

THE INFLUENCE OF THE HUMAN ACTIVITY ON THE CHANGES OF ECOLOGICAL CONDITIONS IN KOMOŘANSKÉ JEZERO LAKE (CZECH REPUBLIC)

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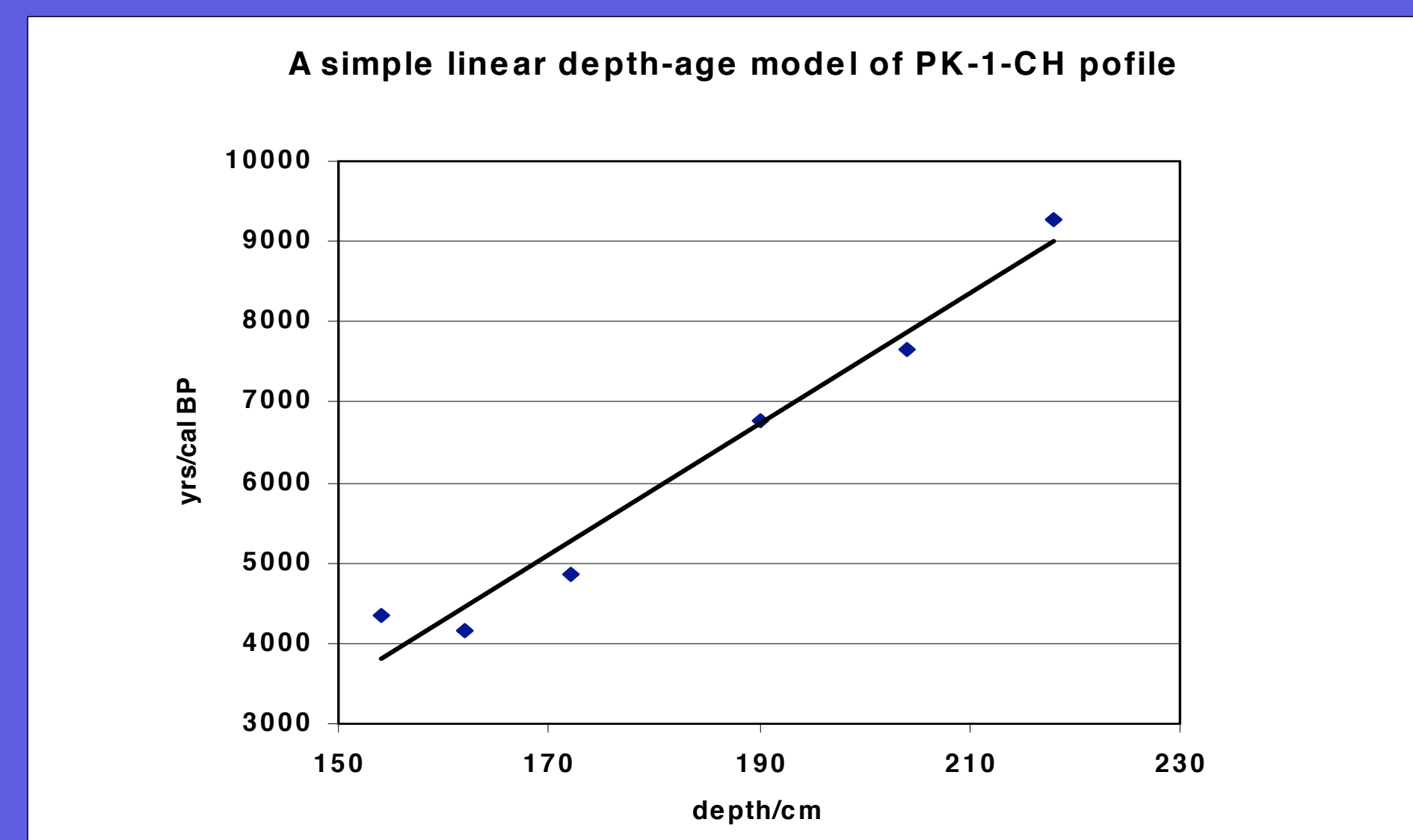


The Komořanské jezero Lake formed the largest (max. 25km²) natural water body in the Czech republic. The extensive sediments were completely destroyed due to opencast coal-mining in the last century. The only saved lacustrine material are four rediscovered sediment profiles gathered during field works in 80's representing continuous record of Preboreal – Subatlantic interval.

