
DAMS AND AQUATIC INVERTEBRATES

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The construction of water dams fundamentally changes nature and landscape not only in the flooded areas but also out of them, including all structures and links and leading to habitat loss. Three characteristically different South Moravian water reservoirs – the Vranov Dam, the Brno Dam and system of water reservoirs of Nové Mlýny have been studied in the project “Submerged cultural and natural heritage of South Moravia” (DF13P01OVV012) supported by the Ministry of Culture of the Czech Republic. There were specific aquatic habitats linked to the water regime of the landscape in the areas beneath the water of present-day reservoirs. Those have disappeared on the submerged areas however some types are still present nowadays in the near or wider area. Logically, changes in the habitats resulted in changes of aquatic biocenoses.

The objective of the study was to document environmental impact of water dam constructions and reservoirs on different types of aquatic habitats and benthic macroinvertebrate species. The result is an overview of strategies and model responses of benthic macroinvertebrate to such environmental change.

The analysis has shown that the most impacted type of water habitat is a lowland river biotopes and fauna specially bound to the lowland rivers. The species of *Ephemerella mesoleuca* and *Isonychia ignota*, which had the last living population in the Czech Republic in today's system of water reservoirs of Nové Mlýny, became extinct altogether with suitable biotopes loss in the Czech Republic. Mayfly *Ephoron virgo*, a critically endangered river species, inhabits one of the last areas in the Czech Republic in the study areas. Periodic pools were found as a heavily impacted type of water habitat, fauna inhabits vernal periodic pools, mainly large branchiopods, is endangered.