

an oceanographic research ship, so wisely Savours again keeps the accounts of the voyages informative but short, balancing them with interesting information on the ship's refit and the origin of oceanographic research expeditions.

The last part of the book, covering by far the longest stage of the ship's career — from 1932 to the present — is the shortest, because on the whole nothing happened. For most of the time *Discovery* was moored in the Thames as a training ship and museum, and, frankly, looking a little sorry for herself. By the 1970s, when the owners, the Ministry of Defence, began to consider disposing of her, her future looked bleak. But in 1979 the Maritime Trust purchased her, commenced the long process of complete restoration, worked hard to secure her financially, and in 1986 handed her over to Dundee to begin the happy ending.

Savours has done her work as biographer supremely well. Her task was to tell the entire story of *Discovery's* life, and, by giving due emphasis to the exciting and adventurous years, while not shirking the adequate coverage of the long, dull years, she has produced a very finely proportioned book that is worthy of the ship. (Clive Holland, Scott Polar Research Institute, University of Cambridge, Lensfield Road, Cambridge CB2 1ER.)

GLACIERS. Michael Hambrey and Jürg Alean 1992. Cambridge: Cambridge University Press. 208 p, illustrated with colour photographs, hard cover. ISBN 0-521-41915-8. £19.95.

Glaciers are among the most beautiful and fascinating elements of nature,' write Michael Hambrey and Jürg Alean in their preface to *Glaciers*. This book convincingly justifies the authors' convictions and should appeal to outdoor enthusiasts happy with the depth such subjects attract when investigated in television documentaries. One could almost imagine the book was planned to accompany a television series! *Glaciers* contains no equations, few line drawings, and many glorious, full-page, colour pictures. The Lake District, Wales, and the Scottish Highlands provide illustrations familiar to UK readers, whilst North Americans can find Mount St Helens, Alaskan glaciers, and Central Park, New York. Photographs of the European Alps tempt the potential tourist with a choice of destinations besides promoting a fuller awareness of mountain terrain with its hazards and slowly evolving landscapes.

Looking at the photographs, we are no wiser in knowing how glaciologists do their work in the field; glaciologists apparently exist to provide a scale to their environment — a task shared also by ice axes and field camps. The only working glaciologist is beneath a sun shade, with theodolite, monitoring the flow of a surging glacier, whilst in their work environment they are found boating, climbing from a crevasse, or watching a helicopter land. More is learned of the lifestyle and survival strategies of the wildlife of the glaciated regions than of the scientists themselves. Unexpected then is an account of *The worst journey in the world*, the visit to the emperor penguin rookery at Cape Crozier

during Robert Falcon Scott's ill-fated expedition to the South Pole.

The index reads like a dry dictionary, with entries like banded ogive, ice worm, kettle hole, and sérac (musk ox and yeti appear, too!), but the actual text reveals the enthusiasm glaciologists have of gleaning the utmost from their chosen environment. We learn surprising facts. We learn that 30,000 died when an eruption beneath the glacier-clad Nevado del Ruiz in the Columbian Andes led to a melt water-induced mud and ash flow burying a nearby town; we learn that the Antarctic ice sheet was larger in milder conditions of 40 million years ago when beech woodland was found in favoured parts of the continent; we learn that up to 15 m of ice melts from the lower region of the Grosse Aletschgletscher every summer, and this helps generate the hydroelectric power used by the totally electrified Swiss railway system. We learn that both lemmings and crabeater seals prepare for death by ascending glaciers and dying of cold, with crabeater seal carcasses being found 70 km inland.

Hambrey and Alean close the final chapter, 'Ice, climate and civilization,' by noting that although the Earth's ecosystem appears to be heading towards irreversible damage through mankind's recent disruption of climate, it is possible that glaciers will have the last word as our interglacial era comes to an end. 'Glaciers may extend equatorwards, bulldozing cities, reducing growing seasons everywhere, destroying farmland, and making our current civilization impossible.' An excellent antidote to worries about global warming and a fitting end to a well-presented book. I spotted only two misprints, both in place names: Dome Circle, for Dome Circe (or Dome Charlie or Dome Concord or Dome C), a summit in the east Antarctic ice sheet; and Quelccava ice cap for Quelccaya ice cap in Peru. This popular and enjoyable account of *Glaciers* is a credit to the authors and to the Cambridge University Press. (Julian Paren, British Antarctic Survey, High Cross, Madingley Road, Cambridge CB3 0ET.)

MEN AND WHALES. Richard Ellis. 1992. London: Robert Hale. xv + 542 p, illustrated, hard cover. ISBN 0-7091-4733-9.

Since ancient times the basis of the man/whale relationship has been predation, the killing of whales for oil, baleen, and other substances valued by society to satisfy needs that have been both practical (illuminating dwellings) and frivolous (shaping foundation garments). Ellis' title reminds us of the long-standing connection between humans and whales — specifically *men* and whales, since whaling has always been men's work.

There are other dimensions to the man/whale relationship. Humans have always been curious about these giants of the seas, and Ellis touches upon the changing artistic rendition of whales, the educational role of captive whales exhibited in aquariums, the recent craze of whale-watching, and the evolving human perception of whales since early times, from feared monsters to respected antagonists

to 'floating oil wells' to noble beasts worthy of our admiration and protection.

