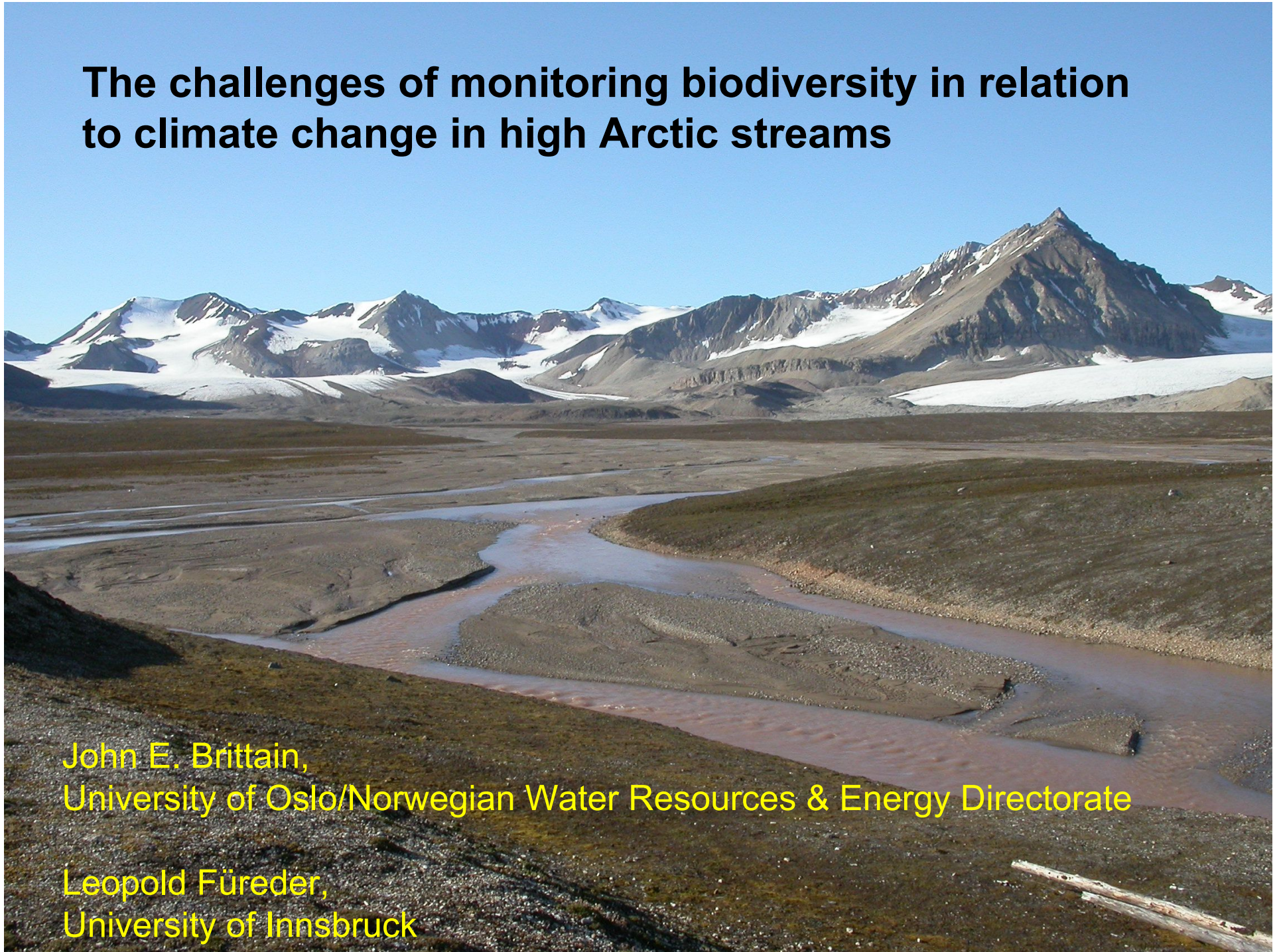


The challenges of monitoring biodiversity in relation to climate change in high Arctic streams

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Challenges

- Logistics, access and expense - funding
- Poor knowledge of biodiversity, ecosystem functioning and the interplay between abiotic components and biodiversity
- Diversity in water source and nutrient inputs
- No ikons (apart from Arctic Charr?)



