

TAXONOMIC COMPOSITION OF BENTHIC DIATOMS (BACILLARIOPHYTA) FROM TWO MARINE LAKES ON THE ISLAND OF MLET (ADRIATIC SEA, CROATIA): PRELIMINARY RESULTS

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The marine lakes, Malo and Veliko Jezero ("Little" and "Big" Lakes), are one of the first established marine reserves in the world. In fact, they are two karstic basins on the island of Mlet which are filled by the holocene ingression of the Adriatic Sea. The lakes with the surrounding area have been protected under the category of the National Park since 1960. The aim of the study was to determine the species composition and abundance of benthic diatoms in two marine lakes. Knowledge of the diatom community structure in the marine protected areas is important for marine ecology and conservation biology. Samples were taken from two stations (Malo jezero - 42° 46' 58" N 17° 20' 56" E at 1 m depth; Veliko jezero - 42° 46' 57" N 17° 21' 06" E at 8 m depth) during April 2011. Samples were fixed in a 4% formalin solution and prepared for investigation by cleaning frustules using the method described by Hustedt (1930). Examination and identification of benthic diatoms were carried out using the oil immersion lens (100 x) of the Microstar binocular microscope, AO Scientific Instruments. Samples were also studied by means of scanning electron microscopy. Photomicrographs were taken for the majority of taxa. Altogether, 96 taxa included in 33 genera were identified. Among them, 60 taxa were found in Veliko jezero and 59 in Malo jezero. Sørensen similarity index of 37% indicated that diatom community of two lakes was highly distinct. The largest number of taxa was found within the genera *Mastogloia* (11), *Amphora* (10), *Diploneis* (10) and *Nitzschia* (7). This work reports the first records of benthic diatoms in the lakes. The unique situation of marine lakes within a karstic system made it possible to get valuable new information about Adriatic sea diatoms.