## Research

## The anthropogenic mire communities of the Silesian Upland (S Poland): a case of selected exploitation hollows

## Damian Chmura<sup>1</sup> and Tadeusz Molenda<sup>2</sup>

<sup>1</sup>Institute of Nature Conservation, Polish Academy o Sciences Mickiewicza 33, 31-120 Kraków, Poland, e-mail: chmura@iop.krakow.pl

<sup>2</sup>Department of Physical Geography, University of Silesia Będzińska 60, 41-200 Sosnowiec, Poland, e-mail: tedimolenda@interia.pl

## Abstract

In two exploitation hollows i.e. a sandpit and brown coal excavation of the Silesian Upland (Southern Poland) during spring and autumn of 2004, hydrological and phytosociological studies (Tab. 1) on spontaneous mire communities were conducted. It is worth emphasizing that they are an example of primary succession because plants encroached into habitats with a mineral substratum deprived of humus. Hydrological analysis of the exploitation pits, pH and the way in which the water supply does not correspond with the phytosociological diversity of formed plant communities. Numerical analysis (Fig. 1) indicated two different communities *Eriophorum angustifolium-Comarum palustre* in a water body ("Poręba") resembling fens and *Drosera anglica-Oxycoccus palustris* in a water reservoir ("Bory") resembling transitional mires. There are statistical significant differences between the frequency of fens, rush, bog and meadow species (Tab. 2). The objects studied are precious because they are refuges of many rare and protected plants.

Keywords

Mires, wastelands, exploitation hollows, vegetation succession.