



## A new species of *Halisarca* (Demospongiae: Halisarcida) from the Sea of Okhotsk, North Pacific

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### Abstract

A new species of sponge without skeleton, *Halisarca korotkova* **sp. nov.** is described from the Sea of Okhotsk. It differs from the other species of *Halisarca* by its different ecological conditions, as well as by its morphology and histology. The new species is characterized by its fulvous colour and by its big nucleolated, eosinophilic microgranular cells (18.7×9.5 to 10.8×7.1 µm) concentrated mainly in the ectosomal part of sponge in aggregates up to 40 µm in diameter.

**Key words:** Taxonomy, Porifera, *Halisarca*, new species, Sea of Okhotsk, NW Pacific

### Introduction

The order Halisarcida contains one family, the Halisarcidae Schmidt, 1862, and one genus, *Halisarca* Johnston, 1842. No clear affinities with other orders of Demospongiae can be inferred by its morphology (Bergquist & Cook 2002) and embryology (Ereskovsky & Gonobobleva 2000; Ereskovsky 2004). Sponges belonging to this group are often small, fragile and always lack spicules and fibrous skeleton, making them difficult to identify. Attempts to define species of *Halisarca* by morphological features have led to a confusing multiplicity of species names (Bergquist 1996). However, more suitable methods for characterization of species in this genus are histological, ultrastructural and embryological (Lévi, 1956; Chen 1976; Vacelet & Donadey 1987; Bergquist 1996; Bergquist & Kelly 2004).

The genus *Halisarca* is represented by 12 valid species known from different oceans around the world (Table 1). Within the Pacific basin, three species have been described from the Indo-Pacific (de Laubenfels 1954; Bergquist & Kelly 2004) and one from the northeastern Pacific (de Laubenfels 1932; Muricy & Pearse 2004). However, there are no previous records of the genus in the northwestern part of the Pacific. This paper describes *Halisarca korotkova* **sp. nov.**, the first record of the order Halisarcida from the NW Pacific region.

### Material and methods

Specimens were collected with a benthic trawl during a cruise of the trawler “Novoulyanovsk” in October 1984. Collection sites are shown in Fig. 1. Specimens were transferred into Bouin solution shortly after collection. Tissue fragments for light microscopy were dehydrated through an ethanol series, placed in a celloidin-castor oil mixture and then in chloroform and embedded in paraffin. Sections six µm in thickness were mounted on glass slides and stained with Mayer's hematoxylin-eosin and Heidenhein's hematoxylin-eosin.

Type material has been deposited in the Zoological Institute of Russian Academy of sciences.