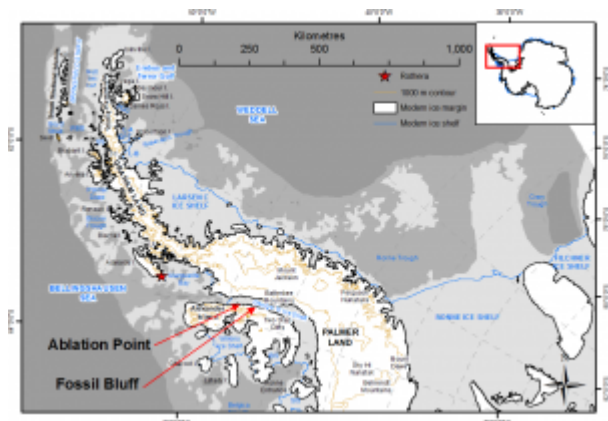




Alexander Island Project

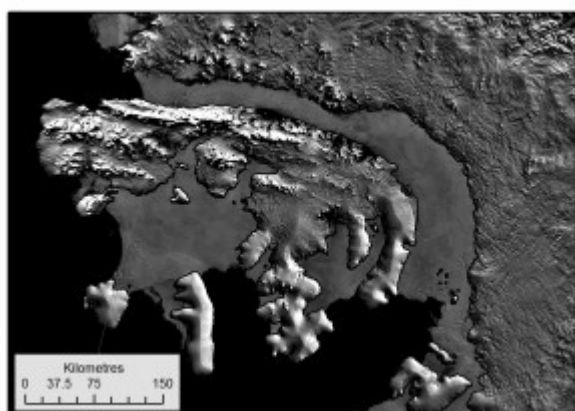


Map showing Rothera research station, Alexander Island and Palmer Land. Note George VI Ice Shelf.

The Alexander Island Project is a continuation of our [James Ross Island](#) project, entitled “*Glacial history of the NE Antarctic Peninsula over centennial to millennial timescales*”. This is a NERC-funded project, led by [Professor Neil Glasser](#), with co-investigators [Professor Mike Hambrey](#), [Professor John Smellie](#), [Dr Jonathan Carrivick](#) and [Dr Bethan Davies](#), from Aberystwyth, Leeds and Leicester universities.

Our work at Alexander Island is supported by the [British Antarctic Survey](#) and involves analysis of valley glacier and ice-shelf moraines at Ablation Point Massif and Fossil Bluff. You can see photographs of our fieldwork and learn more about our research [here](#).

Fieldwork



Alexander Island and George VI Ice Shelf, from the Landsat Image Mosaic of Antarctica

The field team were interested in reconstructing the past behaviour of the ice shelf. The ice shelf has brought granite boulders from the Antarctic Peninsula onto Alexander Island, and they now rest at

elevations of up to 120 m above the modern ice shelf. These “erratic” boulders (boulders that are not part of the local geology and are glacially transported) document the past height and behaviour of the ice shelf. Understanding how the ice shelf behaved in the past should help scientists to understand how it will respond to changing climatic and oceanic conditions in the future. This is important, because if it melted, the Antarctic Peninsula Ice Sheet could raise global sea levels by up to half a metre. Combined with melting from mountain glaciers and the Greenland Ice Sheet, this could result in flooding of low-lying areas of Earth over the next century.

We will be using [cosmogenic nuclide dating](#) to determine the ages of granite boulders exposed at high elevations across the eastern margin of Alexander Island.

Downloaded from:

<https://www.antarcticglaciers.org/glacial-geology/antarctic-ice-sheet/alexander-island/alexander-island-project/>