

The benthic harpacticoids (Crustacea, Copepoda) of Budakskyi (Shabolatskyi) Lagoon, North-West coast of the Black Sea, Ukraine

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Abstract. The present study gives new data on a poorly studied group of brackish harpacticoids from the North-West coast of the Black Sea, Ukraine. Seven harpacticoids species (Crustacea, Copepoda) collected in July 1988 from the Budakskyi (Shabolatskyi) Lagoon are reported.

Key words: Harpacticoida, Budakskyi Lagoon, Ukraine.

Introduction

There are 21 lagoons in the Northwest Black Sea Coast between the Danube River and the Dniro River, covering 5 km². They merge into two main groups - Dunavsko-Dnestrovska and Dnestrovsko-Dneprovska Group (Fig.1). All lagoons are separated from the Black Sea.

The lagoons of the Northwest of the Black Sea are distinguished by their origin and present conditions of development.

The Budakskyi (Shabolatskyi) Lagoon (Fig.1) (45°59'45"N 30°21'05"E) is part of the Danube-Dniester lagoons and is located in the Odessa region. The lagoon is 17 km long, 1.5 km wide and has an area of 3200 ha. It is separated from the sea by sand stripe of about 18 km length and 80 to 200 meters width. The depth rarely exceeds 2.2-2.5 m (average 1.1 m). The temporary connection to the sea is via the "Budaki" canal in the South-West. The connection to the Dniester Lagoon is provided by the Bugaz-1 and Bugaz-2 canals.

In the north-eastern part, it is desalinated with groundwater (Salinity -2-14‰); the south-western and central parts are saline (Salinity 15-32‰). In the summer, the water of the lagoon warms up to 26-28°C.

Material and Methods

Samples were collected from the sand bottom of the Budagskyi Lagoon along the whole length of the basin, with the help of the Peterson dredger D-0.025 m³ (Fig.2). A total of 10 samples were collected (5 and 9 July 1988). The samples from the bottom sediments are treated with a set of sieves by water washing. The specimens were fixed in 70% of ethanol for long term storage. The specimens were mounted temporarily in a mixture of glycerine and ethanol and were identified according Apostolov & Marinov (1988), Huys & Boxshall (1991), Lang (1948), Wells (2007) and relevant literature. Dissected specimens were mounted on slides in glycerol and sealed with clear nail polish.

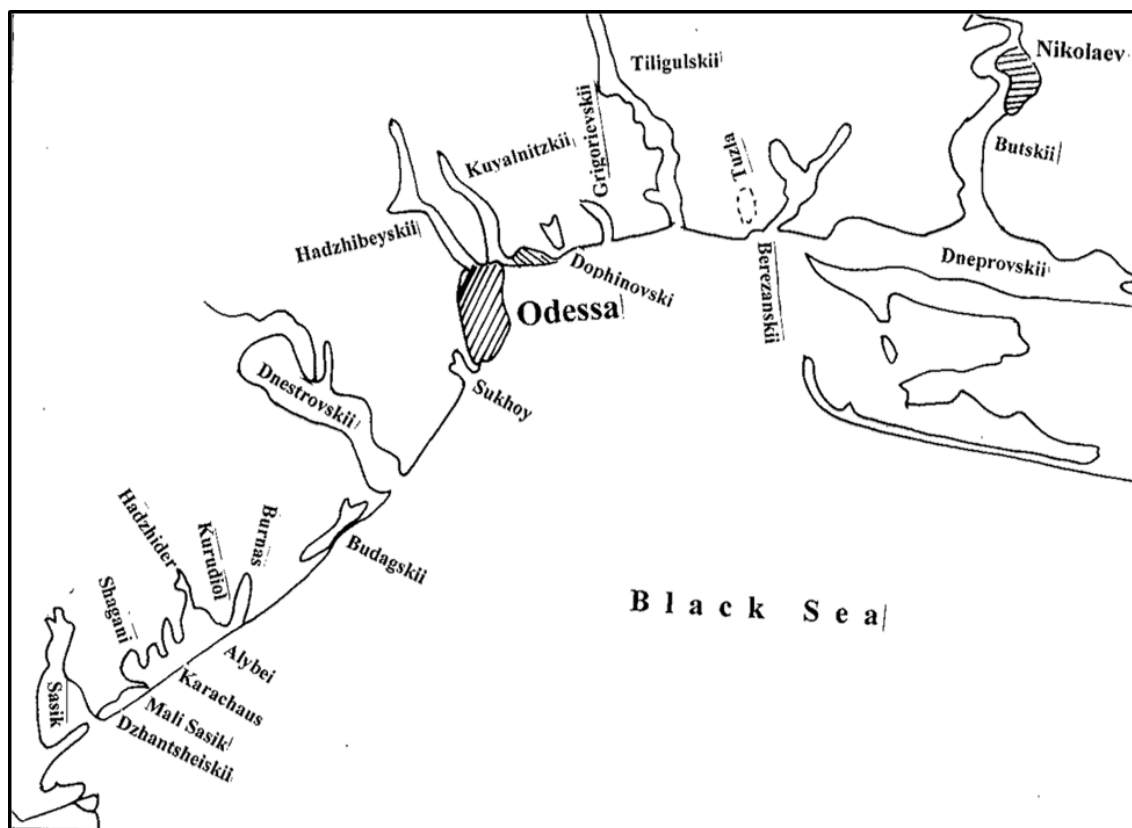


Fig. 1. Location of the lagoons along the North-Western Black Sea Coast.

