

Book Reviews

SCIENCE INTO POLICY: GLOBAL LESSONS FROM ANTARCTICA. Paul Arthur Berkman. 2002. San Diego: Academic Press. xxv + 252 p, illustrated, hard cover. ISBN 0-12-091560-X. \$US59.95.
DOI: 10.1017/S0032247402212899

In this complex and intriguing book, Paul Berkman draws on his intimate knowledge of Antarctica to address four linked themes: the relationship between science and policy; the relevance of experience with the Antarctic Treaty System (ATS) to the pursuit of international cooperation more generally; the basic principles of Earth system science; and the development of teaching tools for those interested in promoting understanding of coupled human–natural systems. As I suggest in the following paragraphs, Berkman does not succeed equally well in dealing with all of these themes. At the end of the day, however, his book has much to recommend it. It should be of interest to all those concerned with global environmental change, as well as to those whose interests focus on Antarctica itself.

Given his background as a natural scientist, it is hardly surprising that Berkman has an incentive to demonstrate the relevance of science to policy. Interestingly, he stresses the impact of science as an activity in contrast to the influence of the actual findings of scientific enquiry. He argues, for instance, that ‘science legitimized international control over Antarctica’ in the wake of the International Geophysical Year ‘by creating a mechanism for [Antarctica’s] management and a goal for its continued rational use’ (page 75). Similarly, he asserts that the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) ‘followed from the scientific accomplishments of the BIOMASS program in the same way that the Antarctic Treaty succeeded the International Geophysical Year’ (page 176). The result, in Berkman’s view, is that ‘science is the keystone for the “progress of mankind”’ (page 222). How credible is this view of the relationship between science and policy? At a minimum, the causal linkages are more complex than Berkman suggests. There is much to be said for the view that the signatories to the 1959 Antarctic Treaty, realizing that some action was needed to control creeping jurisdictional claims and ensuing conflicts in the region, seized on science as an uncontroversial vehicle to be used in pursuing broader policy objectives. And the evidence suggests that during the years since 1959 policy has driven decisions about science at least as much as the findings of science have influenced policy. Does this negate Berkman’s claims about the relationship between science and policy? Not at all. But it does make it clear that this relationship is bi-directional rather than uni-directional.

What, then, can we say about lessons from Antarctica that may prove helpful to those seeking to achieve effective international cooperation in other regions and other issue areas? Berkman argues that the ATS is ‘an international cooperation precedent’ (page 206). Somewhat grandly, he asserts that ‘worldwide cooperation and involvement in Antarctica are precedents for humankind — radiating toward international stewardship of our global civilization’ (page 210). No one doubts that the ATS is a striking example of effective governance at the international level. Yet there are good reasons to question the role of this case as an ‘international cooperation precedent.’ Antarctica has no permanent human population. The jurisdictional status of the continent — lying somewhere between a shared ecosystem and an international commons — is unique. There are no significant incentives to cheat on the demilitarization provisions of the ATS. The role of science as the dominant human activity in Antarctica has no equal elsewhere on the planet. This is not to say that the experience with the ATS offers no lessons for those interested in international cooperation in other areas. Innovations like the inspection system included in the Treaty and CCAMLR’s provisions relating to ecosystem management, for instance, are certainly of interest to those working on the development of other governance systems. Yet the special features of Antarctica are sufficiently fundamental to suggest caution regarding claims about the role of the ATS as an international cooperation precedent.

Earth system science is one of the major intellectual achievements of the recent effort to broaden and deepen understanding of global environmental processes. In essence, it approaches the Earth as a whole as a system featuring complex interactions not only among its biotic and abiotic components but also between anthropogenic drivers and biogeophysical forces. Berkman organizes much of his book around this conceptual framework, offering informative and accessible accounts of geological processes, the Earth’s climate system, the hydrological cycle, and biological processes at the planetary level, along with well-informed accounts of the models underlying major lines of thinking about conservation, sustainable resource use, and environmental protection. Although the range of these presentations is breathtaking, Berkman does not contribute much to progress in the search for integrated models capable of endogenizing human actions and broadening our understanding of the dynamics of coupled human–natural systems. Nonetheless, he does succeed admirably in demonstrating the role that Antarctica plays in the overall Earth system. To take a single striking example, ‘nearly 90% of the ice on the

planet is locked in the Antarctic ice sheets' (page 101). If the East Antarctic Ice Sheet were to melt entirely, sea level worldwide would rise more than 50 meters. Even the melting of the West Antarctic Ice Sheet — a more likely prospect during the foreseeable future — would raise sea level five meters. There can be no doubt that changes in the Earth system are likely to affect Antarctica dramatically and vice versa.

