

rare historical account of the difficulties of conducting scientific research in a non-western society.

For the person with an exclusive interest in polar sciences, the book has little of direct relevance, with the exception of the particular examples of worldwide remote-sensing activities mentioned above. However, as the philosophy of the book can be easily transferred to many problems in polar areas, it is a suitable candidate for the bookshelf of anyone with interests in regional studies. (Kelvin J. Michael, Antarctic CRC, University of Tasmania, GPO Box 252C, Hobart, Tasmania 7001, Australia.)

LABRADOR ODYSSEY: THE JOURNAL AND PHOTOGRAPHS OF ELIOT CURWEN ON THE SECOND VOYAGE OF WILFRED GRENFELL. Ronald Rompkey (Editor). 1996. Montreal, Kingston, London, and Buffalo: McGill–Queen’s University Press. xxxiii + 231 p, illustrated, hard cover. ISBN 0-7735-1366-3. £18.00.

The work of the Grenfell Mission to the Labrador coast is well known, as are the details of the life of its founder and motivating force, Wilfred Grenfell. The Mission started in 1892 as a result of the parlous state of the physical and spiritual welfare of the approximately 25,000 fishermen and their families who worked on the coast during the summer. After a reconnaissance the year before, the Mission to Deep Sea Fishermen, which operated primarily in the North Sea, sent *Albert*, a 155-ton hospital ship, to cruise the coast with the aim of ameliorating their condition. Grenfell was superintendent of the Mission, and as a result of his experience, he decided to devote all his efforts to the cause. Following the 1892 voyage, Grenfell received support for the construction of two hospitals, at Battle Harbour and Indian Harbour, and for a further voyage in 1893.

For that voyage there were to be two nurses and two doctors, Alfred Bobardt, an Australian, and Eliot Curwen, the writer of the diaries that constitute the bulk of this book. All were evangelical Christians. Unfortunately, the Indian Harbour hospital, where Curwen was to work, was not completed until October that year, too late for occupancy, and as a result Curwen and his nurse, Sister Ada Carwardine, had to spend the summer cruising up and down the coast in *Albert*, while Grenfell himself undertook a series of short trips in the steam launch *Princess May*.

Curwen’s writing was exclusively for private purposes, being a diary intended for the information of his mother, brothers, and sisters. He observed the life of the local residents carefully, be they immigrant settlers, whose lives seem to have been a constant struggle against privation; the Inuit cared for by the Moravian Mission; the Moravians themselves; or, finally, the itinerant fishermen. Curwen was indignant at the injustices that he perceived, especially that relating to the payment of people with goods by the same merchants to whom they were bound to sell their fish. He also observed the natural history of the area carefully and, very useful for the historian, was an early and very enthusiastic photographer, taking a large number of high-quality pictures that have lost none of their

poignancy through the years.

Curwen only spent one year in the north. After returning to England, he went to China with the London Missionary Society. He eventually settled in Hove, Sussex, and took up archaeology, which became a consuming interest. He died in 1950.

His journal and a selection of his photographs are presented in this book, which is the third volume in the McGill–Queen’s/Hannah Institute Studies in the History of Medicine, Health and Society series. The journal is printed virtually intact, with minor corrections of spellings, etc. It reveals that the writer had attitudes typical of evangelical Christians from the middle classes in the late-Victorian era. He was honest, hard-working, self-effacing, and ever-so-slightly priggish. He could also be somewhat long-winded at times. As a result, this is definitely not a book to be consumed at one reading, but rather for those with general interests in the area, to be dipped into from time to time. For the specialist, it is an important source for the history of Labrador, and of the Mission at a crucial stage in its development.

The editor has intercalated Curwen’s text with letters by Grenfell and Bobardt to the Mission. These were largely intended for publication and necessarily present a rather more sanitised view of the situation. However, Grenfell occasionally gave harrowing detail concerning the conditions of life of some of the settlers, no doubt with the aim of increasing donations to the Mission.

The editor provides a full and useful introduction, and the critical apparatus is detailed. Information is given on the lives of the different people mentioned by Curwen, and much interesting background concerning the situation in Newfoundland and Labrador is set out. There are several very clear photographs and an adequate map. The book is well presented and the price is modest. (Ian R. Stone, Tartu University, Ulikooli 18, Tartu, Estonia.)

GEOLOGY AND SEISMIC STRATIGRAPHY OF THE ANTARCTIC MARGIN. Alan K. Cooper, Peter F. Barker, and Giuliano Brancolini (Editors). 1995. Washington, DC: American Geophysical Union (Antarctic Research Series 68). xiii + 303 p + atlas, illustrated, hard cover, CD-ROMs. ISBN 0-87590-884-5. \$US65.00.

From time to time the American Geophysical Union publishes the results of Antarctic research in monographs or in thematic collections of papers, which are independently refereed to a high standard. Thus volumes in this series often become milestones in the evolution of Antarctic science, and this one is no exception.

