

Abstract

Streams are an important part of the most ecosystems, they help them to maintain their stability and function. They should therefore be the subject of study and especially protection. For their monitoring and assessment of ecological status is increasingly used biomonitoring of benthic fauna, which well reflects the biotic and abiotic conditions in physical habitats of streams. These abiotic conditions of physical habitats which are shaped by physical and chemical factors are the subject of literature search part of this work.

The second part is about the research in experimental catchments of Zbytinský brook and Tetřívčí brook, tributaries of headwater Blanice river which springs in the foothills of the Šumava mountain range. The research took place on 5 sampling sites which are different in hydromorphological parameters and rate of human activities impact. There was assessed water quality following the previous research and its relationship with discharge conditions. In the case of Tetřívčí brook, there was also assessed physical habitat and macrozoobenthic community.

Zbytinský brook catchment was in the past significantly affected by agricultural activities. The main reach, which flows through Zbytiny village with 300 inhabitants, and its tributaries were meliorated. The only one tributary (Sviňovický brook) was restored in the last decade. The most of streams in this experimental catchment is therefore hydromorphologically modified and anthropogenically influenced. The impact on water quality has demonstrably sewerage plant of Zbytiny village. Tetřívčí brook catchment on the other hand is a near-natural location, which in the past was not too affected by agriculture. Hydromorphology and water quality is here in comparison with Zbytinský brook catchment better. Good results achieved Tetřívčí brook also in terms of settlement of macrozoobenthos and quality of physical habitat around the sampling site.