PROTOZOA COMMUNITIES IN THE VISTULA RIVER ESTUARY (BALTIC SEA)

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Abstract

Protozoan communities (heterotrophic nanoflagellates, dinoflagellates, and ciliates) were studied along the Vistula River estuary (southern Baltic Sea) in June 2005. Protozoan biomass ranged from 64.1 to 162 µgC l\(^{-1}\) close to the river mouth and decreased to 20.7 µgC l\(^{-1}\) at the most offshore station. The negative correlation between distance from the mouth and protozoan biomass was highly statistically significant. Within the estuary, the majority of the biomass was contributed by heterotrophic dinoflagellates and *E. tripartita* (71% on average), whereas heterotrophic nanoflagellates and ciliates contributed 22% and 7% of the protozoan biomass, respectively. At the offshore station, the contribution of heterotrophic dinoflagellates decreased to typical value of 25%. The study confirmed elevated significance of heterotrophic dinoflagellates and *E. tripartita* in the Gulf of Gdansk. Correlation analysis revealed that all groups of protozoa were significantly and positively related to phytoplankton biomass or primary production, but only heterotrophic ciliates were related to bacterial secondary production.

Key words: Rowy, accommodation base, tourist traffic, tourist function

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