Finally, Berkman intends his book to serve as a teaching text. As he puts it, the 'book is as much about the process of learning as it is an interdisciplinary journey through the science and policy of the Earth system' (page 17). In fact, Berkman offers a primer in everything from plate tectonics to the logistic models used to make calculations of maximum sustainable yields from fish stocks. Some readers will find much of the resulting exposition familiar and perhaps a little boring. Yet the chapters on major components of the Earth system and human actions within it provide a remarkable set of non-technical introductions to the principal components of the Earth system. The result is a highly accessible point of departure for interdisciplinary thinking in which empirical information pertaining to Antarctica alternates with more general accounts of global processes in an appealing manner. A particularly striking feature is the Antarctic Treaty Searchable Database: 1959–1999 that comes on a CD-ROM accompanying the book. This database is certain to prove invaluable for all those interested in studying the performance and evolution of the Antarctic Treaty System. The idea of creating similar searchable databases for other international regimes or governance systems merits serious consideration.

There is a certain naïveté about this book that is charming, even though it leads to claims that are hard to sustain. The idea that 'science is the keystone for the "progress of all mankind"' (page 222), for instance, glosses over many issues regarding both the exploitation of science for political purposes and the role of science in generating problems for mankind (for example, the control of nuclear energy). Similarly, the vision of Antarctic cooperation as 'a beacon. . . radiating toward international stewardship of our global civilization' (page 210) stretches the imagination. Nonetheless, there is much to praise about this book. Berkman is one of a small band of scientists that takes seriously the challenge that Earth system science offers to scientific business as usual, and he largely succeeds in his goal of using examples from Antarctica throughout 'to illustrate the events, entities, and phenomena influencing our Earth system across time and space' (page 18). This is no mean feat. Those willing to devote their scientific careers to the effort to meet this challenge deserve our strongest support. (Oran R. Young, Institute of Arctic Studies, 6214 Fairchild, Dartmouth College, Hanover, NH 03755, USA.)

THE COLDEST MARCH: SCOTT'S FATAL ANTARCTIC EXPEDITION. Susan Solomon. 2001. New Haven and London: Yale University Press. xxiv +

383 p, illustrated, hard cover. ISBN 0-300-08967-8. £19.95; US\$29.95.

DOI: 10.1017/S0032247402222895

The centenary of the Heroic Age is certainly being celebrated with a plethora of new books — diaries, biographies, and rehashes of the stories we already know so well. It is hard to imagine that there is much more to say about Robert Falcon Scott and his men, other than filling in details here and there. And yet Susan Solomon has found not only a new angle but one that makes compelling reading.

There are plenty of earlier studies of Scott — from the sycophantic biography by George Seaver through the restrained account by Elspeth Huxley to the seriously unbalanced attacks by Roland Huntford. Yet none of these attempted to examine the scientific evidence available as a way of trying to understand why Scott's polar party failed. Perhaps because none of the biographers had any significant firsthand experience of the Antarctic, the possibility of abnormal weather conditions never occurred to them. Much easier anyway to speculate about flaws in Scott's character, inadequate planning, and a peculiarly British attitude to animals! It has taken an American scientist to see through the psychological babble generated by British writers to the evidence and in so doing produce a structured and reasoned analysis of why the polar party failed.

In the meticulous research Solomon undertook for the book three things stand out. First, she was very thorough in examining all the evidence, cross-checking diaries and data to keep to the recorded facts. Second, her personal experience in the Ross Sea area made her more capable than other authors of understanding what the expedition field parties actually experienced. Third, she had modern data from automatic weather stations along Scott's route to provide an independent check to her arguments.

Solomon begins each of the 14 chapters with a short section she calls 'the eyes of the modern visitor' to try and demonstrate that even now, almost 100 years on from these events, it is still the weather on this frozen continent that determines everything. I especially liked this juxtapositioning of the new and the old, since it pointed up just how well the modern meteorological data reflected the conclusions reached by Scott and his party. Their approach to planning was certainly not perfect in all respects, as Solomon shows. However, she also convincingly lays to rest the suggestions that Scott was functionally inept, a bumbler, and a poor leader by demonstrating the way in which he used all the available data and experience in planning his strike to the Pole.

