

AQUATIC MICROBIOMES IN A HIGH-LATITUDE MIRE-AND-LAKE COMPLEX

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Background

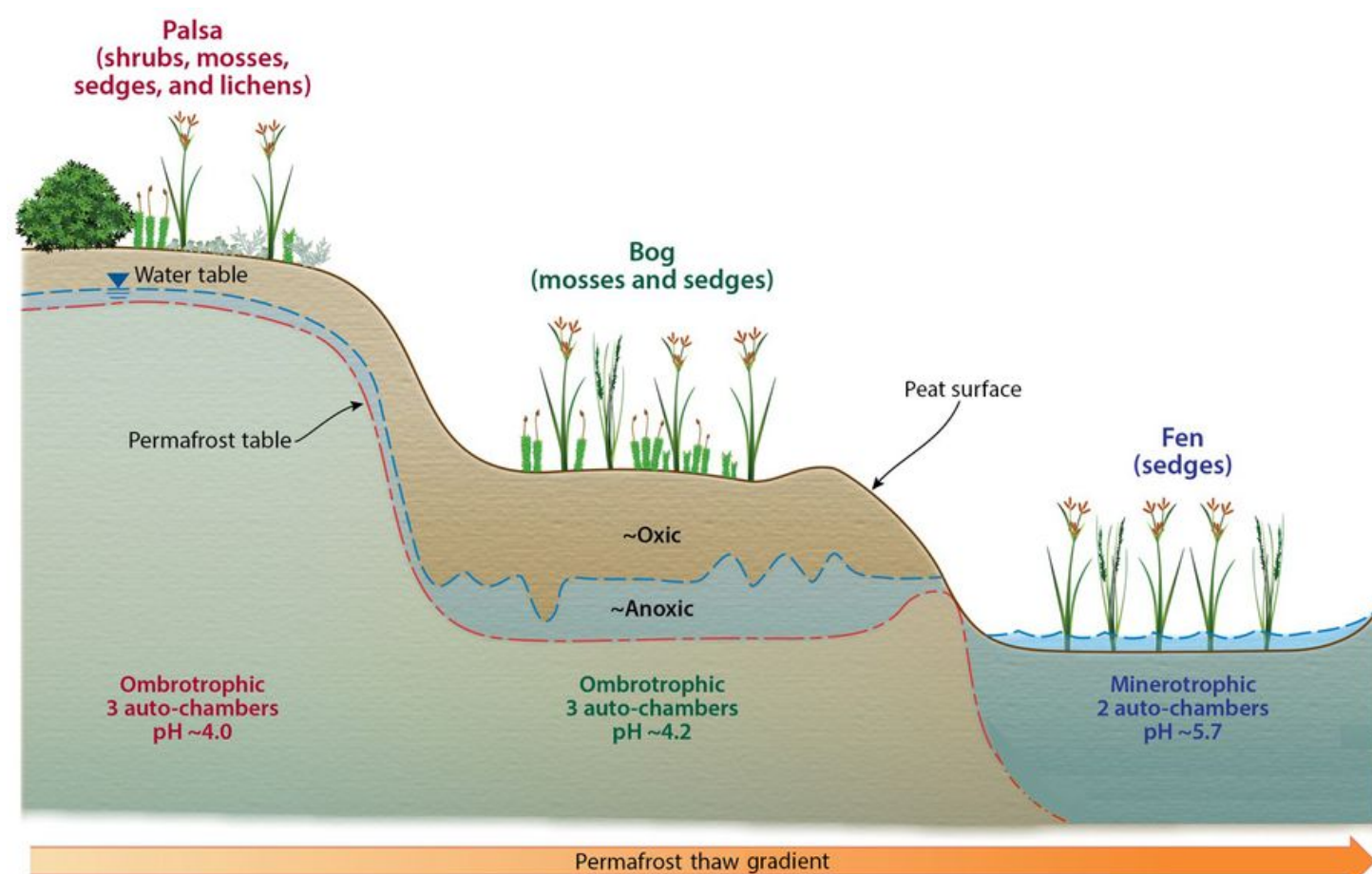


Fig. 1: Stordalen Mire permafrost thaw gradient characterization from Chang et al. 2019

- The permafrost thawing contributes to higher methane emissions by increasing the activity of microbes
- The microbial communities in the soil is well studied however there is a knowledge gap in the expanding aquatic system
- Past soil microbial data will be compared to current aquatic data to curate a better understanding of water-soil interfaces

Driving Question

Do community composition and function, and encoded methane cycling potential, differ?

