

which has long been the fate of indigenous peoples. Indeed, many environmentalists, natural scientists, and some social scientists do not have any great problems with such models. They talk about humans and other animals. But there is a danger in this lumping together of people and animals. Nuttall discusses this problem and how it affects rights to resource use and the perception of non-Arctic residents of indigenous inhabitants of the wilderness.

How do the mixed and informal subsistence economies of rural and remote Arctic communities fare in the face of impacts of the global capitalist market processes and protectionist ideologies of western environmentalism? Chapter 5 looks at the case of Greenlandic subsistence whaling and the prospects of sustainable use of living marine resources to provide community viability. Nuttall provides a balanced view of the hottest of potatoes in the global-environmental debate and situates subsistence whaling in the proper economic cultural and ecological context, as a way of life and as a way of survival at the same time. He also shows how international actions hindering the use of marine mammals for the production of livelihoods for Arctic communities in many cases equals cutting the spinal cord of these cultures. Inuit communities find themselves under increasing pressure to defend their subsistence activities and make claims to develop along their own paths, even if it does not confirm to environmentalists' protests that they have thus forfeited their indigenesness, becoming tainted with money and markets.

Chapter six deals with the prospects and problems of tourism in the fragile ecosystems and for the vulnerable small-scale societies of the Arctic. Nuttall seems to be of two minds concerning the likelihood of tourism providing communities with viable options involving alternative and mostly non-consumptive economic practices. But he does give us an enlightening discussion on how people are actively seeking opportunities that eco-tourism and community tourism provide. Tourism is often an option that local people have not chosen, but rather something of an unwelcome intrusion and an extension of external market forces for the fulfilment of the insatiable appetites of tourists from affluent nations.

In chapter seven Nuttall returns to questions of the construction of indigenous environmentalism involving images of original ecologists, discussing the epistemological status of claims to a unique understanding of the environment and the capacity to dwell sustainably in it. His conclusion is that, in spite of the rhetoric it involves, there is a unique opportunity to learn from traditional-knowledge systems and that they must be part and parcel of attempts to comprehend and deal with issues of resource management and sustainable development. The afterword sums up the book's message and core arguments, and reminds the reader of the importance of cultural diversity and that it can, and indeed should, go hand in hand with biological diversity. This is for the sake of those who depend upon the use of natural resources, as well as for a

humanity that needs the knowledge embodied in the cultures that biodiversity sustains.

To conclude: this well-written and thoughtful book is of high value for anyone interested in better understanding the complex issues facing the contemporary Arctic and the relations between its residents and resources. It is to be recommended to those wishing to gain insight into the area and the problems and prospects facing the north. I would especially recommend it to natural scientists who wish to broaden their knowledge of sociocultural processes and how they relate to issues of environmental protection, cultural survival and sustainable development in the Arctic. (Niels Einarsson, Stefansson Arctic Institute, Nordurlod, 600 Akureyri, Iceland.)

Reference

Pálsson, G. (editor). 2001. *Writing on ice: the ethnographic notebooks of Vilhjalmur Stefansson*. Hanover and London: University Press of New England.

HABITAT CHARACTERISTICS OF SOME PASSERINE BIRDS IN WESTERN NORTH AMERICAN TAIGA. Brina Kessel. 1998. Fairbanks: University of Alaska Press. 117 p, illustrated, soft cover. ISBN 0-912006-98-6. US\$16.95.

This slim volume reports the results of the author's long-term studies of songbird habitats in Alaska, primarily in the upper Susitna River basin. The Alaskan region serves as a model of wooded boreal ecosystems, but has added biogeographical spice due to the mixing of western North American species with eastern Nearctic species that reached the northwestern extremities before western counterparts, and eastern Palaearctic species such as the Arctic warbler. Such issues are not, however, the main subject of this book, which concerns itself primarily with the habitat features associated with the presence and absence of the 15 passerine species most frequently encountered in the study. These include Swainson's and varied thrushes, yellow-rumped and blackpoll warblers, and fox and white-crowned sparrows.

After an initial introduction to the study and its methods, the major part of the book comprises essentially two sections. In the first, the habitats of 12 study plots, each selected to exemplify a particular physiognomy, are described floristically and structurally using a combination of text and tables. This section is not the most gripping of reads, but it is clear and the habitats are illustrated with some helpful reproductions of black-and-white photographs. However, the information contained herein is essential for meaningful interpretation of the next section, which takes the reader through the habitat distributions of the 15 study species. The abundance of the species in each of the study plots is presented, along with an analysis of the habitat variables that correlate most strongly with the species' presence. Again, the text here is necessarily rather dull, but some interpretation of the results in terms of both the functional needs of the birds concerned and community interactions provides some interesting hypotheses. In a

descriptive study such as this, hypotheses generated inevitably remain untested.

