

Distribution and species diversity of lichens on a deglaciated area, Spitsbergen Island, high Arctic Norway

Takeshi Inoue[1]; Masakane Inoue[2]; Masaki Uchida[3]; Hiroshi Kanda[3]

[1] Polar, SOKENDAI; [2] Akita Univ.; [3] NIPR

Landform of glacier foreland consists of mainly hill, moraine, slope and lowland. These landforms have different environmental condition such as moisture, temperature, light, gravel fraction and gradient. Although those differences would affect lichen distribution, detailed investigation about lichen floras has been not conducted in the landforms yet. Therefore, we investigated lichen flora using samples which had been collected from these landforms on the deglaciated area in Ny-Alesund in 1994 and compared coverage and species diversity of lichen to those of moss and vascular plant.

Coverage of lichens was differed between landforms. The coverage of hill, moraine and slope was similar level (20-24%), whereas the coverage of lowland was extremely small (3%). 49 genera and 82 species were determined in all landforms. 35 lichen species were identified for only hill and 3, 1 and 2 species were identified for moraine, slope and lowland, respectively. On the other hand, four species, *Cetrariella delisei*, *Megaspora verrucosa*, *Ochrolechia frigida* and *Stereocaulon paschale* were common in all landforms. Although the coverage of lichen is smaller than that of vascular plant and moss, number of lichen species is similar or more than that of the vascular plant and moss except for lowland. Our results suggest that lichen diversity is different between landforms and the diversity for hill is very high even though small coverage.