

# Provenance Studies of Labrador

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## Fingerprinting the DNA of sand grains...

A collaborative multi-year study with Christian Knudsen (Geological Survey of Denmark and Greenland – GEUS) commenced in 2012. The aim of the project is two-fold: 1) to investigate the orogenic development of the landscape of northern Greenland, northeastern Nunavut and Labrador since the Cenozoic, and 2) to examine the subsequent weathering of the rocks and resultant processes of sediment transport and deposition into the adjacent Labrador Sea. Representative samples of fluvial sand and gravel from major rivers and intertidal zones, as well as representative bedrock samples were collected to determine the source and provenance of the continental shelf sediments. Analytical studies will be undertaken to characterize the age and nature of the sediments. These on-shore provenance studies will be utilized to fingerprint distinct sediment sources that have fed the deep offshore basins in the Labrador Sea.



Sample locations



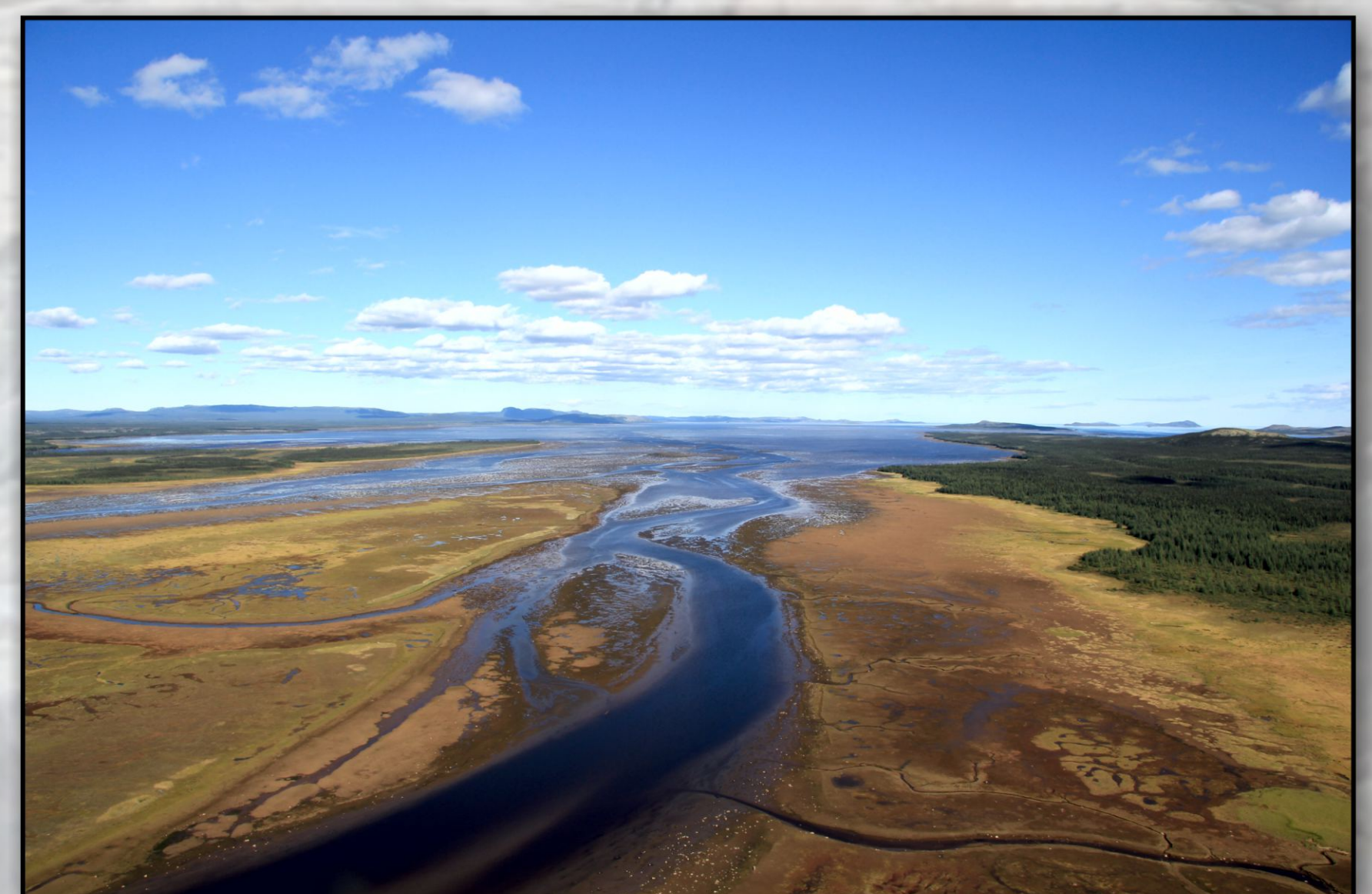
Coastline, near Nain



Sampling fluvial sands in Iqaluit, Baffin Island



Sampling bedrock, northwest of Webb Bay



River flood plain, near Rigolet