

few visitors have developed a style there; Wilson's paintings and the photographs of Ponting, Hurley, Schulthess and Eliot Porter are featured. This unusual combination of scientific, historical and literary aspects of Antarctica is successful and well worth reading, providing a pleasant change from more familiar approaches to the region. (David Rootes, Scott Polar Research Institute, University of Cambridge, Cambridge CB2 1ER.)

### BACKGROUND TO DISCOVERY

**ANTARCTIC OBSESSION—THE BRITISH NATIONAL ANTARCTIC EXPEDITION 1901–1904.** Markham, Sir Clements. (C. Holland, editor). 1986. Aldburgh, Bluntisham Books and Erskine Press. 179p, illustrated, hard cover. ISBN 0 948285 09 5. £14.95.

Sir Clements Markham was the principal proponent of British Antarctic exploration at the end of the last century. He recorded the progress of his plans in a detailed document, a *Personal Narrative*, which was given to the Scott Polar Research Institute by Sir Peter Scott in 1983. The editor has written a concise and informative introduction which greatly assists the elucidation of this very enigmatic record. Much of it reports the intrigue and other circumstances of Markham's manipulation of several different (and frequently disagreeing) organizations to enable the *Discovery* (1901–04) expedition to take place. The account is outspoken and, eighty years ago, was quite confidential—including personal opinions of many of those involved. Now it provides a most interesting and distinct idea of events at the times, and perhaps an idea of situations prevailing more generally. The editor has included a concise biography of Markham, brief biographies of the more important of the others involved, and some general notes. Unfortunately the quality of the printing is rather poor. (R. K. Headland, Scott Polar Research Institute, University of Cambridge, Cambridge CB2 1ER.)

### VITAMIN C IN EXPLORATION

**THE HISTORY OF SCURVY AND VITAMIN C.** Carpenter, K. J. 1986. Cambridge, Cambridge University Press. 288p, illustrated, hard cover. ISBN 0 521 32029 1. £27.50

This is a very comprehensive and fascinating account of one of the diseases which has had the most significant effects on the history of travel and exploration. It is the second of the author's studies in deficiency diseases; his account of pellagra was published in 1981. The information is investigated on a historical basis, beginning in the middle ages and finishing with a discussion of recent 'mega-vitamin' contentions. A final chapter *Retrospect* covers a variety of special matters and enigma. The author has been careful in providing information for the reader, and in many cases cites primary sources where there is disagreement in interpretation. The *Treatise of the Scurvy...*, written by James Lind and published in 1753 is the most important historical development in the knowledge of the disease. The development of Lind's theories and particularly his experiments (one of which was probably the first controlled trial in clinical nutrition) is well described. Unfortunately Lind's ideas did not become generally applied (although there were several notable exceptions), and many lives were lost as other theories were acted upon. The development and consequences of these circumstances are concisely given. Captain James Cook was probably the second most important person in the history of scurvy; the author gives an account of his methods, including making sauerkraut a delicacy for officers in order to encourage the seamen to accept it. One chapter

concentrates largely on scurvy in the polar regions, from 1633 in Greenland and Svalbard to Captain Scott's 1910–13 Antarctic expedition; this indicates the particularly strong connexion between its appearance and the success of expeditions to such areas. Shortly after Scott's expedition vitamin C was isolated and a chapter describes this together with its analysis, synthesis, production, and modern uses. The book is well produced, includes a comprehensive bibliography, and is excellently indexed. (R. K. Headland, Scott Polar Research Institute, University of Cambridge, Cambridge CB2 1ER.)

### POLLUTION OF THE ARCTIC ATMOSPHERE

ARCTIC AIR POLLUTION. B. Stonehouse (editor). 1986. Cambridge, Cambridge University Press (Studies in Polar Research 5). 328 p, illustrated, hard cover. ISBN 0521-330009. £30.00, US\$49.50.

In 1985 an international conference was held at the Scott Polar Research Institute to discuss the phenomenon of Arctic haze. It was a wide-ranging meeting, considering both the origin and transport of pollution into the Arctic as well as the climatic, human and ecological consequences. *Arctic Air Pollution*, the fifth in a series of interdisciplinary publications devoted to Studies in Polar Research, draws together a remarkably coherent and well-balanced series of papers, presented at the meeting by an internationally respected group of scientists at the forefront of research into the phenomenon.

Divided into four parts, the work takes a broad perspective, examining first the composition and origins of Arctic haze and the various pathways by which pollution is transported to the Arctic from lower latitudes. Part 2 examines how the haze can perturb the balance of solar radiation, affecting the climate both locally and also potentially in mid-latitudes. More immediate implications for human health and the ecology of the region are considered in Part 3. Finally the book and the conference view the wider political issues: international legal responsibilities and the possibilities for international cooperation to study and ultimately overcome the problem.

The book has been very carefully compiled and information is easy to find. Each part is headed by a useful summary of the component papers which helps to weld the contributions into an integrated review. This is enhanced in a strong concluding section which draws out the principal findings from each session of the meeting. Although the phenomenon of Arctic haze was first noticed 30 years ago, it has been seriously studied only during the last decade. The book has successfully brought to a focus recent work across a broad front. It inevitably raises more questions than it can answer and the conclusion highlights priorities for future work.

*Arctic Air Pollution* will be of value to all scientists concerned with the problem of large-scale transport of pollution. However it also contains a comprehensive distillation of authoritative and up-to-date information for those who must make decisions to counter the effects of Arctic pollution. As clearly indicated in the book, this is one environmental problem for which a reasonable level of understanding has been achieved before serious human effects have occurred. It is to be hoped that future research, stimulated both by the symposium and the book, will lead to a firm basis for working out a viable strategy to prevent a deterioration in the problem in coming decades. (David A. Peel, British Antarctic Survey, Natural Environment Research Council, Madingley Road, Cambridge CB3 0ET.)