

Reviews



EDITED BY ROBERT M. ZINK

The Auk 110(2):418–419, 1993

Ornithology for Africa.—G. L. Maclean. 1990. University of Natal Press, Pietermaritzburg (P.O. Box 375, Pietermaritzburg 3200, S. Africa). 270 pp., color plates, tables, diagrams and distribution maps throughout. ISBN 0-86980-737-4 (hardback) and 0-86980-771-4 (paperback). \$35.00 (paperback).—There is probably no one in Africa who is better equipped to write this useful text than Professor Gordon Maclean. Maclean has done a great deal to bridge the gap between scholarly ornithology and amateur birding in Africa, partly through the medium of popular books and public bird courses, and partly by extensively revising the region's premier handbook, *Roberts' Birds of Southern Africa*. This latest book, based on the content of Maclean's public lectures, therefore, is appropriately aimed at both senior undergraduates and informed amateurs. On the whole, it should be successful at reaching both.

My primary appreciation of Maclean's book lies in its glowing assertion that there *is* life outside the Northern Hemisphere, and that Africa, with its large ornithological community and rich diversity of subjects, need not limp along wearing only ill-fitting examples and paradigms from temperate ornithological research. The sentiment is a popular one in Africa. Even at the semantic level, ornithologists and birders here squawk at the idea of "overwintering European birds," which spend the northern winter in Africa and indeed may only live in Europe for three months a year. Maclean writes, "I believe it is time we had a work that catered to austral perspectives." For many in the Southern Hemisphere, this will strike a welcome chord. The book's title, however, while catchy (anything in this region that occurs in excess is enough "for Africa"), will probably ensure that potential users in South America, Australasia and elsewhere in the south do not give it more than a passing glance. This would be a pity, as it has much to offer anyone who works in, or teaches about, tropical, subtropical and mediterranean ecosystems.

A book such as this will undoubtedly spawn future editions, and perhaps promote the appearance of similar books in other southern regions, so a few suggestions for improvement are appropriate. The two main drawbacks of Maclean's book are apparently tight budgeting and some outdated, rather parochial writing. As a result, the book does not come across with all of the verve and professionalism that Maclean's writing normally has. On the budget and production side, the book has a muddy, amateurish cover

and 16 color plates of nine small photographs each, grouped together at the front of the book. While the University of Natal Press clearly did not want to splash out on a potentially risky undertaking, more corporate sponsorship might help in presenting improved photographic material that is better edited, is more aesthetically laid out, and has more impact on the reader. Many of the small photographs are of poor quality or doubtful value, and are arranged, borderless, in groups involving awkward color combinations. Furthermore, despite Maclean's admirable attempts to counter (northern) parochialism, he slips into it himself at times. The book's strong South African emphasis should not, for example, be allowed to creep into the photo captions (e.g. "the Verwoerd Dam," "Transvaal highveld" and "Natal coast" are unqualified, while at the same time the reader has to be reminded that the Zambezi River borders Zimbabwe and the Okavango Delta is in Botswana). Maclean also states that "our African sun stays north of the shadows at all times of the year," which is bound to amuse Africans north of Nairobi and Libreville. That said, though, it is true that by far the bulk of the book's market will be South African. Perhaps it is time that South African readers again take their place in the broader context of Africa and the rest of the world.

Maclean has included chapters on classification and evolution, designs for flight, food and feeding, zoogeography, adaptations to environments, migration and navigation, behavior, and breeding biology (pre- and post-laying). On the whole these are appropriately researched, clearly written and sufficiently referenced. Most of the line drawings and maps are cleanly and professionally done. There are also good indices of scientific and English bird names, subjects and authors, and a 79-item glossary. My minor dissatisfactions with the text are perhaps rooted in Maclean's attempt to please both professionals and amateurs, a difficult task. I suspect only the most committed amateur ornithologists and birders would not be put off by initial chapters on what (to me at least) seemed fairly turgid, uninspired accounts of phylogeny with textbook terminology (post-anal tails and such are followed by the physics of flight). However, the shift in favor of textbook-style writing satisfies the one market, while allowing interested amateurs to dip into the book wherever they like. I did find Maclean's (admittedly nicely defended) use of jargon distracting. How many of us regularly use, or have even

heard of, the terms "epimeletic" or "etepimeletic" behavior? Maclean's fastidiousness and scholarly attention to detail have served the course of ornithology in the region very well, but in this book they occasionally lead to some rather dry, inaccessible writing.

