

made some 2000 years ago on St Lawrence Island and persisted through succeeding cultures of Okvik, Old Bering Sea, and Punuk. Except for a brief period around AD 1000, it was not found on the mainland of western Alaska. Some 500 years later this style of decoration became much reduced or absent, but eventually realistic engravings emerged that became widely distributed in Alaska by the early nineteenth century. Decorated bow drill handles (drill bows) were the most common.

After Russia sold Alaska to the United States in 1867, American trading posts were established and walrus ivory was introduced to new areas. Drill-bow art declined, but there was a big expansion in walrus-ivory art with cribbage boards, pipes, and carved or engraved whole tusks. Several examples of the innovative work of Angokwazhuk (Happy Jack) are illustrated and the source of some of his pictures is identified. As walrus-ivory supplies declined, the type of carving changed; several such examples are illustrated.

The differences between the development of contemporary Alaskan and Canadian art are discussed and several early Canadian soapstone carvings illustrated. The final chapter explores at length the nature of authenticity and the ambivalence of native forms and motifs used by non-natives, and the less controversial work of native artists who are no longer resident in Alaska.

Fakes are exposed in the form of elephant and other non-indigenous materials mass-produced into curios for sale in Alaska. There are reproductions and deceptions, too. Ancient Alaskan ivories have been decorated in recent times by copies of early pictographs, and plastic scrimshaw of Arctic scenes is widespread.

The book contains new material and the benefit of the author's willingness to re-evaluate and occasionally correct earlier statements as new information was acquired. It is beautifully written and presented with an index, references, and illustrations conveniently near the relevant text. The thoughtful provision of a chapter heading on each double page greatly facilitates the use of the notes. (Janet West, Scott Polar Research Institute, University of Cambridge, Lensfield Road, Cambridge CB2 1ER.)

ANCIENT PEOPLE OF THE ARCTIC. Robert McGhee. 1996. Vancouver: UBC Press. xii + 244 p, illustrated, hard cover. ISBN 0-7748-0553-6. \$Can35.95.

Robert McGhee has established an international reputation not only as a foremost Arctic archaeologist in a strictly academic sense, but also as an author of popular books and articles in this field. *Ancient people of the Arctic* is meant for a popular audience, and it is certainly one of his finest efforts to date. It is an extremely comprehensible text for the non-specialist, avoiding overly technical or jargonistic terms or phrases.

The book focuses specifically upon various Paleoeskimo cultures of the Canadian Arctic and Greenland. The first three chapters provide a historical summary of Paleoeskimo research, and stress the fact that, because there are no Paleoeskimo cultural descendants, recon-

structing their lifeways is, of necessity, 'imagining history' (page 10). Chapters 4 and 5 deal with High Arctic Independence I and low Arctic Pre-Dorset and Saqqaa cultures, respectively, while chapters 6 and 7 deal with climatic change and the transition to Dorset and Independence II cultures. The remaining four chapters deal with Dorset culture, including technology (primarily chapter 8), ritual and symbolism (chapter 9), contact with neighbouring groups (chapter 10), and eventual disappearance, beginning approximately 1000 years ago, following the arrival of Thule Inuit from Alaska (chapter 11).

While meant for a popular audience, the book will also be of interest to northern (and other) archaeologists. Specifically, it represents a current statement on McGhee's view of Paleoeskimo technology, social structure, and ideology; while some may disagree with certain interpretations (for example, Independence I groups spending the winter in a state of semi-hibernation), it nevertheless represents the most readable, and ambitious, non-technical summary of Paleoeskimo cultures to date.

The book is liberally illustrated, but whereas the colour photographs are excellent, almost all of the black-and-white photographs have been poorly reproduced. Otherwise, it is finely produced, with clear, sharp print, very few typographical errors, and a useful index. (James M. Savelle, Department of Anthropology, McGill University, 855 Sherbrooke Street West, Montreal, Quebec H3A 2T7, Canada.)

ECOLOGY OF ARCTIC ENVIRONMENTS. Sarah J. Woodin and Mick Marquiss (Editors). 1997. Oxford: Blackwell Science. vi + 286 p, illustrated, hard cover. ISBN 0-632-04218-4. £35.00.

Environmental change in Arctic ecosystems has been subject to much attention in recent years. Examples of important issues relating to environmental change include: the large amounts of dead organic carbon stored in tundra ecosystems and its potential loss to the atmosphere as CO₂; the potential for sequestration of atmospheric CO₂ caused by an expanding vegetation in the high Arctic; and the significant emissions of the greenhouse gas methane from wet tundra. All are examples of issues associated with potential feedback effects from Arctic environments in a changing climate, which are frequently dealt with in recent literature. *Ecology of Arctic environments*, edited by Sarah Woodin and Mick Marquiss, is no exception. However, this book will also tell us there are many other important current issues within the area of Arctic ecology, and the fact that the book does not concentrate on a single issue but looks at a wide range of them is an important justification for it.

The book is based on contributions from a March 1995 workshop in Aberdeen marking the end of the first phase of the NERC Arctic terrestrial ecosystems research programme. One might argue that, although UK authors form the majority in the book, it is somewhat surprising that only two of the 12 contributions seem to have been associated with this particular NERC programme.

