Foreword to the Siberian lakes special issue

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Two years before the publication of this special issue, I had the enormous privilege of joining the team of Dutch and Russian limnologists represented here. Because this was my first visit to Russia, let alone to Siberia, the sites were new and exotic to me, but the scientific atmosphere was as familiar and exciting as anywhere.

I worked for many years at a former 'secret atomic city' in the United States, so it was an emotional experience for me to visit the city of Krasnoyarsk, which was closed to Westerners during the Cold War, but now is the site of friendly scientific collaboration. Krasnoyarsk, an industrial city on the upper Yenisei River, boasts one of the largest hydroelectric dams in the world. But its many old-style buildings and wooden houses give the city warmth and charm. As a sign that Russians treasure their literary giants as much as their gigantic material accomplishments, a large statue of Victor Astafiev, a great writer of the second half of the twentieth century, stands in the city's pleasant pedestrian zone along the river.

Having dreamed of the endless Siberian taiga, I was surprised when, on the day-long drive southwest from Krasnoyarsk to the study site in the Republic of

Khakasia, the scenery changed from forest to rolling grassland. The pasture and hayfields gradually gave way to more arid but equally beautiful landscape. Finally, the objects of study, the lakes Shira and Shunet, appeared, like gems in the landscape.

This special issue summarizes the integrated research on these lakes, not only as a joint collaboration of Russians and Dutch, but also as one of modelers and empirical scientists. The highly complex and fine-scale vertical structuring in both physico-chemical factors and biota of these lakes demands the highest level of quality in both empirical research and modeling. I believe this team not only shows that level of quality, but also has the correct view that understanding these lakes requires being open to a variety of modeling perspectives.

A key finding in the empirical work is that not only bacteria, phytoflagellates and ciliates tend to concentrate in thin layers, but also large species such as *Gammarus* occupy specific depths in these highly stratified systems. Concerning the modeling, the project acted as a catalyst to bring together people and approaches needed to meet the challenges and avail the opportunities in lake ecosystem modeling in general.

The work presented here builds on earlier achievements in a collaboration ongoing for over a decade. The early studies are documented in a special issue of *Aquatic Ecology* that appeared in 2002 (Vol 36/2). I am certain this new special issue of *Aquatic Ecology* contains great contributions to limnology and marks the start of new collaborations.

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