nomena that can occur in the earth's atmosphere. It is mainly a phenomenon of the Arctic and Antarctic regions, the zones of maximum occurrence being roughly between 1300 and 3000 km of the earth's geomagnetic poles (located approximately at Thule in Greenland and at Vostok in Antarctica). No-one who has ever seen its display of dancing green and red light against the night sky can have failed to want to know at least a little more about it. Not surprisingly, it has generated many myths and legends among those who live in the northern lands from which it is frequently visible. According to a tradition of the Russian Lapps, the aurora is blood spilt on the floor of the house of the dead as the spirits of murdered men engage in mighty battles. Whistling at it (or ringing sleigh-bells) is dangerous; it may attract the aurora's attention, bringing it sufficiently close to tear out one's eyes, so it is therefore perhaps useful to recall that, according to a similar North American tradition, an aurora can be scared away by flinging a frozen dog turd at it. Modern myths also abound. Erroneous but purportedly scientific explanations are still sometimes given in terms of sunlight reflected from icebergs, airborne ice crystals, and so on. In fact, the aurora is caused when oxygen atoms very high (typically 100 km) in the earth's atmosphere are stimulated to produce light when they are bombarded with high-speed electrons emitted by the sun. The process is a complicated one, and its study reveals a great deal about the complexities of some of the interactions between the sun and the earth.

Neil Davis' book claims the status of a handbook, which implies, for me, that it should contain, in a readily accessible form, as much information as anyone could reasonably want about the aurora. The author, a distinguished geophysicist from the University of Alaska who has spent most of his scientific career studying it, achieves this end very effectively by dividing the book into two parts. The first part (about a third of the book) provides a very clear description and explanation of auroral phenomena aimed at the lay reader, and suggestions on the best way to observe and photograph them. The first chapter gives an explanation of the aurora suitable for a child, say, 10 years old. This, I think, works brilliantly well, and I strongly suspect that it is based on personal experience. Of the remaining two thirds of the book, helpfully headed 'For those who want to learn more,' the first half builds up a fairly detailed technical explanation of the phenomena, including a discussion of some of the latest research, which could easily serve as an introduction to the subject for a research student. The chapters discussing the operation of the magnetohydrodynamic dynamo driven by the solar wind as it interacts with the earth's magnetosphere are necessarily complicated, and the reader who is not a physics graduate might have to take some of the statements here on trust, but, overall, the discussion is convincing and very well informed. The last third of the book describes much of the folklore relating to auroral phenomena, and treats, at a reasonably non-technical level, unknown aspects of auroral processes, the possible interactions between the aurora and weather, and the unproved phenomenon of auroral sound.

Davis' book is clearly written, and well-illustrated with diagrams (some technical, and some quirky but rather amusing cartoons), black-and-white photographs that are occasionally somewhat lacking in contrast, and 27 superb colour plates. There is a good index, a helpful glossary of technical terms, and a short but up-to-date list of suggestions for further reading. In short, the author has succeeded in producing a concise work that will appeal to readers at many levels, and that contains an impressively large amount of accessible information. My only real criticism relates to the physical quality of the paperback edition, whose covers tend to curl up. (Gareth Rees, Scott Polar Research Institute, Lensfield Road, Cambridge CB2 1ER.)

INUJJUAMUIT FORAGING STRATEGIES: EVOLUTIONARY ECOLOGY OF AN ARCTIC HUNTING ECONOMY. E.A. Smith. 1992. New York, Aldine de Gruyter. 455 p, soft cover. ISBN 3-11-013269-9.

This book is a substantial study of the Inuit hunting economy in Inujjuaq, Quebec. Based on fieldwork during the late 1970s, it analyses in fine and heady detail the material investments and material outcomes of some 600 hunting and gathering — or what the author calls foraging — trips, drawing on data from both direct participation and interviews.

Arguing that 'it is still logically valid and analytically useful to separate the personal experience and reactions of the ethnographer from the data she or he collects during fieldwork' (page 144), Eric Alden Smith has not allowed a post-modernist, humanist, or literary style to get in the way of straight-forward empirical inquiry. Rather, Smith's main theoretical concern is with the application of evolutionary ecology to the study of human foraging strategies. Following a summary of the tenets of evolutionary ecology and a defence of optimal foraging theory, Smith places the Inujjuamiut economy within its natural and human historical settings before launching into a lengthy discussion of contemporary foraging patterns, prey choice, time allocation and patch choice, cooperative foraging, and foraging within the context of a mixed economy.

The underlying framework is neo-Darwinian, with Smith taking the position that 'natural selection is a powerful (but not omnipotent) explanatory framework for understanding ecological and behavioural variation in our species' (page 31). In defending his approach the author discusses and evaluates the major criticisms of a Darwinian approach to optimal foraging and outlines its methodology, structure, and logic. There is much in this book about models of foraging efficiency, time/energy costs, inclusive energy expenditure, quantitative analysis of prey choice, net capture rates, and monthly time allocation and return. Smith suggests that, as 'one of very few extensive quantitative tests of foraging theory with human foragers' (page 406), the book has relevance and significance for research on hunter-gatherer peoples outside of the

circumpolar north, particularly in the formulation of theory for explaining variation in specific socio-economic contexts.