In Maclean's explanation of behaviors and other adaptations to radio audiences, he has sometimes lapsed into apparently group-selectionist thinking. Such thinking hovers around the edges of this book, although the writing is nearly always tight and sound. I agree with Richard Brooke's assessment of the book in a local magazine (*Birding in Southern Africa* 43[3]:92, 1991) that Maclean does not always seem up-to-date with ecological theory, particularly that relating to evolutionary ecology. This could be improved by wider refereeing, or by multiple authorship by specialists. But these are minor quibbles. The major contribution of this book is in its celebration of the richness of southern ornithology, and its detailed presentation of our progress to readers in a form to which they can respond. For that, ornithologists everywhere can be glad. Indeed, ornithologists everywhere would be well advised to buy this book—if only to shift temperate biases to a region that richly deserves more study.—PHOEBE BARNARD, *Namibian Evolutionary Ecology Group, P.O. Box 5072, Windhoek, Namibia.*

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Bustards, Hemipodes, and Sandgrouse. Birds of Dry Places.—Paul A. Johnsgard. 1991. Oxford University Press, Oxford. xii + 276 pp., 51 color plates, 53 text figures, 39 maps. ISBN 0-19-857698-6. \$115.—This is the latest contribution by the prolific Paul Johnsgard, as he continues his eclectic wander through the birds of the world. His choice of subjects for this volume—the bustards (Otididae), hemipodes or button-quail (Turnicidae), and sandgrouse (Pteroclididae)—are united on rather tenuous grounds. Instead of being united on a taxonomic basis, as has characterized the subjects of Johnsgard's previous volumes, these three unrelated families are grouped because of their general preference for dry habitats. Although not all the species covered meet this criterion, it is not really a drawback. To its benefit, it provides a reason for comprehensive treatment of three groups that have been recently neglected and are otherwise too small to attract monographic treatment on their own.

Each family is widespread throughout the Old World. Because of this scattering, no regional work can adequately put its own members into a proper overall perspective of the family as a unit. These are

not groups of birds that the author has personally worked with. He has extracted extensively from the relevant literature, providing a lengthy bibliography (the most recent reference is a single citation for 1990), but the book perhaps lacks the personal presentation that would be obtained from an author at the cutting edge of research with these taxa.

The first part of this book presents an overview of different aspects of these birds, opening with a review of the taxonomic history of each family. These make good introductions into the systematic literature of these taxa, although they do not contain the detail of the family accounts in Sibley and Ahlquist's recent *Taxonomy and Phylogeny of Birds*. Johnsgard is content to provide the major ideas about the higher level taxonomy of these families, but does not strongly champion any particular detailed resolution. At generic and specific levels, he offers tentative phylogenies for each family, which serve as the basis for the book's arrangement. These differ from other proposals to various degrees. The phylogenies are based on zoogeography and behavioral and plumage characters. Johnsgard admits that the resulting classifications are tentative and, in the case of Otididae, "might well have been constructed in other ways, given the still highly limited array of information on the group." The phylogenies of the Turnicidae and Pteroclididae do not seem to have any firmer a basis. There is no attempt at a robust analysis of characters, and the distribution of the character states indicated on the phylogenies often contradict each other.

The species-level classification of the Turnicidae varies from Peters' arrangement in sequence and in following a few more recent suggestions regarding species limits. The adopted sequence of the Pteroclididae differs only slightly from Maclean's 1984 sequence (*Manibus* 6:75–78). The greatest change occurs in the Otididae. Johnsgard has deemphasized characters of adult males, with a consequent reduction of genera: 6 genera with 3 being monotypic, compared with 11 and 8, and 6 and 5, respectively, from earlier authors.

The choice of habitat similarities allows the author to relate the distribution of the families with that of arid and sub-arid regions of the Old World. He then identifies within each family several possible evolutionary trends in morphology that he relates to the behavior and ecology of the species. The next chapter, Behaviour, is quite extensive. It begins with egocentric and protective/evasive behavior and moves through to territoriality, flocking and mating. These lead easily into Breeding Biology, the next section. The concluding chapter on Exploitation and Conservation is mainly a discussion of the plight of bustards; of button-quail only a few species are of concern, and the sandgrouse all are still found in moderate to large numbers. These introductory chapters serve as backgrounds for the species accounts, setting the scene, and thus easing the need for repetition.

