

CONTENTS OF NITROGEN AND PHOSPHORUS COMPOUNDS
IN GROUNDWATERS OF SELECTED FOREST ASSOCIATIONS
IN SŁOWIŃSKI NATIONAL PARK

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Abstract: The study of groundwaters was carried out in two different forest ecosystems of Słowiński National Park: *Vaccinio uliginosi-Betuletum pubescentis* and *Empetro nigri-Pinetum* in the period of 2002–2005. Differences were found in the position of the groundwater table and in the concentrations of nitrogen and phosphorus compounds in the investigated forest associations. In the *Vaccinio uliginosi-Betuletum pubescentis* association the groundwater table was found on average at a depth of -73.3 cm, while in *Empetro nigri-Pinetum* at -90.2 cm. No statistically significant effect of precipitation on the position of the groundwater table was found in this study. Statistical calculations (U Mann-Whitney test) for groundwaters in the analyzed forest associations showed statistically significant differences in the dynamics of concentrations of total nitrogen (T-N), organic nitrogen (Norg.), nitrate nitrogen (N-NO₃), total phosphorus (T-P), organic phosphorus (Porg.) and the level of groundwaters.