

Reviews

COLD COMFORT: MY LOVE AFFAIR WITH THE ARCTIC. Graham W. Rowley. 1996. Montreal, Kingston, London, Buffalo: McGill–Queen’s University Press. xiii + 255 p, illustrated, hard cover. ISBN 0-7735-1393-0. \$Can 29.95.

The author’s introduction to the Arctic came in 1936 as archaeologist to a small British expedition exploring the west coast of Baffin Island. He continued to work in the area until 1939 and excavated the first site of the pure Dorset culture near Igloolik. Moreover, the expedition was one of the last in the region to depend on traditional methods. Therefore, even if this book were a mere record of the expedition and its sequel, it would deservedly be high on the list of priorities for reading by any person who had Arctic interests.

But it is much more than this. One of the most damning points ever made by any reviewer was the famous comment that the work being reviewed was hard to pick up and very easy to put down. Quite the opposite is the case here. This reviewer found it absolutely impossible to put the book down and, as he was in hospital at the time, the author’s work was doubly appreciated.

The reason for this is the sheer fascination of the tale that Rowley has to tell. Those were quite literally the days! A young man in Cambridge receives a two-line note and off he goes light-heartedly to the Arctic on what amounted to a University expedition. The story of the book covers the doings of that expedition and those of the author when it became clear that more could be accomplished in his area of research by working separately. Much of the book is devoted to the learning process that the author went through during his time there and this largely related, of course, to his being taught by the Inuit. Much relevant information is given, and one suspects that there are few alive now who would not learn something not only from the author’s description of methods of travel, preparation of clothing, camping techniques, and the like, but also in the way life was led in the 1930s. For example, this reviewer was astounded to be informed that there was a squash court on a transatlantic liner in which Rowley sailed!

But the chief merit of the book is the way in which it is written. The author has a pleasant matter-of-fact style of writing that quite disarms any critic. There is no flummery, just a simple tale superlatively well told. Moreover, the author has the gift of making his characters come alive on the page. Especially excellent in this respect are his pen portraits of the various missionaries and HBC staff that he met on his travels. Here is one: ‘...Henry Voisey hated the radio with an intensity that made him incapable of learning the morse code. The conditions of the transmitting licence obligated the station to serve the whole community, but the prospect of sending messages reduced Henry to such a

state of nerves and misery that nobody had the heart to initiate any without a very pressing reason’ (page 171).

Moreover, there is a clear feeling of the respect, even awe in places, with which the author regarded the area and the people living within it. It is not in any sense intended to be disrespectful to comment that the author gives the impression of being very slightly naive, at least in the first few years, and this lends charm to the book.

A further point is the utter hilarity of much of the author’s writing, which is enhanced by his straight-faced way of telling a tale. This is a representative sample: ‘The *Nascopie*’s scows brought bags of government coal from the ship to the shore to be unloaded by the Inuit for the use of the RCMP detachment. The same scows were being loaded by the same Inuit with bags of HBC coal from Salmon River to take from the shore to the ship for the Company’s use at Clyde River. This must have puzzled the Inuit, who then knew little about how government operated’ (page 149).

In complete contrast is the description of the death by drowning of Reynold Bray. Here the author’s sparse style is perfectly fitted to the topic, full of pathos as it is.

The quality of the work is enhanced by the illustrations. There are 48 contemporary photographs, and these themselves constitute an important historical document of the work of the author and of the people referred to in the text. The most beautiful of these are the three of objects excavated by the author. There are also several sketches distributed throughout the text on such subjects as how to build an igloo, which incidentally makes it look very simple, and birds and animals. There are a few well-chosen maps although, almost of necessity, some places are referred to in the text that are not marked in them. There are also interesting appendices.

To sum up: a gem of a book and one that could and should be read for pleasure, and perhaps profit, but mostly for pleasure, by all polar enthusiasts. (Ian R. Stone, Laggan Juys, Larivane Close, Andreas, Isle of Man IM7 4HD.)

ANTARCTIC COMMUNITIES: SPECIES, STRUCTURE AND SURVIVAL. B. Battaglia, J. Valencia, and D.W.H. Walton (Editors). 1997. Cambridge: Cambridge University Press. 464 p, hard cover. ISBN 0-51-48033-7.

This large and well-bound volume is the distilled outcome of a symposium held in mid-1994 in Venice. Sponsored by the Scientific Committee on Antarctic Research (SCAR), it was the sixth in a prestigious series of Antarctic biological symposia initiated in 1962. The published proceedings of each of these have provided benchmarks of progress and signposts for future work. The latest contains 63 high-quality contributions selected by the symposium steering

committee. It was subjected to rigorous peer review and revision — this is not the standard ‘book of the conference,’ where gold and dross jostle for space.

