

Home Counties North Regional Group



Zoom Lecture
Thursday 18th July 2024

Zoom opens at 6.45 p.m and lecture starts at 7 p.m.

Jurassic dolerites in the Theron Mountains, Antarctica

Presented by Dr David Brook OBE FGS

Lecture organised by John Wong FGS
Home Counties North Regional Group Chair

Zoom room hosted by Adrian Marsh FGS



Abstract

Lower Permian sediments in the Theron Mountains were intruded in the Jurassic by great thicknesses of dolerite, mainly in the form of sills with a few dykes and accompanied by minor local tilting and faulting. Different phases of intrusion have been recognised and layering in two sills is attributed to flowage differentiation and crystal settling.

The intrusions are petrographically variable, many being olivine-bearing while others are characterised by granophyric quartz-dolerite. Petrographical variation is reflected in the chemistry of the intrusions and individual intrusions are readily correlated on a chemical basis. Field, petrographical and geochemical evidence indicates major differences between the dolerites of the Theron Mountains and the Ferrar dolerites of Jurassic age elsewhere in eastern Antarctica. Comparison with other Mesozoic tholeiitic rocks of the southern hemisphere confirm the distinction of two separate magmatic provinces recognised by others but it modifies their geographical limits.

Lecture speaker **Dr David Brook OBE FGS**



This talk is based on some of the work for which Dave Brook was awarded a PhD in 1973. Newly graduated from the University College of Swansea, Dave had joined the British Antarctic Survey (BAS) and spent two years based at Halley Bay (75°30'South, 26°30'West), from where he travelled to the Theron Mountains to carry out reconnaissance geological mapping. On return to the UK he carried out the detailed examination of the rock specimens and researched other Gondwana dolerites as part of the work for his PhD. On leaving BAS, Dave worked in the Minerals Planning Division of the Department of the Environment and its successor departments from 1972 to 2004, where he was responsible for planning policy and research on land instability, flooding, pollution control, contaminated land and the environmental effects of mineral working. He was awarded the OBE in 2003 for his work on incorporating scientific and engineering information in planning policy guidance. On retirement he did a few years consulting work and he served on the committee of the re-formed Home Counties \North Regional Group including 2 years as Chair.

This event is free of charge, but registration is essential, priority will be given to Fellows and Student Fellows of the Geological Society who are members of the Home Counties North Regional Group. Fellows and Student Fellows of all other Geological Society Regional Groups are welcome to register their places, also free of charge.

Please book your places on a first-come-first-served basis by e-mail to homecountiesnorthregionalgroup@gmail.com.

For more information on the Home Counties North Regional Group visit the website <http://www.geolsoc.org.uk/hcnrg>

CPD (Continuing Professional Development) hours – This Home Counties North Regional Group event qualifies for your CPD hours spent travelling to/from and attending the event. The content is intended to be suitable for early career through to experienced geologists and related professionals.

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