The lake drainage basin and the shores of the lake were intensively occupied since the Paleolithic times with the most remarkable settlement peak in Neolith represented by the Linear pottery culture.

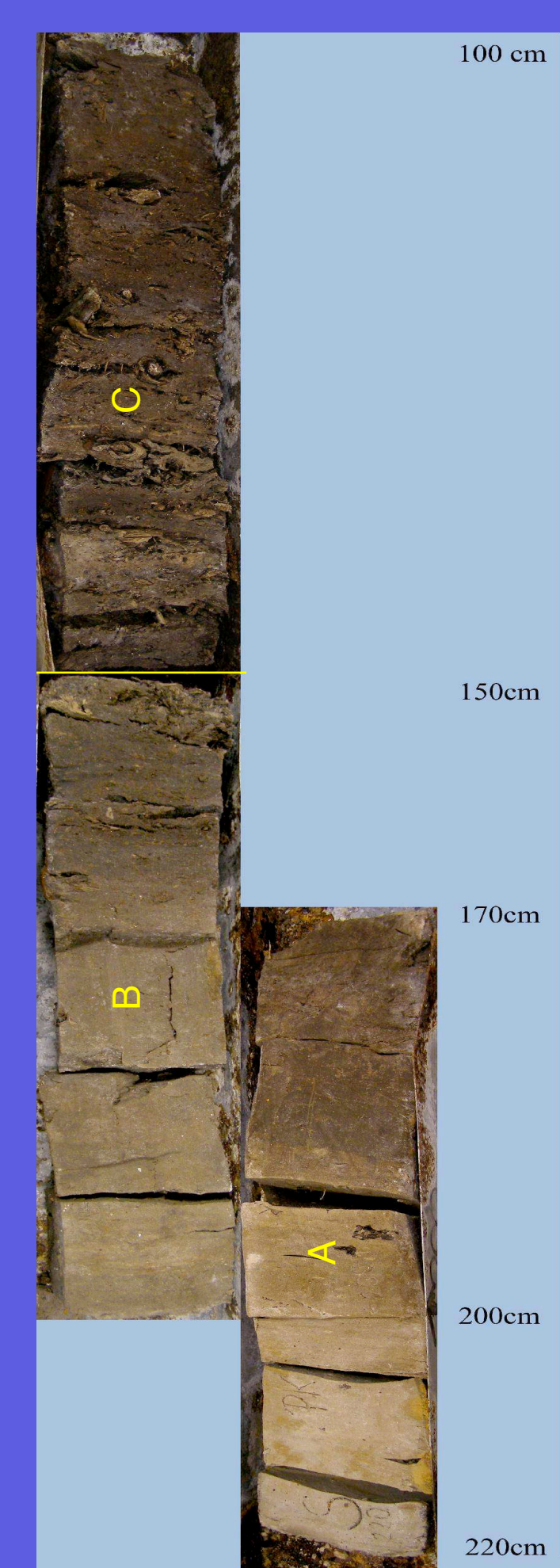
The lake nutrient content was on a very stable meso-eutrophic level during its whole existence as inferred from diatom analysis. The only interpretable decrease occurred during 8.2 kyr event.

The steep increase of the sediment organic content in Eneolithic was connected with the final infilling process resulting in the formation of a bog.

