

counts; among these are the contributions by S. Schneider (climate modeling), T. Turco (atmosphere chemistry), R. Najjar (marine biogeochemistry), P. Sellers (biophysical models), and W. Washington (modeling increased greenhouse gas effects). M.A. Cane carefully describes our understanding of El Niño–Southern Oscillation phenomenon before proceeding to discuss its modeling. Adoption of this structure would have benefited some of the other chapters. There are, however, some imbalances and gaps in the treatment. The crucial issue of cloud radiative forcing receives only a qualitative discussion on pages 97–98 and no cross-reference to the ERBE results (page 712) or to model treatments (page 645). The cloud contribution to planetary albedo (page 8) is not traceable via the index. Low-frequency variability in the atmosphere (blocking modes, intra-seasonal variability) are missing from the chapter on the atmosphere, but are discussed by N.-C. Lau in the context of model simulations. Snow cover receives little attention. It features briefly in the context of modeling results, but there is no systematic treatment as for sea ice and land ice, despite its greater annual variation and areal extent and its important role in the hydrologic cycle. Also missing is a discussion of evidence for recent climatic changes and trends. Whereas paleoclimatic changes are reviewed by J. Kutzbach, there are no diagrams of observed fluctuations of regional and hemispheric temperature and precipitation averages for the last 100 years, although greenhouse gas trends are illustrated in Chapter 2.

The chapters on modeling sea ice (W. Hibler and G. Flato) and land ice (C. van der Veen) will be of particular interest to polar scientists, although the latter is too brief in its treatment of ice-sheet modeling. Other relevant polar topics such as the modeled high-latitude amplification of greenhouse gas-induced warming (pages 655–658) and the nature of the global ocean conveyor belt, treated under global coupled models by G. Meehl rather than under ocean circulation, are not easily located. Ice–albedo feedback in simple zero-dimensional climate models is briefly treated by J. Kiehl (page 324; not indexed), but the usefulness of zero- and one-dimensional model results is unfortunately not discussed.

The production of the book, with standardized diagrams, provides a consistent appearance. There is a list of acronyms and a key to basic notation used in equations throughout the book, although this is inconveniently printed sideways. A glossary would also have been helpful, given the multi-disciplinary terminology (methanotrophs, Newtonian cooling, plastic ice rheology, Rayleigh friction, and till, for example). The index is incomplete: brine formation is referred to page 136 but is fully described on page 413; Arctic, PAR, and jet streams, for example, are missing. Some figures are incomplete. Figures 4.12 and 5.1 need a latitude–longitude grid, and Figure 18.1 a vertical scale.

The editor's intention that 'professors who are experts in one disciplinary area will be able to use this text to teach

a course in climate system modeling that introduces students to the other disciplines and the issues involved in coupling among the components of the climate system' may seem an unrealistic aim given the breadth of this work. Nevertheless, it is a welcome step toward the solving of this important educational problem. Perhaps of equal value will be its contribution to educating disciplinary-specialist scientists and professors! The book is excellent value for money and can be strongly recommended for all scientific libraries. (Roger G. Barry, World Data Center-A for Glaciology, University of Colorado, Boulder, CO 80309-0449, USA.)

**READINGS IN SAAMI HISTORY, CULTURE AND LANGUAGE III.** Roger Kvist (Editor). 1992. Umeå: Center for Arctic Cultural Research, Umeå University (Miscellaneous Publications 14). iii + 142 p, illustrated, soft cover.

The Umeå Center for Arctic Cultural Research already has a fine record for publishing material on the past and present aspects of Saami life. As I indicated in an earlier review (*Polar Record* 27 (161): 142–143, 1991), this is not always uncontroversial, but it is certainly stimulating and informative. This volume has a number of excellent contributions.

Lars Forsberg takes what he calls 'a provocative view' on the proto-Saami Bronze Age. My criticism of this is that to attach ethnic labels to the prehistoric inhabitants of an area implies that these had meaning at that time. It is certainly true that ethnicity has become the opiate of the twentieth-century masses, but whether in past times, where stark issues of human survival may have dominated, people used such a form of differentiation must at least be questioned. A paper by Inger Zachrisson on 'Saami prehistory in the South Saami area' tangentially raises the same issue. She writes of 'colonization,' but is more cautious in attaching ethnic labels until the first references in classical sources.

Gunlög Fur, writing of seventeenth-century Swedish policy towards both Saami and Lenape Indians, is on firmer ground: the comparison is illuminating. Roger Kvist's own paper on 'Swedish Saami policy, 1550–1990' concentrates on policies that were discriminatory, resulting in what he characterises as 'a system of institutional racism,' which, however, has been superseded by more enlightened attitudes. His paper provides the non-Swedish reader with information otherwise difficult to obtain.

Johannes Marainen, himself a Saami, compares social stratification and marriage in two Saami administrative districts, Talma and Könkämä, between 1901 and 1923. His paper is excellent, although one wishes he might have included his own area, Lainiovuoma, which lies between Talma and Könkämä. Kaisa Korpjaakko, working at the Institute for Nordic Law at the University of Lapland (Rovaniemi) discusses the legal aspects of land use by the Saami of Sweden and Finland. It is a key question, which is taken beyond the documents into the domain of public

policy. Sten Henrysson's discussion of Swedish Saami education during the twentieth century also addresses major issues. Until land rights and education have been settled, the region will be politically divided.

