

## Abstract

In the Quaternary, the area of the Libický floodplain forest was shaped mostly by the action of the Elbe river. The river generated a structure of oxbow lakes, pools, wetlands, floodplain forests or wet grasslands. These are connected by shallow groundwater of the Quaternary aquifer. During the Upper Cretaceous period, the area of Libický forest was flooded by the sea, which resulted in the formation of the bedrock of Libický forest – now the Cenomanian aquifer of the Poděbrady mineral spring structure. This aquifer is part of the Bohemian Cretaceous Basin. This thesis provides an overview about the waters in the area of the Libický forest, especially about: the development of the structures of surface water during the last ~2k years, groundwater of the quaternary aquifer and mineral water of the Poděbrady mineral spring structure. Finally, this thesis contextualizes this knowledge into climatic, geological, pedologic and also to ecological conditions of the area of Libický luh which is an important ecosystem in terms of biodiversity in otherwise relatively densely populated agricultural landscape.

Key words: Libický luh, surface water, hydrology, Elbe, groundwater, hydrogeology, Cenomanian aquifer, Bohemian Cretaceous Basin, Poděbrady mineral spring structure, floodplain forest