Tegnforklaring

Metadata Benthic Algae Rivers

● 1 year

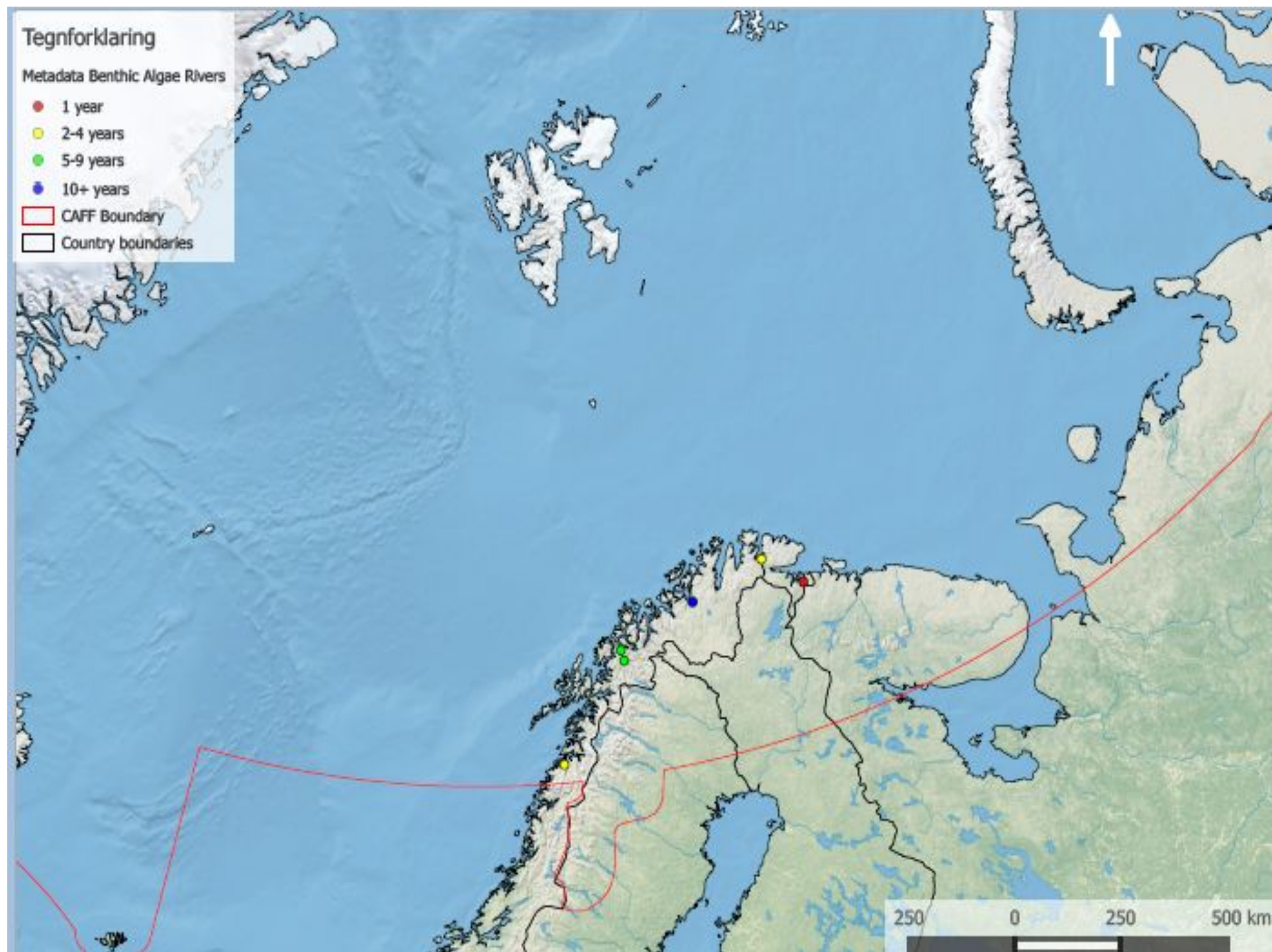
● 2-4 years

● 5-9 years

● 10+ years

▭ CAFF Boundary