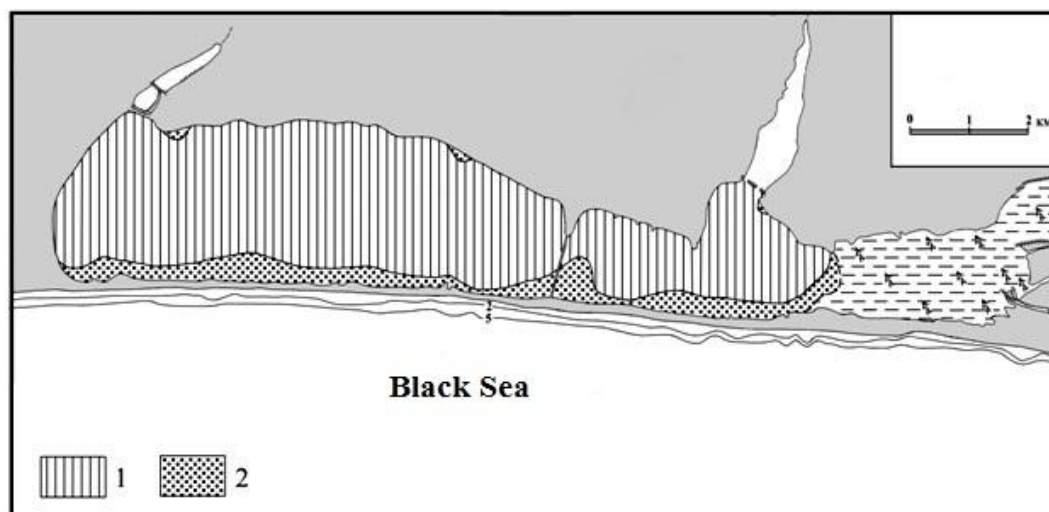


Fig. 2. Distribution of bottom substrate in Budagskyi lagoon. Legend: 1 – silt, 2 – sand.

Results and Discussion

The examined specimens of harpacticoids belong to 7 species from 6 genera and 5 families. Only family Ameiridae is represented by 2 species, all other families are represented by one species.

Order HARPACTICOIDA Dana, 1846

Family Ameiridae Monard, 1927

Subfamily Ameirinae Monard, 1927

Genus *Ameira* Boeck, 1865

***Ameira parvula* (Claus, 1866)**

Material examined: 5 ♀♀. Habitats: Marine coastal waters, sandy bottom.

Genus *Nitokra* Boeck, 1865

***Nitokra typica typica* Boeck, 1865**

Material examined: 2 ♀♀. Habitats: Sandy bottom.

Family Canthocamptidae Brady, 1880

Genus *Mesochra* Boeck, 1865

***Mesochra rapiens* (Schmeil, 1894)**

Material examined: 4 ♀♀, 2 ♂♂. Habitats: Sandy bottom.

Family Canuellidae Lang, 1944

Genus *Canuella* T. & A. Scott, 1893

***Canuella perplexa* T. & A. Scott, 1893**

Material examined: 1 ♀. Habitats: sandy bottom, brackish waters, springs, rivers, lakes.

Family Harpacticidae Dana, 1846

Genus *Harpacticus* Milne Edwards H., 1840

***Harpacticus littoralis* Sars G.O., 1910**

Material examined: 10 ♀♀, 2 ♂♂. Habitats: Sandy bottom.

***Harpacticus flexus* Brady & Robertson, 1873**

Material examined: 2 ♀♀. Habitats: Sandy bottom.

Family Laophontidae T. Scott, 1904

Genus *Heterolaophonte* Lang, 1948

***Heterolaophonte stroemii stroemii* (Baird, 1837)**

Material examined: 5 ♀♀, 2 ♂♂. Habitats: Sandy bottom.

Of the 21 lagoons along the North West coast of the Black Sea, in four of the lagoons the species composition of harpacticoids has been studied (Garlitska, 2000, 2004, Stahorskaia, 1970). Five species of harpacticoids are found in the Sukhoi Lagoon, and in the Great Adzhalikskiy (Dofinovskiy) Lagoon; 27 species in the Little Adzhalikskiy (Grigorievskiy) Lagoon and 21 species in the Tiligunskiy Lagoon. The Budakskiy Lagoon ranks third in number of species (7) after the lagoons of Sukhoi and Great Adzhalikskiy (Dofinovskiy). The established species of harpacticoids in the lagoons along the North West coast of the Black Sea are part of the meiobenthos fauna of the Black Sea.

For the first time *Mesochra rapiens* (Schmeil) and *Heterolaophonte stroemii stroemii* (Baird) are reported for lagoons in the north-western part of the Black Sea.

The *Canuella perplexa* occurs only in three of the lagoons - the Sukhoi Lagoon, the Little Adzhalikskiy (Grigorievskiy) Lagoon and the Budakskiy Lagoon. The *Harpacticus flexus* is a common species for the Sukhoi Lagoon, Tiligunskiy Lagoon, Little Adzhalikskiy (Grigorievskiy) Lagoon and Budakskiy Lagoon, and the *Nitokra typica typica* is found only in

the Little Adzhalikskiy (Grigorievskiy) Lagoon and the Budakskiy Lagoon. The species *Ameira parvula* is found in the Little Adzhalikskiy (Grigorievskiy) Lagoon and Budakskiy Lagoon.

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