

Pacific margin of East Antarctica, and West Antarctica, where most of the papers are concerned with the Antarctic Peninsula. Many of the papers provide additional evidence to support the generally accepted scheme, but a few look more broadly at New Zealand–Marie Byrd Land relationships. In chapter 3 new geophysical, structural, and geochemical data are used to present new insights on various aspects, including plume magmatism and its relation to Gondwana break-up processes. Together these demonstrate the growing complexity of the former, more simple models.

Papers on marine seismic and sedimentological studies constitute the bulk of chapter 4. The evolution of the ocean floor between South America and Antarctica and in the southeastern Pacific Ocean form the principal regional focus, with additional papers on Bransfield Strait and George VI Sound. Only one paper deals with the Australia–Antarctic region and a final paper proposes that Iles Kerguelen may constitute a third type of oceanic island.

Chapter 5, covering climate-change records, includes papers that discuss the Sirius Formation and the contentious issue of possible deglaciation during the Cenozoic based on the presence of diatoms that may or may not be of wind-blown derivation. Another paper contests this hypothesis, and the arguments are likely to continue for some time. Chapter 6 is concerned only with the last glacial cycle and contains detailed micro-palaeontological analyses from lakes onshore and from sediment cores on the continental shelf offshore. Other papers examine glacial fluctuations recorded in outcrop geomorphology, demonstrating the wide ranges of techniques that can be used. Chapter 7 is an eclectic mix of papers that did not fit easily into other chapters in the volume.

The palaeontological papers in chapter 8 show, amongst other things, the changing climate of Antarctica from the Permian to the present and how plant life flourished close to the Pole during warm climates and was able to cope with the seasonal extremes of solar radiation, an environment that is absent on Earth today. There are also reports of new ungulate species from the Eocene of the northern Antarctic Peninsula.

Chapter 9, on station geophysics, includes descriptions of station facilities as well as research studies, particularly in seismology. There are three papers on volcanic studies at Deception Island and Mount Melbourne, including the relationship between fumarolic gas composition and seismic activity. The section on new directions (chapter 10) deals mainly with the application of new techniques to earth-science research in Antarctica. Various types of remote-sensing from satellites, as well as aeromagnetism from aircraft, are covered. There is also a paper on beryllium isotope analysis to determine exposure ages of rocks, which has significance for the age of the Dry Valleys in Victoria Land.

Chapter 11 is a set of selected extended abstracts describing the geoscientific maps that formed a permanent exhibition during the symposium. An interesting develop-

ment was that the majority of maps were produced digitally rather than by traditional cartographic techniques. Examples range from conventional geological maps to those with specific themes, such as tectonics, geomorphology, geopetrography, and aeromagnetism.

Serious criticisms are few, but an annoyance to this reviewer is the occasional inclusion of references in some abstracts. In some places there appear to be a few words or even a line or two missing from the text, but these are minor complaints. This volume represents a magnificent editorial effort and at 3.65 kg it is not light reading. On the contrary, it contains a wealth of information and demonstrates very clearly the breadth and depth of current earth-science research in the Antarctic; there is something in it for everyone. No library with a clientele of Antarctic geologists should be without a copy, and at 150,000 lire (about £47) it is astonishingly good value by today's standards, although still pricey for many students. The message has to be that if you want a copy of a proceedings volume these days, make sure you present a paper at the symposium. (Peter D. Clarkson, Scientific Committee on Antarctic Research, Scott Polar Research Institute, University of Cambridge, Lensfield Road, Cambridge CB2 1ER.)

ACROSS ARCTIC AMERICA: NARRATIVE OF THE FIFTH THULE EXPEDITION. Knud Rasmussen. 1999. Fairbanks: University of Alaska Press. xl + 415 p, illustrated, soft cover. ISBN 0-912006-94-3. \$US24.95.

On a cold day in 1923, Knud Rasmussen stopped his sledge and 12-strong dog team to rub some warmth into his frozen face. He had left his base at Danish Island, north of Southampton Island, some weeks before, and had been travelling deeper into the Canadian high Arctic. As he paused, he heard the unmistakable report of a gun being fired and glimpsed several figures on the horizon. Without considering whether the intentions of these people might be friendly or hostile, Rasmussen set his team hurtling across the hard-packed snow towards them. One of the strangers forged ahead of the others, but his unfamiliar clothes and smell sent Rasmussen's dogs into a frenzy. Rasmussen leapt from his sledge and 'embraced the stranger after the Eskimo fashion.'