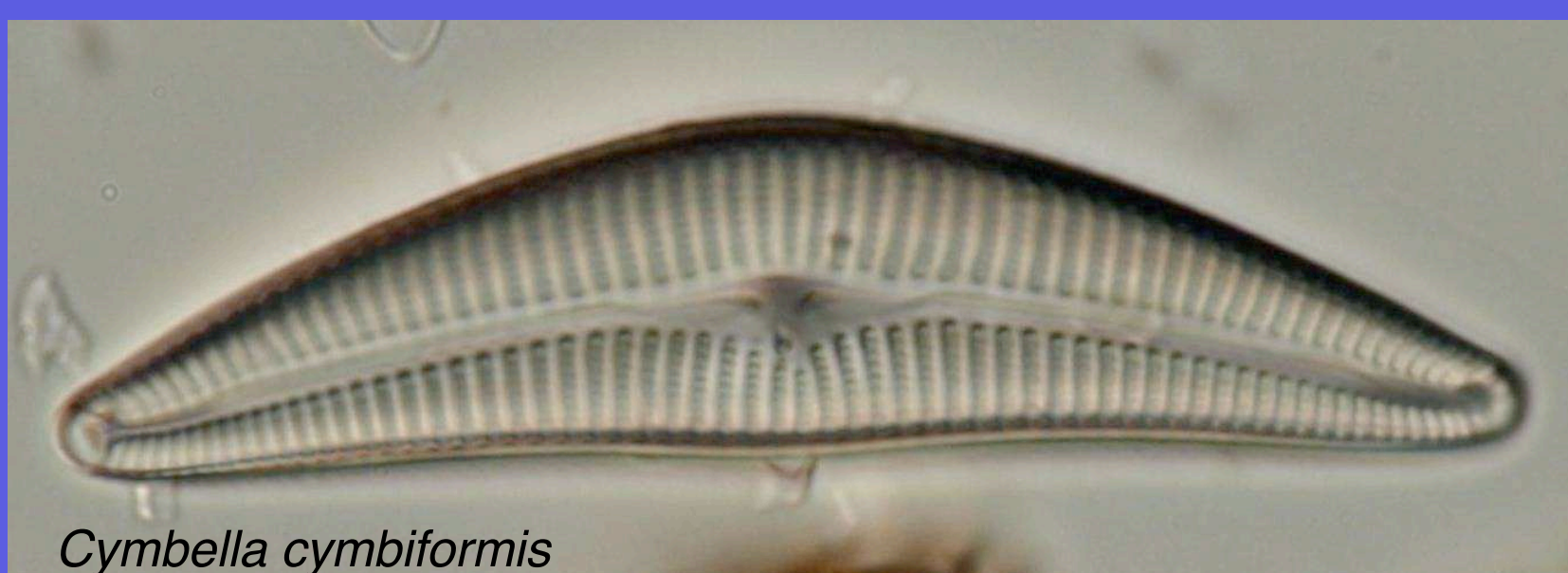
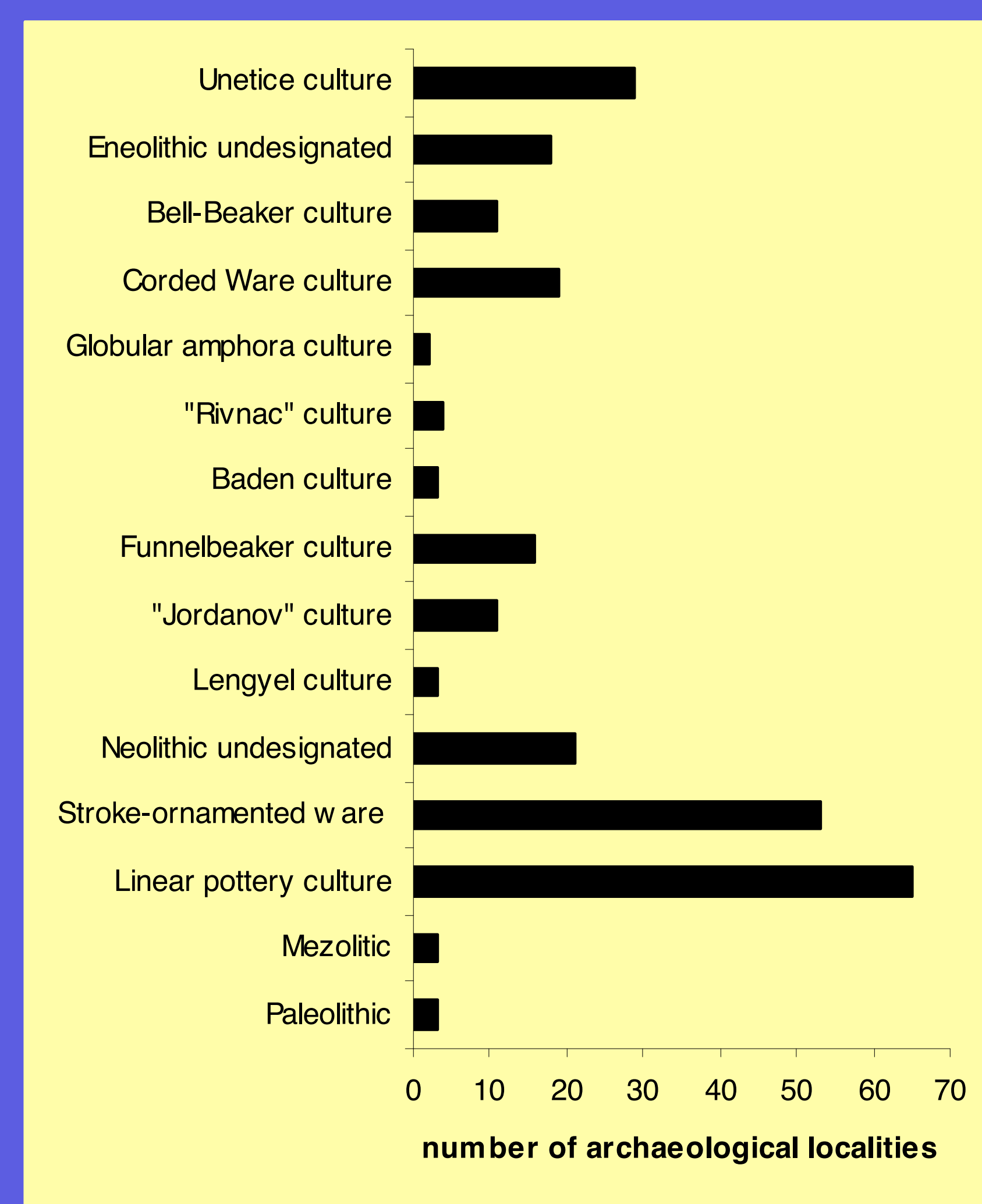
