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THE INFLUENCE OF LAND USE ON HABITAT CONDITIONS AND VEGETATION OF SELECTED MIDFOREST AND MIDFIELD PONDS

Key words: belt of vegetation, land use, midfield and midforest ponds

Summary

Various plant belts arranged concentrically around the water surface in ponds have biocenotic functions but are also important for water quality and the amount of water in soil and in the pond. The aim of this study was to determine the influence of vegetation belts in two pond surroundings – fields and forest – on vegetation and habitat moisture. In the years 2008–2010, floristic and phytosociological research was conducted in two groups of three ponds in each. Fifty four floristic lists and 62 phytosociological relevés were made. The study was performed in a forest of the Ślupia Valley Landscape Park and on fields near the forest complex of the Beech Forest. The relationship was analysed between habitat moisture (estimated with the Oświt’s method) and the type of surrounding. Obtained results confirmed preliminary assumptions about higher moisture in the habitat of midforest ponds. The analysis of variance showed a significant impact of the type of pond and the type of protective plant belt on moisture parameters. The same factors were decisive for the number of species in ponds. More plant species (105) and communities (15) were found in the studied midfield ponds despite the absence of any protective structures like trees or shrubs in the vicinity. Midfield ponds had a complete vegetation belt which was not defined in forest ponds, due to the absence of an escarp. Statistical analysis of physical and chemical parameters of water showed significant differences between pond types and seasons.