This was a moment Rasmussen had yearned for all his life: a meeting with the 'Akilinermiut' or the 'men from behind the Great Sea,' of whom he had heard tales in his Greenland childhood, and a description of his first encounter with the Lyon Inlet people is how he chose to begin his remarkable book *Across Arctic America*. His excitement at the meeting, even several years after the event when he wrote his popular account of the Fifth Thule Expedition, leaps from the page, as does his evident love of the people with whom he chose to spend so much of his life. From the first, Rasmussen's vivid descriptions take the reader into a white world of villages and settlements where the inhabitants had seldom or never encountered western visitors. The journey from Greenland to the Pacific coast of America

took Rasmussen 16 months, much of it spent collecting ethnographic data that remain unique and valuable.

Knud Rasmussen was born in Jacobshavn (now Ilulissat), Greenland, in 1879, and always claimed part-Inuit ancestry (Cruwys 1990). He could drive a sledge, ski, and skate before he was 10 years old (Rasmussen 1927; Freuchen 1958), and spoke Greenlandic before his own native Danish (Cole 1999). He completed his schooling in Denmark, but the lure of the north never left him, and in 1902–04, he was part of the four-man Danish Literary Expedition, and in 1906–08, he explored northeast Greenland as part of the Ethnographic Expedition. But it is the so-called Thule expeditions for which Rasmussen is best known. These were a series of journeys undertaken between 1912 and 1933, from the base called Thule that Rasmussen founded with friend and fellow explorer Peter Freuchen.

All Rasmussen's expeditions enabled him to collect valuable ethnographic data from the peoples he encountered. The first two Thule expeditions were to northeast Greenland and the north Greenland coast, while the third was a depot-laying trip for Roald Amundsen's *Maud* expedition. The fourth took Rasmussen to the little-known east coast of Greenland, where he spent some time among the Inuit of Angmagssalik.

The Fifth Thule Expedition was Rasmussen's greatest achievement, however. It was a mammoth undertaking, and included highly respected academics and explorers such as Kaj Birket-Smith (ethnographer), Therkel Mathiassen (archaeologist), Helge Bangsted (writer), Peter Freuchen, Jacob Olsen (interpreter), and Leo Hansen (photographer). In company with carefully selected guides, the team documented almost every aspect of Inuit spiritual, intellectual, and domestic life. The collections of artefacts (some 20,000 of them) remain a source of information and data for archaeologists and anthropologists today, while Rasmussen's and Birket-Smith's accounts of various Inuit traditions and folk-tales are the only such collections that were ever made. Without the Fifth Thule Expedition, many of these oral histories and stories might have been lost. Between them, the team-members sledged nearly 20,000 miles, meeting hundreds of people and documenting archaeological sites, geology, and topography, and compiling thousands of pages of information on ethnography.

The official reports of the Fifth Thule Expedition were published as an impressive 10-volume series between 1946 and 1952, the final drafts of which Rasmussen never saw (he died in 1933, shortly after the Seventh Thule Expedition). Rasmussen's popular two-volume account was published in 1925 in Danish, and was entitled *Fra Grønland til Stillehavet: rejser og memmesker fra 5. Thule-Ekspedition 1921–24*. The English translation, *Across Arctic America: narrative of the Fifth Thule Expedition*, appeared in 1927, and was the first of Rasmussen's books to be widely available in the United States and Britain. It met with lavish praise, with favourable reviews

in such influential publications as the *Geographical Journal* and the *Geographical Review*. Vilhjalmur Stefansson noted in *The New York Times* that Rasmussen's work was not only of 'literary charm but also one of the deepest and soundest interpretations of primitive life and thought that has ever been put in a book' (Stefansson 1927).

It is this English translation that the University of Alaska Press has chosen to reprint, complete with an informative introduction by Terrence Cole. The original edition had no index, which made it awkward to use as a reference text. The 1999 edition has a 26-page index, which is more detailed than the index provided in *Fram* (1984), and the photographs have been reprinted from the originals, which means that many of them are not particularly sharp. This is generally not a problem, except for the maps (page 16 and front inside cover), in which the small print is difficult to read.

It is almost impossible to overemphasise the importance of Rasmussen's work, and his narrative of the Fifth Thule Expedition in particular. His childhood experiences in Greenland and his love of the north gave him a unique insight into the world that he observed, and his accounts provide the reader with a 'new and rich dimension which previous explorers missed' (Cole 1999: xi). He is often acknowledged as the founder of Eskimology, and few anthropologists have surpassed his contribution to northern ethnography. He was the first to demonstrate a unity of Inuit culture that stretched from Greenland to Siberia, and Cole regards him as the 'spiritual godfather' of the movement that culminated in the Inuit Circumpolar Conference (Cole 1999: xxv).

In Denmark, Rasmussen is still regarded as an important figure, although his fame in the English-speaking world is generally confined to those people with specific polar interests. Hopefully, the re-publication of this splendid account of the Inuit who inhabited Arctic America in the 1920s will encourage a wider appreciation of his work, not just in polar communities, but the general public as a whole. (E. Cruwys, Scott Polar Research Institute, University of Cambridge, Lensfield Road, Cambridge CB2 1ER.)

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