

**Animal Populations in Relation to their Food Resources**, edited by Adam Watson. Blackwells, £5.00.

This compilation consists of 22 papers plus some introductory and closing discussions at the Tenth British Ecological Society symposium. The main papers are divided into three sections which give an idea of the range of subjects covered: the relevance of food selection and utilisation to population processes; the importance of behaviour mechanisms in relating animal populations to the food resources; and population processes in relation to the quantity, quality and availability of the food resources. Questions raised, and the authors' answers, are also included.

The papers cover a wide field from amoebae, flatworms, insects and snails to vertebrates (one paper on fish, six on birds and six on mammals), and the subject matter varies widely from studies of rat populations in the laboratory to the energy flow in a woodland community. There is also a long review paper by Watson and Moss on the factors affecting general population limitation in vertebrates.

One important series of papers, on the grazing animals and their relations with the vegetation on which they grazed, range from the levels of sheep production on pastures, through the effects of sheep and cattle on the different grass species in a community, to the selection by herbivores of different parts of the vegetation under natural conditions. Two papers in particular will interest the conservationist: one, by D. R. Klein, deals with food preferences of North American deer, and how the deer, by grazing, may affect the food species available, and how in its turn the quality of the food affects the productivity of the deer, their body size, conception rates, fawn survival, etc.; the other, by R. H. V. Bell, shows how some of the herbivores in the Serengeti select different diets from each other and suggests reasons for the striking adaptations and different selectivity of some of the many different species there.

C.M. PERRINS

**The Oxford Book of Invertebrates**, by David Nichols and John A. L. Cooke. Oxford University Press, £3.

Skimming through this book will 'direct the attention of naturalists and students to the profusion of invertebrate wildlife that surrounds them'. Each of ninety-five pages of text is illustrated by a colour plate opposite it. Space is given not only to the more familiar groups but also to the less well known Protozoa, Nemertines, Nematomorphs, Cladocera, Acari, Sipunculoids, Hemichordates and so on.

The closer one looks the less satisfactory this book becomes. The authors seem to lose sight of their readers. For instance, the glossary lists 'anus', 'carnivore', 'invertebrate' and 'ovary', but leaves out so many words, such as 'diverticula', 'lumina', 'mesostigmatid', & 'theca', that I found I had hardly a 50-50 chance of guidance from it. The general introduction to all these wonderful animals uses only two pages whereas fifteen pages are given to a Classification of Invertebrates, which the 'general reader' will not need and the student will find inadequate. Likewise the reading list at the end, specifically for the 'general reader', includes works of technical solemnity such as Eales's *Littoral Fauna* and the *International Code of Zoological Nomenclature*.

The plates, by Derek Whiteley, are based on an almost stylised plan. Some are gay and good, notably those of the terrestrial snails, the

*Venus* shells and the starfish; but rather more are too dominated by matt colours. Experience of the living animals would not have left *Aplysia* with cherry-red eggs, or the egg-capsules of the dogwhelk dangling on the open rock face. The squiggle on page 97 is hardly *Syllis hyalina*. Indeed this constant use of specific names in the captions is too often downright misleading; the specific characters often do not show at all, e.g. *Gammarus* and *Orchestia* on page 125, *Suberites* on page 5 and *Procerodes* on page 23. Only sometimes in the text and never on the plates is there an indication of size or scale. When tiny creatures are drawn alongside big ones the uninitiated cannot tell if he is dealing with a couple of millimetres or fractions of a metre.

The text too has anomalies. *Gibbula magus* is certainly not the commonest topshell likely to be seen; cowries do not 'often occur in rock pools with the topshells'. A three-line explanation of torsion in the Gastropoda, without a drawing, leaves the 'general reader' puzzled, as does the statement about the tubes of the Serpulidae being 'moulded by the worm's anterior collar'.

I wish I could say that this book had been more successful. Have the authors been forced by the format of the series to try the impossible? They have finished with a book from which creatures cannot be identified in any but the most provisional way and one which is not an outline account of their biology. But for a sweeping, general view of the range of kinds of animals in the Invertebrata it will have a limited usefulness.

JOHN H. BARRETT

A new edition of the *Uganda National Parks Handbook*, profusely illustrated, with brief articles on the animals, insects, vegetation, management, and research, and check lists of birds and mammals, is an invaluable guide for the visitor. (Longmans, PO Box 3409, Kampala).

Collins have issued a revised edition of A.D. Imms's *Insect Natural History* (£2.50), one of the earliest (No.8) and one of the best in the New Naturalist series. The revision consists of a re-written chapter, On Wings and Flight, by Michael Tweedie.

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