

Project title

Carboniferous Basins in Svalbard, Canada and the Barents Sea

Researchers names and affiliations

Leader: Jean-Baptiste Koehl, University of Calgary, Calgary, Canada; University of Oslo, Oslo, Norway

One field assistant to be named.

Project location

The study area is located on the Grinnell Peninsula, in Northwest Devon Island, along the Lyall River.

Timeframe

Three to four weeks between June 15th and August 15th 2019.

Project description***Purpose***

The project aims at studying 360-325 million years old sedimentary rocks in NW Devon Island. The project will investigate the context of deposition of these rocks and compare them to analogous rocks in Svalbard and the Barents Sea (Norway).

Goals and objectives

The project will test three main hypotheses:

1. Testing that the studied rocks were deposited within a large depression bounded by large cracks.
2. Testing that these rocks deposited while the tectonic plates were diverging.
3. Testing the influence of adjacent basement rocks on the deposition and deformation in the studied rocks.

Methods of transportation

Twin Otter from Resolute Bay to the Grinnell Peninsula or strip designated by the PCSP. If needed, helicopter transportation from Twin Otter landing site to study area. Daily walks from the campsite to the outcrops.

Structures to be erected

Two personal tents will be erected at the campsite.

Restoration/abandonment plans

The camp site will be restored to its original conditions and photos will be taken by the field participants prior and after abandonment following the legislation in place. All unburnt waste will be bagged and transported back to Resolute Bay.

Methodology

Collection protocol and mechanism

About 70 small rock samples (less than 0.5 kg each) will be collected for geochemical, structural, microscopic, and geochronological analyses. The samples will be collected using a geological hammer and a chisel and will be catalogued and stored at the University of Calgary. No fossil will be collected.

Use of data

The data will be published in Gold Open Access peer-reviewed scientific journals and be freely accessible to anyone who wishes to use them. The data will also be accessible on repositories at the University of Calgary.

Reporting

Six to eight peer-reviewed articles and two to three popular science articles will result from this project. The results will be disseminated through international and specialized scientific conferences and popular science events. Report to the communities and the media will be provided upon request.