The editors have attempted to organise the chapters in three groups, the first dealing with background information on soil and plant community processes, the second with species interactions with climate, and the third with man's influence on the Arctic environment. This division seems somewhat artificial in places.

A considerable amount of literature has been produced during the last decade on the topics covered by this book. For example, the interactions of terrestrial ecosystems with climate (which is the central issue of at least six of the chapters) is the subject of two major volumes in Springer-Verlag's Ecological Studies series, which appeared during the past year (Reynolds and Tenhunen 1996; Oechel and others 1997), thus adding to the already substantial number of recent books in this field (such as Chapin and others 1992, and Callaghan 1995).

The obvious question that comes to mind when confronted with the broad title of this book is, therefore: is there a niche for yet another book on current issues within the ecology of Arctic environments? To cut a long story short, I believe the answer is yes.

The first reason is because of the broad range of research fields covered by this book. It is, to my knowledge, unique to see fields like traditional cryopedology, soil carbon and nitrogen cycles, invertebrate and mammal ecology, acid deposition, and trophic interactions treated in the same book. Obviously, the cost of including such diverse topics is the lack of detail that can be included about each, yet, it is an appropriate strategy, as this book concentrates on overviews.

Secondly, due to the wide range of topics, the book avoids concentrating on any of the very topical issues of, for example, global warming or acid deposition, as most other recent books have done. Rather, it appears more like a textbook on aspects of Arctic ecology with 'appetisers' in the form of case studies associated with current environmental issues. Some of the chapters are very well written and will support both current research purposes and modern ecological graduate teaching purposes; others less so.

One highlight of the book is the chapter by Robinson and Wookey on microbial carbon and nitrogen cycling. It forms a good background paper for recent research in this field and includes some significant original data. Chapin and others, in a paper dealing with man's impact on the environment, in the form of interaction between global change and Arctic vegetation, make a brief, but nevertheless brave and important, attempt at integrating small-scale experimental ecosystem research with global vegetation models and other large-scale and long-term modelling approaches.

In a book of this nature, it is refreshing to see Bale and others dealing with the ecology of arthropods. Arctic invertebrate ecology has recently been somewhat neglected in the functional contexts of Arctic ecology. At a November 1996 Copenhagen meeting on Arctic soil biology, organised as a review of progress in the 25 years following the 1970s International Biological Programme, the lack of studies in recent years on invertebrates, and in

particular the functionally important enchytraeids, was repeatedly pointed out. Therefore, while waiting for a renewed international effort within Arctic earthworm ecology, it is refreshing to see other parts of the invertebrate zoology represented in a current ecosystem-oriented book like this one.

The book has a small number of typographical errors and in general appears well organised with — in most cases — well-illustrated chapters (a chapter like Longton's on bryophytes and lichens does seem a bit dry). The book is recommended to anyone interested in current issues within Arctic ecology and in particular those teaching graduate courses in general aspects of Arctic ecology. (Torben R. Christensen, Global Systems Group, Department of Ecology, Lund University, Sweden.)

References

- Callaghan, T.V. (editor). 1995. *Global change and Arctic terrestrial ecosystems*. Luxembourg: European Commission (Ecosystems research report 10).
- Chapin, F.S. III, R.C. Jefferies, J.F. Reynolds, G.R. Shaver, and J. Svoboda (editors). 1992. *Arctic ecosystems in a changing climate*. San Diego: Academic Press.
- Reynolds, J.F., and J.D. Tenhunen (editors). 1996. *Landscape function and disturbance in Arctic tundra*. Berlin: Springer-Verlag.
- Oechel, W.C., T. Callaghan, T. Gilmanov, J.I. Holten, B. Maxwell, U. Molau, and B. Sveinbjörnsson (editors). 1997. *Global change and Arctic terrestrial ecosystems*. Berlin: Springer-Verlag.

THIN ICE: INTERNATIONAL ENVIRONMENTAL COOPERATION IN THE ARCTIC. Paul Samson. 1997. Wellington, New Zealand: Pacific Press. 176 p, soft cover. ISBN 0-9583418-1-8. £18.00.

Paul Samson divides this book into three major sections, including an introduction and conclusion, with several annexes. Its overall theme, as the title suggests, is that international policy mechanisms for protecting the environmental quality of the Arctic are in a nascent stage. Samson argues that a new dynamic of regional politics is developing as concern grows over issues of global environmental change. He focuses on how the Arctic is unique, yet linked to the entire planet, and on the interactions between science and politics. The book offers little in the way of new ideas or innovative approaches to help the reader think more critically about Arctic environmental policy. However, it provides a useful survey of the existing literature on a complex and important subject.

The first section introduces the Arctic setting in its physical, biological, and human dimensions. Samson briefly discusses the ecogeography of the region, providing some basic information about its physical and biological traits and describing the actors who are stakeholders with interests to defend or promote in the Arctic. He argues that the post-Cold War era has broken apart the old hierarchy of issues, where national sovereignty and military security were paramount. In a new age of the Arctic, economic development, environmental protection, and the rights of aboriginal peoples are now linked with these