As with all symposium volumes, there are great variations in style, readability, and approach amongst the chapters — they range from broad-brush reviews of the literature to tightly focused presentations of unpublished material. A tremendous range of topics is covered, which is wonderful for the generalist but frustrating for the specialist. Few people will read all contributions, but most ecologists, zoologists, or botanists will find dozens of papers that are well worth their attention. Sadly, there has been a rather greater time lapse between the symposium taking place and the proceedings appearing than the editors would have wished. In 1998 we are reading about the ‘hot’ Antarctic science of five years ago, and several areas recommended for increased scrutiny (for example, UV studies, molecular genetics) have moved on significantly in the interim. This probably restricts the probable sales. Who will buy or read the book? Libraries of appropriate research and teaching institutions must make up the bulk of the market, while postgraduate or doctoral polar scientists are the most likely readers. However, many of the chapters have far wider relevance than the volume’s title suggests and provide material and further reading of considerable use to a wider community of students and researchers.

The chapters are allocated to five sections. The first (‘Biodiversity and evolution’) considers biodiversity at a range of scales, from intraspecific to whole ecosystem levels. Taxonomic groups from prokaryotes to endoparasites of marine mammals are dealt with. Given my research interests (zoology, marine biology, physiology), I was attracted first to a chapter on Antarctic marine biodiversity (by Arntz and others). This represents a good overview, but confirms the intractable problem of non-standardization of sampling that has plagued studies for many years. However, the chapter does help to dispel the old concept of a consistent pattern of low polar diversity — certainly many Antarctic benthic assemblages are as rich as any found elsewhere in the world. Next, I was intrigued by a chapter on lichen diversity (Castello and Nimis), not because of the science, but by reading that the field of Antarctic lichen taxonomy is a hotbed of controversy. Slipshod early work by Hue and Dodge is described in *extremely* uncomplimentary terms! The section contained an excellent demonstration of small-scale patchiness of benthic and benthopelagic fish distributions (by Zimmerman) and a useful DNA analysis of relationships amongst notothenioid fish by Bargelloni and others. However, for me the most interesting paper was one by Vayda and others concerned with the expression of the myoglobin gene in icefish. This excellent contribution not only presents the first unequivocal demonstration of expression and accumulation of myoglobin in a species of icefish, but shows that loss of myoglobin in the group has been a two-step process. First, a mutation abolished myoglobin ex-

pression in the aerobic skeletal muscle of all icefish. Subsequently, independent mutations caused the loss of heart muscle myoglobin in some icefish species, but not others.

The second section (‘Community structure and function’) is dominated by marine studies, although there are a few terrestrial/fresh-water contributions. Several of the plankton studies left me cold, demonstrating as they do a curse of Antarctic marine science — the lack of standardization of methods and timing of observations and experiments between different research groups — substantially limiting the development of general concepts. However, I did enjoy reading a paper by Skerratt and others demonstrating the feasibility of use of lipid signatures to quantify contributions of various species to algal blooms. It was particularly interesting that this worked well for *Phaeocystis antarctica*, hitherto a difficult species to quantify, yet often dominant in the water column of Antarctic coastal waters. There are good solid contributions on larval krill biology at the ice edge (Frazer and others) and the large bivalve *Laternula elliptica* (by Ahn). Finally, there is an excellent chapter on sub-Antarctic weevils by Chown. This has a strong biogeographic/evolutionary thread running through it, and also makes out a very sound case for the importance of sub-Antarctic islands as sites where global climate change can be detected and studied — sadly just when most national/international research programmes are acquiring a continental Antarctic emphasis.

Section III (‘Survival mechanisms’) contains several excellent chapters. Two on fish antifreezes I found particularly interesting. A.L. DeVries presents a succinct and up-to-date account of the field that he has done so much to pioneer — this should be on the reading list of every student of vertebrate physiology. The complementary contribution by Wörmann shows how widespread and varied antifreeze substances are, and how they are found throughout the fish phylogenetic tree, implying multiple convergent evolution. There is also a good short paper by Montgomery that demonstrates an ontogenic shift from visual foraging in spring-hatched fish larvae, to lateral line-mediated winter foraging by adult fish. This is accompanied by a decreased retinal rod density.

For much of the last half-century a central area of Antarctic biological research has involved the study of adaptation — determining how organisms live where they live. Section IV (‘Adaptive mechanisms’) opens with a good summary of physiological and biochemical adaptations in fish (by di Prisco). This concentrates heavily on the tendency towards reduced or absent haemoglobin in Antarctic species. Several chapters (notably one on lipid composition in *Euphausia superba*) sit uneasily in this section and could have been better placed elsewhere. Mostly marine organisms are concerned, although there is a complementary pair of papers on terrestrial arthropods. Block describes ecophysiological strategies in mites and spring tails, demonstrating that these arthropods do not exhibit unique adaptations characteristic of the Antarctic

(in contrast to Antarctic fish). Convey's contribution reaches similar conclusions; both papers contain fairly familiar material.

