

is the index of expeditions and voyages, referencing in brief all relevant material in the collection under chronological lists of Arctic and Antarctic expeditions. Considering the importance of the Scott Polar Research Institute's manuscript collection to historical scholarship, \$100 does not seem too high a price to pay for this indispensable key to its contents.

GREENLAND WHALING

[Review by W. Gillies Ross* of William Scoresby jr's *The 1806 log book concerning the Arctic voyage of Captain William Scoresby*. Whitby, Caedmon, 1981, 41 p, £12.50; and William Scoresby jr's *Journal of a voyage to the northern whale-fishery; including researches and discoveries on the eastern coast of West Greenland, made in the summer of 1822, in the ship Baffin of Liverpool*, Whitby, Caedmon, 1980, 472 p, illus, maps, £13.95.]

The first of these books is a facsimile edition of the ship's logbook kept in 1806 by William Scoresby, junior, then only 16 years old but already holding the responsible position of chief mate on the Arctic whaler, *Resolution*, under his father's command. The voyage was an unusual one in which Captain Scoresby, supplementing whaling by bold exploration, pressed his vessel northwards to 80°30'N, the highest latitude ever attained up to that time. As the official record of the ship, the logbook includes observations on course and position, wind direction and velocity, atmospheric pressure, state of sea and ice, sail changes, work carried out by the men, sightings and kills of Greenland whales, and the processes of flensing and making off.

Having read a few hundred whaling logbooks I knew that occurrences of great excitement of interest were generally reported in a terse, impersonal line or two, and I assumed that Scoresby's logbook would make dull reading. Having myself struggled with stained, faded pages and illegible handwriting in manuscripts of this sort, I supposed that this facsimile logbook would present problems of comprehension. Unhappily, I was correct on both counts. Although the handwriting is for the most part firm and clear, the faded condition of the original logbook, and its reproduction on soft, cream-coloured paper, have combined to produce many illegible passages. Despite the historical interest of this record-setting voyage, the publication is therefore unlikely to appeal to general readers. On the other hand, the precise information on the ship, whales, sea ice, and the atmospheric and marine environments from day to day, may be useful to specialists in oceanography, biology, climatology, or history.

This publication was inspired by a much earlier venture undertaken by the Explorers Club of New York, which in 1916 published seven logbooks by William Scoresby, senior, describing 14 voyages to the Greenland whaling grounds. While the Caedmon book adds significantly to the small number of Arctic whaling logbooks published in facsimile, and provides the only logbook by Scoresby junior published in its original form, the quality of its reproduction is somewhat inferior to that of the elegant, limited edition by the Explorers Club.

The second book, a facsimile of one originally published in 1823 by Archibald Constable of Edinburgh, is of much greater readability and interest: a more mature Scoresby described a voyage 16 years later on *Baffin*, under his own command. It is far more than a mere catalogue of events during the voyage, for he skilfully weaves into the narrative a number of fascinating anecdotes and details about Arctic whaling, the geography and human occupancy of the region, and natural phenomena such as optical effects, icebergs and tides.

Like the voyage of 1806 this was an extraordinary one. Success in whaling was capped by achievement in exploration, for Scoresby sailed *Baffin* to a latitude nearly as high as that attained in his father's ship on the earlier occasion. More importantly, he made several hundred careful astronomical and trigonometrical observations along approximately 645 km of Greenland's east coast north of 69°N, and from these compiled an improved chart (which is included in this volume) of largely inaccessible and unknown land. On his chart the coastline from 72°N to 75°N was set down more than 320 km west of its erroneous position on the existing charts customarily used by whalers. This valuable contribution to geographic knowledge was undertaken on Scoresby's own initiative, and somehow combined with the demanding task of filling his ship with whale blubber. Ironically, the Admiralty had

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disdained to provide him with the extra chronometer and azimuth compass that he (a mere whaleman) had dared to request for the work.

Nine appendices follow Scoresby's text, presenting valuable reference material on geology, botany, zoology and meteorology, along with brief accounts by two other whaling captains in the same year. Among the eight plates in the book are topographical sketches of the Greenland coast and two maps incorporating Scoresby's own researches.

The release of these two books brings to seven the number of items either by or about William Scoresby, jr published recently by Caedmon of Whitby. The popularity of Scoresby's great two-volume work *An account of the Arctic regions* during the last century and a half has overshadowed his other writings, which amount to more than 90 published titles relating to whaling, science and religion. It is therefore gratifying to see some additional Scoresby contributions, unpublished or out of print, now made available. This laudable publishing effort by Caedmon should stimulate interest in the history and ecology of Arctic whaling, and the achievements of this remarkable man during the period of the Greenland fishery.

SURVEYING ARCTIC SOILS

[Review by Donald A. Davidson* of K. A. Linell and J. C. F. Tedrow's *Soil and permafrost surveys in the Arctic*, Oxford, Clarendon Press, Oxford University Press, 1981, 279 p, illus. Hardcover £25.00.]

Economic developments in the Arctic since World War II have resulted in a demand for information on soils, relevant to the construction and maintenance of airfields, roads, pipelines and buildings, and similar projects. The authors of this book, both established authorities, concentrate on the particular problems of surveying Arctic soils and permafrost. The first six chapters are introductory, defining Arctic areas and outlining characteristics of climate, hydrology, permafrost, thermal regimes, and the formation and classification of soils. Chapters 7, 8 and 9 turn to soil engineering and properties of soils in the Arctic; chapter 10 discusses briefly the agricultural potential and conservation of Arctic soils. Chapter 11 outlines factors that influence the thermal stability of permafrost, and chapter 12 summarizes engineering soil classifications, such as the Unified and AASHTO systems. Chapter 13 applies the findings of soil engineering investigations to problems involving piling, roads, utility lines and pipelines, excavations, shafts and tunnels. Chapters 14 to 17 finally pay specific attention to survey planning and execution, covering such topics as field organization and procedures, terrain evaluation and route or site selection.

Soil and permafrost surveys in the Arctic is thus much more of a general text than might be inferred from the title. This is both a strength and a weakness. Strength lies in its usefulness as a general introduction to Arctic soils, making it a suitable reference text for undergraduates; the reader without Arctic experience will be struck by the practical difficulties of field investigations in that environment. The overall weakness is that the detailed examination of survey procedures is too brief for the book to become the definitive research text on the subject. The market potential for such a research text would of course be limited; it is understandable why the book's scope has been broadened to cover the general reader as well as the Arctic specialist. The authors' own Arctic experience is evident, for example from their writing on the effects of structures on permafrost (chapter 11). One important geotechnical theme not adequately discussed is hydraulic conductivity of frozen soils—one of the key issues in the Mackenzie Valley Pipeline Project enquiry. Some reference to governing thermodynamic principles should also have been made. Most of the illustrations have been extracted from published sources with little attempt to simplify them for this book; some are over-reduced, one (Fig 17.1) to the point of illegibility. In summary this book will mainly become a library reference for readers to dip into according to their interests; it is neither a comprehensive introductory text nor a research treatise on the title topic, and confusion of aims is bound to limit its value.

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