The depth of treatment of the species accounts varies according to the attention each has received in the primary literature. Thus, bustards, a group of considerable behavioral interest and conservation concern, frequently have comparatively lengthy accounts. The more furtive button-quail have, in contrast, briefer entries. If several species were not established as cage birds it would be worse; a significant portion of the information on this group comes from avicultural observations. Sandgrouse species range from well known to relatively ignored.

Each species account begins with sections on alternative names, followed by the distribution of the species and component subspecies, augmented with a detailed map. Again, there is a sense that the most recent information on distributions has not been found. The map of the Australian Bustard (*Ardeotis australis*), for example, does not indicate this species' slow but steady southern recolonization during the past decade.

Measurements and Weights follow, and then Descriptions, which are detailed, but variably so. For some species, adults through juveniles are described; for others, juveniles are omitted. Downy chicks are not discussed. General Biology and Ecology deals with aspects not covered in subsequent sections, primarily habitat, migration (if present) and food. Social Behaviour, particularly that of bustards, receives rather detailed coverage. The striking courtship displays of the bustards are shown with black-and-white sketches. Reproductive Biology presents data for the nest situation, breeding season and clutch size, which, for many species, are about the limit of our knowledge. For others, more extensive information, such as success rates, is provided. Evolutionary Relationships is a summary of the author's opinion of each species' relationships. Status and Conservation are usually presented in a few lines, but some of the endangered species of bustards merit more extensive treatment.

As in his preceding volumes, Johnsgard provides his own black-and-white drawings. These are liberally placed throughout the text, primarily to illustrate aspects of behavior. One of the highlights of the book are the color paintings of Major Henry Jones, from the collections of the Zoological Society of London. These paintings, most not before published, show all the species but one. There are minor problems with the accuracy of some portrayals. For example, the Black-breasted Button-quail (*Turnix melanogaster*), a rare inhabitant of eastern Australian rainforests, is shown in grassland. The only species for which a Jones painting was not available is the Lark-quail (*Ortyxelos meiffrenii*). In the book, its portrait has been well rendered by Mark Marcuson. The color plates make an attractive and useful accompaniment to the text. On the negative side, however, their inclusion no doubt has contributed greatly to the volume's high price.

If there are occasional quibbles with the production of the book (the price being a major one), there is

much in its favor. It serves as the most recent and most comprehensive coverage of three interesting families and, if the information is less than complete for a number of species, the book serves the valuable role of highlighting areas of missing knowledge. Until someone with more "hands on" knowledge compiles a similar tome, Johnsgard's will deservedly serve as a major reference on all these groups for some time.—WALTER E. BOLES, *Division of Vertebrate Zoology, Australian Museum, 6 College Street, Sydney NSW 2000, Australia.*

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Illustrations of the Birds of California, Texas, Oregon, British and Russian America.—John Cassin. 1856. Reprint, with introduction by Robert McCracken Peck. 1991. Texas Historical Association, Austin, Texas. 42 + viii + 298 pp., 50 color plates, 13 black-and-white illustrations. ISBN 0-87611-106-1. Cloth, \$29.95; limited edition, \$75.00.—John Cassin was one of the leading American ornithologists of the 19th century. Appointed Honorary Curator of Birds at the Academy of Natural Sciences of Philadelphia in 1842, he built and studied the collections of that institution (although engaged full time in business) until his death in 1869. This book represents perhaps his most important and least well known endeavor.

Western North American birds, which were becoming better known through increased military and exploratory activity in the mid-1800s, fascinated Cassin. He aspired to illustrate them as Audubon had the more common eastern species in his *The Birds of America*. The prospectus for the *Illustrations* billed it as a supplement to Audubon's work. The original plan was to publish the *Illustrations* in 30 parts of five color plates each, to appear approximately bimonthly. Cassin calculated that he would need 250 subscribers at \$1.00/part to break even. The first part was distributed in April 1852. Troubles with artists, lithographers, printers and publisher struck immediately and additional parts were delayed. Part I was reissued in a new edition in March 1853. The series ended with 10 parts published in 1855. The entire work was then published in three editions (1856, 1862, 1865). Print runs of all editions were small, however, and it is unlikely that more than a few hundred copies ever existed. *Illustrations* was neither a financial nor scientific success.

