Taxonomic Composition and Dominant Structure of Macrozoobenthos in the Blagoevgradska Bistritsa River

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Abstract: The Blagoevgradska Bistritsa River is one of the main tributaries of the Struma River and the basic water source of the city of Blagoevgrad. A contemporary assessment of its ecological condition was made based on complex morphometric, hydrometric, physical-chemical, and hydrobiological studies carried out in 2002 and 2003. The taxonomic composition was determined and the dominant structure of the macrozoobenthic communities is commented in this paper. Totally for the river during the whole period of investigation 236 benthic animals taxa are reported. Eighty seven of them (57 species, 24 genera and 6 families) were found for the first time for the river fauna. A hundred and two taxa were not detected in comparison with previous periods. Species typical of the upper river courses (high flow velocity, low temperature and high dissolved oxygen content) Baetis alpinus, B. muticus, Ecdyonurus epeorides, E. sylvicola, Nemoura sp. or eurybiontic species as B. rhodani and Chironomus gr. riparius had the highest frequency and degree of dominance in 2002 and 2003.

Key words: Blagoevgradska Bistritsa River, macroinvertebrate benthic fauna, dominant species.

Introduction

Hydrobiological studies of the Blagoevgradska Bistritsa River were carried out in the period 1970-1981 and in 1999. Some of them concerned the river invertebrate fauna composition. Kovatchev (1976) reported 12 species from the Simuliidae family (Diptera) found in the river. The populations of some species – Epeorus sylvicola (Natschev 1979) and Crenobia alpina (Natchev 1983) as well as the species composition of some macrozoobenthic groups – Chironomidae family (Diptera) (Natchev 1983a, Stoichev, Chernev 2001) and Oligochaeta class (Uzunov, Natchev 1984) were studied. Data about the composition of the macroinvertebrate communities from the lower river course are included in Natchev’s publication (1982). He reported 23 species from Ephemeroptera order, 12 taxa from Plecoptera and 11 – from Trichoptera order.

Complex morphometric (Michailov, Sakelarieva 2006), hydrometric, physical-chemical (Sakelarieva, Janeva 2006) and hydrobiological studies (Sakelarieva, Janeva 2005) of the river were carried out in 2002 and 2003. The taxonomic com-