Finally, I must mention a commendable paper on reindeer herding on the Kola Peninsula by Hugh Beach, and another on the names of the Saami thunder-god in their pre-Christian religion. (Ian Whitaker, Department of Anthropology, Simon Fraser University, Burnaby, British Columbia V5A 1S6, Canada.)

**ANTARCTICA: EXPLORATION, PERCEPTION AND METAPHOR.** Paul Simpson-Housley. 1992. London and New York: Routledge. xviii + 131 p, illustrated, hard cover. ISBN 0-415-08225-0. £16.99.

Previously noted for his publications relating to behavioural and cultural geography, to hazard perception, and to the analyses of literary landscapes, this is the author's first study devoted to the polar regions. Simpson-Housley describes his book as approaching 'the evaluation of Antarctica from the perspective of environmental perception. It [Antarctica] is diverse and a polyphony of voices is heard. Throughout the focus is on individual views and perceptions' (page xvii). Misperceptions are of particular interest, and these are attributed by the author to a variety of causes, including the sheer strangeness of the southern continent, the prevalence of mirages, and the inability to determine exact location through difficulties of calculating longitude. Attention is paid to the views of poets and artists as well as to those of scientists and explorers, since 'In a postmodern world we deny nobody their right to speak' (page xvii).

Clearly an interesting subject has been identified, and the method of approach is also intriguing, with chapters entitled 'The seaman's view' (Cook, Bellingshausen, Wilkes, Ross...) and 'The landsman's view' (Borchgrevink, Scott, Shackleton, Amundsen). Simpson-Housley's distinction here is not that the latter were not seamen, since clearly they were, but that perceptions of Antarctica were not the same for expeditions based on the continent as they were for those in vessels voyaging around it. Other chapters explore such topics as Bouvetøya and its mysteriously disappearing neighbor, Thompson Island; feelings of fear, desolation, and — contrastingly — beauty inspired by Antarctic seas and landscapes; and the particular problems of Antarctic navigation and the misperceptions consequent upon them. This last matter is pursued further in two chapters devoted respectively to Benjamin Morrell's claimed discovery of New South Greenland and to Wilkes' charting of the coast of Wilkes Land up to 200 miles north of its correct location. Simpson-Housley defends the honesty of both Morrell and Wilkes, arguing that misperception resulting from the effects of superior images in each case led to error. A final chapter studies Antarctic poetry, much of which consists of an examination of Coleridge's sources for *The rime of the ancient mariner* and echoes of Coleridge's expressed sentiments in the

writings of explorers such as Scott and Shackleton.

Interesting as Simpson-Housley's book undoubtedly is, my overwhelming impression is that, given this topic and the author's breadth of learning (particularly with regard to the more 'cultural' aspects of his subject), this publication does not really live up to its promise. At only 131 pages, it is brief, and a substantial proportion of the limited space available is spent in re-telling familiar expeditionary exploits without shedding much new light on the specific subject of environmental perception. Chapter 3, for example, contains thumbnail sketches of the Borchgrevink, Scott, Shackleton, and Amundsen expeditions, all told in the space of 20 pages. Little room remains for the author to investigate potentially fascinating questions such as whether there were any systematic differences in the ways in which these very different expeditions perceived Antarctica. Did the personalities of the various leaders, for example, have any influence upon perceptions of expedition members, and, if so, what type of influence? To what extent did perceptions vary with an individual's role in the expedition, social background, or motive for joining the expedition? It is frustrating that a publication that does so much to stimulate interesting questions so frequently fails to pursue them.

Any newcomer to polar studies is likely to make certain mistakes, but the author's comparative inexperience does show up particularly disadvantageously in his confusion on pages 14–15 between the two Rosses, where James Clark Ross rather than John Ross is described as charting the Croker Mountains when leading his first Arctic expedition with Parry as second-in-command.

My final criticism is that too great reliance appears to have been placed on a relatively small number of largely secondary sources, a point borne out by a quick scan through the bibliography. Whilst I can appreciate that time is limited and that the potential reading matter for an ambitious subject of this nature is almost inexhaustible, it is surely the case that there is simply no substitute for detailed textual study of the expedition accounts themselves whenever possible, since only these will prove truly revealing about the perceptions of those encountering Antarctica, rather than the perceptions of those subsequently encountering and filtering their written words. (William Mills, Scott Polar Research Institute, University of Cambridge, Lensfield Road, Cambridge CB2 1ER.)

**ANTARCTIC AND SOUTHERN OCEANS LAW AND POLICY OCCASIONAL PAPERS 1–5.** Hobart: Law School, University of Tasmania. Soft cover. \$A12.00 each.

These are the first five papers in what promises to be a lively series, aimed at 'encouraging research and providing a forum for public discussion on law and policy issues relating to the Antarctic and the Southern Oceans generally.' Published by the Faculty of Law, University of Tasmania, in production they show an interesting evolution from ad-hockery to self-confidence: from No. 3