

by Curtsinger of marine mammals around the world. The large format of the book enhances the fine reproduction of these photographs, which comprise half of the book. Wild cetaceans are among the most difficult of photographic subjects, and this difficulty tells, for the pictures of cetaceans in this book cannot compare with those of seals — either in composition or clarity. In part because of these difficulties, this collection of photographs is eloquent evidence of the persistent and devoted skill of Curtsinger as a photographer.

The text accompanying these photos exhibits a curious ambiguity of purpose. Not only does the author, Kenneth Brower, describe Curtsinger's adventures with cetaceans, but he also devotes equal attention to details of Curtsinger's personal life. The book does contain many statements about the biology and natural history of whales; these are occasionally in error and are tossed off carelessly as if the facts of whale life are peripheral to the

main theme of the book. Brower is obviously fascinated with the issue of what kind of person would devote his life to living on the remote edges of the Earth, constantly struggling for fleeting encounters with marine mammals. Yet Brower never directly acknowledges this hidden agenda of the book and leaves me wondering about his purpose. Does he simply want to extol the virtues of whales as seen through Curtsinger's eyes and camera, or does he want to say something more general about the importance of wildness and mystery in all of our own lives? In spite of this ambiguity, *Wake of the Whale* should interest anyone who wants a beautiful collection of marine mammal photographs accompanied by a description of what it is like to live near these animals.

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World fisheries

Food from the Sea. By James Nicolson. Pp.205. (Cassell: London, 1979.) £6.50.

THIS book, which is written primarily for the layman and the fisherman, begins with a brief account of aspects of the marine environment which are of importance to fisheries and goes on to consider some of the notable features of fish populations such as reproduction, migration and short- and long-term fluctuations in stocks. This is followed by a chapter which describes some of the main food organisms harvested from the world's oceans. Obviously it is impossible in a book of this size to deal with every important species but in many respects I felt that there was a certain lack of balance in this chapter. For example, the five species of Pacific salmon fished by five nations are only mentioned in passing, whereas the three dogfish of European waters, only one of which has any commercial value, have two paragraphs devoted to them.

In chapters 3 to 7 the author traces the development of the world's fisheries from the earliest times, through the astonishing technological advances of the last hundred years, to the present day. These chapters are well researched and the historical account, laced with many interesting anecdotes, clearly shows that "the history of fishing is a story of human ingenuity and remarkable technological achievement — marred by carelessness and a wanton misuse of some of the richest sources of food in the world".

He then considers the question of overfishing and describes how the development of fleets of ocean-going freezer trawlers in the 1950s and 1960s had a devastating effect on many of the worlds already over-

exploited fisheries. In many cases it was the industrial fisheries which suffered most and as soon as one fishery became uneconomic the fleets simply moved on to uncontrolled exploitation of yet another resource. He then deals with the systematic destruction of the north-eastern Atlantic herring fisheries and discussed the conflict between the traditional fishery on the adult stock with the fishery on the young fish on their nursery grounds for reduction to meal and oil. He then traces the history of the scientific basis for fisheries management and the setting up of the various international organisations with responsibility for conserving the stocks. He is critical of the scientists, the International Council for the Exploration of the Seas and the North-

Sea guides

Marine Life, by David and Jennifer George (Harrap: London; £16) is an extremely well produced book describing marine invertebrates. The centre section of the book consists of 1,300 colour photographs of high quality, while the two end sections describe the various invertebrate phyla down to family and a "representative species". There are a number of line diagrams in these sections of the book. Technical terms are reduced to a minimum and a short glossary is provided. Nevertheless, readers without zoological knowledge might find the book a little daunting. It is not unlike some of the modern gardening books, with a centre section of colour plates and a fairly technical description at either end.

Although the publishers claim it is an encyclopaedia, it could not be used for identification of different groups down to species. Nor could it be considered as "an

Eastern Atlantic Fisheries Commission for their failure to conserve the herring stocks.

The author is undoubtedly aware of all the problems involved in the management of a stock but it is unfortunate that some space could not have been devoted to considering the differences between growth overfishing and recruitment overfishing. The latter is an important factor in herring and indeed many other pelagic species which grow little in their adult lives, and the failure of the scientists to understand the relationship between recruitment and stock size was a key factor in the collapse of the herring fisheries.

Looking to the future the author considers the role of fish farming as a means of increasing food production from the sea. Throughout the book one gets the impression that, while not denying that fish meal production has a role to play in utilising the resources of the seas, the author would prefer to see a greater emphasis on the use of fish for direct human consumption. It is therefore surprising that he is not critical of fish farming as practised by most of the developed nations in which fish meal is used to produce luxury protein in the form of species such as salmon and trout.

I have no hesitation in recommending this book to anyone with an interest in the fishing industry, especially to anyone who wishes to understand the background to the present problems facing the industry and the controversy involved in the formulation of a common fisheries policy within the European Economic Community.

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indispensable work of reference." It is true that scuba diving has enabled biologists and laymen to see animals in their natural state but detailed identification is still done from fixed specimens even if they are "distorted and colourless on the laboratory shelf." The authors seem to take a rather simplistic view of identification, although David George is on the staff of the Natural History Museum. I agree with the Foreword that it is a fine book but it is not a field guide in the sense that it could be put in one's pocket. It is excellent value for £16 and worth a place on the library shelf of any institution, or anybody interested in marine invertebrate zoology, but it should fulfil the role of a colourful adjunct to a systematics course rather than a substitute for the rigours of formal systematics.

Kenneth Gosner's *Field Guide to the Atlantic Seashore* (Houghton Mifflin: Boston; \$12.95) would just fit into a capacious pocket. It lists 907 littoral invertebrates and 140 seaweeds from the NW Atlantic from the Bay of Fundy to