



## Late-Glacial and Holocene ostracod sequences from lacustrine sediments of lake Mondsee (Austria)

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Succession of ostracod assemblages was analysed in a 14.8 m-long sediment core recovered from the 62 m-deep zone of a pre-alpine lake Mondsee in Upper Austria. A total of 14 taxa were identified, of which all but one occur in the modern lake and are indicative of cool to temperate lacustrine environments. Overall, the preservation of the valves was good, which coupled with the presence of both adults and juveniles strongly suggests that the studied assemblages were autochthonous. Four major intervals of ostracod stratigraphy were recognised based on species composition, abundances and the modern autecological data. First interval (1480-1240 cm) is marked by very low abundances of cold stenothermal species distinctive of early successional stages in post-glacial European lakes. These include: *Leucocythere mirabilis* followed by *Cytherissa lacustris* and a species resembling *Fabaeformiscandona rectangularata*, which at present is restricted to the Nearctic permafrost zone and so far was not reported from European Quaternary. Towards the end of this interval, other common inhabitants of the profundal zones of modern lakes appear in relatively equal proportions: *Fabaeformiscandona lozeki*, *Candona neglecta* and *C. candida*. Second interval (1240-980 cm), much richer in the ostracod remains, is characterised by increasing proportional representation of *C. neglecta* and *F. lozeki*, the loss of *F. cf. rectangularata*, gradual disappearance of *L. mirabilis* and appearance and increasing abundance of *Cypria ophthalmica*. This suggests progressive climatic amelioration and more stable aquatic environment, as indicated by the increased number of valves of the dominant species. In the third interval (980-840 cm) relative abundances of *C. neglecta* and *C.*

*ophtalmica* increase, while *F. lozeki* and *C. lacustris* become almost extinct. However, this zone is most notable for a transient peak in *Fabaeformiscandona protzi*, a cold stenothermal species. The last interval (840-0 cm) is clearly dominated by *C. neglecta* associated with *C. ophtalmica*, having in the entire sequence of this zone nearly constant relative percentages and high counts, which reflects long, stable and equable conditions. Only in the uppermost sediment layers the total abundances and species diversity decline due to anthropogenic eutrophication.

The preliminary data on the ostracod succession and the abundance of preserved valves presented here show the potential benefits of more detailed examination of ostracod valves in oxygen isotope studies aiming at more refined reconstruction of climatic variations.

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