

TROPHIC STRUCTURE OF THE MACROZOOBENTHOS IN NATIVE AND INFLUENCED FRESHWATER ECOSYSTEMS

(Summary of PhD-Thesis)

The work presents trophic structure of the bottom benthic communities in different categories, types and anthropogenic influence of freshwater bodies, such as taxonomic composition, proportional, distribution and bio-indicative potential of Functional Feeding Groups/FFG (Shredders, Scrapers, Collectors, Filterers, Deposit feeders and Predators). In Bulgaria the beginning of targeted researches on the trophic structure of macrozoobentos was given after 2005 in the scientific materials of Varadinova *and al.* In our environmental conditions this topic is poorly studied. At the same time, this problem is relevant and essential theoretical and practical importance of hydro-biological research, because it provides an opportunity to develop a functional approach.

Trophic structure has been analyzed in several aspects: depending on the river continuum, on the type of water body, on the type and strength of the anthropogenic impact (or its absence), on the seasonality. The survey also contains information about the effects of environmental factors on FFG, such as water temperature, pH, conductivity, oxygen indices, nutrients, altitude and at the same time - an overview of the complementarity of their influence on the trophic structures.

Also, was analyzed a subgroup restructuring of taxonomic composition at different FFG along the river and by anthropogenic pressures, such as similarity in the trophic structures by FFG. It was analyzes the tolerance of different taxa in FFG, based on comparing between percentage ratio of FFG density by Indicators Group by Biotic Index.

It was considered the ecological status of the studied points of the rivers, lakes and reservoirs. Also was approbating a modified version of the trophic index to assess the ecological status, which gives weight to the length of individuals/taxa (size RETI-PETI).

The dissertation represented composition of trophic structure in different types lentic and lotic water bodies and the similarity in the trophic structure between different types. Special attention was paid to the taxonomic composition and the ratios between FFG at referent conditions.