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Ecological remarks and re-description of the hermit crab-associated pleustid amphipod *Pleusymtes japonica* (Gurjanova, 1938) (Crustacea: Amphipoda: Pleustidae: Pleusymtinae) from the Russian coasts of the Sea of Japan

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Abstract

Numerous specimens of poorly known pleustid amphipod *Pleusymtes japonica* (Gurjanova, 1938) (Crustacea: Amphipoda: Pleustidae: Pleusymtinae) were found in association with large hermit crab *Pagurus ochotensis* Brandt, 1851 (Crustacea: Decapoda: Paguridae) near Furugelma Island in the Sea of Japan. This is the first report of the species in association with hermit crabs. Amphipods were found living close to the shell aperture and hermit crab feeding appendages. Color photographs, remarks on ecology and re-description of the species are given.

Key words: Crustacea, Amphipoda, Pleustidae, Pleusymtinae, *Pleusymtes*, association, Decapoda, Anomura, hermit crabs, the Peter the Great Bay, Sea of Japan, Russia

Introduction

Gammaridean amphipods of the family Pleustidae (Crustacea: Amphipoda: Gammaridea) are widely distributed in the Northern Pacific as well as in other regions of the Northern Hemisphere (Barnard, 1969; Bousfield & Hendrycks, 1995). The genus *Pleusymtes* J.L. Barnard, 1969 belongs to the subfamily Pleusymtinae which currently contains 9 genera. Representatives of the subfamily are mainly free-living species (e.g. Gurjanova, 1951; Barnard & Given, 1960; Ishimaru, 1985; Bousfield & Hendrycks, 1995) but some of them are known as participants of associations with large marine invertebrates, for example deep-water gorgonarians (*Pleusymtes comitari* Myers & Hall-Spencer, 2004 (Myers & Hall-Spencer, 2004) and *Pleusymtes symbiotica* Gamo & Shinpo, 1992 (Gamo & Shinpo, 1992)).

Sympleustes japonicus Gurjanova, 1938 was described from sea grass biotopes near Petrova Island, the Sea of Japan, at the depth of 6–62 meters (Gurjanova, 1938). Since the original description given by Gurjanova (1938) and later re-publishing of the same illustrations (Gurjanova, 1951) the species has been never mentioned in scientific literature. Barnard (1969) transferred *Sympleustes japonicus* Gurjanova, 1938 to the genus *Pleusymtes* J. L. Barnard, 1969 which was proposed to replace some species from the genus *Sympleustes* Stebbing, 1899 synonymized under the name *Stenopleustes* Sars, 1895 (Barnard, 1969).

During the survey of the diversity of hermit crabs and their symbiotic assemblage at the Peter the Great Bay, the Sea of Japan, numerous associated amphipods were collected (see Marin & Sinelnikov, 2012). Careful morphological examination of associated amphipods showed that one of the most colorful and numerous associated species found is pleustid *Pleusymtes japonica* (Gurjanova, 1938) which is re-described herewith. The examined material is deposited in the Laboratory of Ecology and Evolution of Marine Invertebrates of A.N. Severtzov Institute of Ecology and Evolution of Russian Academy of Sciences (LEMMI). Body length (bl., in mm), the dorsal length from tip of rostrum to the tip of telson, is used as standard measurement of the size.