▭ Country boundaries



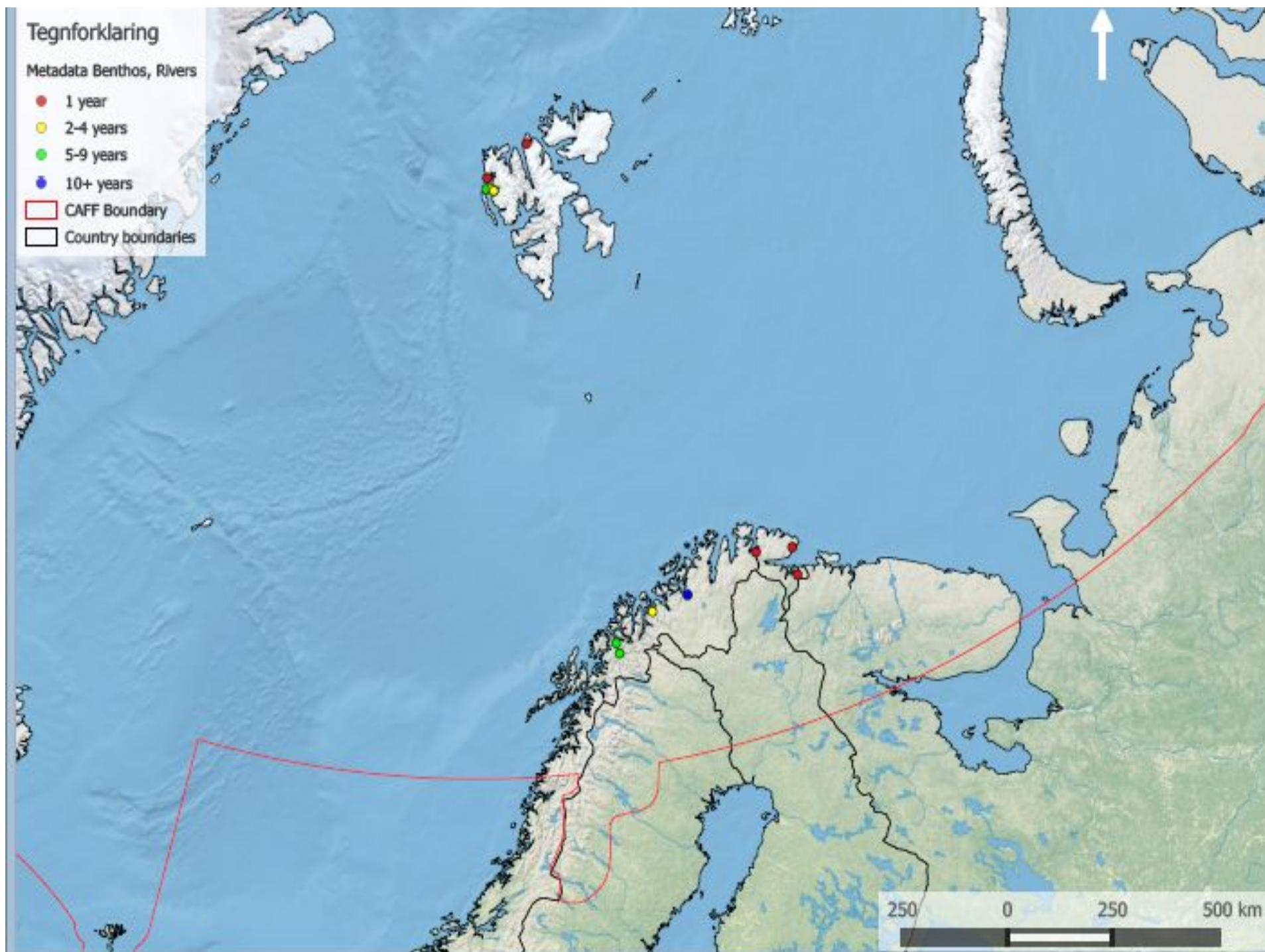
Tegnforklaring

Metadata Benthos, Rivers

- 1 year
- 2-4 years
- 5-9 years
- 10+ years

CAFF Boundary

