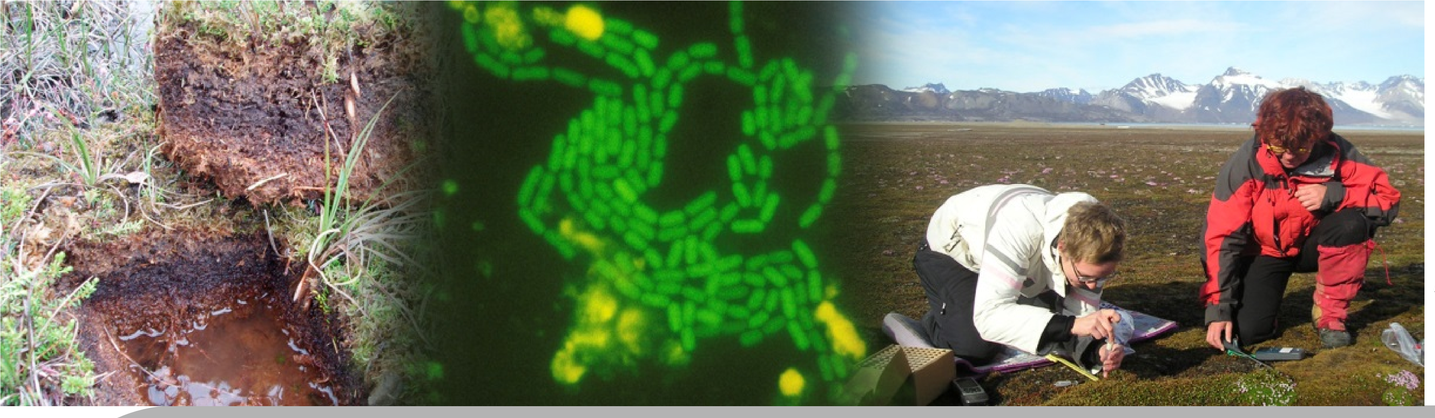

NENUN

Arctic Microbial Ecology
University of Tromsø, Norway

Research area of interest

Systems: Permafrost soil ecosystems, (continuous and dis-continuous), High-Arctic and Low-Arctic

Processes: C-cycling, soil organic carbon decomposition, methane oxidation, N_2 fixation

Organisms: Microbial communities including all three domains, methanotrophs, *Methylobacter tundripaludum* SV96

Members of research group

Mette Marianne Svenning (Professor)
Alexander Tøsdal Tveit (PhD)
Nadine Manke (Master)
Alena Didriksen(Technician)
Anne Grethe Hestnes (Technician)
Associated members
Susanne Liebner, GFZ, Potsdam
Lars Ganzert, METLA Rovaniemi
Tim Khalke, University of Tromsø
International collaborators
Dr. Tim Uric, University of Vienna
Prof. Peter Frenzel, MPI Marburg

Methods

DNA and RNA isolation from high organic

soil and acidic soil

Metagenomics and Metatranscriptomics

Genomics and transcriptomics

Bioinformatics

Q-PCR

Cultivation of methane oxidising bacteria

Aerob and anaerob cultivation

In situ flux measurements

Resources

Field sites: Ny-Ålesund, Svalbard and Neiden, Finnmark

HPC-High Performance Computer cluster

Well equipped microbial and molecular laboratory

Microscope and BioImaging

Phytotron

Five key publication

•Liebner S. and Svenning M.M. 2012. Environmental Transcription of mmoX by Methane-Oxidizing Proteobacteria in a Subarctic Palsa Peatland. Applied and Environmental Microbiology 79: 701-706.

•Tveit A., Schwacke R., Svenning M.M. and Urich T. 2012. Organic carbon transformations in high-Arctic peat soils: key functions and microorganisms. *The ISME* Journal 7: 299-311.

•Svenning M.M. et al. 2011. Genome sequence of the Arctic methanotroph *Methylobacter tundripaludum* SV96. Journal of Bacteriology 193: 6418-6419.

•Graef C., Hestnes A.G., Svenning, M. M. and Frenzel P. 2011. The active methanotrophic community in a wetland from the High Arctic. Environmental Microbiology Reports 3: 466-472.

•Wartiainen I., Hestnes A.G., McDonald Ian R. and Svenning M.M. 2006. *Methylobacter tundripaludum* sp. nov., a methane-oxidising bacterium from arctic wetland soil on the Svalbard islands, Norway (78°N).International Journal of Systematic and Evolutionary Microbiology 56: 109-113.