OBSERVATIONS OF SELECTED CHEMICAL COMPONENTS OF MEROMICTIC LAKE ZAPADŁE WATERS IN 1990–1993, 2000–2001 AND 2005–2006

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Abstract: Studied was a small (4.6 ha) meromictic lake situated in a deep land hollow surrounded by a high-inclination slope. The lake was made shallower two times (from 20 to 18 m) by collapsed shores. It is fed by underground waters and has relatively constant outflow. Limited water dynamics reduced the epilimnion thickness (from 4 to 2 m) and influenced the monimolimnion setting below 13 m depth with a characteristic small (0.2°C) temperature increase in the vertical profile and a permanent deoxygenation of the water below 7–11 m depth. The relationship between the organic matter parameters BOD_5 and COD-Mn before the shore collapse revealed the dominance of matter produced in the reservoir. In the final period the situation was opposite. In the monimolimnion allochthonous matter accumulated which due to anaerobic decomposition generated large amounts of ammonium. Observed in the same water layer was also a decrease of the conductivity.