

Preface

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The European Large Lakes Symposia (ELLS) emerged from the “International Lake Ladoga Symposia,” which took place four times between 1993 and 2002 and presented topical research on the functioning of Lake Ladoga and other large lakes in northern Europe. After changing the name, and because of its primary focus on northern European lakes, the first two ELLS took place in Tartu, Estonia (2006) and Norrtelje, Sweden (2009). However, because these symposia had attracted an increasing number of scientists from other European regions, it was decided that the third European Large

Lakes Symposium should take place in another European region with a high density of large lakes: the peri-Alpine region. This present symposium was held on the shores of Lake Constance, at the University of Konstanz, in September 2012. It was hoped that this shift in venue would help foster the exchange of information and cooperation between aquatic scientists working on large lakes, and especially between those based in eastern and central European countries.

The symposium was organized by an International Organizing Committee consisting of Reiner Eckmann (University of Konstanz, Germany), Daniel Gerdeaux (INRA, Thonon-les-Bains, France), Hans Güde (Institut für Seenforschung, Langenargen, Germany), David Livingstone (Eawag, Switzerland), Tiina Nõges (Centre for Limnology, Estonian Agricultural University, Estonia), Frank Peeters (University of Konstanz, Germany), Kurt Pettersson (Uppsala University, Sweden), Karl-Otto Rothhaupt (University of Konstanz, Germany), Nico Salmaso (IASMA Research and Innovation Centre, Italy), Bernhard Schink (University of Konstanz, Germany), Dietmar Straile (University of Konstanz, Germany), Arkadi Terzhevik (Karelian Scientific Centre, Russia), and Thomas Weisse (Institute for Limnology, Mondsee, Austria).

The symposium was attended by 103 participants (Fig. 1) from 17 countries: Australia, Austria, Colombia, Estonia, Finland, France, Greece, Hungary, Israel, Italy, Japan, Russia, Sweden, Switzerland, Taiwan, Turkey, and the USA. It thus succeeded in attracting a large number of researchers studying lakes located not

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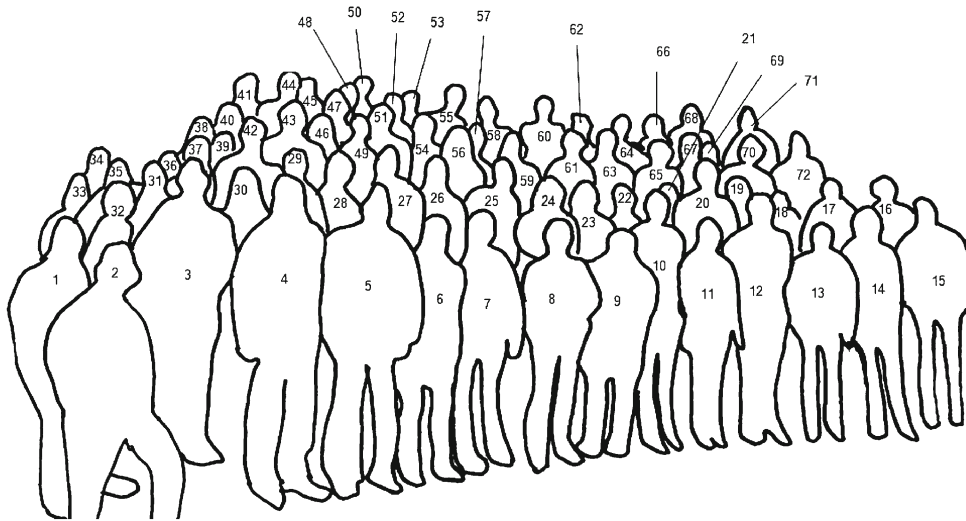
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Fig. 1 Participants of ELLS 2012. Participants not available for the group photo were Rita Adrian, Flavio Anselmetti, Jasminca Behrmann-Godel, Maren Bornemann, Maria M. Eder, Nikolai Filatov, Daniel Gerdeaux, Hans Güde, Almut Hanselmann, Thomas Heege, Hilmar Hofmann, Chih-hao Hsieh, Marc C. Jochimsen, Paula Kankaala, Katrit Karus, Toomas Koiv, David M. Livingstone, Detlev Lohse, Larisa Nazarova, Steffen Niemann, Ryan P. North, Kristel Panksep, Kristijan Piirimäe, Leonid Rukhovets, Karin Schenk, Klaus Schmieder, Robert W. Sterner, Valerii Tonkopji, Markku Viijanen, Martin Wessels, and Elizabeth Yohannes