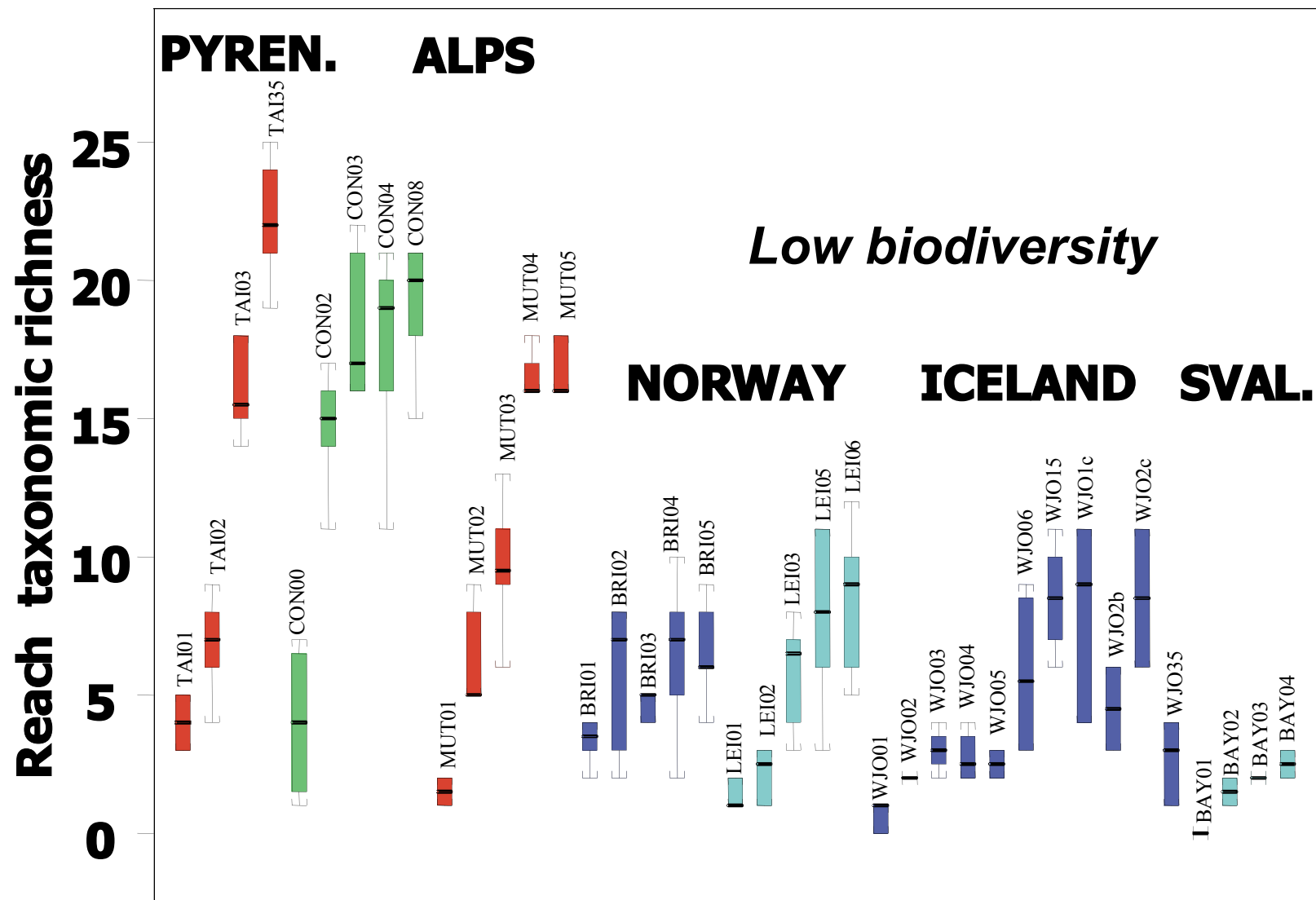
Country boundaries



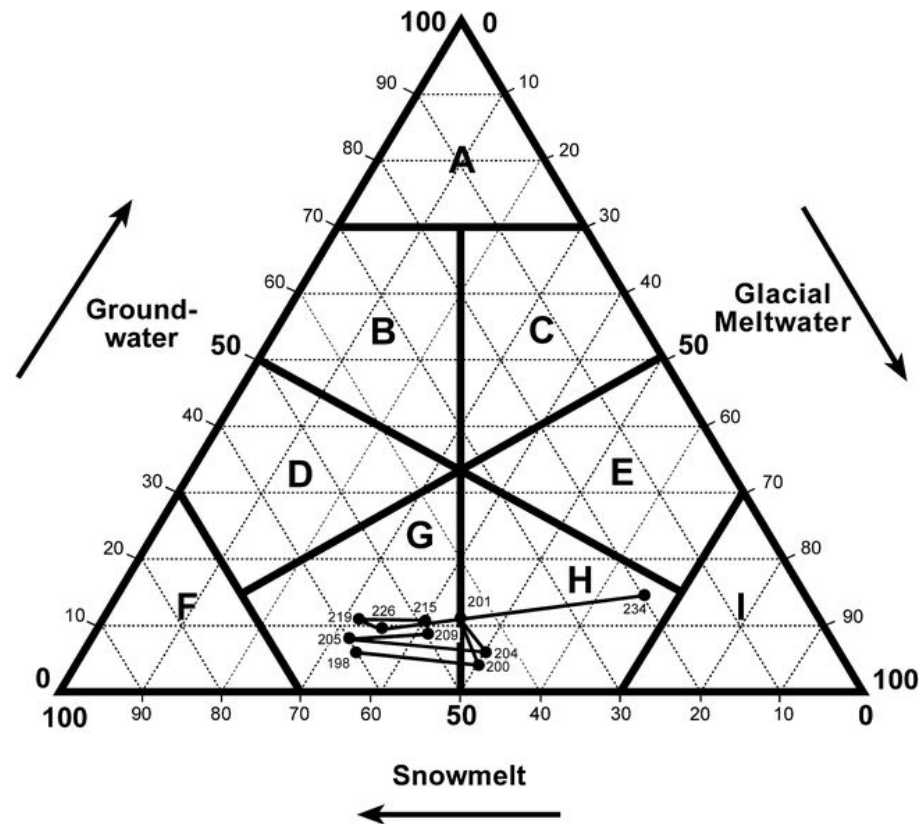
Advantages!

- Low biodiversity and short food chains
- Sensitive to climate change
 - Not just temperature, but water source and connectivity changes
- Climate changes greater and more visible in the Arctic