Illustrations was made up of more than just color plates. Each plate was accompanied by Cassin's text, which often incorporated everything known about the species. These species accounts are similar to Bent's later life histories in many respects. Many include long quotations from papers or letters by the ornithologist.

thologists who first discovered or named the species—or who sent them to Cassin to describe. There is a lot of history as well as ornithology in the accounts. There are also interesting little essays on topics ornithological or philosophical, by which one gets better acquainted with Cassin. Inappropriately (for today), the essay on collecting is in the account of Kirtland's Warbler (*Dendroica kirtlandii*). One also learns something of the polite, rather flowery use of language before editors took the pleasure out of writing or reading science.

In addition to the species accounts, the text of *Illustrations* included synopses of several groups of North American birds, and summaries of systematics and distribution that could have been done at the time only by Cassin. These synopses are of the vultures (7 pages), diurnal birds of prey (36 pages), owls (23 pages), parids (4 pages), and a grouping of nightjars, swifts, swallows and kingfishers (22 pages). These sections give diagnoses and synonyms of all species known to occur in North America, and lists of doubtful or obscure species attributed to North America. Most of the latter are synonyms of known species (as it turned out), and some are errors from the earlier literature. There are a few names of hawks that I have been unable to find elsewhere and, as yet, I have no idea to what species they refer.

The introduction by Robert McCracken Peck is a biographical sketch of and tribute to Cassin, with emphasis on his concern with the *Illustrations*. There is an appendix giving the current names for the birds depicted in the plates, where they retain the English and scientific names of the times.

The test of any reprint edition of illustrations is the quality of the plates. In this instance, the quality of the originals deserves comment, as well, because so few readers have had the opportunity to see them. George Gorgas White was the artist employed by Cassin; William Hitchcock transferred the plates to lithographic limestone. Friction developed between Cassin and White, and Cassin then had Hitchcock compose the originals directly on stone. Some of the illustrations are as good as any prints of the time; only a few can be rated as poor. The reproductions of the 1991 edition are excellent; they are slightly brighter than in the copy of the 1856 edition I examined because of the yellowing of the pages in the older book.

There are so many new books about birds that one may be reluctant to buy a new book that is a century-and-a-quarter old. Your library may have a copy of the original, but it is probably locked up in the rare-book room. You should have this book around to consult frequently so as to let you know what ornithology used to be like. I recommend this book for your personal and institutional libraries, for the history, the content, and because it is fun to read.—RICHARD C. BANKS, *U.S. Fish and Wildlife Service, Biological Survey, National Museum of Natural History, Washington, D.C. 20560, USA.*

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Bird Trapping and Bird Banding. A Handbook for Trapping Methods All Over the World.—Hans Bub. Translated by Frances Hamerstrom and Karin Wuertz-Schaefer. 1991. Cornell University Press, Ithaca, New York. 330 pp., 456 text figures. ISBN 0-8014-2525-5. \$69.50.—This book is a translation of a German edition published in 1978 by Die Neue Brehm-Bucherei, which in turn is a summary of four parts published earlier (1967–1970). Its main title, a direct translation of the German *Vogelfang und Vogelberingung* is misleading. Only six pages deal with matters one might usually expect in a book with “bird banding” as part of the title. This includes a single paragraph that admonishes against brightly colored clothing, one stating that binoculars are indispensable when checking trapping locations, and a half-page on dangers to the bander such as sinking in marshes and falling from ladders and cliffs. The remaining five pages deal with gathering cages or devices and with handling and releasing birds.

F. S. Schaeffer (*North American Bird-Bander* 6:116–117, 1981), in a review of Bub's earlier publications, pointed out that a 1980 book by Bub and Hans Oelke on marking methods for birds contains much more information on bands, auxiliary marking methods and techniques than any of Bub's earlier publications. Thus, the present translation lacks much material that is implied by the title. Kinds of studies that may be accomplished by banding, record keeping, use of pliers and band openers, types of bands, color banding, methods of aging and sexing birds, and so on, are not covered at all. Nearly 100 pages of that kind of information was included in Part IV (1970) of the original series, but was not included in this book (nor perhaps its 1978 German version). It seems a pity that the meat of the Bub-Oelke book could not have been included as part of this one. Moreover, Bub's 1991 book might have been given a title that better reflects its contents.

