

INFLUENCE OF FISHERY MANAGEMENT AND ENVIRONMENTAL FACTORS ON
OCCURRENCE OF HETEROTROPHIC, HEMOLYTIC AND MESOPHILIC BACTERIA
AND *AEROMONAS HYDROPHILA* IN WATERS OF THE DRWEĆA RIVER, POLAND

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Abstract: The research covered the determination of the numbers of heterotrophic bacteria: psychrophilic, psychrotolerant, mesophilic and percentage participation of hemolytic bacteria and *Aeromonas hydrophila* (with aerolysine and hemolysine genes) in the waters of the Drwęca River depending on environmental factors and fishery management. The mean quantities of heterotrophic bacteria (HPC) at 4, 14 and 28°C ranged: $0.78-7.57 \cdot 10^3$, $1.40-6.65 \cdot 10^3$ and $1.93-16.23 \cdot 10^3$ cfu·cm⁻³, respectively. The percentage participation of hemolytic heterotrophic bacteria (HemPC) and *A. hydrophila* among psychrophilic, psychrotolerant, mesophilic microorganisms determined at 4, 14, 28°C, ranged: 7.9–10.4, 6.8–12.2, 8.6–22.0 and 1.1–6.4%, respectively. Statistically significant correlation between examined bacteria and temperature values, flows and O₂ saturations confirm that the occurrence of those microorganisms depends on the degree of microbiological contamination of that ecosystem, resulting from the fishery management and environmental factors.