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Review of amphipods of the *Melita* group (Amphipoda: Melitidae) from the coastal waters of Sakhalin Island (Far East of Russia).

II. Genera *Quasimelita* Jarrett & Bousfield, 1996 and *Melitoides* Gurjanova, 1934

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Abstract

Based on new material, three new species of the genus *Quasimelita* are described: *Q. tolyza* sp. nov., *Q. jarrettii* sp. nov. and *Q. serraticoxae* sp. nov. from northern shelf of Sakhalin Island and contiguous area. The new species of the genus *Melitoides*, *M. kawaii* sp. nov. is described from north-east shelf of Sakhalin Island. Keys to the world species of genera *Quasimelita* and *Melitoides* are provided. Cladistic analysis of morphological relationships within genera *Quasimelita* and *Melitoides* are implemented.

Key words: new species, taxonomy, cladistic analysis, North Pacific

Introduction

Review of amphipods of the *Melita* group from the shelf waters of Sakhalin Island was given by Labay (2013). The list of the *Melita* group in the Russian Far East coastal waters included three species of genera *Melitoides* and *Quasimelita*: *Melitoides makarovi* Gurjanova, 1934, *Quasimelita quadrispinosa* (Vosseler, 1889) (as *Melita quadrispinosa*: Gurjanova 1951; Kudrjaschov 1972), *Q. formosa* (Murdoch, 1885) (as *Melita formosa*: Gurjanova 1951; Kudrjaschov 1972).

In this paper we report on the genus *Quasimelita* which includes five species from the shelf waters of Sakhalin Island, with three of them being new to science, and on the genus *Melitoides* which includes two species from the coastal waters of Sakhalin Island, with one new species.

Material and methods

The material examined was collected from bottom ground of the Sakhalin Island's water area (shelf and continental slope) in various expeditions from research vessels "Dmitry Peskov" and "Pavel Gordienko" in 2008–2013. The specimens were dissected under a stereoscopic microscope and their appendages and mouth parts were mounted in glycerol gel slides. Illustrations were made under an optic microscope with digital photo camera DCM-500 and digitally prepared, following a protocol based on Coleman (2003). All the type material is preserved in ethanol 70% and it is housed at the Crustacea Collection of the Zoological Museum of Far East State University, Vladivostok.

Setae definitions are based on Watling (1989). SEM images of surface sculpture were produced using a JEOL Neoscope JCM-5000 SEM on pre-dissected alcohol-dried material, coated with gold.

The analysis of morphological relationships between species within the genera *Quasimelita* and *Melitoides* is based on superficial characters and character states, as outlined in Table 1. The directions of evolutionary changes of characters from plesiomorphic to apomorphic were identified for genera *Quasimelita* and *Melitoides* in

adjacent aquatories of the Arctic Ocean and the Pacific Ocean and further into the North Atlantic. The settlement of genera was accompanied by the formation of new species.

Q. formosa probably descended from the ancestral species of *Quasimelita* (similar to the modern *Q. tolyza*) and has spread widely throughout the Arctic Ocean and the North Pacific. The other direction of evolution has produced *Q. serraticoxae* and *Q. quadrispinosa*. *Q. quadrispinosa* has spread widely throughout the Arctic Ocean and the North Pacific. *Q. abyssorum* descended from it in the northern Atlantic Ocean and *Q. jarettii* evolved from it in the Asian North Pacific.

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