A prefatory comment by George Jonkel, former chief of the U.S. Bird-Banding Laboratory, points out that some of the techniques discussed, such as the use of live decoys to bring birds into nets or traps, are illegal in North America even if one holds a valid banding permit. Nonetheless, what remains in the American edition is the most detailed summary of methods of catching birds that has yet been published. Each of the 20 chapters deals with a specific kind of trap or specialized trapping situation. The chapter lengths roughly indicate the detail of coverage. The longest chapters are devoted to small- and medium-sized funnel traps (21 pp.), installations for catching ducks and other waterbirds (19 pp.), stationary nets (40 pp.), and capture of birds by hand and with dip nets (38 pp.). Other chapters treat large funnel, cage, and pit traps, as well as drop, aerial-clap, bow, clap, hedge, tent,

and pull nets. Other short chapters document methods for catching bats (somewhat furry birds) and grouse, the use of nooses and snares, and techniques for capturing birds after dark and at watering places.

The book is profusely illustrated with 457 figures that include both black-and-white photographs and line drawings. The latter reproduce somewhat more clearly; the lack of contrast in many of the photographs leads some to appear rather muddy and lacking in detail. The illustrations are highly eclectic and range from practical diagrams for building various sorts of traps (which sometimes give measurements, but more often do not, even if the source cited did so) to copies of illustrations from 14th-, 15th- and 17th-century books showing early European methods of catching birds, and to photographs of ancient drawings of Egyptians using boomerangs to collect birds.

Bub's book concludes with five bibliographies and a short index to vernacular names of bird species treated. Three of the bibliographies are short, less than a page each, and treat cannon netting, other books and manuals for bird banding, and periodicals for bird banding (including the *Journal of Wildlife Management* but not *Ringing and Migration*). A fourth bibliography, several pages long and arranged by language in which published, summarizes the earlier publications on trapping birds, ranging from a 1538 book that contains a Latin poem on bird trapping from the 1st century AD to some obscure publications printed in the early 20th century. Finally, a 10-page main bibliography lists many hundreds of citations on various aspects of trapping birds.

The translation itself reads smoothly and is a testament to the care and effort of the translators. The only fault I would find with the translation is that, occasionally, it follows the original too literally; the present tense is used to describe activities that took place more than 30 years ago by persons, most of whom are now, at best, moribund. Occasionally, one also encounters phrases, constructions doubtless faithful to the original, that are less felicitous in English (e.g. "as McClure already described"). There may be a few more than the one I noted, but the book was well proofed and is virtually free of typographical errors.

The book's principal flaw is its lack of currency; it views the subject largely from the late 1960s. I found only 11 titles published later than 1970 in the main bibliography and only one later than 1973.

About five years ago I prepared a 583-title bibliography (unpublished) on methods of capturing birds. I excluded the 152 titles later than 1977 and compared the remaining 431 with those given by Bub to get some idea of the scope and completeness of his list of references. Of my 75 pre-1978 titles dealing with various aspects of mist netting, Bub cited 10, only one later than 1965. Of some of the other pre-1978 titles I list, Bub cited none of 14 dealing with various sorts

of nest traps, 1 of 14 dealing with the use of night and floodlighting, 3 of 13 dealing with Bal-Chatrri traps and their variants, none of 12 dealing with baits and lures, and 4 of 51 dealing with small- to medium-sized traps.

What does this all mean? It partly reflects that a great deal has been written on the subject, but also reflects that Bub's book is based to a large degree on the German literature, with most other references to the European literature and with virtually no attention to the North American literature beyond the early 1960s. A few topics (e.g. use of narcotics in catching game or other birds) receive no attention, presumably because of their relatively recent use compared with the period with which Bub's book is primarily concerned.

Does the bird bander or ornithologist need this book for his or her library? Perhaps not, if one needs a general guide to the subject of bird banding or even of catching birds. Much of the material needed for beginning hands-on bird banding is covered by the North American *Bird-Banding Manual*, and it, together with McClure's 1984 *Bird-Banding* (Boxwood Press, Pacific Grove, California, 1984), provide enough for the beginner to get started (and much more inexpensively, at that). On the other hand, the volume's strong summary of historical methods makes it a candidate for general research libraries, while its compilation of little known bird-capturing techniques should make it of interest to ornithological libraries as well.—ROGER B. CLAPP, U.S. Fish and Wildlife Service, National Museum of Natural History, Washington, D.C. 20560, USA.

