

Diatom 20: 23-31 (英文)

Małgorzata Bąk, Andrzej Witkowski, Horst Lange-Bertalot and Anna Dadał : Ecology of the szczecin lagoon diatom flora with reference to the utility of diatom indices in assessing water quality

Abstract

The study focuses on applying the diatom flora to evaluate environmental conditions of the Szczecin Lagoon. A total of 521 taxa (diatom species and varieties) of 74 genera were identified in the samples. Light microscope (LM) counts were processed with OMNIDIA software to yield diatom indices. The diatom flora structure and relations between assemblages at individual sites were explored with multivariate analyses. Applicability of diatom indices in assessing the state of the Szczecin Lagoon was confirmed. The inferences produced by diatom indices were compared with those derived from directly measuring physico-chemical water parameters and from using the diatom bioindicative characteristics. Diatom indices produced conclusions similar to those resulting from conventional application of diatom bioindicative potential. Both methods showed the Szczecin Lagoon to be eutrophic and moderately polluted.

Key index words : Baltic Sea, bioindication, diatom indices, diatoms (Bacillariophyceae), Szczecin Lagoon