

Fish Community Structure and Water Quality Assessment of Babuna River

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Abstract: Nowadays, intensive investigations of the fish fauna from the flowing water in Republic of Macedonia are carry out. The purpose of this study was to assess longitudinal variation of species composition and community structure of ichthyofauna from the Babuna River, as well as assessment of the ecological status of the river based on the fish fauna. During the summer 2010, a total of 2510 fish samples were catch. The obtained results showed presence of 17 fishes which belong to 4 families. Thirteen of them are autochthones, while 4 of them are allochthonous species (*Oncorhynchus mykiss*, *Pseudorasbora parva*, *Carassius gibelio* and *Oxyneomacheilus bureschi*). The highest diversity was occurred at Cyprinidae, presented by 11 species. The others families such as Salmonidae, Nemachelidae and Cobitidae were founded by 2 species. *Alburnoides bipunctatus* (43.3%) and *Barbus balcanicus* (30.3%) were dominant species of ichthyofauna in whole river body, while the *Squalius vardarensis* (8.53%) was subdominant. The other species were presented of minimum percentage but with their presence increased the general diversity of fish fauna. Following WFD requirements and previous experience, the water quality assessment using European Fish Index (EFI) was done. The obtained EFI values indicate good water quality along the Babuna River. Possible source of pollution along the Babuna River are discussed, too.

Keywords: *fish, water quality, EFI, Babuna River, R. Macedonia*

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