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The Conservation Atlas of Tropical Forests: Asia and the Pacific.—N. Mark Collins, Jeffrey A. Sayer, and Timothy C. Whitmore, editors. 1991. Simon and Schuster, New York. 256 pp., 55 four-color maps, 50 illustrations. ISBN 0-13-179227-X. \$95.00.—Although this large-format, beautifully produced atlas of tropical forests and conservation for the Far East does not focus specifically on birds or ornithology, it is a work that will be of interest to many readers of the *Auk*. It provides a guide to the current disposition and condition of the native humid forests of 17 nations (or major political or transpolitical units) of southern Asia and the Pacific. This, then, is a potentially useful tool for the researcher wishing to plan field studies in one of the focal countries.

Each nation receives a detailed account that features a two-page color map showing the current vegetation, protected areas, and major natural features. The text for each account includes detailed data on the country's size, climate, wildlife, human population, forest,

and patterns and rates of deforestation. A list of references provides an up-to-date introduction to the literature treating the wildlife and environments of the area.

The book also benefits from a series of introductory chapters that focus on tropical forest, forest wildlife, indigenous peoples inhabiting these forests, and a variety of conservation-oriented questions. There are lots of hard data presented that will be invaluable to conservation biologists working in Asia and the Pacific. Beautiful color photographs are scattered throughout the text, adding to the book's attractiveness and providing glimpses of some of the world's most remarkable natural habitats.

The maps are the key to the book's value. They provide a close-up look at each nation in a way that gives a clear and sometimes shocking view of the current status of its forests. Compare, for instance, the maps of Sri Lanka and India with those for the Solomon Islands and Papua New Guinea. The latter show the broad expanses of green indicating continuous forest, whereas the former show nearly total dominance of the dreary white that denotes the near-total dominance of nonforest habitats.

The maps are not perfect. I do not like how the maps of India, Sri Lanka, Papua New Guinea, and Bangladesh delineate protected areas by use of red circles of various sizes. Presumably the details of park boundaries were not available to the authors. In the case of the Western Ghats of India, these circles actually obscure important sections of the map. Data presented are not always accurate. In northeasternmost India, Namdapha National Park is misspelled and is slightly misplaced (too far west). In Papua New Guinea, the Purari and Maramuni rivers are misspelled, distributions of "inland swamp forests" are exaggerated, and the Nakanai Mountains are displaced too far to the southeast. These problems are minor and are the sorts of mistakes that crop up in books that are the product of massive group collaborations, as this most certainly was. The atlas was produced by the World Conservation Monitoring Center, as part of the Tropical Forest Conservation Programme of the International Union for Conservation of Nature and Natural Resources (IUCN). No single author could have compiled the remarkable range of data for this number of countries.

The book is very expensive. This may put it out of the reach of many interested field workers and conservation biologists—especially those living and working in the countries addressed in this publication. Because of its timeliness and its pertinent data, it should be in the collections of all research libraries that include a focus on South and Southeast Asia or the tropical Southwest Pacific.—BRUCE M. BEEHLER, *Division of Birds, NHB MRC 116, Smithsonian Institution, Washington, D.C. 20560, USA.*

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Putting Biodiversity on the Map: Priority Areas for Global Conservation.—C. J. Bibby, N. J. Collar, M. J. Crosby, M. F. Heath, Ch. Imboden, T. H. Johnson, A. J. Long, A. J. Stattersfield, and S. J. Thirgood. International Council for Bird Preservation, Cambridge, United Kingdom. vi + 90 pp., 36 color figures, 22 tables, and 7 appendices. ISBN 0-946888-24-8. £12.50 (\$23.50).—This publication is an artful presentation of the distribution of and threats to the world's most threatened bird species. The overall objective, largely satisfied, was to identify restricted-range (RR) bird species (those species with breeding ranges <50,000 km²), and to delimit Endemic Bird Areas (EBAs) where two or more of the 2,609 RR species occur together. The 221 EBAs, accounting for only 4.5% of the earth's land area, were then assigned conservation priority based mainly upon biological importance of the area, including endemic taxa other than birds, and threats to the area. In this manner, critical areas, and not species, are identified for conservation, and entire ecosystems are addressed. The material is presented in easy-to-read text, figures, and tables. The authors have done a noble job in objectively identifying priority areas for bird conservation, although this endeavor always will be controversial. This publication will be useful for some planners to identify quickly the priority areas in their region of interest. However, the usefulness of this publication to ornithologists and conservationists is limited. My major criticisms are:

(1) The term "endemic" has been misused throughout. An "Endemic Bird Area" means little, considering that all species are endemic to some area.

