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SPECIES DIVERSITY OF PLANKTONIC ROTIFERS IN LOTIC ECOSYSTEMS: A CASE OF STUDY OF DANUBE, SFÂNTU GHEORGHE BRANCH

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Abstract

Rotifers are known as cosmopolitan organisms, found in high density in most waters, often representing the dominant group in terms of species diversity and abundance in the zooplankton community. Since the functionality of an ecosystem is closely related to the diversity of communities, analysis of rotifers assemblage may be a useful tool in understanding the mechanisms of the spatial and temporal changes on this level. Data were collected from 2008 until 2010, in distinct areas of Danube, Sfântu Gheorghe branch with different degrees of human impact. Sfântu Gheorghe river branch has distinct features conferred by the construction of new canals and cutting off the meanders. Due to these regularization changes, a complex of ecosystems with different features resulted. The impact of engineering may determine a reduction in species diversity and abundance in the new ecosystems. The canals of Sfântu Gheorghe branch presented the lowest value of the species richness and diversity indices in comparison with the other two areas. The constant species belong to *Brachionus*, *Keratella*, *Asplanchna*, *Synchaeta* genus. The branch environmental conditions allow the development loricate species and soft-bodied type, the dominant species belonging to Brachionidae family. This study reveals a close resemblance between natural sectors and meanders in terms of diversity and abundance of the rotifer assemblage. Opposites, in the newly created canals, the species richness and abundance registered a decreasing reflecting the impact of human interventions on the ecological system.

Key words: lotic ecosystems, richness estimators, river engineering, rotifers, species diversity

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