

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

Project Enquiries: james.witts1@nhm.ac.uk

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 project partners 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, please send your CV, the completed GW4plus personal statement, degree transcripts, degree certificates and contact details of two academic referees directly to James Witts, NHM, before **the application deadline Monday 13 January 2025 @ 2359 GMT**. Should you have any enquires, please contact [Ali Teague](#) at the BAS Student Office. Please visit our website to find out more about [BAS](#) and the [BAS PhD Student Programme](#)

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