XVIII. KONFERENCE
České limnologické společnosti
a Slovenskej limnologickej spoločnosti

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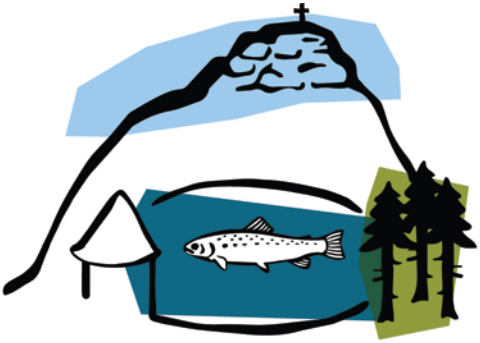

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Veronika Sacherová (ed.)

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Sponzoři

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Sonar data acquisition, interpretation and methodologies in study of the limnic infill of the Tatra Mountains lakes

přednáška

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We present the results of the sonar survey of five alpine lakes in the Tatra Mts. – Batizovské pleso, Velické pleso, Zelené pleso Kežmarské, Popradské pleso and Nižné Temnosmrečinské pleso – with aim to investigate the thickness of the limnic infill and topography of the lake bottom for selection of the optimal coring place, three-dimensional distribution of the lake deposits and reconstruction of the lakes evolution since the last deglaciations. Acquisition of the data was made by sub-bottom profiler operated from the limnic platform and allowing an observation of the sedimentary infill and its internal structures in 2D lines. The autonomous side-sonar allowed high resolution acoustic image of the bottom. Interpretation of the sonar data and lithology was controlled by coring.

The combine sonar and coring data show that a total sedimentary infill thickness is very variable among the lakes and it reaches almost 10 m. The classic lithological succession composed of the moraine clastic deposits at the base, clay and sand as middle member and Holocene gyttja at the top is developed in Batizovské pleso, Popradské pleso, and Nižné Temnosmrečinské pleso. The lithological succession of the Zelené pleso Kežmarské is strongly effected by numerous bottom springs. The gyttja of the Velické pleso lays directly on the granitic bedrock and the other lithological members are missing.

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