Author-artist Richard Ellis is perhaps best known for his haunting portraits of great whales swimming silently beneath the surface of the sea, as if viewed by an underwater artist or another animal of the deep. Black-and-white versions of a dozen of his paintings, representing almost as many species, are included among the illustrations of this book. These serene, mystical compositions depict whales in a peaceful submarine world, unbothered by animal and human predators — solitary whales, whale couples, family groups of whales. In stark contrast, his text relates the bloody history of whaling, with plenty of illustrations depicting the unpleasant realism of killing and butchering these immense marine mammals.

On a personal basis, Ellis does not see whales as targets for harpoons, but rather as impressive and beautiful animals that excite our imagination. His invective makes his viewpoint abundantly clear. Whaling has been 'murder' (page xi), a 'millennial war on whales' (page xi), a 'senseless slaughter' (page xii) in which whales were 'exhausted, stabbed and blown up, their babies slaughtered' (page xii), and a 'story of unrelieved greed and insensitivity' (page x). Whalers were engaged in 'a race to eliminate the whales' (page xi), and they sailed the oceans 'so that they could decimate the world's sperm whale populations' (page x). A whaling company was a 'killer navy' (page 428).

One may justifiably ask whether whalers really believed that they were involved in a race to eliminate all whales, whether the killing of whales was 'senseless' when cities of the pre-petroleum era were lighted with their oil, and whether whaling was nothing more than a story of 'greed and insensitivity.' These half-truths, employing the familiar metaphors of war and massacre, overlook the attitudes and economic realities of earlier periods of our history.

Is it not curious that someone who uses such emotive language to describe the whaling industry, and who obviously feels so passionately about the welfare of whales, has written a book that is essentially about the history of whaling? Perhaps it is, but as much as one may abhor the killing of whales, one can admire the courage of the men who sailed the world's oceans, rowed open boats half as long as the whales they hunted, and wielded harpoons and lances by hand from a few feet away. There is less to admire in the factory-ship whaling of our century.

There have been many books about whaling. Ellis' book, with its broad approach, covers much of the same ground as *The whales*, edited by Leonard Harrison Matthews (1968). Nonetheless, *Men and whales* is a very important addition to the whaling literature, for several reasons. First, it brings the story of whaling up to date, encompassing several interesting developments since Matthews' book, among them the anti-whaling movement, the moratorium of 1982, and the Alaskan Eskimo bowhead whaling controversy. Second, the book goes much further towards providing a truly global coverage, with brief summaries of whaling by countries whose

activities are usually overlooked — for example, Japan, China, South Africa, Australia, New Zealand, and Canada. Third, it describes aboriginal subsistence whaling in Indonesia, Tonga, the Caribbean, the Azores, Greenland, and Alaska. Fourth, it outlines the twentieth-century regulation of whaling, and assesses the effectiveness of the International Whaling Commission. These are good reasons to read the book.

In a book of this scope there are bound to be some minor errors. On his third voyage, Martin Frobisher did not lead his fleet from Hudson Strait 'back to England' (page 67); he continued first to Frobisher Bay and mined ore. Red Bay, Labrador, was not really a Basque 'colony' (page 48), but only a summer whaling base, albeit a very large and important one. It does not seem feasible that Basque whalers in Labrador killed bowhead whales in northern regions and then 'brought them back for processing' (page 47). The weight of an 'average bowhead' (page 54) is surely less than 60 tons. When yields declined, the usual response was not to 'escalate whaling effort' (page xi), but to withdraw ships from whaling. The grenade harpoon cannon invented by Svend Føyn was not responsible for 'virtually every whale killed by the hand of man' since 1868 (page xi), because other weapons (hand-thrown harpoons, non-exploding gun harpoons, darting guns, hand lances, and bomb lances) were used on Arctic whaling grounds until the termination of the commercial bowhead fishery about 1915. Bowhead whales were not eliminated from the eastern Arctic 'a century earlier' than Roys' whaling voyage of about 1855 (page 256); in fact, the Greenland, Davis Strait, and Hudson Bay fisheries continued into the twentieth century. A total kill of 62 whales from 1517 to 1662 does not make an average of about two and a half whales per year (page 45), but less than half a whale per year. The 'polar ice cap' (by which Ellis means the ice cover of the polar basin) does not change into 'pack and fast ice' (page 206); it already consists of pack ice, and does not become landfast ice.

Those who wish to follow up specific points or topics are likely to be frustrated by the absence of reference citations for quotations, statistics, and opinions.

What is the outlook for whales and whaling? Ellis does not pretend that we have certainly seen the end of commercial whaling. His discussion of pirate whaling by Aristotle Onassis, and of the transparent subterfuge of killing whales under the pretence of 'research,' reminds us that not all individuals, companies, or nations conform to accepted norms of ethical behaviour or even to international law. The future may bring more circumvention of international regulations and increased pressure to resume intensive commercial whaling.

Men and whales contains an index, a glossary of whaling terms, an excellent bibliography of more than 700 items, including many scientific publications, and almost 270 diverse and fascinating black-and-white illustrations. This handsome and informative book will be of great value to anyone interested in whales, whaling, or saving whales from extinction. (W. Gillies Ross, 2060 Rodgers Road, R.R. #1, North Hatley, Quebec J0B 2C0, Canada.)