

## Abundance, biomass and community structure of pond phytoplankton related to the catchment characteristics

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Studies were conducted in 2010 on phytoplankton assemblages in ponds in North-East Poland with catchment areas in village environments, mid-forest, mid-meadow and mid-field settings. Differences in phytoplankton abundance, biomass and structure and the environmental requirements of dominant species were assessed in the studied ponds. These features were related to variable physicochemical water parameters and nutrient presence; with the highest phytoplankton abundance and biomass dominated by chlorophytes and diatoms in the village ponds and the greatest diversity of species' assemblages recorded in the mid-forest and mid-field ponds. In addition, CCA analysis of general trends in phytoplankton growth determined that NH<sub>4</sub> and TN enhanced growth in the mid-meadow and mid-field ponds, and P-PO<sub>4</sub> and pH influenced growth in the mid-forest pond. The relationships established in this study between phytoplankton and environmental conditions can directly influence future directions in small water-body conservation.

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