BIOSCIENCES IN POLAR AND ALPINE RESEARCH 2017

State of Art and Prospectives of Polar and Alpine Research

November 21st 2017, Faculty of Science, Masaryk University Brno
http://www.sci.muni.cz/biosciences/

In autumn 2017 (21.11.2017), a traditional workshop was organized in Brno by the scientists involved into CzechPolar2 and ECOPOLARIS projects. The intention of the meeting was to present the scientific outputs of recently running projects in the field of biological disciplines in polar and alpine ecosystems. Czech participants dominated the workshop, however, the meeting was attended also by specialists from Italy and Argentina. A wide range of scientific topics was presented at the workshop ranging from polar microbiology to immunological parameters of staff members of Antarctic expedition (*see* the below list).

[1] Michaela Marečková, Miloš Barták: Advanced chlorophyll fluorescence in photosynthetic study of Antarctic lichen *Dermatocarpon polyphyllizum* under stress.

[2] Kumud Bandhu Mishra: Optical signals for characterization of Antarctic lichen.

[3] Kateřina Trnková: Cyanobacteria from soil crusts and their photosynthetic activity during UV-B exposition.

[4] Hebe Carreras: Lichens as models organisms for plant physiology.

[5] Alena Žákovská, Olívie Zezulová, Kristián Brat: Study of selected hematological and immunological parameters of crew members of Antarctic expedition.

[6] Claude-Eric Souquieres, Jana Kvíderová, Josef Elster: *Vaucheria* a xanthophycean alga from Svalbard intertidal zone. Year 2

[7] Peter Váczi, Luděk Sehnal, Miloš Barták: Investigations of Antarctic terrestrial freshwater ponds: Overview of field activities and laboratory-based photobioreactor studies.

[8] Alla Orechová, Miloš Barták: Potential of digital microscopy in evaluation of microrelief of surface structures of Antarctic lichens and soil crusts.

[9] Pavla Holochová: Biodiversity of soil heterotrophic microorganism at the long-term research plots at James Ross Island investigated by DNA sequencing.

The workshop met a great success since it provided a platform for discussion of newly-emerging techniques in biological in polar research such as *e.g.* Raman spectroscopy and advanced analysis of fast chlorophyll fluorescence curves (OJIPs) in photosynthesis research of Antarctic autotrophs. The participants enjoyed informal and friendly character of the workshop which helped to establish professional relations especially between young and early-career scientists. They appreciated the discussion that led to the formation of several interdisciplinary links and suggested to implement moderated panel discussions in the forthcoming workshop in 2018.

M. Barták (Brno)

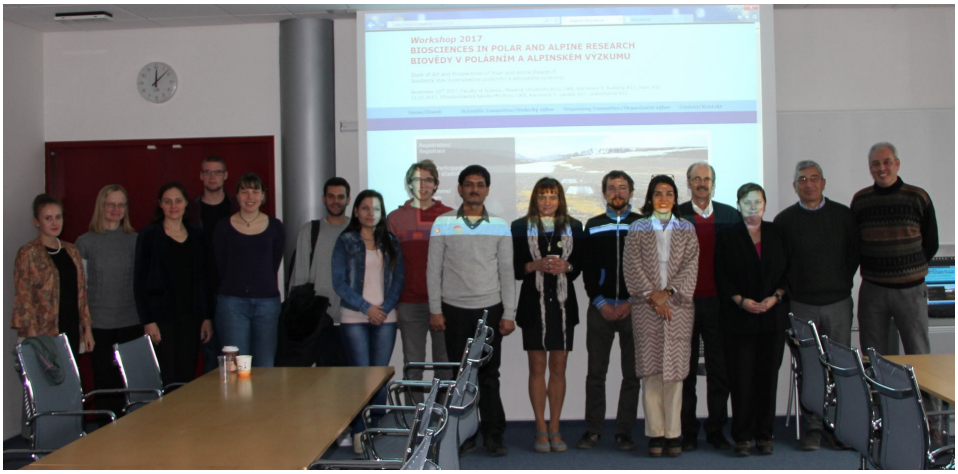

Fig. 1. Group photo of the workshop *Biosciences in Polar and Alpine Research 2017* participants.

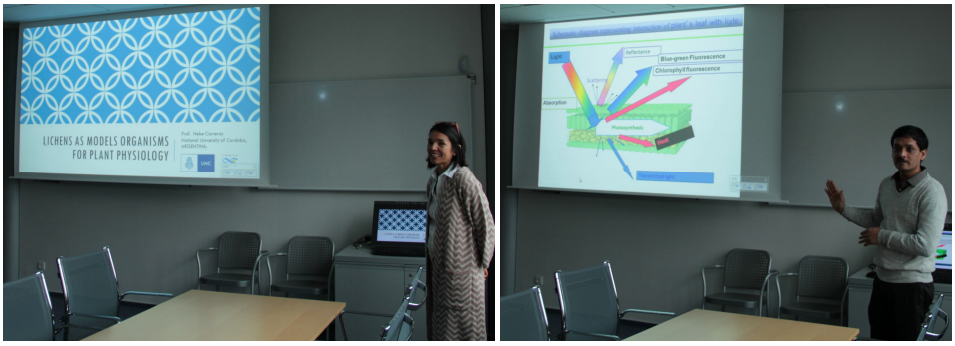

Fig. 2. Prof. Hebe Carreras (University of Córdoba, Argentina – left panel) and Dr. Kumud Bandhu Mishra (Czech Globe, Brno – right panel) presenting the results of experimental research on the workshop.

Fig. 3. Prof. Hebe Carreras (University of Córdoba, Argentina) and Prof. Martin Bačkor (Pavol Jozef Safarik University in Košice, Slovakia) during the workshop.