

BACTERIOPLANKTON OF WATER-BODIES IN THE LOWER DNISTER BASIN

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Bacterioplankton is among the most important components of aquatic ecosystems as organic matter microbiological transformation is one of the main self-purification and natural water quality formation processes. Regional Centre for Integrated Monitoring and Ecological Studies, Odessa National I. I. Mechnikov University, has been carrying out field surveys in the Lower Dnister basin since 2003. One of activities during surveys is observation of bacterioplankton spatial distribution and seasonal dynamics of its number and biomass in all main water-bodies in the area: Kuchurganskiy Liman (estuary), Rivers Dnister and Turunchuk, lakes Beloye, Svinoye and Tudorovo, as well as the Dnistrovskiy Liman (estuary). Besides, there are three points monitoring of the Dnister and Turunchuk Rivers where observations of bacterioplankton quantitative characteristics are carried out all year round.

Analysis of regularities of bacterioplankton spatial distribution in the Lower Dnister basin shows quite stable trends over all the years of studies. The highest bacterial number $(7-14) \cdot 10^6$ cells ml⁻¹ is characteristic of south-western part of the Dnistrovskiy Liman and the upper reaches of the Kuchurganskoye Reservoir. In their turn, the lowest numbers of bacterioplankton $(2-4) \cdot 10^6$ cells ml⁻¹ are observed in the river waters. Seasonal changes of bacterioplankton quantitative characteristics in the rivers Dnister and Turunchuk have shown that maximal values of its number are reached in August - September. At this period development of cyanobacteria belonging to genus *Aphanothece* is registered in the waters of Dnister, which causes «algal blooms». At that, it should be pointed out that the heaviest «algal blooms» are annually observed in the upper part of the Kuchurganskoye Reservoir, where cyanobacteria of genera *Pseudanabaena* and *Microcystis* are intensively developing.

Analysis of bacterioplankton dynamics for many years had shown that average number of bacteria in the Dnister River and the Dnistrovskiy Liman did not change significantly in the last eight years. According to ecological classification of inland surface waters quality (Romanenko, 1988) waters of the Dnister River are eutrophic, and according to their cleanliness they belong to category «weakly polluted» or «moderately polluted» depending on the season. In its turn the Dnestrivskiy Liman



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water area is characterized by high quantity of bacteria, which indicates the category «polluted» natural waters. At that, at the south-western bank of the Liman quantity of bacteria reach every summer the level of hypertrophic waters which, according to their cleanliness, refer to «heavily polluted».