

Vegetation structure of High Arctic lichens on East Brøggerbreen glacier foreland

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Relationship between lichen species structure and landform on high Arctic glacier foreland was surveyed at Ny-Ålesund in Spitzbergen Island. Thus we surveyed dominant and indicator species that sampled in 1994 and 2007. 46 group 82 species (1994) and 31 group 68 species (2007) were identified on deposited in the herbarium, respectively. Fruticose lichen *Cetrariella delisei* and crustose lichen *Ochrolechia frigida* was dominated in coverage and frequency evenly across the study area. Moreover 13 among 4 landform (upland, slope, gravel and lowland zone) was founded upland and gravel zone by conducted with package 'labdsv' (Roberts 2012) in program R. Especially, blue-green algal lichens that generally prefer semi-wet to wet ground was indicator specie on gravel zone as might be especially dry environment. Also upland was made different water or chemical environment including substrate difference, and it is appropriately growth for *Cetraria* group. Landform that make ground surface structure was affected lichens distribution and their growth. In this study clearly indicate relationship between detail vegetation structure of lichens and landform on glacier foreland.

References

Roberts, D. W., Package "labdsv": ordination and multivariate analysis for ecology. R package version 1.5-0. Available at: <https://cran.r-project.org/web/packages/labdsv/labdsv.pdf>, 2012.