from the type locality of this species, the Zolotoi Rog Bay. The specimens were extracted from burrows of *Upogebia* spp. shrimps on sandy-gravel bottom. This finding represents the only record of *B. levifrons* since its original description by Vinogradov (1950). Therefore, a complete redescription and new figures of *B. levifrons* are provided here. Carapace length (cl, in mm) and total body length (tl., in mm) is used as a standard measurement of size. The material is deposited in the Museum of the Institute of Marine Biology (MIMB), Vladivostok, Russia, Laboratory of Ecology and Morphology of Marine Invertebrates of A.N. Severtzov Institute of Ecology and Evolution (LEMMI), Moscow, Russia and the National Taiwan Ocean University (NTOU), Keelung, Taiwan.

Systematic part

Family ALPHEIDAE Rafinesque, 1815