The emphasis on evolutionary ecology and stress on hypotheses in order to make quantitative predictions of hunter-gatherer behaviour is one that many anthropologists have rejected in favour of more humanistic approaches and a concern with the construction of cultural meaning. The author acknowledges this, saying that he does 'not view culture as theoretically or empirically irrelevant to understanding human foraging behaviour in general or the Inujjuamiut case in particular' (pages 405-06), but nonetheless he defends his own position by pointing to the mass of empirical evidence he presents. The use of foraging theory for prediction and explanation, however, does leave out the person of the hunter as a conscious agent interacting with his social and natural environment and the subtle interplay of culture, social structure, ritual and belief, economics, exchange, and prestige. Nevertheless, the value of this work lies in the contribution it makes if allowed to stand alongside studies concerned with the cultural factors, social relations, and modes of subsistence of hunter-gatherers, not just in the Arctic but worldwide, as well as more pragmatic accounts of environmental adaptation and predatory behaviour. (Mark Nuttall, Department of Social Anthropology, University of Edinburgh, George Square, Edinburgh EH8 9LL.)

INTERTIDAL BIVALVES: A GUIDE TO THE COMMON MARINE BIVALVES OF ALASKA. N.D. Foster. 1991. Fairbanks, University of Alaska Press. 152 p, illustrated, hard cover. ISBN 0-912006-49-8. $30 (US). Softcover, ISBN 0-912006-54-4, $20 (US).

Nora Foster, Coordinator of the Aquatic Collection at the University of Alaska Museum, offers in this book the first identification guide to bivalves written specifically about Alaskan species. Bivalves—clams, mussels, cockles, and scallops — abound in the intertidal zone and shallow waters of Alaska's 6000-mile coastline, and at least 184 species are to be found, of which 106 are included in this book.

Although the book is primarily a guide to identification, the author aims to do more than help 'clammers' correctly identify shells commonly found on the Alaskan coast, providing additional information on distribution and habitat, together with a discussion of paralytic shellfish poisoning (PSP). Accurate bivalve identification can be more than a matter of simple curiosity, and those enjoying wild seafood will now be able to do so with an enhanced sense of security that they are not going to wake up the following morning with the dreaded symptoms of PSP, or — worse still — not wake up at all!

Following a brief introduction to bivalves in general and Alaskan bivalves in particular, a system of identification keys is described and used to indicate likely bivalve family. Entries for the 106 common Alaskan species are grouped under the 32 families. Each species is illustrated with a line drawing, and a short description is provided, starting with size, characteristics, distribution, and habitat.

This is a very thorough guide of its kind, but it invites certain questions. From a polar point of view, what would have been even more useful would have been a comprehensive guide to Arctic bivalves. This book is restricted to Alaska and is not comprehensive even for Alaskan species. A perhaps fairer criticism, since Foster's book is clearly intended primarily for the Alaskan market, is that the publishers have chosen too large a format for a book that should fit conveniently into the pocket of any Alaskan beachcomber. These criticisms aside, the author has performed a useful service in compiling so thorough a guide. (William Mills, Scott Polar Research Institute, University of Cambridge, Lensfield Road, Cambridge CB2 1ER.)

BRIEF REVIEWS

MEMOIRS AND MUSINGS OF AN OCTOGENARIAN BIOLOGIST. Colin Bertram. 1992. Hanley Swan, Self Publishing Association. 248 p, hard cover. £14.95.

The Self Publishing Association is doing a good job for recent polar history. Not long ago we reviewed Andrew Croft's autobiography *A talent for adventure*; here now are the memoirs of Colin Bertram, who before World War II took part in two Arctic summer expeditions and the British Graham Land Expedition 1934–37. After the war he was for seven years director of the Scott Polar Research Institute. He has also travelled widely and worked intensively as a biologist on other continents. Like his earlier *Antarctica, Cambridge, conservation and population* (1987), these writings distil some of the wisdom he has accumulated along the way. Idiosyncratic, in style often reminiscent of *Arabia Deserta*, never dull.

AN ANNOTATED BIBLIOGRAPHY OF ANTARCTIC INVERTEBRATES (TERRESTRIAL AND FRESHWATER). William Block. 1992. Cambridge, British Antarctic Survey. 263 p, illustrated, soft cover. ISBN 0 85665 148 6. £25.00.

As Richard Laws's foreword reminds us, despite the popularity of seals, whales, and penguins, '... some of the most numerous Antarctic animals are the small and inconspicuous terrestrial and freshwater invertebrates, which are significant ... both for their contribution to our wider understanding of basic ecological and physiological processes and ... for what they may be able to tell us about environmental change.' Over 1430 references cite literature from the *Cocquille* expedition of 1822 to 1990, covering continental and maritime Antarctica, South Georgia and the South Sandwich Islands, Bouvetøya, Marion and Prince Edward islands, Iles Crozet and Kerguelen, and Heard and Macquarie islands. Some ectoparasites are included; endoparasites are not. Each entry has a generous annotation, and is cross-referenced to taxonomic, species, and author indexes. In total, a most useful compilation that will never lose value. Obtainable from British Antarctic Survey, NERC, High Cross, Madingley Road, Cambridge CB3 0ET UK.