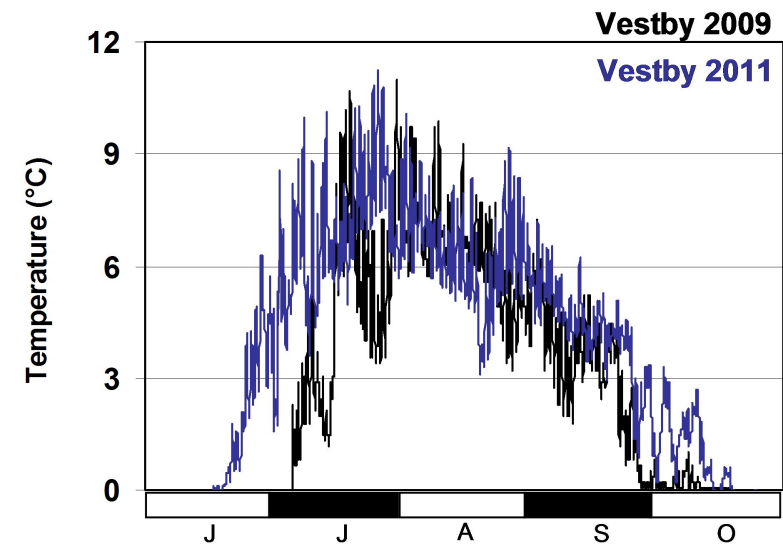
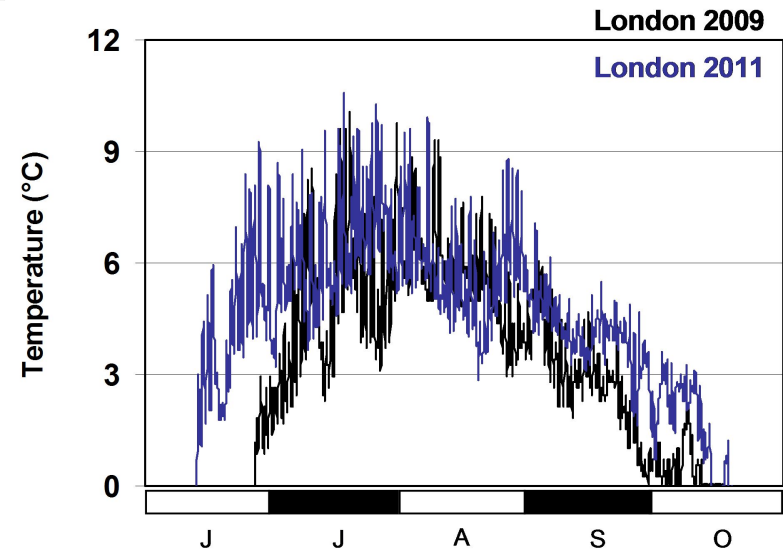
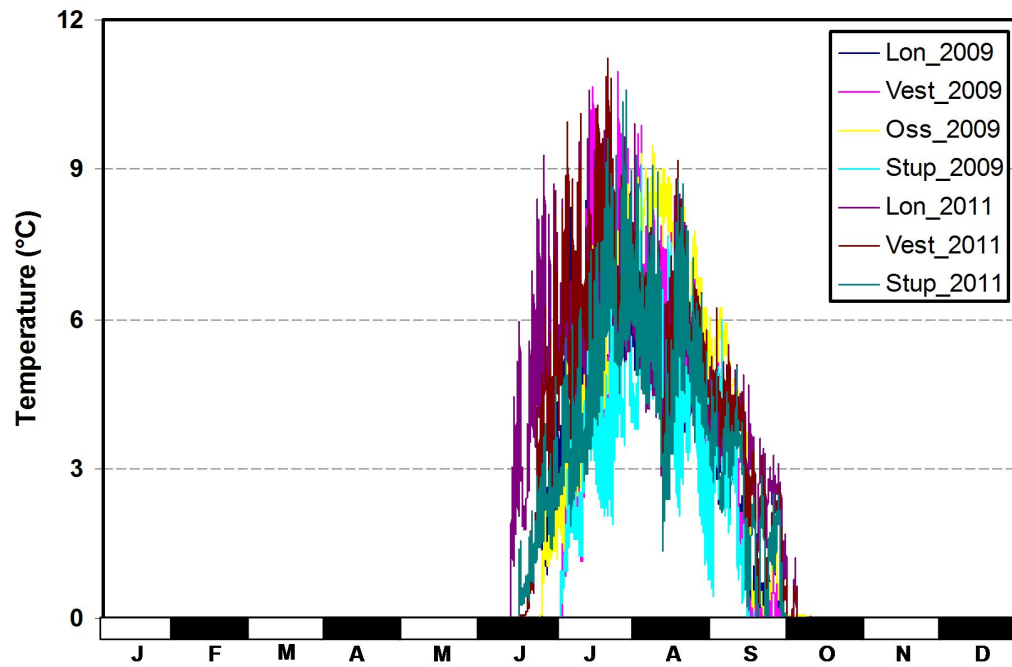
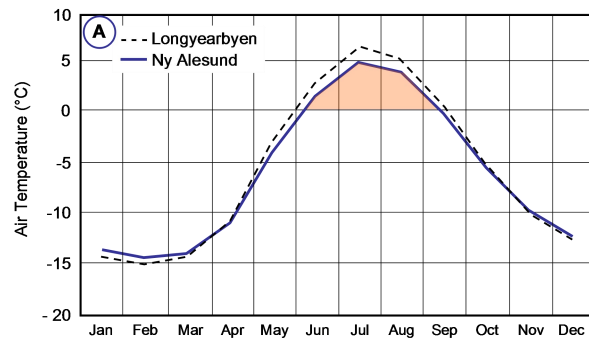