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|-----------------------|-----------------------|----------------------|--------------------------|
| 1 Jayant Ranjan | 20 Peeter Nõges | 39 Viktória Üveges | 58 Katalin Hubai |
| 2 Arkady Terzhevik | 21 Anna Izmaylova | 40 Andu Kangur | 59 Petrina Köngäs |
| 3 Matti Leppäranta | 22 Tatyana Sapelko | 41 Toomas Kõiv | 60 Lauri Arvola |
| 4 Dietmar Straile | 23 Galina Kapanen | 42 Gerhard Soja | 61 Lilian Freiberg |
| 5 Sergei Bocaniov | 24 Yulia Gubelit | 43 Nico Salmaso | 62 Brigitte Vinçon-Leite |
| 6 Viktor Komov | 25 Peter Hingsamer | 44 Martin Dokulil | 63 Mans Lindell |
| 7 Natalia Kalinkina | 26 Ioanna Salvarina | 45 Marieke Frassl | 64 Onur Kerimoglu |
| 8 Mikhail Naumenko | 27 Thomas Wolf | 46 Katrin Teubner | 65 Sirje Vilbaste |
| 9 Roberto Bertoni | 28 Shiva Shams | 47 Minna Hiltunen | 66 Minna Rahkela-Sorsa |
| 10 Priit Zingel | 29 Orlane Anneville | 48 Anita Pätynen | 67 Karl-Otto Rothhaupt |
| 11 Tiina Nõges | 30 Tamar Zohary | 49 Franciska Tóth | 68 Barbara Leoni |
| 12 Reiner Eckmann | 31 Takehiko Fukushima | 50 Rod Oliver | 69 Kristel Panksep |
| 13 Marlene Pätzig | 32 Monica Tolotti | 51 Dirk Harmsen | 70 Bernhard Schink |
| 14 Benoît Sotton | 33 Manuela Milan | 52 Thomas Posch | 71 Frank Peeters |
| 15 John Lenters | 34 Justin Brookes | 53 Peter Kasprzak | 72 Egor Zadereev |
| 16 Anna Rigosi | 35 Dirk Schlabing | 54 Robert McKay | |
| 17 Michaela Salcher | 36 Chiara Pistocchi | 55 Giuseppe Morabito | |
| 18 Cristiana Callieri | 37 Yosef Yacobi | 56 Luisa Vega | |
| 19 Ari Voutilainen | 38 Külli Kangur | 57 Laura Joensuu | |

Fig. 1 continued

only in the two European large lake “hotspots” of northern and central Europe, but also in other regions both within and outside Europe.

The symposium was arranged around the theme “Large lakes under changing environmental conditions,” with keynote lectures given by:

- Robert W. Sterner et al.: “Plumbing the nitrogen cycle to understand runaway nitrate:phosphate ratios”

- Flavio Anselmetti: “Calibrating the limnogeologic record of large lakes with their modern states to understand environmental changes and events in the past”
- Tamar Zohary: “Water level fluctuations beyond natural in stratified lakes—cause for concern?”
- John D. Lenters: “Recent warming of the world’s lakes: Global patterns and regional hot spots”

The main topics of the contributions were the consequences of long-term change in nutrients and climate for large lakes, the role of large lakes in the global carbon cycle, cyanobacterial blooms, and neozoans in large lakes. These topics were addressed via both empirical studies and numerical simulations. The present Special Issue of *Hydrobiologia* contains 13 contributions to the symposium, demonstrating the range of topics covered and documenting the progress that has been made in our understanding of large lake ecosystems.

We thank the German Science foundation (DFG, Grant Number: Ro 1008/13) and the University of

Konstanz for supporting the symposium. Organization of the symposium was facilitated by Anne Zitzelsberger from the Conference Management group of the University of Konstanz. The help of numerous staff from the University of Konstanz, especially from the university's Limnological Institute, ensured the smooth progress of all sessions and coffee breaks. The tireless work of Karin Huppertz, the secretary of the Limnological Institute, was highly important to the success of the symposium. Last but not the least, we wish to thank all the reviewers of the papers in this Special Issue, who made important contributions that improved both their style and their content.