

Abstract

Peatlands, as primary boreal habitats, are very rare and valuable azonal ecosystems in the Central European landscape. Their value is due, among others, to the enormous abundance of microalgae communities, of which probably the most prominent group consists of desmidiaceae, both in the richness of species and in their proportional representation. An important factor that affects peatland biota is the ombro-minerotrophy gradient derived from the hydrological regime. According to this concept, peat bogs are divided into two basic types - ombrotrophic peat bogs, which are saturated only by rainwater and minerotrophic fens, which are enriched by groundwater or surface water. The desmids, characterized by high sensitivity to environmental factors and species richness, are a very useful model group for ecological studies. In my work I deal with the effect of the ombro-minerotrophic gradient on the structure, diversity and dynamics of desmid communities on Sudeten peat bogs. The results show that ombro-minerotrophy significantly affects the structure of communities and is more determinant for the occurrence of individual species than their abundance. Significant effect was also found in species diversity. Minerotrophic peat bogs have apparently higher species diversity, which is mainly determined by the presence of species with low abundances. The communities of ombrotrophic peat bogs are probably represented by a smaller number of species that were able to adapt to the low pH and fertility of bogs. On the contrary, the results of species turnover in communities did not show any significant differences between the two types of wetlands. I also used the NCV index for data analysis, which quantifies the conservation value of acidic wetlands. The results show that the conservation value of both types of sites is comparable. For minerotrophic peatlands, the index value was influenced mainly by species diversity, for ombrotrophic peatlands by the occurrence of rare species or species requiring ecosystem stability and maturity.