

Foreword: A virtual congress on palaeolimnology— palaeolimnological proxies as tools for environmental reconstruction in fresh water

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Published online: 19 May 2009
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The motivation for collecting recent knowledge in a special issue of *Hydrobiologia* derives from the recognition of the importance and applicability of palaeolimnological tools to help in defining “reference conditions” as designated within the Water

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Palaeolimnological Proxies as Tools of Environmental
Reconstruction in Fresh Water

Dedicated to Olga Sebestyén (1891–1986), key scientist at the
First Palaeolimnological Symposium, Vice-president of the
SIL (1962–1986).

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Framework Directives and estimating influence of global climate change on surface waters. This volume was developed by inviting contributions from prominent experts in their respective fields. The compilation not only presents papers on palaeolimnological studies, focusing mostly on Eastern and Central Europe but also includes results from other regions.

The use of palaeoecological analyses of sediments has a long tradition in Central Europe. In the nineteenth century, Lajos Lóczy (1849–1920) organized a systematic scientific research on Lake Balaton, the largest shallow lake of the region, and published the series of booklets (Lóczy 1897–1920) which are considered milestones in the development of limnology as a separate branch of science and which are comparable to Forel’s (1841–1912) seminal scientific heritage (Forel, 1892). Another milestone in the development of palaeolimnology was the first palaeolimnological meeting which was held in Hungary in 1967. This meeting included some of the most prominent limnologists in the world including G.E. Hutchinson, D.G. Frey (Chairman), Nina V. Korde, D.A. Livingstone, O. Sebestyén, and W. Tutin who together formed the organizing committee. This committee decided to hold the symposium at the Biological Research Institute, Tihany, Hungary. The meeting profited from the excellent facilities and made the attendance of scientists from socialist countries possible. This location was also appropriate in celebrating the long tradition of geological and limnological studies on the lake including the early

effort of L. Lóczy. Eighty-nine individuals representing 20 different countries were registered at this symposium (Frey, 1969).

In spring 2008, a large group of scientists expressed an interest in the present special issue and 22 manuscripts were submitted, 18 of which are included in this volume. The primary objective of this special issue is to present new palaeolimnological findings from Eastern and Central Europe, as well as important findings from other regions. Although this area has sometimes received less attention than other areas of Europe, the lakes and mires, coupled with the variability in landscape and the local differences in climate, provide unique opportunities for studying palaeolimnology. A review on the Late-Quaternary records in the Carpathian region provides new results on the history of a crater lake, Lake Saint Ana, glacial lakes in the Tatra Mountains and Lake Bled. The sediments of these lakes, as well as peat bogs, also provide valuable evidence for studying climate change.

In the present issue, the various papers provide new insights on the development of lakes and bogs during the late-glacial and Holocene, using a wide

range of palaeolimnological proxies, including diatoms, pollen, macrofossils, pigments, Cladocera, and Chironomidae as well as geochemistry. New results are also provided from Spain, Finland, Russia, North America and South America.

The editors express their thanks to Enikő Magyari who helped with the editorial work in all of its phases. Thanks are also due to all the referees for their efforts in evaluating and improving the manuscripts that were submitted for publication in this volume.

The guest editors

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