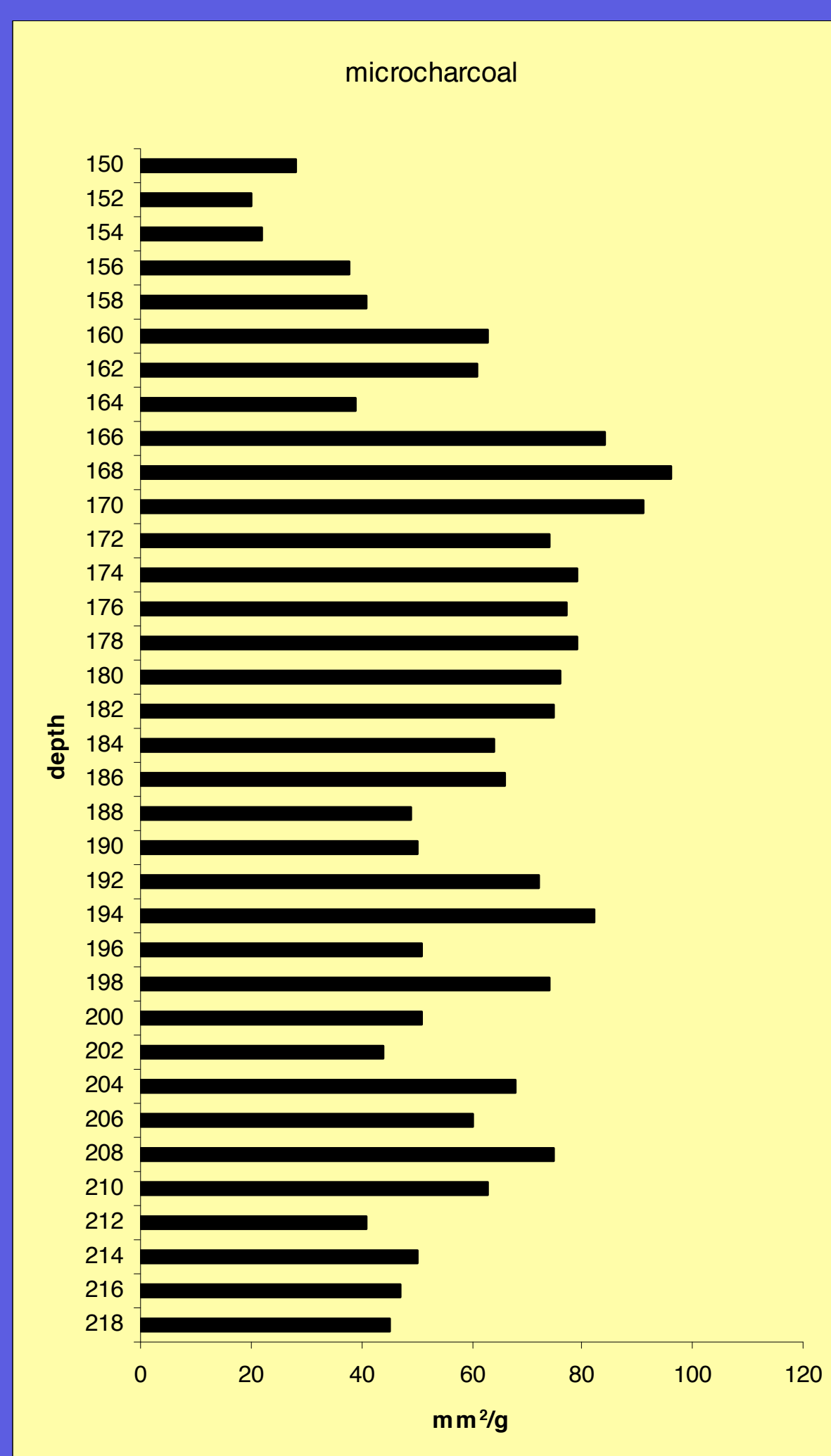


