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The impact of *Molinia* meadow communities usage on the species diversity of plants and microscopic fungi

ABSTRACT

The changes in the ways of *Molinia* meadow communities usage over the last decades have largely contributed to the transformation of these biocenoses, and the transition seems to be progressing over the years. Due to the semi-natural nature of the *Molinia* meadows - formed as a result of drainage of marshy areas - the disappearance of active human economy, having a direct impact on their formation and maintenance, often leads to secondary succession processes. The aim of the research was to carry out a floristic analysis of the fragments of *Molinia* communities, to assess the state of secondary succession and the impact of the use of meadows on the species diversity of plants and microscopic fungi, as well as to analyze changes in the occurrence of mycobiota. The research on meadow communities was conducted in 2017-19 in the area belonging to the Natura 2000 PLH020053 Zagórzycie Łąki. In the floristic research, the differences such as species richness, and the variety of Shannon and Simpson biodiversity indices were analyzed. Plant fragments showing disease symptoms were used for mycobiota analyses. During the research, the species diversity of micromycetes and the degree of infestation of the above-ground parts of plants were determined. Classification analyses were performed using the UPGMA, CA and redundancy methods. Molecular test results were interpreted using MEGA 6.0 and BLAST. 160 species of plants were identified, out of which 82 were hosts for 133 species of microscopic fungi. It is the first comprehensive work devoted to the analysis of the diversity of plants and fungi in the *Molinia* meadows.