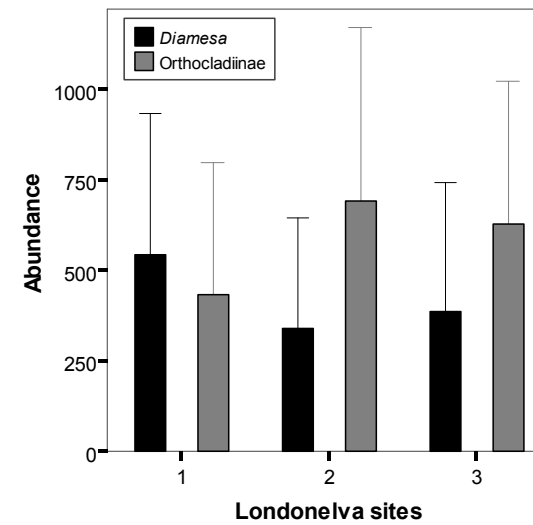
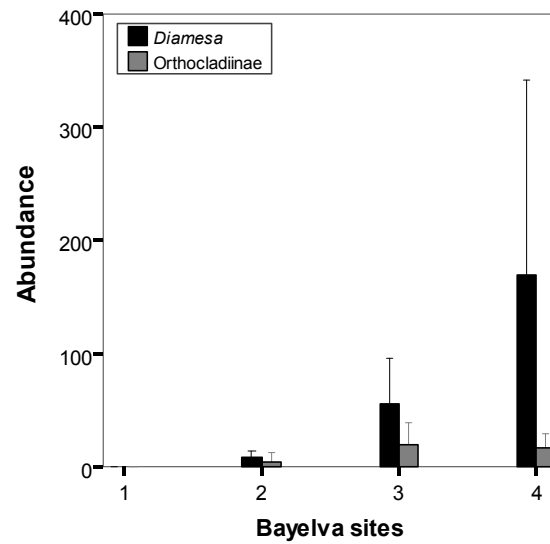