(2) The EBA maps are of limited use, because only the outline of continents is given. Without country borders and physical landforms (mountains, rivers, etc.), the exact location of the EBAs cannot be determined. The borders of EBAs in central continental areas, such as the Asia or Amazonia, are especially unclear.

(3) The methods are scattered throughout the text. It often is difficult to determine exactly how EBAs, RR species, and priorities are defined. The references used to determine the range limits of species are largely not cited. The species used to identify EBAs are not given. A follow-up publication with this material is necessary.

(4) Assigning value to the rank of genus, and especially family, for a taxon's conservation priority is of doubtful use, given that ranks above species, and even species in the eyes of some systematists, are rather subjectively determined. Is a drepanid honeycreeper of lower priority because Sibley and Monroe (*Distribution and Taxonomy of Birds of the World*. Yale University Press, New Haven, 1990) now give "Drepanidae" only tribe rank within the Fringillidae?

Because of this classification, the Hawaiian Island EBAs did not receive priority for taxonomic uniqueness.

(5) By definition, RR species do not include many widespread, but critically endangered species (e.g. eagles, big cats), whose absolute population size may be much lower than RR species.

(6) Priority for EBAs takes into account the percent of area protected. Because EBAs vary greatly in size, the important figure here is the absolute area protected, not percent of the EBA. Twenty percent of a very large EBA may be substantial enough to save its biota, but all of a small EBA may be necessary.

Most important for working ornithologists is identifying problems and areas for future study. Although within some regions (e.g. Asia, page 36) areas of urgent study are mentioned, a whole chapter would be desirable to give ornithologists, as well as planners and funding agencies, a resource for determining priorities of research projects.

Lastly, despite many pleas from the world of systematics, including those of E. O. Wilson, the author of the Foreword to this publication, no emphasis is given to the importance of systematics in determining and protecting biodiversity. Species limits of tropical birds are only beginning to be understood; some recent studies have uncovered greater genetic variation within Amazonian bird species than within some temperate zone genera. This variation underscores the importance of identifying "subspecific" variation, which will necessitate increased inventory work as well as responsible collecting by museums. Sadly, no museums and few curators are acknowledged in this work, even though most distributional records are from museum specimens. That an average of only 20 locality records/species are used in this publication indicates the general dearth of knowledge of bird distributions.

Despite these criticisms, *Putting Biodiversity on the Map* does a commendable job of taking current distributional and taxonomic data and identifying the

areas of highest priority for conservation. I would recommend it for all those interested in the conservation of birds.—ANDREW W. KRATTER, *Museum of Natural Science and Department of Zoology and Physiology, Louisiana State University, Baton Rouge, Louisiana 70803, USA.*

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Birds of the Strait of Gibraltar.—Clive Finlayson. 1992. T. & A. D. Poyser, London (in the United States, published by Academic Press, San Diego, California). xxv + 533 pp., 34 black-and-white photographs, 282 text figures. ISBN 0-85661-066-6. £27.00 (\$53.00).—This book covers an area from the Iberian Peninsula south to Morocco. The geography and climate of the region are summarized. The Strait of Gibraltar is known for its importance as a passage point for migrating Palaearctic birds. Often, thousands of raptors, storks, and other birds pass by in a single day. Rather than produce an annotated checklist, the author has summarized the ornithology of the region in terms of groups of birds. Chapters include migration of soaring birds, landbirds, seabirds, migration and wintering of waterbirds, terrestrial bird communities, wetlands, and the seasonality, distribution and biological importance of birds of the Strait. Aspects of migration are emphasized. The book contains a wealth of information on the avifauna, and appears to be an important regional study. In appendices are a systematic list of bird species, a list of dominant plant species in some habitats, and mean densities of breeding birds at some sites. I recommend this book for libraries and those visiting the area.—ROBERT M. ZINK, *Bell Museum of Natural History, Ecology Building, University of Minnesota, St. Paul, Minnesota 55108, USA.*