As Solomon points out, Scott was always disarmingly frank about his mistakes, always concerned about the welfare of his men, and imbued with a spirit of genuine curiosity about science not often seen amongst naval men of that time. The attacks on Scott have resulted in a legend that has tarnished not only him but also, by association, his men in a totally unacceptable way. Solomon tries hard

to show how his men not only made significant scientific contributions in their disciplines but also provided key information in the planning for the polar journey. Since she is meticulous in providing sources for her information and in distinguishing facts from speculation, the reader can feel much more confident about the reliability of her arguments than is possible with some earlier books on Scott.

Chapters 1 and 2 deal in a summary fashion with the *Discovery* expedition, whilst chapter 3 takes the reader back to England on *Discovery* and then south again on *Terra Nova*. In these chapters, Solomon sketches out some of the personalities, such as Wilson, Bowers, and Cherry-Garrard, who will play a major role later in the book. Chapter 4 begins to introduce the reader to the mixture of modern and historical data that are used to establish the reliability of observations and planning undertaken by the expedition. Chapter 5 describes the 'coreless' winter, comparing Simpson's data with modern data from McMurdo and the Russian Arctic and showing how the Antarctic winter begins about two months before that in the Arctic. Chapter 6 describes the weather on the Cape Crozier trip to collect emperor penguin eggs, pointing out the characteristics of Windless Bight and the problems with sledge-runners at temperatures below -20°F .

Chapter 7 deals with the preparations for the polar party and the difficulties they experienced in getting the depots into position, whilst chapter 8 provides a description of progress, comparing Scott with Shackleton and analysing the weather conditions experienced by Evans' party on the return leg. Reaching the Pole in chapter 9, Solomon compares the daily minimum temperatures recorded by Amundsen's and Scott's parties within one degree of the Pole. She finds that the later arrival of Scott meant that his party experienced an overall difference of 10 degrees colder than the Norwegians. In chapter 10 the party die, and the importance of dehydration in their decline is underlined. The failure to ensure enough fuel for melting snow had catastrophic consequences. The search for the bodies in chapter 11 leads on to the final three chapters in which Solomon examines the climatic evidence in more detail and concludes that Scott was exceptionally unlucky to be caught out by what she describes as 'a chillingly unusual month.'

Her epilogue, again with the modern visitor realising the implacable nature of the weather, completes the narrative on a sombre note. Underestimating the importance of the weather and overestimating the capabilities of the party will always be a problem for those who work in Antarctica and pay no attention to the lessons of history. The book is completed with a list of expedition participants, 32 pages of source notes, a glossary, a selected bibliography, and a short but useful index.

Much will probably be made of her recognition of Scott's weaknesses, but she is concerned to make the point that he recognised and addressed them. Her analysis also underlines the fact that Scott tried to achieve a great deal on limited resources, so his margin for success or failure

was much finer than that for Amundsen, who had only a single and very limited goal.

Laying to rest the myths and suppositions, Solomon shows Scott's planning was principally defeated by this unusual period of exceptionally cold weather for which he could not have allowed. This book is a very important contribution to polar exploration literature. It is well written, absorbing even for those who have read the many earlier accounts, and balanced. The truth is always hard to find but perhaps in this book we are closer to it than ever before. (David Walton, British Antarctic Survey, NERC, High Cross, Madingley Road, Cambridge CB3 0ET.)

THE THIRD VOYAGE OF MARTIN FROBISHER TO BAFFIN ISLAND 1578. James McDermott (Editor). 2001. London: The Hakluyt Society (Series III, No 6). xii + 268 p, illustrated, hard cover. ISBN 0-904180-69-7. £45.00.

DOI: 10.1017/S0032247402232891

Here we have at last a complete edition of the documents pertaining to Frobisher's third and last expedition to the Canadian Arctic. Nine of the 13 documents in the book — about two-thirds of its length — are published for the first time, while the rest have been re-edited. The documents are preceded by a 51-page introduction. Because of the completeness of this collection and meticulous editing by James McDermott, the earlier editions of these documents by Collinson (1867) and Stefansson and McCaskill (1938) should no longer be used for scholarly work.