The title, *Geology and seismic stratigraphy of the Antarctic margin*, may not initially indicate the importance of this work in understanding the place of Antarctica in the global system, but for many people the main interest will be in understanding the role of the Antarctic ice sheet in influencing global climate, sea level, ocean circulation, and southern-hemisphere biotic evolution. The continental margin of Antarctica has yielded, through sea-floor drilling and seismic investigations, considerable insight

into these influences. This book presents the latest results in this area of research, and derives from a major international project named ANTOSTRAT (Antarctica Offshore Acoustic Stratigraphy), started in 1990 under the auspices of the SCAR Group of Specialists on Cenozoic Palaeoenvironments of the Southern High Latitudes. The project involved a data-collection phase, during which 13 countries provided multi-channel seismic data to a library, and the results were presented at a symposium in Siena, Italy, in 1994. The papers in this volume are based on those presented at the symposium. In addition to providing a state-of-the-art account of the geological evolution of the continental margin of Antarctica, the book is intended as a launching pad for future cooperative projects, including offshore drilling on the Antarctic continental shelf (which requires the highest quality seismic data to locate safe drillsites).

The volume consists of three main parts: (1) scientific papers dominated by seismic interpretations; (2) a seismic stratigraphic atlas of some 45 maps in a separate folder of the Ross Sea; and (3) CD-ROMs containing digital maps and seismic data. These data have been provided to help educate students and scientists, and to stimulate cooperative projects, in order to enhance our understanding of the Antarctic geosphere and cryosphere.

The papers are written by leading Earth scientists, especially geophysicists, and may be grouped as follows. Two general papers describe the seismic stratigraphy and marine record from the whole continental margin. Then follow a series of papers dealing with specific areas: five on the Antarctic Peninsula region and five on the Ross Sea. Unfortunately, Prydz Bay, where much work has been undertaken, and other areas are only given limited attention in the general papers. Many papers consider how ice advances and recessions have influenced the seismic stratigraphy and sedimentary facies of the continental shelf, and the significance of these fluctuations in terms of climatic and sea-level change. Although the geophysical interpretations are excellent, the application to interpreting depositional environments is somewhat simplistic, especially in light of modern work on understanding glaciomarine sedimentary processes. The book also contains three appendices, the most useful describing the atlas and the CD-ROM data.

The atlas provides a comprehensive set of well-produced fold-out maps, some in colour, of the Ross Sea. The maps include compilations of bathymetry, seismic 'travel-time,' unconformity depths, and isopachs (thicknesses) of particular seismic units. In addition, numerous fold-out seismic profiles, on which the main structures are indicated, are included. Much of these geophysical data are usefully tied in to drillsites previously cored, including those of the Deep Sea Drilling Project in 1972 and the New Zealand sites of the 1970s and 1980s.

The CD-ROM accompanying the volume is readily installed on a PC. The seismic profiles and maps are clearly depicted in colour on the screen, and there is scope for enlarging certain portions of the former. The bulk of

the information is from the Ross Sea. Given that these data are plotted also on the fold-out maps, most non-specialists will find these more useful, as the authors have highlighted the main faults and unconformities on them.

Overall, this volume represents an important addition to our understanding of the Cenozoic evolution of Antarctica. It is well presented, and the editors are to be congratulated in their compilation efforts. My only quibble is the absence of an index. (M.J. Hambrey, School of Biological and Earth Sciences, Liverpool John Moores University, Byrom Street, Liverpool L3 3AF.)

JOHN MUIR'S 'STICKEEN' AND THE LESSONS OF NATURE. Ronald H. Limbaugh. 1996. Fairbanks: University of Alaska Press. xviii + 185p, illustrated, hard cover. ISBN 0-912006-84-6. \$US22.95.

This is a delightful book on many levels: it is a good adventure story, a fascinating study of John Muir's development as a thinker and writer, and a compelling narrative about the creation of this story.

Stickeen is, at the simplest level, a man-and-his-dog adventure story. One foul morning in July 1880, Muir departed camp to explore the Taylor Glacier in the Gulf of Alaska. *Stickeen*, the camp dog, followed. The two walked for miles, jumped numerous crevasses, and then turned for home as darkness loomed. In this failing light, they suddenly found themselves in a heavily crevassed area, stranded on an island with a deteriorated ice bridge as their only means of escape. How they managed this escape is the climax.

Muir told the story for 15 years and the details changed as the man did — from an explorer who recited a thrilling narrative of his adventure, to a philosopher who imbued the tale with knowledge gained during the intervening years. Both Muir and his publisher, Robert Underwood Johnson of *The Century Illustrated Monthly Magazine*, thought that translating the story from an oral to a written one would be a simple task. In fact, it was not until 1897, three years after their initial discussions, that Muir submitted to *The Century Illustrated* what he felt was the completed manuscript.

The original version did not mention the dog or even hint of his presence. Only after Muir revised his 1880 notes did *Stickeen*, named after one of the towns in the area, become a part of the narrative. It is likely that, at the time, Muir did not recognise the dog's importance to the story. Limbaugh likens the creation of this written story to 'a work of art, it was not reality but a version of reality, an interpretation of a single day's adventure rather than a simple description.' It is through this narrative that Muir could express what he could not say publicly. In this popular story, his more radical views on the human/nature relationship could be told as a parable 'on the worth of animals and their importance to mankind.'

Limbaugh traces the development of *Stickeen* through Muir's reading. Muir had a working library of some 1250 volumes, and, because he made notes in nearly 40% of