

Boras Zoo in Sweden was a pioneer in the 'zoo park' field and *Berggren's Beasts* describes its origins and development. Sigvard Berggren keeps his animals as far as possible in large open enclosures. The largest is the African savanna exhibit, where elephants, white rhinos, reticulated giraffes, white-tailed gnus, bushbuck, crowned cranes, ground hornbills, ostriches and guinea fowl roam at will in the daytime. He describes how the population was built up by a process of trial and error.

The book is a personal history, and the author concludes with a chapter devoted to his philosophy on the relative places of man and animals in the world, and on the form that zoos will have to take in years to come.

JOE LUCAS

The Hedgehog, by Maurice Burton. André Deutsch, 30s.

'It seems that one can expect almost anything of a hedgehog!' This remark on page 34 almost summarises the contents of this new and welcome addition to the series of Survival Books. Dr. Burton has augmented his own observations and study of this fascinating mammal with information received from his many correspondents. To a detailed analysis of the hedgehog's general behaviour, senses, feeding, breeding and hibernation, are added accounts, with photographs, of the puzzling habit of self-anointing, which Dr. Burton compares with anting in birds and the reaction of cats to catmint. The evidence presented on the long-standing belief that hedgehogs impale fruit on their spines seems to indicate that it is not impossible under certain conditions associated with self-anointing. The equally old controversy about hedgehogs robbing resting cows of their milk seems similarly to be not so unlikely as might at first be thought.

It was time that the various pieces of lore that have surrounded discussion of this nocturnal and secretive mammal should be critically examined and either accepted or rejected, and in doing this Dr. Burton has provided us with a pleasantly written and interesting book.

JOHN CLEGG

Natural History of the Lake District, edited by G. A. K. Hervey and J. A. G. Barnes. Warne, £3.

The Lake District is the only truly mountainous area in England and each year attracts thousands of visitors who enjoy walking, climbing, boating and other open-air pursuits. It is for such people that this book has been written.

The idea originated with the late Canon Hervey who acted as editor. The book reflects his tremendous enthusiasm and energy and his interest in conservation, and it is to his genial persuasion that we owe the enlistment of the team of specialist contributors. Their job was to draw attention to special features of the local natural history, to tell the reader about the plants and animals he is most likely to see, and to present a story of changing nature so that conservation work may be more widely understood. Most have succeeded admirably and the accounts of life in the water, of birds and of deer are especially noteworthy for the intimate local knowledge presented.

With such a wealth of available material to compress into a book of reasonable length some omissions are inevitable, but it is strange that there is so little reference to classic work on Lake District ecology. Thus, even though the Keskadale and Rigg Beck oakwoods are mentioned in the chapter on plants, it is not until the chapter on birds (page 156) that it is made clear that it is sessile (not pedunculate) oakwood which is a

special feature of the area. Similarly there is no attempt to use Pearsall's work on Esthwaite Water when describing the plants, though it is mentioned in the account of life in the water. Surely something could have been said about the adder which is always of interest to visitors, and the chapter on molluscs is quite inadequate. The book is beautifully illustrated with eight colour and 24 black-and-white plates, although the pictures of plants are below the standard expected today, and there is no scale to indicate size on any of the plates. But, in spite of minor criticisms, it fills a real need and should be bought by everyone interested in the natural history of the Lake District and the conservation of its wildlife.

J. E. LOUSLEY

Flowers of Europe, by Oleg Polunin. OUP, 84s.

To have the commoner flowers of Europe both described and illustrated in a single book will obviously make the amateur botanist's travels in Europe far more rewarding in future. Oleg Polunin's book, very well produced, and with a profusion of colour photographs, describes 1900 species in detail, and a further 700 by short notes.

The photographs are, for the most part, of very high quality, but, using the book in the field, mainly in Italy, I found them difficult to use as identification guides; paintings and drawings would have been of greater value. On the other hand the text is well-written and clear, and by using the keys for identification and the pictures for corroboration, the user should have little difficulty. Since the area covered is so large, and the book is intended to be a field guide, the author has had to be extremely selective in his choice of species (which is very good); even so the book is bulky for the purpose. On the other hand, since so many species are

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