Of special interest to this reviewer are the newly published log of the ship *Judith* by Captain Edward Fenton, Frobisher's lieutenant-general — in particular Fenton's list of provisions for the proposed wintering colony — and Michael Lok's scathing description of Frobisher's role in the enterprise. Fenton's log is really a ship's log *and* diary; that is, besides recording the movement of his ship he also noted events and gave some opinions. Here we finally learn something of the foundations of a building he (rather than Frobisher, who is usually given credit) erected on Kodlunarn Island. It is also from his log that we learn that scurvy was present among 'the most parte' (page 174) of *Judith's* crew. If *Judith* was representative of the fleet, then it appears that Frobisher sailed with a crew showing early stages of scurvy. By contrast to Fenton's log, Christopher Hall's logs of the ships *Thomas Allen* (outward voyage) and *Ayde* (return) primarily give nautical data. Fenton's list of provisions for the proposed colony of 100 men proves that at the time nothing was really known about life in Arctic conditions. These men were fortunate that the scheme had to be abandoned after *Denys* went down on the outward voyage with some of the building materials and the colony's provisions on board. Without antiscorbutics, adequate supplies of wood and coal, or friendly relations with the Inuit who could have aided them, and with no knowledge of Arctic winter survival, they would have died miserably. There is not a scintilla of evidence to suggest that Frobisher was experimenting with 'Inuit's habit of

eating local varieties of “grass” (lichens)’ (page 13). The so-called evidence for this supposition is the presence on the list of two hogsheds (approximately 100 gallons) of ‘sweet oyle’ (pages 13 and 67), presumably (for we are not told) to preserve the lichens the men would be picking, since vegetable oil contains no vitamin C. But we do not know from the data that the oil was for anything but cooking or that the English were intending to emulate Inuit food habits, for which they had shown nothing but contempt.

Lok’s testimony against Frobisher is, of course, self-serving, but he does score points that other evidence supports. Some of his complaints are petty, but his criticism of Frobisher’s organization of the third voyage rings true, such as rampant nepotism, disregard for proper victualling procedures, failure to turn over logs and maps to the company, failure to search for a western passage, and so on. Lok must share the blame for the failure of the expeditions and he paid dearly for it. That Frobisher escaped formal proceedings of censure seems unjust and is not adequately explained.

McDermott’s introduction demonstrates a masterful knowledge of these documents and this period in time. Except for his assessment of the chances for the colony’s survival there is little with which to quarrel. His summary of the first two voyages is excellent. He takes us through the third voyage in chronological order and comes to a brief set of conclusions. The documents are briefly discussed and placed in their proper context. The quality of his writing and scholarly documentation is faultless. I would like to have seen more about the aftermath of the three expeditions and their financing, but I realize that the accounts of the company are too extensive to reproduce in this volume. A single criticism is that the book desperately needs a large-scale map showing sixteenth-century and present place-names in and around Frobisher Bay. The small map on page 54 is inadequate.

What can one make of Frobisher’s voyages? That they are a tribute to English seamanship is without question. In spite of dreadful working conditions, foul weather, health problems, and the death of some from overwork and scurvy, men and officers co-operated in a courageous manner and most survived. But these voyages are also a monument to baser human nature. That three expeditions — the third of unprecedented size — could be launched into an Arctic environment on the basis of contradictory evidence for the presence of gold presented by a few assayers, speaks of greed, wishful thinking, incompetence, and probably fraud. Only the Cartier/Roberval expeditions of 1541–43, to conquer the non-existent ‘Kingdom of Saguenay’ in the northern wilds of Quebec, rivalled Frobisher’s for greed. Here gullible Frenchmen launched an expedition of similar size to Frobisher’s third one, based on nothing more than unproven native stories about a northern kingdom that might be robbed of its gold. Here too, problems were compounded by minimizing proven environmental difficulties and antagonizing the local population.

