

## **ABSTRACT**

### **Vegetation development in the Cheb basin (NW Czech Republic) recorded in the sediments of the SOOS National Nature Reserve**

This thesis focuses on palaeoecological research of quaternary sediments in the Soos National Nature Reserve (Cheb basin, NW Czech Republic). Quaternary history of this locality is poorly known, despite it is a valuable and protected area with high natural qualities. The Soos basin is also known for its unique geological record, which is expected to cover information on landscape dynamics at least during the Holocene. A lake existed in the Soos basin enabling accumulation of diatomite and peat sediments of a broad palaeoecological potential. Records were analysed with method of pollen analysis and were dated using  $^{14}\text{C}$ . The results of this study bring information about vegetation development in the area of Cheb basin as well as development of lake ecosystem. It also gives a new insight on lake's origin and its age. The accumulation of peat sediments started in the Preboreal period and was continuous at least until the Atlantic following with a hiatus, therefore further detection of vegetation development is impossible. The beginning of diatomite accumulation, as well as the existence of the lake goes back to the Bølling interstadial, according to radiocarbon dating. However, this finding seems to be contrary to the results of pollen analysis which shows much younger age. This problem is discussed extensively in the thesis. The lake itself was very shallow, up to 2 metres, probably with very poor faunal, algal and plant communities, mainly because of its specific chemical water composition. According to the results of diatomite analysis it filled-in during Atlantic-period. Vegetation development in this area was compared with other regions in the Czech Republic, mainly focusing on tree migration during the Holocene. Traces of human impact were searched in palaeoecological records with effect on both vegetation and lake environments but with no significant result.

**Keywords:** palaeoecology, pollen analysis, Cheb basin, vegetation development, Late Glacial, Holocene, Soos National Nature Reserve