

THE FRESHWATER DIATOM FLORA FROM TWO CONTRASTING ANTARCTIC LOCALITIES

Kateřina Kopalová^{1,2}, Josef Elster^{2,3}, Linda Nedbalová^{1,2}, Ralitsa Zidarova⁴ & Bart Van de Vijver⁵

¹Charles University in Prague, Faculty of Science, Department of Ecology

²Academy of Sciences of the Czech Republic, Institute of Botany, Section of Plant Ecology

³Centre for Polar Ecology, University of South Bohemia, Faculty of Science

⁴University of Sofia, Faculty of Biology, Department of Botany

⁵National Botanic Garden of Belgium, Department of Bryophyta & Thallophyta

It is widely accepted that climate change will have significant effects on polar ecosystems. Because of their (bio-)geographically interesting location, the study of Antarctic environments currently receives considerable attention. Diatoms (Bacillariophyta) form one of the principal algal components of the freshwater and terrestrial ecosystems of the Antarctic Region.

The current research project focuses on the taxonomy and ecological characterisation of aquatic diatom communities of two islands, located close to the Antarctic Peninsula: James Ross Island and Livingston Island. Although located close to each other, their geographical position on different sides of the Antarctic Peninsula makes them interesting localities to explore the differences in the environmental impact on their diatom communities.

The present poster discusses the results of the study of the diatom communities living in various freshwater habitats such as lakes and seepage areas in relation to ecological factors determining their composition and diversity. In this study, more than 150 diatom taxa have been identified during the survey. Until recently, most of the non-marine Antarctic diatom species were believed to have a cosmopolitan nature, mainly due to the use of non-appropriate taxonomic literature. A detailed revision based on scanning electron microscopy observations was therefore necessary to clarify the taxonomic position of most taxa resulting in the description of more than 20 new taxa such as *Eolimna jamesrossensis* Kopalová & Van de Vijver, *Luticola truncata* Kopalová & Van de Vijver and *Luticola tomsui* Kopalová (Kopalová et al. 2009, 2011)

References:

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