

Reviews

SEALS AND SEA LIONS OF THE WORLD. W. Nigel Bonner. 1994. London: Blandford Press. 224 p, illustrated, hard cover. ISBN 0-7137-2377-7. £18.99.

The 1950s and 1960s saw the emergence of some of the world's finest marine mammalogists, who pioneered research into seals, sea lions, and fur seals in the most remote regions on Earth. Among these was Nigel Bonner, who spent years in the Antarctic studying southern elephant seals and Antarctic fur seals, and who later became head of the Life Sciences Division of the British Antarctic Survey, where he wrote several important books on seals and sealing. *Seals and sea lions of the world* is his last work on marine mammals, published posthumously in October 1994.

Seals and sea lions of the world is one of a series of 17 books by Blandford Press, including animals as diverse as spiders, snakes, primates, bees, and crocodiles and alligators. The series is informative, but accessible to the general public, and it is intended to be a comprehensive guide to the evolutionary history, ecology, biology, and behaviour of particular groups of organisms. It is not easy to convey complex biological information to the lay reader and still keep the text interesting, but Bonner succeeds admirably. In 1980 Bonner wrote *Whales* in the same series, and both books present data on physiology and behavioural ecology in conjunction with the interactions between marine mammals and humans, to provide an intriguing glimpse into the as-yet poorly understood world of these elusive animals.

Seals and sea lions of the world begins with a general overview of the differences between otariids, phocids, and odobenids, with a brief description of the unique way in which pinnipeds have adapted to their marine environment. The section on evolution is perhaps a little short, but this is a highly contentious area in which the theories of molecular biologists and fossil experts seldom coincide. It is also a field that is expanding rapidly as more advanced methods of analysis are becoming available, and it is possible Bonner considered that any in-depth examination of the problem might well become outdated very quickly.

The following five chapters are dedicated to specific accounts of the 33 species of fur seals, sea lions, walrus, northern phocids, and southern phocids. Information includes geographical distribution, appearance, and body size. These chapters are superbly illustrated with colour photographs, mostly taken by Bonner himself, and with line drawings, also by the author. Particularly impressive are the photographs of the southern fur seals, which include one of the rare Juan Fernandez fur seal, and one of a white Antarctic fur seal.

Chapter 8 provides an overview of reproductive biology, social organisation, and lifespan. This is not in the

depth provided in Bonner's *The natural history of seals* (1989), but it provides the basic information in a concise, lively manner that is a pleasure to read.

The remaining three chapters deal with the complex problems of seals and their relationship with humans, both historically and in a modern context. Chapter 9 reviews seal-hunting, ranging from archaeological evidence that it played a role in the lives of Palaeolithic communities in northern Europe, through the strong dependency of many Inuit cultures on seals, and to the commercial sealing of the last four centuries in western Europe and North America. Bonner was well-placed to provide his vivid descriptions of 'elephant oiling' — the boiling of elephant-seal blubber for oil — since he spent a number of years living on South Georgia overseeing the management strategies developed to halt the seal decline and to manage the sealing industry (Laws 1995). His descriptions of the process of flensing are clearly from personal observation, as are his observations about the appalling weather conditions the sealers endured, and the exposure to seal attacks.

'Seals and fisheries' — the title of Chapter 10 — tackles far more immediate issues. The European Economic Community's ban against the import of harp and hooded seal products in 1983 has effectively destroyed the market for seal furs, and although sealing is still carried out in some areas in the north (notably in the Denmark Strait and the White Sea), it is not a large industry. The relationship of seals and fisheries, however, is a hotly debated issue. Bonner's caption to the photograph on page 193 captures the essence of the matter: 'The sight of a seal chewing a fish is likely to arouse strong feelings in fishermen.' After describing the type of damage by seals caused to fishing gear, caught fish, and the role of seals as parasite hosts, Bonner assesses the emotive issue of seal control. He lists ways in which fishermen have attempted to reduce seal populations, and concludes with a description of the experiment in which tape recordings of killer whales were used in an attempt to scare seals away, indicating that seals seemed able to differentiate between recordings and the real thing. He notes with characteristic wry humour: '...seals may not only become habituated to the device, they may actually learn to recognize it as a signal that potential food is in the neighbourhood. From being a warning device, the signal becomes a dinner bell' (page 200).