One might at least have expected some geographical results from the Frobisher expeditions. After all, 15 ships set out, manned by 360–400 competent sailors and officers. Yet, unlike the Cartier expeditions that at least led to the rough mapping of the lower St Lawrence River, the Frobisher expeditions spawned endless confusion. The surviving maps were incompetently made and misleading, perhaps deliberately so, with the result that no one really knew where the expeditions had been. Even John Davis, who set out (1585) to find a Northwest Passage seven years after Frobisher returned, did not know where his predecessor had been. Shortly after Frobisher’s third expedition returned, ‘Frobisher Strait’ had become a fixture on the southern tip of Greenland. There was no legacy that placed the areas visited into a geographical context. Was this deliberate obfuscation or incompetence? Probably the latter, since there was no reason to keep the source of the non-existent ‘ore’ a secret after 1578. This is an important question McDermott does not really tackle, important because Frobisher’s territorial claims were worthless if he did not know where he had been or chose not to tell. Was Frobisher an explorer, as he is often made out to be, or just an adventurer who had a large measure of personal courage but even more the trappings and conscience of a bullying self-assured con man? (Conrad E. Heidenreich, Department of Geography, York University, Toronto, Canada.)

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LICHENS OF ANTARCTICA AND SOUTH GEORGIA: A GUIDE TO THEIR IDENTIFICATION AND ECOLOGY. D.O. Øvstedal and R.I. Lewis Smith. 2001. Cambridge: Cambridge University Press. xii + 411 p, illustrated, hard cover. ISBN 0-521-66241-9. £70.00; US\$100.00.

DOI: 10.1017/S0032247402242898

This is a book expected for a long time. Ever since terrestrial biology became a significant field of research, a detailed monography on lichens has been missing. The book combines a general description of the environmental conditions of lichens with systematics on an artificial key on genera and a substantial amount of photographic documentation of lichens. There is no doubt that this is a book of great importance, and not only for people doing research in the Antarctic.

The book is divided in six parts. Part one presents the introductory material on biogeographic zones, the history of lichenological investigations, and the development of the present taxonomic survey. Part two is a detailed

description of the environment and lichen ecology containing aspects on climate, geology, diversity, and conservation of lichens. Part three describes materials and different methods. Part four applies the systematic arrangement, and part five follows the artificial keys to genera. Part six presents the most detailed and important part: systematic and ecological accounts of the genera and species (297 pages), containing 32 pages with 104 illustrations of Antarctic lichens and their habitat.

In the introduction, the authors start with a short description of the biogeographical zones, supplemented by a detailed table on geobotanical zones of the Antarctic and South Georgia, as well as some maps of different areas of the Antarctic region. An overview on lichenological investigations gives the background of the history of research on lichens since 1820. The first biological investigations including lichen collections were made by the German expedition in the International Polar Year, 1882–83. This was followed by botanical accounts and collections by Skottsberg in 1902, but, in general, there was little scientific activity on the terrestrial sites during the first half of the twentieth century. There was also little activity on South Georgia by the British Antarctic Survey in the 1960s, but in the 1970s experimental research in plant ecology and physiological processes developed rapidly. More recently, after the Convention of Biological Diversity in Rio de Janeiro (UNEP 1992), 'biologists began to recognise the importance of lichens as the dominant terrestrial life-form in Antarctica.' Detailed information is given on herbaria lichen collections, including addresses of internet web sites.

Part two starts with short descriptions of general climate (including one table) and geological features. Although the description of ecological features of lichen-dominated communities is meant as a general overview, it contains important detailed information. Specific information is given on diversity and biogeography of the lichen biota in tables. The main part of the book contains descriptions of the systematic and ecological accounts of the genera and species. Each description of a lichen species starts with the characterisation of systematic features followed by short but important data on ecology, chemistry, distribution, herbaria, comments, and literature. All the species are treated in alphabetical order, which facilitates quick access to the names. The glossary at the end of the book presents a list of the most important terminology in lichenology and is certainly very useful for the reader. The list of references contains the most relevant publications on lichens of Antarctica and South Georgia and therefore can be seen as the most detailed list of literature currently available.

Scientific assessment aside, there are some points of criticism. In the subchapter on ecological features of South Georgia, *Himantormia lugubris* has been changed erroneously to *Hypogymnia lugubris*; *Leptogium menziesii* has also been written in the wrong way. Unfortunately there are too many typographical errors, especially

in the list of references. Besides this, some references are not cited in the correct way. Several descriptions of the distribution of species lack the most recent knowledge or are incomplete. Concerning gigantism in Antarctic lichens, the authors do not differentiate among the different growth forms in lichens. Maximum diameters of a crustose lichen mean that many small areoles or lobules form a conglomerate of thalli. That might be interpreted as gigantism, but it means something completely different to a foliose lichen, where one thallus can reach relatively large dimensions in diameter. Future editions might avoid these errors.

