

***Escherichia Coli* and other Groups of Opportunistically Pathogenic and Pathogenic Bacteria in the Offshore Water of the Lake Wigry – Ewa Korzeniewska**

Summary

Studies were carried out in the summer seasons of 1995–1999 (from June to September) on the quantitative and qualitative composition of *Enterobacteriaceae* bacteria (including *Escherichia coli* and *Salmonella* sp.), and potentially pathogenic bacteria *Aeromonas hydrophila*, *Pseudomonas aeruginosa* and *Staphylococcus* sp. in the water of 8 bathing sites of the Lake Wigry. *Aeromonas hydrophila* occurred in the all samples of studied water and was the most numerous in water sampled from sites of increased trophic levels. Irrespective of the site and time of sampling *Pseudomonas aeruginosa* was rarely isolated. In the total of 160 samples of water analysed *Salmonella* sp., *Escherichia coli* and *Staphylococcus aureus* were determined in 32 (22.6%), 68 (42.4%) and 90 (55%) samples, respectively. Pathogenic bacteria of the genus *Salmonella* sp. and potentially pathogenic *Staphylococcus aureus* and *Aeromonas hydrophila* identified in the analysed offshore waters (also when *Escherichia coli* were absent) suggest that the use of the Lake Wigry waters for swimming, falling into account faecal bacterial counts, may not be sufficient to fully reflect safety conditions for bathers. The results of the research suggest that the evaluation of the Lake Wigry surface waters for recreational use should include the frequency of the occurrence of *Salmonella* sp., *Staphylococcus aureus*, *Aeromonas hydrophila* and *Pseudomonas aeruginosa*. These three species, which are not directly linked to faecal contamination, can cause various diseases of the skin, nasal and oral cavities, eyes, internal ear and other problems in people swimming in contaminated water.