

# Long-Term Changes of Zooplankton and Dynamics of Eutrophication in the Polluted System of the Struma River – Pchelina Reservoir (South-West Bulgaria)

Dedicated to the memory  
of Prof. Dr. Sc. Weselin Naidenow

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**Abstract:** The qualitative and quantitative parameters of zooplankton in the Struma River – Pchelina Reservoir system and the ecotone zone between them are compared for the periods 1990-1992 and 2001-2003. The effects of transition from lotic to lentic conditions and the anthropogenic impact on the formation of zooplankton communities were investigated. During the first period the reservoir was a typical mesotrophic water body. More than 15 zooplankton species, that were present during 1990-1992, could not be found in 2001-2003. They are all pelagic elements. The number of species found only during the second period was 36. All of them are characteristic of eutrophic water bodies. Significant changes in the quantitative parameters of zooplankton were established in all parts of the system. The values of species diversity indices also have changed significantly in a way which suggests that the process of eutrophication has advanced.

**Key words:** river-reservoir ecotone, zooplankton, eutrophication, self-purification