The last section ('Human impact and environmental change') encompasses two sorts of contribution, those concerned with globally relevant issues (for example, anthropogenic effects on climate, ozone depletion) and parochial Antarctic matters (for example, impact of alien insects, effects of oil spills). It opens with a rather humdrum and familiar consideration of past temperatures (by Karlén) that has an extremely short (and dated) section about future trends. However, there are several excellent papers on UV effects on Antarctic biota, introduced by an excellent overview by Marchant. One of the most interesting 'impact' papers is one concerned with the effects of burgeoning fur-seal populations on terrestrial and freshwater ecosystems (by Lewis Smith). Reasons for the population increases are not clear, but may be related to past patterns of human exploitation of seals and whales. Whatever the reason, clearly physical disturbance and nutrient toxicity have profound effects on terrestrial plant assemblages, causing environmental damage that is probably irreversible.

The book ends with a short postscript that tries to identify future research opportunities. This is coloured somewhat by the Biodiversity Convention and the Antarctic Protocol, both of which were very recent history at the time of the symposium. (John Davenport, University Marine Biological Station, Millport, Isle of Cumbrae KA28 OEG.)

THE CHARTS & COASTAL VIEWS OF CAPTAIN COOK'S VOYAGES. VOL 3: THE VOYAGE OF THE *RESOLUTION* AND *DISCOVERY* 1776–1780. Andrew David (Chief Editor). 1997. London: The Hakluyt Society. cxxx + 319 p, illustrated, hard cover. ISBN 0-904180-55-7. £210.00.

The publication of this third volume of Captain Cook's *Charts and coastal views* is the latest in a series of publications covering Cook's three voyages. In 1955, the Hakluyt Society published the late John Beaglehole's scholarly edition of the journals, to be followed in 1974 by his life of Cook. More recently, a comprehensive and magnificently illustrated three-volume catalogue of the visual art of Cook's voyages has been published under the editorship of Rüdiger Joppien and Bernard Smith. In 1979, Commander Andrew David, formerly of the Hydrographic Department, Taunton, accepted an invitation to edit, in cooperation with Dr Joppien and Professor Smith, three further volumes to cover the charts and coastal views, the first two of which were published in 1988 and 1992, respectively.

The arrangement of this volume closely follows that of its predecessors, opening with an introduction followed by a descriptive catalogue of the charts and views themselves. Here the introduction (pages vii–xxxiii) is divided into a number of themes following on an account of the circum-

stances leading to Cook's recall from semi-retirement and his appointment to take command of *Resolution*. There follows an account of the Admiralty's detailed instructions, particularly in regard to the probability of finding a water passage linking the Atlantic and Pacific oceans. Subsequent topics embrace a brief account of Cook's officers and scientists and a review of the astronomical, surveying, and navigational instruments taken on board *Resolution* and *Discovery*, along with Cook's navigational and surveying practices.

Notes on the coastal views remind the reader that this volume includes all surviving views drawn on the voyage and that their purpose was partly navigational and partly a scientific record. The account of the scientific results includes a number of references to ice observations, although only one to aurora. Short biographies of the officers responsible for the production of the charts and coastal views form a reminder of the considerable talent attracted by Cook's leadership, artists as talented as William Ellis, Henry Roberts, and John Webber, and, among the hydrographers, William Bligh, James Burney, James King, Edward Riou, and George Vancouver. All three artists enhanced their work with colour, 21 examples of which are here reproduced and discussed. The original publication of the art work was apparently beset with all manner of crises, not the least of which was the loss of a package of Cook's loose papers, which may well have included some of his original surveys. There was the expectable dissension over place-names, and rival versions of the charts threatened to delay publication. In the event, the first edition of the official narrative was published in 1784 and was an instant success, 2000 copies selling within three days.

Following this introduction to the charts and views is an examination of Russian charts of the North Pacific in relation to Cook's third voyage by Alexei V. Postnikov, who discusses Russian charting of the region since Bering's day and pays tribute to the Russian pilot G.C. Izmailov, who shared valuable information with Cook. A select bibliography of references is followed by a descriptive inventory of collections, arranged according to their present location. An introduction to the descriptive catalogue and five appendices relating to Board of Longitude papers in the Cambridge University Library conclude the introduction.

The descriptive catalogue that follows (pages 1–319) lists some 193 charts of coastal views, reproduced in monochrome, together with 10 supplementary charts and drawings relating to all three voyages not previously catalogued plus a list of corrigenda and addenda. The arrangement is chronological, thus forming a visual accompaniment to Cook's main narrative. Each plate is identified by title, artist, a descriptive annotation, and references to expedition and other journals. Cross-references are made to similar views and panoramic sketches together with their provenance. Appended to the catalogue is a transcript of James King's 'Running journal