Chapter 11 continues to confront contentious issues, and examines the effect of human activities — especially fishing — on seals. Recent research has focused on the effects of pollution on seal populations, and Bonner provides an overview of anthropogenic contamination from mercury, and organochlorides, such as DDT, DDE, TDE, and PCBs. The relationship between high concentrations

of DDT and PCBs and an epidemic of spontaneous abortions in California sea lions is examined, along with the association of toxin accumulation and incidence of stenosis of the uterus in ringed seals. Perhaps better known was the outbreak of phocine distemper virus in harbour and grey seals in the 1980s. Bonner examines the supposition that it was pollution-induced, and indicates that evidence is insufficient to allow reliable conclusions to be drawn.

The book ends with sections entitled 'A new look at seals' and 'The future of pinnipeds,' in which Bonner finally offers his personal opinions on the sealing issue. Discussing the Canadian harp seal cull, he notes: '...the argument was not really about suffering. It was about the ethics of killing seals at all. The fact that seal products — fur and leather — were for a luxury trade made it even less acceptable. Fading film stars visited the ice and burnt their fur coats, rejecting the blood-stained luxuries' (page 216). His view of environmental pressure groups is, like many marine biologists, ambivalent. On the one hand, he is scathing of groups like Greenpeace and the International Fund for Animal Welfare (IFAW), which used emotive photography to draw attention to the seal hunt with scant attention to biological facts: 'A dispassionate observer might suggest that the suffering of a seal pup on the ice, whose life was suddenly ended with a blow to the head from a club or a hakapik, was substantially less than that of a sheep or a steer transported hundreds of miles from its home to be held in lairage at an abattoir before being taken into a killing chamber and shot or electrically stunned' (page 216). He also writes, 'Conservation interests would better have looked at the general exploitation of the North Atlantic, rather than the seal hunt. But there is inevitably less concern for fish than for cuddly seal pups' (page 216). Yet, on the other hand, Bonner acknowledges that environmental pressure groups have 'brought the general issue of wildlife protection to the attention of a wide general public and this may be of benefit to species and ecosystems far more endangered than the seals of the north-west Atlantic ever were' (page 216).

Seals and sea lions of the world is a splendid addition to the expanding library of books on these remarkable mammals. It is not an academic book, like the recent *Antarctic seals: research methods and techniques*, edited by R.M. Laws, and contains no new insights into the rapidly developing world of marine mammal science like *Elephant seals: population ecology, behavior, and physiology*, edited by B.J. Le Boeuf and Laws. It is a book intended for the interested lay reader, and, in the words of Bonner himself, while noting the tenuous position held by many animals in a world dominated by an expanding population of humans, 'If this book helps to sustain and develop an interest in the seals, sea lions and walruses of the world, it will have been worthwhile' (page 217). (Elizabeth Cruwys, Department of Environmental Sciences, University of East Anglia, Norwich NR4 7TJ.)

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ARCTIC ARTIST: THE JOURNALS AND PAINTINGS OF GEORGE BACK, MIDSHIPMAN WITH FRANKLIN, 1819–1822. C. Stuart Houston (Editor). 1994. Montreal and Kingston: McGill–Queen's University Press. xxviii + 403 p, illustrated, hard cover. ISBN 0-7735-1181-4. \$Can45.00.

With the publication of this fine book, Stuart Houston concludes with an appropriately elegant flourish one of the most impressive Arctic historical projects of recent decades. The task that Houston set himself was to edit the journals, notes, paintings, and related materials of the three naval officers serving under Lieutenant John Franklin on his renowned Arctic Land Expedition of 1819–1822: midshipmen Robert Hood and George Back, and naval surgeon and naturalist John Richardson. Franklin's own narrative of that extraordinary expedition was published as early as 1823, but his ponderous, uninspired, and inordinately long-winded prose seldom did justice to an expedition that was, by its very nature, of compelling interest from the outset, and that became quite spellbinding as it ran its course. It set out with high hopes of achieving major distinction by locating and exploring the north coast of North America, but a long series of setbacks evolved cumulatively into crippling disorganization, and ultimately into disaster and tragedy. By publishing the records of the three other leading participants — all men of rare individual talent — Houston has given the reader the chance to feel closer to the action, and has laid before his audience a wide range of new insights into one of the most remarkable exploring expeditions in polar history.

There is no doubting the historical importance of what Houston has achieved, for this expedition was in many ways unique, and for decades afterwards it played a prominent role in shaping both official and public perceptions of the Arctic throughout Britain, Europe, and North America. If, for the remainder of the nineteenth century, the Arctic was seen as being considerably more hostile than it really was, then Franklin's expedition, and the prolonged agony that attended the death of 11 of his 19 companions, was one of the main reasons. The expedition was also important in effectively launching the Arctic careers of three of the most prominent and influential polar explorers of that century: Franklin, Richardson, and Back (sadly, Hood, as fine a budding talent as any of them, met a violent death at the hands of one of the expedition's voyagers in 1821).