The aim of presented study was the confrontation of changes in the lake aquatic conditions with the intensity of settlement on the background of coincident climatic changes.

For the construction of linear model median values of calibrated radiocarbon dates were used



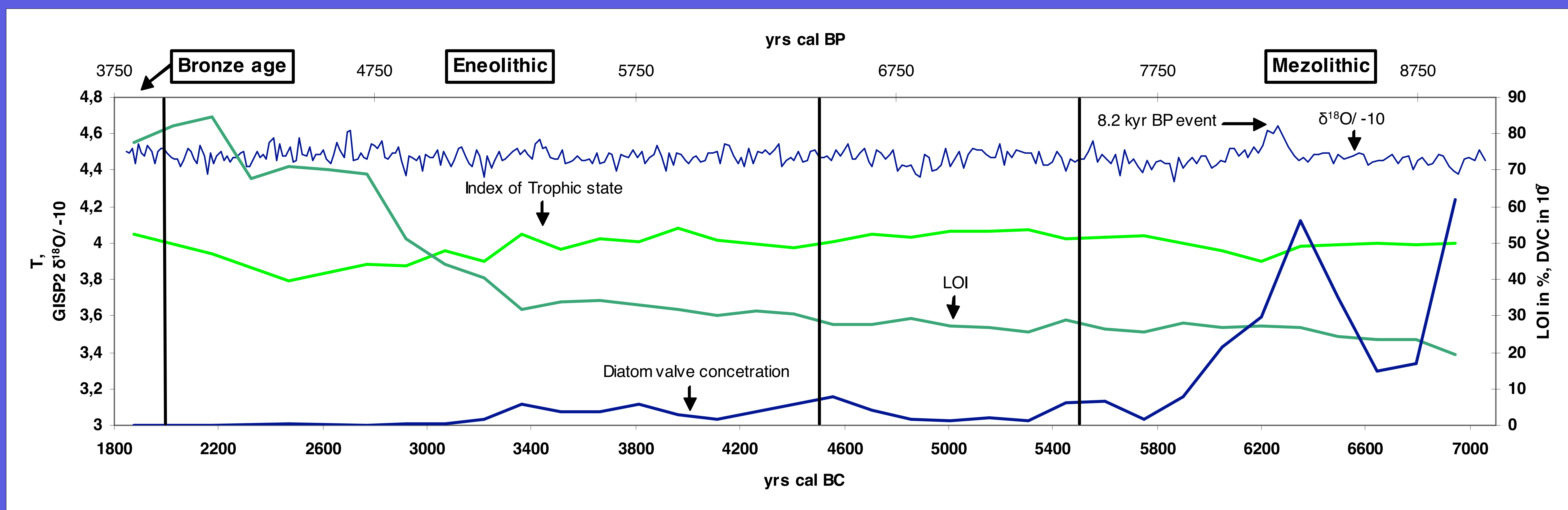
The findings of numerous micro charcoals in all studied samples documents continuous settlement and extensive human activities in the vicinity of the lake from the Mesolithic. Their relatively constant values are in contrast to the dynamics of settlement recorded in the number of archeological sites.



Studied part of the rescued profile PK-1-C

Diatom based indices of the lake trophic status slightly increased during the period rich in archeological material. However, the shift could have been also the result of a climate warming after 8.2 kyr BP cold event.

This implies that no direct evidence for human influence of the aquatic environment during period of intensive settlement was found. Such result may support the idea that large meso-eutrophic lakes could have been hardly affected by the even relatively numerous human population.



DCV – Diatom valve concentration per gram of dried sediment, Index of Trophic state based on van Dam et al.1994, LOI – Loss on ignition after 6 hours at 550°C



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