Penguins

The Biology of Penguins. (Biology and Environment.) Edited by Bernard Stonehouse. Pp. ix+555. (Macmillan: London and Basingstoke, March 1975.) £18.50.

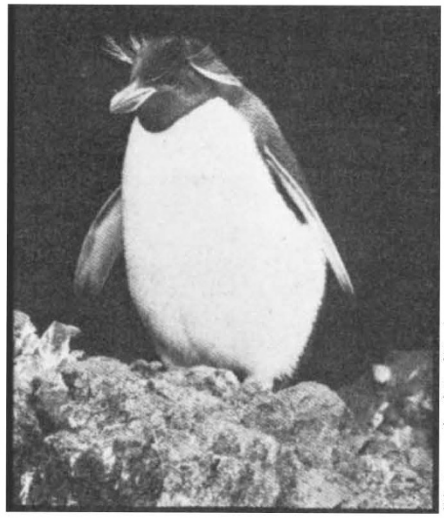
THIS book is the first in a new Macmillan series—Biology and Environment. It is a contributive work, thoughtfully edited by Dr Bernard Stonehouse, one of the world's leading penguin biologists. Dr Stonehouse has assembled twenty papers, a mixture of reviews and the results of new research, which he has grouped into six sections and which together form a very comprehensive reference work on penguin biology. Extensive bibliographies at the end of each chapter enhance the book's academic value.

Dr Stonehouse's introduction includes a concise account of the distribution and major points of biological interest for each of the 18 penguin species. At first, this seems a little unnecessary in a book so obviously specialised, but for the non-penguin functional anatomists, physiologists, ethologists, ecologists (and others) who will also find the work of interest, this check list provides both useful background information and a ready appreciation of the size and diversity of the family. Professor G. G. Simpson begins the section on evolution and taxonomy with an updated review of fossil penguins, the first to be published since his earlier catalogue in 1946. A more recent approach to the elucidation of penguin phylogeny is reviewed in a chapter on the results of protein electrophoresis.

The section on anatomy and physiology contains five papers, ranging from a detailed study of skull anatomy, particularly in relation to feeding, to a valuable review of diving behaviour and physiology. A report on thermoregulation in the little-studied Galapagos penguin is particularly interesting. The lion's share of the book goes to the section containing three chapters on temperate and subpolar penguins amongst which the crested penguins, which have received little attention in the past, are the subject of Dr J. Warham's long contribution, the first published comprehensive account of the genus. Six chapers make up the section on breeding and population studies of Antarctic penguins and although, not surprisingly, the much-studied Adélie penguin is well represented, it is refreshing to find that information on other species has been included. Notable amongst these is an account, prepared by members of the British Antartic Survey, of the little-known Chinstrap penguin. A useful review of penguin predators, both at sea and on land, joins a specialised study of Emperor penguins to form a short section on predation and mortality. Adélie penguins figure again in a final section on communication and display, consisting of two chapters which provide interesting examples of different approaches to the problem of describing and interpreting behaviour.

Most of the criticisms which can be levelled at the book are explicitly felt by the editor himself. He fairly points out the absence of papers on long term population studies, parasitology and conservation, and particularly of studies at sea where, for penguins as for most seabirds, relatively little is known. Too often, contributive works of this kind are merely collections of loosely connected, highly esoteric papers but this is not the case here. Dr Stonehouse has skilfully compiled a volume which, in spite of its omissions, is sufficiently comprehensive to wear its title honestly. The book is sure to find a ready place in many libraries.

David M. Burn



Photograph: John Warham

Endangered species

Breeding Endangered Species in Captivity. Edited by R. D. Martin. Pp. xxv+420. (Academic: London and New York, May 1975.) £12.80; $33.75.

THIS collection of papers marks the beginning of a very much greater realisation by responsible zoos of the role that they should be playing in preventing the total loss of some fascinating and important animal species which are at risk for reasons usually related to man's rapid expansion.

The editor is to be congratulated on bringing together in a readable form, papers which vary in the quality of presentation and of content. Nearly all shed light on the task of maintaining viable breeding groups in captive conditions, especially those that are rare in the wild. A number of authors have drawn attention to the broader issues involved in the development of breeding programmes, and some rightly demand a more pragmatic approach by those controlling animal collections to ensure the maintenance of viable breeding groups on an inter-zoo co-operation basis, thus avoiding the dangers of inbreeding and gene-pool loss. Attention is also drawn to the need to maintain rare animals in a number of collections rather than concentrating them in one area where they may so easily be destroyed by disease or other misfortune. Views are expressed as to whether the genetic changes occuring during, and possibly as a result of, captive breeding will fit animals for a return to a natural environment, especially if re-introduction is attempted after a number of generations in captivity.

Pilot projects to ascertain the problems of re-introduction are suggested, and these could as easily involve common species. In this context, it should be remembered that today's common breed could so easily be tomorrow's rarity, and that every item of information that might help to maintain these in a productive captive state should be available to those involved in this.

The Fauna Preservation Society, one of the conference sponsors, has been for many years responsible for the conservation of animals in their natural state, and has been perhaps identified with conservationists, many of whom are still unable to see the value of breeding endangered species in Zoological Gardens. The other sponsor, the Jersey Wildlife Preservation Trust, on the other hand has been at the forefront of those zoos who specialised in breeding endangered species; but in this field also there are regrettably still many zoos who do not believe their function is other than to entertain. It is the directors of these zoos that Gerald Durrell would like to see on the endangered species list.

The publication is unfortunately rather highly priced; unfortunate because it should be an essential part of every zoo director's library, and not just those Directors who are already aware of what has to be done. In a wider sense it should be on the bookshelves of all those who are deeply concerned with the future of existing wildlife and wild places.

This collection of papers may be the first of a succession of books on the important challenge of ensuring for moral and other reasons, species of animal life for the aesthetic and other pleasures of future generations. Most first efforts have their imperfections, and this is no exception, but it does form a foundation on which to expand.

R. J. Wheater