Reviews

ANTARCTICA AND GLOBAL CLIMATIC CHANGE. Colin M. Harris and Bernard Stonehouse (editors). 1991. London, Belhaven Press, in association with the Scott Polar Research Institute, Cambridge. 198 p, illustrated with more than 50 photographs, maps, and line diagrams, hard cover. ISBN 1-85293-187-6. £33.00.

This book forms the proceedings volume of a symposium held in Cambridge to celebrate the one hundred and fiftieth anniversary of the Treaty of Waitangi, signed by representatives of Britain and the indigenous Maori population of Aotearoa, from which the modern state of New Zealand developed. The theme of the book is global climatic change and the role played by United Kingdom and New Zealand cooperation in Antarctica. It is also appropriate that 1990 represented the one hundred and fiftieth anniversary of the pioneering voyage to Antarctica by James Clark Ross.

The book comprises 13 chapters in three parts following an introductory historical overview. *Part 1: Current state of knowledge*, sets the scene of global climatic change with special reference to Antarctica, both as an observatory for recording global change and as a continent undergoing change. Four chapters cover prominent issues, global climate models, the geological perspective, and the contribution of Antarctic glaciology. *Part 2: Atmosphere, ice and ocean*, considers atmosphere–ice–ocean interactions in two chapters and the role of the Antarctic ice sheet in a further two chapters. *Part 3: Ecology and management responses*, includes two chapters on ecosystems, two chapters on strategies for mitigating impacts of climatic change, and a final chapter giving a bibliographical guide to recent Antarctic and global climatic change literature. There is a list of contributors, a foreword by Lord Shackleton, an editors' introduction, and a good index.

This reviewer's initial reaction, 'not another book on global climatic change' was quickly overcome, for here is a very readable text that covers all the major points with an accent on New Zealand and United Kingdom research in Antarctica. There are some refreshingly honest papers, particularly those by Vernon Squire, David Drewry, and Paul Mosley, that draw attention to gaps in knowledge, the extreme complexity of global climate, and the difficulty, if not impossibility, of making reliable forecasts at the present time. For example, the popular scenario of increasing carbon dioxide accelerating climate warming to result in large-scale melting of the ice sheets is not so simple; much more likely is a delayed response of 500 to 1000 years for major ice-sheet melting. In fact, increased precipitation may initially add to the total ice volume and actually contribute towards a fall in global sea level, or at least offset a rise in sea level due to thermal expansion of the oceans. All in all, we learn that Mankind is capable of changing the global climate and is undoubtedly doing so, but that the extent of the change and its effect on the natural cycle of change is, as yet, uncertain. There are some interesting tables of carbon dioxide emissions that show New Zealand in a particularly poor light. But perhaps the most telling comment in the whole book is a call for '... further effort to limit growth in human population since the emission of greenhouse gases is a function of not only industrial and agricultural practices but also of population.' This single action would surely eliminate many and reduce virtually all of the global environmental problems we currently face, but it will require a greater awareness and a will to succeed on the part of all Mankind.

This book should appeal to all who are interested in global climate and the contribution that can be made by scientific research in Antarctica. It will be readily comprehensible to the lay reader. Although it is not an advanced scientific text, it does include a political and human perspective that could be enlightening to the dedicated scientist. The book has an important message to convey and it is a pity that the price may deter many prospective casual purchasers. (P.D. Clarkson, Scientific Committee on Antarctic Research, Scott Polar Research Institute, Lensfield Road, Cambridge CB2 1ER.)

LONG TERM ADAPTATIONS AMONG ARCTIC HUNTER-GATHERERS. George Sabo, III. 1991. New York, Garland Publishing. 400 p, illustrated, hard cover. ISBN 0-8240-6111-x. $91.00 (US).

In this study, the author draws on archaeological fieldwork, historical material, and ethnographic data from the Lake Harbour/North Bay region of southern Baffin Island in an attempt to consider the social strategies employed by successive Arctic hunter-gatherer populations in long-term environmental adaptations. The study covers an 800-year period, from the time when the first Thule migrants moved to the North Bay region in about AD 1100. George Sabo examines how prehistoric Thule and historic Inuit groups living in this area responded and coped with the effects of climatic change on the availability, distribution, and population dynamics of the animal resource base they depended upon.

Sabo takes an ecological anthropology perspective that regards culture as the characteristic means through which people organize and define their specific relationships with other aspects of their environments. He begins by outlining some basic concepts and assumptions about human ecosystems and adaptations, before placing his archaeological analysis of the North Bay region in its environmental and cultural setting, developing an ecosystem model, and reviewing evidence for climatic change in the Central Arctic over a 1000-year period.