Synthesis is provided in a series of brief essays at the end, including a comparison of thrush habitats, the case for the importance of floodplain cottonwood forests, and a statement of the habitat stability provided by spruce forests, in addition to a conclusion–summary. Some interesting points are raised in these sections, although one is left feeling slightly short of satiation at the end.

In general, this book has the feel of a long paper rather than a book. It could easily and beneficially have been condensed. However, a wealth of vegetation and bird distribution data is presented and it would serve as a useful overview of boreal habitats at a good level for ornithologists. The book may be too quantitative for most birders and not embedded within a firm enough theoretical framework to be of general utility to scientists. However, it has much information that might be useful to conservationists, teachers, and those with management responsibilities. (Chris Hewson, Department of Zoology, University of Cambridge, Downing Street, Cambridge, CB2 3EJ.)

GLACIER ICE: REVISED EDITION. Austin Post and Edward R. LaChapelle. 2000. Seattle: University of Washington Press in association with the International Glaciological Society. Xii + 145 p, illustrated, soft cover. ISBN 0-295-97910-0. US\$27.95.

Glacier ice was initially published in 1971. I first discovered a copy in the library of the Scott Polar Research Institute and since then have requested it periodically from libraries. It has long been out of print and has been extremely hard to obtain second-hand; this new edition will gladden many glaciologists. *Glacier ice* is a classic; it is also a very beautiful and evocative book. The majesty and splendour of glaciated environments is presented in a sequence of stunning air- and land-based photographs. Each photograph is carefully chosen to depict a chosen feature or process. Several are annotated to aid the uninitiated in identifying the feature depicted. Many will stimulate discussions among glaciologists on the processes occurring in glaciated environments. Yet each photograph is also a beautiful and soulful image. All of them are sharp, clear, and high-contrast black-and-white photographs. Invariably someone picking up the book examines these photographs first and reads the figure headings. The text usually is not read until a later visit, when it is discovered to be clear and precise, providing additional explanations to the figure headings. In a very few places it is a little dated, but the majority reads well and will not confuse, despite being originally written 30 years ago.

The first chapter covers the fundamental concepts of glacier mass balance, stressing alpine environments. The emphasis is on the visual, and so there is particularly good coverage of the surface textures developed on glacier ice, which form the basis of the second chapter. The semi-regular patterns of nature produce beautiful and intriguing images. Glacier dynamics and fluctuations form the theme

of the next five chapters. The phenomenon of surging follows naturally from a chapter on moraines, and the photographs show stunningly well the differences between normal steady and unsteady flow. The last of this group of chapters depicts ogives and explains their formation. A chapter on meltwater follows. This is a rather difficult theme to cover pictorially, because of the importance of the inaccessible basal water system. This chapter is the least thorough of the important glaciological themes covered by the book.

Glacier ice also includes some rather intriguing surface features, many of which were new to me. These include ice worms, sun cups, ice pillars, and ice ships. These photographs stimulated many discussions among our group of glaciologists. Calving glaciers, glacier outburst floods, and the interactions between glaciers and volcanoes are the topics of the next two chapters. These are followed by a series of stunning photographs of the effects of ice on the landscape. The final chapter depicts a range of glaciers, emphasizing the differences between polar and temperate glaciers. The book ends with a glossary of terms, and a useful and up-to-date bibliography has been added since the first edition.

Most but not all of the examples pictured in this book are taken from Alaska. There are also small groups of photographs from the Himalayas and from the North American Arctic and Greenland. There are, therefore, many glaciated areas of the Earth that are not covered. This bias reflects the interests and field experience of the authors.

There are few improvements that could be made to this book. However, one simple aid for the lay reader would be the addition of an approximate scale for each figure. This is particularly true for those photographs that show surface features of glaciers, such as crevassing. For the glaciologist, the examples shown are so classic that many may be tempted to visit the sites shown. For this reason a useful addition would be for each photograph to be dated. Finally, a location map for each photograph would be useful.

Overall this is a very visually exciting and appealing book. It could easily be regarded as a coffee-table book to entertain and delight anyone generally interested in landscape or mountain regions. However, it is also much more, being both informative and stimulating to professional earth scientists. Who should look at this book? It is likely already to be well known to most glaciologists, many of whom will be delighted to be able to buy their own copy at last. It will be equally as attractive to anyone interested in alpine environments and mountain scenery, or the grandeur of nature. For readers of *Polar Record*, there are relatively few Arctic or Antarctic examples. However, it is a must for anyone interested in Alaskan scenery. I will be asking my university to buy this book and will be recommending that students taking my modules on glaciology look at it for inspiration and background information. (Tavi Murray, School of Geography, University of Leeds, Leeds LS2 9JT.)