Abstract

The final stadial of the last glacial – Younger Dryas (12 650 – 11 500 cal yr BP) is relatively well described in sediments of European lakes, however research related to its progress in Central European area is missing. The goal of this thesis was to examine progress of this stadial based on sediment core from Černé Lake at Šumava (Czech Republic). To reconstruct climatic conditions, sub-fossil remains of Chironomidae was used. The air July temperature was estimated using Swiss-Norwegian model. Geochemical analysis was performed to determine intensity of erosion, trophic status of the lake, and sources of its organic matter. To complete information about catchment, pollen analysis was performed.

Following climatic events were identified in the sediment: Older Dryas (13 583 – 13 394 cal yr BP), Alleröd (13 394 – 12 383 cal yr BP), Younger Dryas (12 383 – 11 394 cal yr BP) a Early Holocene (11 394 – 11 138 cal yr BP). Presence of two phases of Younger Dryas was not significantly proven, nevertheless, the isotope composition suggests, that the first half of this oscillation was drier. Reconstructed temperature ranged between 8,30 and 10,31°C. The mean temperature for Older Dryas event was 8,92 °C, for Alleröd 9,61 °C, Younger Dryas 9,17 °C and Early Holocene 10,00 °C. Reconstructed temperature exhibited distinct oscillations, which corresponds to unstable late glacial climate. Dominant species of Chironomidae were almost entirely profundal taxa Micropsectra radialis-type, Heterotrissocladius grimshawii-type a Procladius sp. Litoral species were also present namely in core parts corresponding to Alleröd and Early Holocene. During Younger Dryas these species almost disappeared. Černé Lake was oligotrophic, with minimum content of organic matter in sediment (0,48 – 2,84 % C_{org}), and with well oxygenated hypolimnion.

Key words: Younger Dryas, Chironomidae, reconstruction of temperature, Černé Lake