

Some groups of benthic invertebrates and the physico-chemical conditions in the streams of the Magurski National Park in the Beskid Niski Mts (Northern Carpathians)

Bronisław Szczęsny

Institute of Nature Conservation, Polish Academy of Sciences
Mickiewicza 33, 31-120 Kraków, e-mail: szczesny@iop.krakow.pl

Abstract

From 2001-2003, hydrochemical studies were carried out at 32 sites in the Wisłoka river drainage basin (330-790 m a.s.l.) in the Magurski National Park, benthos samples were collected and imagines of aquatic insects were caught. In terms of water chemistry, the aquatic habitats were described as typical for the West Beskid Mts. The water was clear, very low on combined phosphorus and nitrogen, and representative of a predominantly bicarbonate-calcidic type (electrolytic conductivity 61-425 $\mu\text{S/cm}$). Only in the spring sections of some streams, slightly acidic (pH 4.4-5.8) sulphate-bicarbonate-calcidic water was found.

No fewer than 166 taxa were identified in the following groups: *Trichoptera* (92 taxa), *Ephemeroptera* (29), *Plecoptera* (27), *Coleoptera* (7), *Mollusca* (3), *Amphipoda* (3), *Tricladida* (2), *Hirudinea* (2), and *Odonata* (1 taxon). The list of species, along with their altitudinal and spatial distributions are presented. Using statistical methods, 4 types of stream habitats were distinguished, and the qualitative composition and dominance structure of the fauna living in each type were determined. The stream habitats of the Magurski NP and the Bieszczady Zachodnie Mts were compared in terms of the fauna of *Ephemeroptera* and *Trichoptera* living in these regions. The similarities between the fauna of *Ephemeroptera*, *Plecoptera* and *Trichoptera* living in the Magurski NP were ascertained along with those of other national parks in the Polish Carpathians.

Key words

West Carpathians, Magurski National Park, water chemistry, macroinvertebrates, biodiversity, lotic habitats, *Trichoptera*, *Ephemeroptera*, *Plecoptera*.