

Some Ecological Analyzes of Benthic Fauna of Osumi, Devolli and Shkumbini River during Summer- Autumn 2011[#]

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Abstract: Albanian functional freshwater ecosystems are essential elements of human life in many aspects which needs to be more recognized. Benthic macro-invertebrates, based on EU Water Framework Directive, are an important group of bio-indicators used to assess freshwater quality. Our study was focused on three Albania Rivers (Osumi, Devolli and Shkumbini), during 2011. The purpose of this study was to indentify the biodiversity of benthic macro-invertebrates of Osumi, Devolli and Shkumbini Rivers in Albania and their water quality status based on benthic macro-invertebrates. A river substrate is a micro-mosaic that offers microclimatic conditions for a wide range of organisms. Osumi, Devolli and Shkumbini Rivers in Albania based on their typology of their watershed and on the impact of anthropogenic factor, represents different and very specific freshwater environments. During this study we indentified 3519 organisms that belong to three phylas (Arthropoda, Annelides, Mollusca), four classes (Insecta, Oligochaeta, Hirudinea, Gastropoda), and 31 families (*Ephemerellidae*, *Baetidae*, *Heptagenidae*, *Caenidae*, *Leuctridae*, *Perlodidae*, *Perlidae*, *Hydropsychidae*, *Hydroptilidae*, *Glossosomatidae*, *Philopotamidae*, *Uenoidae*, *Rhyacophilidae*, *Gomphidae*, *Calopterygidae*, *Chironomidae*, *Ceratopogonidae*, *Tipulidae*, *Simulidae*, *Tabanidae*, *Empididae*, *Ptychopteridae*, *Culicidae*, *Hydrophilidae*, *Elmidae*, *Agriotypidae*, *Haplotaxide*, *Erpobdellida*, *Physidae*, *Planorbidae*, *Lymnaeidae*). Group EPT (*Ephemeroptera* - *Plecoptera* - *Trichoptera*) (insect) constitutes 41.9% of the total number of families. The highest values dominances (*Ed*) were expressing at Osumi River with 4 specie, while highest values of Constant (*Ec*) we examined at Osumi River with 5 specie. Based on this data we can say that Osumi, Devolli and Shkumbini Rivers in Albania, has a high level of biodiversity.

Keywords: *Macro-invertebrates, Benthic, Biodiversity, Dominance, PSC.*

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