

ABSTRACT

In association with nearly a decade of limnological research in the Brdy Mts and long-term monitoring of the headwaters in the Slavkov Forest and the Jizera Mts, a hydrobiological study aimed at the macroinvertebrate community structure of these sites was performed. Samples of water for chemical analysis and samples of macroinvertebrates were sampled from two streams in each region: one of them was strongly acidified (pH < 4,6, R-Al > 500 $\mu\text{g l}^{-1}$), and one was a less-acidified reference site (pH > 5, R-Al < 250 $\mu\text{g l}^{-1}$).

Characteristic macroinvertebrate organisms in the strongly acidified streams were larvae of the stoneflies *Leuctra nigra*, *Nemurella pictetii* and *Protonemura auberti*, chironomids of the subfamilies Chironominae, Orthocladiinae, Tanypodinae and Corynoneurinae, the caddis fly *Plectrocnemia conspersa*, blackflies *Simulium* sp. and water-beetles *Agabus* sp.. In the reference streams, the mayflies Baetidae, Leptophlebiidae, Ameletidae and Siphonuridae, caddis flies Rhyacophilidae, *Drusus annulatus* and *Sericostoma personatum*, the mollusc *Pisidium casertanum* and other less acid-tolerant benthic organisms were also found.

This study is part of the Czech participation in the ICP Waters and ICP IM projects (monitoring of acidification). Results will be added to their databases, and will support future monitoring of the biological recovery of the macroinvertebrate community in strongly acidified streams.