PROJECT TITLE: Antarctic Eocene sea-floor ecosystem structure in response to environmental change

Project Science Theme: Evolution and Biodiversity Through Space and Time
Project keywords: Fossil, Palaeoecology, Climate, Antarctica, Eocene

Lead Institution: British Antarctic Survey (BAS)
Lead Supervisor: Dr Rowan Whittle, BAS, Palaeoenvironments, Ice and Climate Change
Co-Supervisor: Daniela Schmidt, University of Bristol, School of Earth Sciences
Co Supervisor: Saurav Dutta, BAS
Co-Supervisor: Alex Dunhill, University of Leeds
Co-Supervisor: James Witts, Natural History Museum

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Webpage: https://www.bas.ac.uk/project/the-evolution-and-ecology-of-antarctic-sea-floor-communities/#about

Project aims and methods:

The Eocene epoch is a time of immense change in the global climate when Antarctica transitioned from a greenhouse environment to an icehouse environment. Ecosystems responded to these changes, but there is a lack of knowledge of responses on the shelf and especially in higher latitudes. The student will make the first quantified reconstructions of benthic marine community structure throughout the Eocene of Antarctica using new samples collected this year.

Working with the leading expert in the field at the British Antarctic Survey (BAS), the student will analyse benthic community composition (taxonomic composition, ecological traits e.g. predator/prey ratios). With co supervisors at the NHM and the University of Leeds, the student will identify the key trophic relationships and analyse food web structure through the Eocene. Working with a geochemist from BAS, the student will explore the interdisciplinary links of life and the environment by putting biotic change into a paleoenvironmental context.

Understanding ecosystem restructuring in response to environmental change in benthic communities provides insights into the conservation effort of Antarctic ecosystems in the context of modern environmental change.

Useful recruitment links:

Rowan Whittle, the BAS lead supervisor, will be on fieldwork during the recruitment period. In Rowan's absence, for information relating to the research project please contact James Witts at the Natural History Museum via: james.witts1@nhm.ac.uk

To submit an application, you will need to apply via the University of Bristol application page as the registered university for the project. It is important that you follow the detailed instructions provided when applying for the project and be sure to read the prospectus carefully. We advise you download the 'Admissions Statement' for Bristol and follow the instructions.

When applying please include in your application the NERC GW4+ DLTP personal statement (Office document, 194kB) version of a personal statement.

There is an additional 'applicants questionnaire' that the DLTP require, so please complete this at the time of application as well.

When applying for projects in the School of Earth Sciences please choose 'Geology- PhD' in the 'find a programme' box.

Note: The successful candidate will be based at BAS in Cambridge.