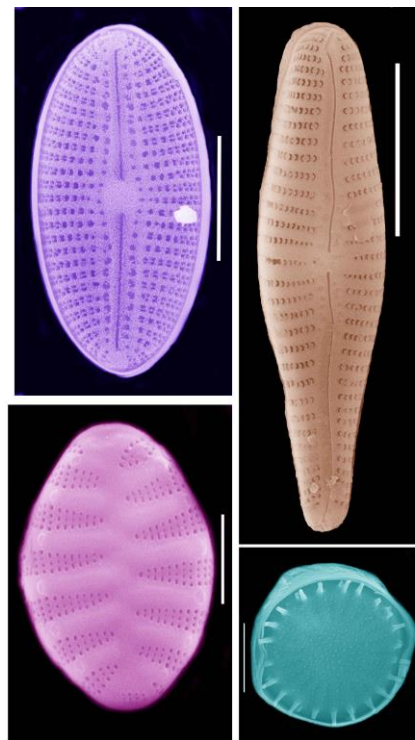


Siliceous algae based palaeo environmental reconstruction of mountain and lowland lakes (Krisztina Buczkó)

Siliceous remains (diatoms and chrysophycean cysts) from mountain and lowland lake sediments of the Carpathian Basin are analysed for a better understanding of the hydrological and climatic changes of the last 20,000 years. High-resolution analyses are carried out on sediment cores from a crater lake (Lake Szent Anna in Transylvania, Romania), some glacial lakes in the Retezat Mts (Southern Carpathians, Romania), and a shallow calcareous lake (Lake Balaton, Hungary). Using the European and our own databases, we reconstruct the changes of the quantity of phosphorus, salinity and pH in 40 lakes in the Carpathians and also attempt to estimate the temperature of mountain lakes in the Late-Glacial and Holocene by biogenic silica measurement. Our aim is to create a high-quality taxonomic work on fossil and living diatoms, and compile volumes of detailed iconographies that would be a supportive and accessible literature source for the researchers of the field in the future. Understanding hydrological changes in the past is useful for estimating the local-scale manifestation of projected global warming in the 21st century in the Carpathian Region.



Diatoms from Lake Balaton (photo Krisztina Buczkó)