**LICHEN-ASSOCIATED BACTERIAL COMMUNITIES OF POLAR REGION ARE STRUCTURED ACCORDING TO MYCOBIONT TYPE**

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Lichens are a symbiotic association between lichenized fungi (mycobiont) and photosynthetic algae or cyanobacteria (photobiont). In addition, the presence of lichen-associated bacteria as an additional and integral component of lichen symbiosis has been proposed and symbiosis is considered as a successful life strategy of lichen for survival in extreme or unfavorable environmental conditions. As the first step to understand the potential functions of bacteria within the lichens in the subpolar and polar regions including the Arctic, the Antarctic, Norway, Russia, and Chile, we analyzed the composition of lichen-associated bacterial communities across the lichens of 157 specimens of the genera *Cetraria* (11), *Cladonia* (44), *Flavocetraria* (7), *Ochrolechia* (12), *Psoroma* (30), *Stereocaulon* (17), *Umbilicaria* (14), and *Usnea* (22) using Illumina sequencing of 16S rRNA gene. *Alphaproteobacteria* (average relative abundance 57.3% ±20.6%) followed by *Acidobacteria* (17.0%±13.0%) and *Betaproteobacteria* (8.5±18.6%) dominated the lichen-associated bacterial communities across all samples. One OTU with 96.4% 16S rRNA gene similarity with [*Acetobacter tropicalis*](https://www.ezbiocloud.net/taxonomy?tn=Acetobacter%20tropicalis) constituted more than 1% of bacterial sequences in 96 specimens. The bacterial composition was strongly influenced according to the growth type and taxonomy of mycobiont rather than geographical location of the sampling sites This finding implies that host related factors rather than geographical distance determine the similarities between the bacterial communities in the polar region.