

## **ABSTRACT**

Long-term paleoenvironmental reconstructions provides essential interpretation of environmental changes. Multiproxy analysis of lake sediments can be used for tracking the historical evolution of lakes and significant processes which formed them over time. Subfossil Cladocera play a key ecological role in freshwater ecosystems. Sedimentary cladoceran assemblages reflect environmental changes and exhibit great potential in past environmental reconstructions.

The purpose of this diploma thesis is to identify climatic changes of the time interval between the Late Glacial and the early Holocene in Černé Lake. Based on the analysis of geochemical and biological proxies, determined climatic conditions of Younger Dryas (YD). The YD oscillation in Central Europe has only been briefly described. The Czech Republic is positioned between oceanic and continental climate. The results of the multiproxy analyses suggests that climate conditions of the region during YD were similar to Western Europe with moderate wet climate conditions during the first half and drier conditions during the second half of the period. In the middle of YD there was an interesting event. Observed, probably due to high precipitation and floods. These results are based on P/L ratio, geochemical proxies, pollen analyses and record of fire history. The climate of last glacial period was extremely unstable. Reconstructed mean July temperatures ranged from 8,3 to 10,3 °C.

Key words: subfossil Cladocera, paleoecology, reconstruction, Younger Dryas, Černé Lake