Water sources in Arctic regions

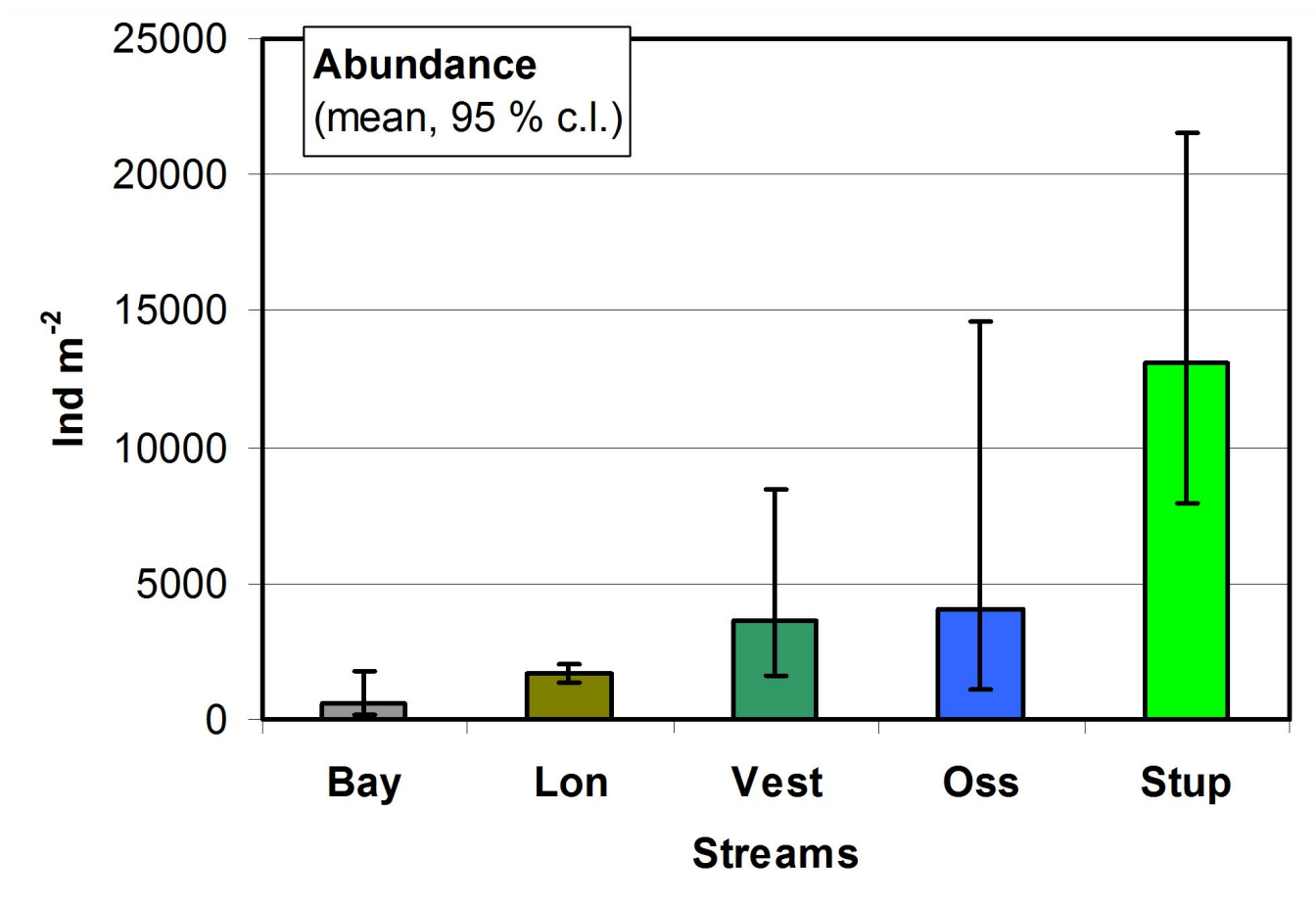


After Brown et al., 2003





Abundance (individuals m⁻²) of Diamesa and orthoclads in two different streams near Ny-Ålesund, Svalbard





High Arctic streams

- Streams are significantly different
 - nutrient and food availability
 - presence and abundance of benthic taxa
- Taxa basically primary consumers; short food chains
- Differences highly influenced by catchment properties
 - water source and connectivity,
 - nutrient inputs (lake outflows and bird cliffs)

