

Mediterranean littoral of Israel. However, this is a useful bonus because there are no comprehensive modern works on the mammal faunas of these countries.

Several species have had to be added since the first edition, some new to science such as the Queen of Sheba's gazelle *Gazella bilkis*, the Arabian pipistrelle *Pipistrellus arabicus* and the Arabian white-toothed shrew *Crocidura arabica*; others newly recorded from Arabia, including *Crocidura somalica* and the lesser kudu, although the origin of the two recorded specimens of kudu, and the survival of the species in Arabia, are doubtful. For most species additional data are available, whether on distribution, behaviour, ecology etc., and all have been carefully documented, with sources. Its value for quick reference would have been enhanced, however, if topics such as habitat, food and reproduction had been given separate headings instead of being included under 'Remarks', which in some cases fill a column or more without paragraph breaks.

The reduction from the first edition has been achieved in a number of ways without detriment to the quality and the usefulness of the work. Descriptions of morphological details have been considerably condensed except where they are useful for the confirmation of identification in the more difficult groups; the maps and illustrations have been reduced in size without any loss of clarity; and the tables of measurements have been condensed by giving means and ranges rather than measurements of individual animals. The result is considerably greater clarity, enhanced by greatly enhanced layout and typography. Identification keys

are given throughout and are much more clearly presented than before.

For the many species of larger mammals whose ranges have drastically declined in the last century, the decline is well documented in the text but it would have been helpful to distinguish between old and recent records on the maps.

As far as any volume can be described as definitive, this is the definitive reference on the mammals of this important and volatile region. It is a safer prediction now than it was in 1964 that this will 'last out the century' but even so at least two species have arrived too late for inclusion (a new species of mouse *Apodemus hermonensis* in Israel and the African mon-goose *Bdeogale crassicauda* in Yemen), and no doubt there will be many more changes for better and worse to be documented in the future.
Gordon B. Corbet.

Beyond Captive Breeding: Re-introducing Endangered Mammals to the Wild: Zoological Society of London Symposia 62

J. H. W. Gipps (editor)
Clarendon Press, Oxford,
1991, 284 pp., ISBN 0 19
854019 1, HB £45.00

The release into the wild, for reintroduction, of captive-bred animals, with the ultimate aim of re-establishing populations, has become an area of keen interest in contemporary conservation. *Beyond Captive Breeding* discusses the advantages and limitations of this approach to conservation and establishes criteria for reintroductions and how best to carry them out. The volume contains 17 articles by 27 expert authors covering the theoretical and practical factors involved with

reintroductions and includes case studies of scimitar-horned oryx, addax, black-footed ferret, red wolf and golden lion tamarin for illustration.

The contributors discuss the many biological and non-biological factors involved in the decision to proceed with a reintroduction effort, and suggest that this approach may be useful only for threatened species for which large areas of suitable habitat remain and for which adequate protection can be assured. In consequence, the greatest value of reintroductions may be in the habitat protection that they entail and in the public support for such projects that they can encourage.
Liz Price.

The Birds of Pakistan Volume 1

T. J. Roberts
Oxford University Press,
1991, 598 pp., ISBN 0 19
577404 3, HB £40

This large, informative work is the first of two volumes, covering 347 of a total of 660 species. Its style is now a rarity in the ornithological literature—a country avifauna in which the author not only provides detailed information on distribution and status (accompanied by 285 maps and a gazetteer), but also includes sections on identification, habits, breeding biology and vocalizations. Much of what is written is original, based on 30 years studying wildlife in Pakistan. Unlike the compressed style of most recent avifaunas, the accounts are frequently a delight to either dip into or browse through, especially those relating to near-endemic species such as western tragopan *Tragopan melanocephalus*, Syke's nightjar *Caprimulgus mahrattensis* and

Sind woodpecker *Dendrocopos assimilis*.

All previous literature is extensively summarized and referenced. Introductory chapters deal with zoogeography, ecological zones, the history of ornithology in the country and interactions between birds and man. There are useful maps showing localities, topography, vegetation and climate. Eight colour plates, painted by the author, illustrate 104 species; the one depicting the 12 woodpeckers is the most successful to my mind. There are also some undistinguished black-and-white plates and many line drawings.

There are a surprising number of typographical errors and the author propounds some strange or, in some cases, erroneous taxonomic ideas but these do not detract from the overall usefulness of the work. A must for all birdwatchers visiting Pakistan and a useful addition to any bird library.
Tim Inskipp.

Cyprinid Fishes: Systematics, Biology and Exploitation

Edited by I. J. Winfield and J. S. Nelson

Chapman and Hall, Fish and Fisheries Series 3, 1991, 667 pp., ISBN 0 412 34920 5, £60

This book is a noble attempt to provide a balanced global survey of the most speciose family of freshwater fish. The first few chapters provide an overview of extant and extinct cyprinids, an analysis of the validity of the characters used to distinguish species and a survey of sub-cellular features and their value.

The next five chapters are, to most people, the *raison d'être* of the work. Each of the major land masses or their faunistic divisions is discussed with ref-

erence to the whys and wherefores of its cyprinid fishes. It is a sad reflection on how mankind has deleteriously altered the world that a whole chapter is devoted to the cyprinids of Australasia. All Australasian cyprinids have been introduced. The rest of the book covers aspects of physiology, behaviour and human usage of this important group of fishes.

The intelligibility of the chapters varies widely. In some the information is accessible to all. Others are written by specialists for specialists who probably know what is contained therein. This is a pity as it diminishes the overall value of the book to a wider readership. There are gaps; for example, conservation is dealt with in some chapters but a synthetic chapter on this topic, including species rarity, would have been of value to conservationists and wildlife managers.

Possibly the greatest and most useful attribute of this volume is the extensive bibliography that follows each chapter. It is a most important reference work. It is a pity it is so expensive as that limits the wide readership it deserves.
Keith Banister.

Conserving Migratory Birds. ICBP Technical Publication No. 12

T. Salathé (editor)
ICBP, 1991, 393 pp., ISBN 0 946888 20 5, SB £19.50, available from ICBP Publications, 32 Cambridge Road, Girton, Cambridge CB3 0PJ, UK

Christoph Imboden, Director-General of ICBP, in his foreword to this book, presses for international action to treat the causes—unsustainable use of resources, poverty, the north-south divide, Third-

World debt, population growth—rather than simply the symptoms, of environmental problems. In the case of migratory birds for example, land-use practices in the wintering areas are a factor in determining population levels. Treating the symptom involves establishing protected areas for resting and wintering migrants—a relatively simple task. Treating the causes is far more difficult: it would involve developing international trade policies that allow truly sustainable agricultural practices. Imboden points out that no one yet has assessed in detail how the new international GATT treaties will affect land-use practices and conservation of critical ecosystems.

While few migratory species are listed as 'globally threatened', most have declined in the past 20 years. This erosion of the abundance and range of numerous 'common' and widespread species is a greatly neglected aspect of the loss of biodiversity.

The book is in four parts. Part I discusses the ICBP's conservation programme for migrants, Part II describes, in four chapters, the problems facing migratory birds, Part III is devoted to nine case studies and four regional overviews, while Part IV contains five chapters under the heading 'Future directions'.

The chapter 'Conservation and sustainable development' emphasizes that conservation of migratory birds in sub-Saharan Africa can be achieved only through a broad-based approach to management of the natural habitats on which they depend so that they continue to support birds while also meeting human needs. The final chapter is a Forward Plan for the ICBP Migratory Birds Programme 1991-1994.
Editor.