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**Title:** *Diversity, distribution and significance of terricolous and muscicolous lichens of the Bellsund region (SW Spitsbergen, Svalbard) – pilot*

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Lichens, together with other cryptogams, are a major component of the arctic tundra communities. Although more than 700 lichen species are known from Svalbard, they are still an insufficiently investigated group, especially in comparison to vascular plants. Terricolous lichens, which grow on soil and plant debris, together with muscicolous species (growing on bryophytes), contribute significantly to the biomass of tundra vegetation, and their role in ecosystem functioning cannot be neglected.

The aim of the current project is to investigate biodiversity and distribution of terricolous and muscicolous lichens in the Bellsund region (SW Spitsbergen), and their role in the tundra vegetation. Elaborating historical materials, collected in the 1980s, will provide a basis for comparative studies, and allow to detect possible changes in lichen vegetation of Spitsbergen over the last decades.

Fieldwork was carried out during two Polish expeditions in 1987 and 1989. Taxonomical analysis of lichens has employed both classical methods and chemotaxonomy. Identification of lichen secondary metabolites has been done using thin-layer chromatography. All examined specimens have been deposited in the lichenological herbarium of the Institute of Botany of the Jagiellonian University in Kraków (KRA-L).

Currently, 83 species have been identified from the study area, and taxonomical analyses are still in progress. After the first stage of this analysis, it can be assumed that species composition and richness of terricolous and muscicolous macrolichens corresponds with results from other parts of Svalbard (e.g. Olech 1990). Species from genus *Ochrolechia* and *Cetraria* seem to be the most common ones. Many species new to the Bellsund region (e.g. *Buelia geophila*, *Lecanora umbrina*, *Lecidea plana*, *Mycbilimbia hypnorum*, *Peltigera ponojensis*, *Polyblastia bryophila*, *Rinodina terrestris*) and two new to Svalbard (*Helocarpon crassipes*, *Thamnolia vermicularis* var. *vermicularis*) have been noted so far. As well several very rare (e.g. *Cetraria ericetorum*, *Peltigera scabrosella*) or probably previously underestimated (e.g. *Biatora subduplex*, *Protomicarea limosa*) species have been identified. Next findings of new or rare species are expected during further investigations.



As the final step of the project, a lichen distribution map of the study area will be prepared. The results will allow to fill the blank spots in the map of arctic lichens distribution, and, moreover, will be used for further comparative studies.