



Book review: *Antarctic Basalt: An Antarctic Quest in the Days of Dog-sledge Travel*

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Received: 6 February 2026 – Accepted: 19 February 2026 – Published: 26 February 2026

Jukes, L.: Antarctic Basalt: An Antarctic Quest in the Days of Dog-sledge Travel, Troubadour Publishing, Market Harborough, Leicestershire, 436 pp., 48 photographs, 21 maps, ISBN 978-1805147602, 2024.

Lewis Jukes, a South African–British geologist and student of Prof. Lester King, takes us in his book back to the period shortly after the Antarctic Treaty came into force in 1961, when geoscientific field research in Antarctica began to be pursued systematically. In contrast to the “Heroic Age of Antarctic Exploration” from 1897 to 1922, this later phase – whose end can be defined as the entry into force of the Madrid Protocol in 1991 – has so far received little attention.

Across 436 engaging pages, Lewis Jukes, freshly graduated from the University of Natal (Durban) in 1963, recounts his 2-year experiences at the British station of Halley Bay and during fieldwork in the Heimefrontfjella of Dronning Maud Land. The purpose of this work was to search for evidence supporting plate tectonics, which had been postulated in the early 1960s but was still highly controversial. As early as 1953, Lester King had predicted the presence in East Antarctica of equivalents of the Karoo sequence and the overlying Jurassic basalts. Jukes was tasked with finding evidence that Natal and Dronning Maud Land had once been connected within Gondwana. Thanks to his knowledge of the geology of Natal, he was a suitable candidate to search for corresponding rocks in Dronning Maud Land.

As an employee of the British Antarctic Survey, Jukes arrived at Halley Bay station in January 1964, where preparations had to be made for the first overwintering. The reader learns much about the station’s layout and the cramped living conditions of 30 young scientists in a station built on the ice shelf. Before heading into the field after the Antarctic win-

ter of 1964, the inexperienced Jukes first had to learn how to handle dog teams. Although heavy loads were transported by a Muskeg tractor to the Heimefrontfjella, about 300 miles (ca. 480 km) away, the actual fieldwork was carried out by two-person teams – consisting of a geologist and a surveyor – using dog sleds.

During the Antarctic summers of 1964/1965 and 1965/1966, Jukes did indeed find the Karoo sequence with Permian plant fossils and Jurassic sills in the Heimefrontfjella, exactly as his teacher had predicted.

However, the tragic events of the second Antarctic summer cast a shadow over what was otherwise a highly successful geological expedition. On the way to the Mannefallknausane nunatak group, a Muskeg tractor fell into a crevasse. The accident involved four people, only one of whom survived because the technique of “towed dogs” had been used: the dog teams were harnessed behind the Muskeg, with one man supervising the dogs. Jukes and his colleague, who were already on their way back to the station, undertook a futile rescue attempt. It is to Jukes’s credit that he analysed the reasons for the accident and the mistakes made at the time, thereby doing justice to those who died. This stands in stark contrast to the account given by the head of the British Antarctic Survey, Sir Vivian Fuchs, who in his 1982 book, *Of Ice and Men*, places the main blame on the Muskeg driver during conditions of poor visibility.

The Antarctic work came to an end with departure on 1 February 1966. The book concludes with an overview of the geological work carried out after returning home, which culminated in the submission of an official report and a doctoral dissertation, as well as an outline of Jukes’s subsequent career in industry. As with many other polar researchers who did not pursue an academic career, the years in Antarctica were personally formative but had little influence on his later

professional life. Particularly noteworthy is the extensive, almost affectionate tribute to the husky teams, without which Jukes and the other geologists would not have been able to carry out their work.

Richly illustrated with colour photographs and map sketches, and equipped with an index, the book is both a source on British Antarctic research in the 1960s and a personal biography of a formative period in the life of a young geoscientist.

Review statement. This paper was edited by Bernhard Diekmann.