The quality of the print and the design are excellent. The quality of the reproduction of the figures is good, but some photographs are of poor quality. In summary, this is an excellent guide on lichens of the Antarctic and South Georgia, and those dealing with Antarctic cryptogams should have it in their libraries. It is to the credit of the authors that for the first time a monograph with detailed information on a broad level on lichens in Antarctica is available. Despite some criticism, the book can be seen as a highlight for biologists working on terrestrial Antarctic biota. (Sieglinde Ott, Botanisches Institut, Heinrich-Heine Universität, Universitätsstraße 1, D-40225 Düsseldorf, Germany.)

ABANDONED: THE STORY OF THE GREELY ARCTIC EXPEDITION 1881–1884. Alden Todd. 2001. Second edition. Fairbanks: University of Alaska Press. xxviii + 323 p, illustrated, soft cover. ISBN 1-889963-29-1. US\$22.95.

DOI: 10.1017/S0032247402252894

This is a reprint of Alden Todd's 1961 book on the 1881–84 Greely expedition and is the eighth of the 'Classic reprint' series of the University of Alaska Press. The story is well known. In brief, the expedition, which was part of the International Polar Year programme, and which consisted of members of the US Army, occupied a station named Fort Conger on the northeast coast of Ellesmere Island for the period 1881–83. Despite the non-arrival of a planned relief vessel in 1882, the party lived and worked in conditions of relative comfort, but when no ship appeared in the summer of 1883, the situation rapidly deteriorated and the leader, Lieutenant Adolphus W. Greely, determined to move southward, a journey that was fraught with danger and difficulty. For example, they were forced to remain for a month on an ice floe in the Kane Basin. Eventually they reached Cape Sabine, where Greely determined to winter. However, their supplies were virtually exhausted and there was little local game. In the end, the party was reached by a relief expedition on 22 June 1884, but by that time there had been a large number of deaths and one man succumbed after rescue, leaving only six survivors, one of whom was Greely himself.

Two aspects of the story are of particular interest. The first is the inefficient, not to say bungling, efforts by

those responsible in the United States to make proper arrangements for resupply of the expedition in the summers of 1882 and 1883, and the second is the allegation that some of the party had resorted to cannibalism in order to stay alive. Obvious comparison is afforded with the other great Arctic disaster, the 1845 Franklin expedition.

Todd's book has always merited reading by those with polar interests. The author accomplished a considerable amount of very detailed research among the primary sources dealing with the expedition. There are a large number of these, since several of the participants maintained diaries and there were numerous official papers. Both during and after the expedition there was great public interest, and there was a great deal of correspondence and other unofficial papers, not to mention press accounts. Todd absorbed all these and wrote a book that was detailed and balanced, with the additional merit of being very easy to read. It was also well illustrated with reasonable maps and well chosen photographs and engravings. The book had an introduction by Vilhjalmur Stefansson. In this he compared Greely with Peary and wrote concerning the cannibalism issue, which haunted Greely for the rest of his life. He advanced the 'rabbit starvation' theory, which related to the dangers of a fat-free diet, pointing out that those who did not commit cannibalism, including the survivors, who all denied it, would have lived longer than those who did.

However, the book had one glaring deficiency. This was that no references to sources were supplied. It was,

therefore, impossible for subsequent researchers to go directly to the passage in question. In some cases it was obvious enough, as where dates were given in quotations from Greely's diary. In the preface, Todd noted that Greely's private papers were presented to the Library of Congress in 1961. But in others, he merely noted that he 'turned up' the papers from which he quoted with very little indication of where they were to be found. This is lamentable, since Todd was not merely attempting a popular account.

Unfortunately, the University of Alaska has simply reprinted the text as it stands and has done nothing towards making it more useful to present-day researchers by including an editorial apparatus, which might have gone some way towards remedying the deficiencies of the original. There is an interesting foreword by Terence Cole, and, ironically, this does have references in the normal format. One appreciates, however, that it would have required a considerable amount of work to have prepared a new edition that equipped the original text with a proper textual apparatus and that there may have been cost constraints.

To sum up, a worthwhile reprint of an interesting book, and a worthy addition to the series. But it could have been much more useful if the opportunity had been taken to prepare a new full edition. One hopes that the University of Alaska Press will review its policy when considering future publications in the series. (Ian R. Stone, Laggan Juys, Larivane Close, Andreas, Isle of Man IM7 4HD.)