

Interpreting the Environment, edited by **Grant W. Sharpe**. Wiley, £11.65.

The Economy of Nature, by **Robert E. Ricklefs**. Blackwell, £6.75.

Environmental interpretation, as practised in countryside centres, nature trails, urban study centres, town trails etc., is very much an 'in' thing at present and there is a real need for a comprehensive and practical manual on how to do it. This volume is certainly comprehensive. A team of about 20 contributors covers most aspects of environmental interpretation, with major emphasis on the rural situation.

However, the coverage is so broad that it tends to be rather superficial and platitudinous, and not to give sufficient operational detail on how exactly to set up a nature trail or write a descriptive leaflet. Advice, for example to 'arrange facts in logical order, first things first and related things together' is sound but not really necessary. Nor, at the other extreme, does the book deal in any depth with communication theory or tell you how to test the effectiveness of different interpretative techniques against defined objectives. The philosophy, framework and details are essentially American and do not all transfer to other situations. What I am criticising, the fact that the book seems to me to fall halfway between practical detail and academic theory, may seem to others a merit, and there is no doubt that it would be of considerable value to anyone working in countryside interpretation.

Ricklefs' stated aim in *The Economy of Nature* is 'to provide a broad integrated treatment of ecological principles in a book of moderate length', something more than a flimsy paperback and less than a massive monograph. He has reduced the length and complexity of the book by cutting down on literature references and omitting mathematical treatment of ecological theory and also omitting discussion of man's ecological crisis. Chapters 1-9 deal mainly with the description of ecosystem function and structure, including primary production, energy flow and nutrient cycling, and a useful comparison of terrestrial and aquatic environments. The second part, Chapters 10-19, looks at ecosystem function at successive levels of organisation: organism, population and community.

In general the aim is well achieved. The book is clearly and concisely written, with good use of diagrams and photos. There are sufficient references (about 20 per chapter) to allow for follow-up of most of the topics mentioned. Sometimes when a large topic is condensed to one or two pages it may become misleading, e.g. energetic efficiencies in plants. Phrases like 'photosynthesis is an uphill process', 'the guts of a calorimeter', and 'plants are terrible predators', may strike some readers as vivid analogues and others as unnecessary colloquialisms. For anyone wanting a comprehensive, easy-to-read, up-to-date account of ecology, this book would be hard to beat.

PALMER NEWBOULD

Endangered Birds: Management techniques for preserving endangered species, edited by **Stanley A. Temple**. Croom Helm, £8.95.

This is the proceedings of a symposium on the latest developments in the management of endangered birds, using manipulative methods to enhance the chances of survival. Breeding species in captivity is a well-tried technique, and its few successes are so far overstated. However, the case of the peregrine, cited here, is an example of how useful such methods can be for building up numbers and perhaps re-establishment in the wild. For some species captive breeding may be the only way of saving them. The Amazon parrots of the Caribbean illustrate the problems that can arise when an aviculturally desirable species is so reduced in numbers that the combination of natural threats and competitive bird-keepers endanger it before legal breeding programmes can be

established. Other more recent manipulation techniques include the provision of artificial nesting sites, which is helping the bald ibis in Turkey; the reduction of competition for nest sites to favour species such as the cahow; the elimination of introduced predators, a method used extensively in New Zealand; supplemental feeding, which hopefully will stop the decline in the California condor; fostering by similar species, e.g. whooping cranes being successfully introduced into sandhill crane nests; and removal of populations to safer areas, as was done with the seven remaining New Zealand black robins taken to a nearby island.

This is an essential reference work for anyone involved in conservation of threatened birds.

TIM INSKIPP

Reptiles of Northern and Central Europe, by Donald Street. Batsford, £10.

Until fairly recent years the reptiles and amphibians of Europe were not well covered in English natural history books. Now such books appear with increasing frequency, and this one follows hard on the heels of the excellent Collins Field Guide published last year, reflecting the increasing interest in herpetology among naturalists — although the trend seems to have reached the academic zoological establishment!

The present book gives a clear and readable account of the different species, some 25 in all, of lizards, snakes and chelonians which inhabit northern and central Europe. The information covers external appearance, food, reproduction, behaviour, general habits, habitats and distribution; there are, unfortunately, no distribution maps. A useful introduction deals in a very general way with reptilian biology, including such topics as relationship with man, snake-bite and its treatment, and the care of captive animals. It is perhaps a pity that the author did not spread his net a little wider and discuss some of the very interesting physiological studies on thermoregulation and other topics made in recent years. There is, however, a good bibliography of publications dealing with the more traditional areas of natural history and an appendix on the reptiles of southern Europe.

Well illustrated and produced, it will be an attractive addition to the library of anyone interested in the herptiles of Europe, despite its somewhat restricted scope.

A. d'A. BELLAIRS

Brief Reviews

Greenshanks (Poyser, Berkhamsted, Herts, £8.80), by Desmond and Maimie Nethersole-Thompson, is much more than a revision of Desmond's 28-year-old New Naturalist classic. It represents a full lifetime's work on his favourite bird by our top ornithological monographer, helped by his daughter (and in various ways by the rest of his large family). A first-class book of its kind.

Wildfowl of the World (Blandford Press, Poole, Dorset, £7.50), by Eric Soothill and Peter Whitehead, is welcome as a fine collection of colour photographs of ducks, geese and swans, although unfortunately not complete. The text describes the birds, their behaviour, habitat, distribution, food, voice, display and breeding habits, in a compendious way. Buy it for its photographs.

The Birds of Zanzibar and Pemba, by R.H.W. Pakenham (British Ornithologists' Union, c/o London Zoo, £4.00, air mail £5.30), is the second in the BOU's excellent series of checklists. The first was for Libya. These two islands are little known or visited nowadays, and this excellent conspectus of their avifauna will be valuable when, as is hoped, tourism restarts, and will give ornithologists something to work on.