Data Collection Process

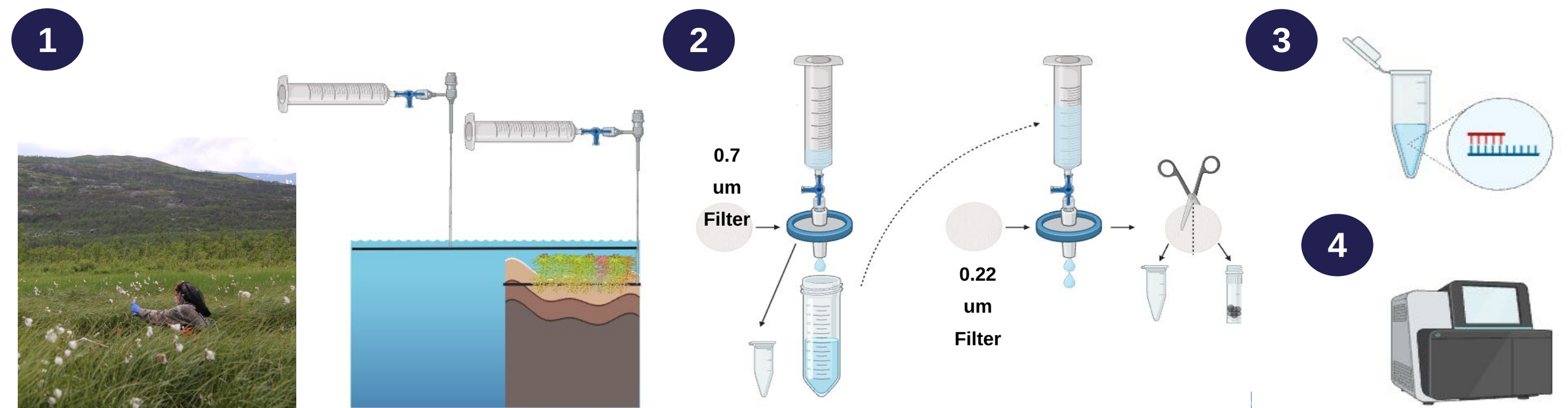


Fig. 2: Schematic of sampling process including (1) drawing water from the environment, (2) filtering them for microbial size fractions, and (3) extracting DNA for (4) sequencing. Made from Biorender.

Future Steps

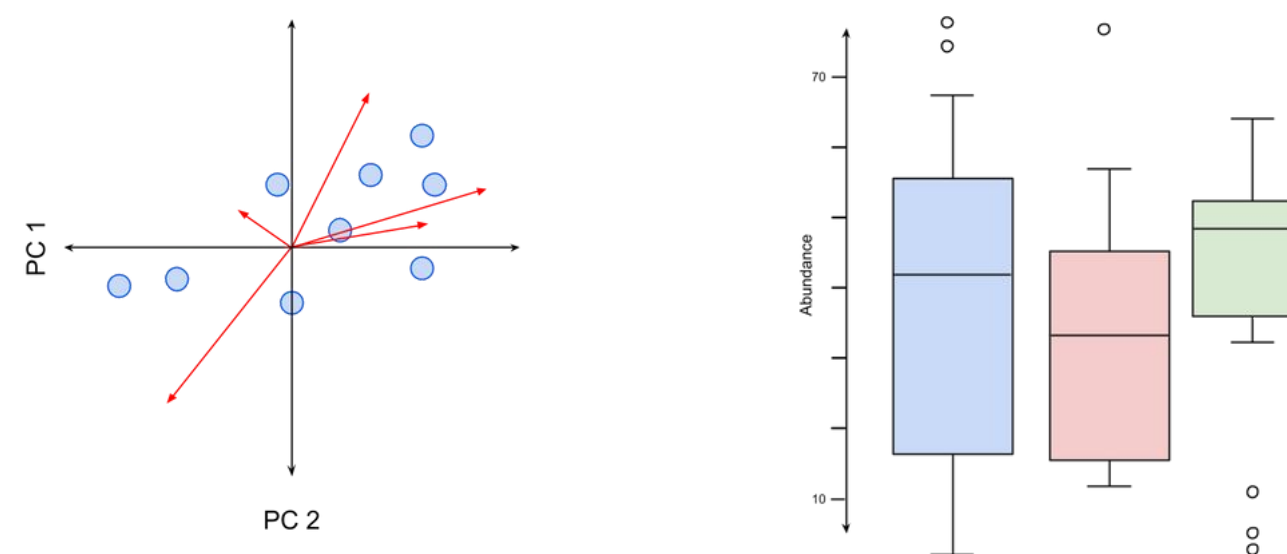


Fig. 3: Schematic representations of analyses typically done in microbial ecology (1) ordinations such as PCoA and (2) box plot comparisons of abundance, diversity, etc. from Buttigieg & Ramette 2014

Acknowledgments

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 This research took place on indigenous lands in Sápmi, where Sámi people have lived since time immemorial.
 Diana Lo from the UNH Leitzel Center

References

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- Buttigieg P.L., Ramette A. (2014) A Guide to Statistical Analysis in Microbial Ecology: a community-focused, living review of multivariate data analyses. *FEMS Microbiol Ecol.* 90: 543–550.