

**DIVERSITY AND VERTICAL DISTRIBUTION OF MICROBIAL EUKARYOTES
IN THE SNOW, SEA ICE AND MARINE WATERS FROM NORTH POLE**

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Our knowledge of microorganisms currently living in the Arctic Ocean is still rudimentary compared to other oceans, due to the logistical challenges imposed by its multi-year ice cap and inhospitable climate. We studied the eukaryotic diversity in the upper part of the water column, the sea ice and the snow from North pole samples (N8820', E01409; N8835', E01559), based on the analysis of 18S rRNA gene clone libraries. The specific richness is relatively low compared to that identified in other molecular analyses from oceanic samples. The Alveolates, especially the dinoflagellates, are the most important component of clone libraries in water samples. Comparisons of assemblage composition suggest differences in the origin of microorganisms detected in the upper and lower portions of ice cover. Specifically, the upper ice cover microbiota reflects the presence of species from continental ecosystems; whereas assemblages in the deeper ice appear to have been trapped from the water column. The exploration of this emblematic location has implications for the assessment of microbial biodiversity in polar environments.

Poster D-1

OPERATIONAL TAXONOMIC UNITS IN MICROBIAL ECOLOGY