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STUDY OF LAKE FUNGI BIODIVERSITY IN FROM THE *LA IZVOR* LAKE (CHISINAU MUNICIPALITY)

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Fungi (mushrooms) are indispensable components of biota in any ecosystem. In aquatic environments, fungi belong to important microbial communities for organic decomposition, nutrient cycle and energy flows and play important roles in the dynamics of the trophic network of freshwater ecosystems. Fungi are among the least studied groups of aquatic microorganisms, so the aim of the research was to study the biodiversity of fungi in Lake Izvor.

247 strains of fungi isolated from samples taken from La Izvor lake (water, silt, and biofilm) were studied. For the isolation of fungi, 5 agar media were used (Czapek: Sabourand, Malt - agar, Agar - nutritious, Raistrik), specific for the growth of filamentous fungi.

The highest fungal biodiversity was detected in the silt samples (87 strains), then in the water samples (85 strains), and the least in the biofilm samples (75 strains).

The cultural and morphological features of the isolated fungal strains were studied. As a result of the research, representatives of 18 genera of fungi were found, these being: *Penicillium*, *Aspergillus*, *Trichoderma*, *Alternaria*, *Fusarium*, *Botrytis*, *Monilinia*, *Mucor*, *Rhizopus*, *Acremonium*, *Cladosporium*, *Trichocladium*, *Phoma*, *Chaetomium*, *Stachybotrys*, *Talaromyces*. In all studied samples, the most common genera of filamentous fungi proved to be *Penicillium* and *Aspergillus*, followed by the genera *Trichoderma* and *Alternaria*. Together these genera represent about 90% of the total number of isolated strains. It was found that depending on the place of isolation, the representatives of the genus *Penicillium* predominate in the water, and in the silt, and biofilm samples – the representatives of the genus *Aspergillus*.

The obtained results showed that, from the genus *Penicillium*, the species predominates: *P. verrucosum* and *P. corylophilum*, from the genus *Aspergillus* predominates *A. niger* followed by *A. flavus* and *A. fumigatus*. *Trichoderma* strains belonging to the species were found: *viride*, *harzianum*, *atrobrunneum*, *simmonsii*, *longibrachiatum*, etc. *F. oxysporum* and *F. moniliforme* predominate among the species found in the genus *Fusarium*. Most of the isolated silt strains were *Aspergillus niner* and *Alternaria*.

The data obtained are in accordance with the data in the literature which states that freshwater predominates filamentous fungi of the genera *Penicillium*, *Aspergillus*, *Alternata*, which contribute to the breakdown of organic matter, nutrient cycle, and energy flows.

Keywords: fungi, biodiversity, La Izvor lake.