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BOOK REVIEWS

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Important Bird Areas in Kenya.—L. Bennun and P. Njoroge. 1999. Nature Kenya, Nairobi, Kenya. 318 pp., 69 line drawings, 58 maps, 97 tables. ISBN 9966-9921-1-1. £18.00 (paper).

Where are the important areas for on-the-ground conservation in Africa? At the Eighth Pan-African Ornithological Congress in 1992 in Burundi, BirdLife International launched an ambitious program to answer this question by identifying Important Bird Areas (IBAs) across the continent (Bennun and Fishpool 2000). IBAs are defined as sites holding: a) globally threatened species (IUCN 2000); b) species with restricted ranges ($<$50 000 km^2); c) ''biome-restricted'' species; or d) large concentrations of particular birds. Directories of IBAs have already been published for Egypt, Ethiopia, Madagascar, and Southern Africa (Botswana, Lesotho, Namibia, South Africa, Swaziland, and Zimbabwe). *Important Bird Areas in Kenya* is the latest in the series.

This book is a gem. It demonstrates both how much and how little we need to do to implement conservation in the country, and in the tropics generally. The difficulty of the task is determined by its human dimensions. Kenya's human population growth has fallen to 2.7%, but absolute pressure is high with ~25 million people concentrated in the fertile highlands and coast (only 20% of the country). Further, the institutional capacity for conservation is weak, being divided between no fewer than ten government ministries, and hampered by the scarcity of resources for implementation. On the bright side, the task is eased by the concentration of species in relatively few sites. Kenya's IBAs cover only 10% of its land area, and nearly three-quarters of this 570 000 km^2 is already protected.

The layout of *Important Bird Areas in Kenya* is simple and easy to use. Its introductory chapters are comprehensive but not stolid, totalling 57 pages. The first eight pages are a summary, with two of text plus a full tabulation and clear map of the IBAs. This brevity is extremely important: the people in whose hands this book will do the most good are land managers and policy-makers with little time to read more than a page or two. The second section is a page of acknowledgments; that nearly a hundred individuals and a dozen institutions are credited is testimony to the amount of work that this book represents. The third section, of six parts, gives useful overviews: of the book, Kenya's geography, conservation issues, its ''institutional, legislative and policy framework,'' and a summary and justification of the selection of Kenya's 60 IBAs.

The sixth part, ''Priorities for action,'' concludes the introduction by classifying sites as ''critical'' (19 sites), ''urgent'' (18) or ''high'' (23). This classification is not an attempt to elevate importance artificially by making the lowest class ''high'' (in the manner of, say, the sizes of McDonald's fries), but instead implicitly designates the rest of the landscape as low priority. The classification system assigns scores for each site's risk and its importance for both birds and ''other biodiversity.'' Sites scoring highly in both categories are designated as the top priorities. I am unconvinced by the token inclusion of ''other biodiversity'' here or by the complex ranking system of the four categories used to define the IBAs in the first place. But no matter: I have no quarrel with the final prioritization of sites.

The bulk of the book is composed of accounts of each of the 60 sites, averaging three pages per site and ranging from a single page for the Masinga Reservoir (IBA 30) to no less than seven for the Tana River Delta (IBA 22). The layout of each account is logical, with a site description, discussions of the birds and of other wildlife, summary of conservation issues, and extensive bibliography (I was happy to see that references are also given in the text, where relevant). All sites are mapped; some together, all to a very high quality. Comprehensive tables for each site detail all of the species for which the site has been designated, along with all regionally threatened species (Bennun and Njoroge 1996). Each site is introduced with a very handy header, giving a logical code number, geographic center-point coordinates, province, district, extent (in ha), altitude, legal status, and the IBA categories of species represented (I was sorry not to see each site's priority ranking also given here). Five potential IBAs which only just fail to meet the criteria for inclusion are also briefly detailed.

Following the main accounts is an impressive reference section including little-known reports, popular literature, and extensive coverage of the scientific journals. Two appendices give the distribution by site of species triggering each of the four IBA categories and calculation details for the bird importance scores; and four indexes conclude the book: two of birds (by scientific and common names), one of other taxa (scientific and common names combined), and one of sites (by code and name). Overall the book is wonderfully easy to use, with very effective use of light blue shading to highlight important text. It is also lightened throughout by delightful line drawings (illustrating key species for nearly all sites) by Edwin Selempo.

Does *Important Bird Areas in Kenya* have any shortcomings? This sort of project is vulnerable to an overarching criticism: are these Important *Biodiversity* Areas? Or, more importantly, how well do the conservation priorities for birds represent species in other groups (Howard et al. 1998)? We can test this for Ken-

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ya using a dataset compiled at the Zoological Museum of the University of Copenhagen on the distribution of all African birds, mammals, snakes, and amphibians (Brooks et al., in press). As it turns out, IBAs represent Kenyan terrestrial vertebrate biodiversity extremely well, although the degree to which they represent plants and invertebrates, and biodiversity processes, remains untested. IBAs capture 1593 of the 1640 (97%) species occurring in the country, which is better than a random set of the same number of areas (which, based on 1000 repetitions, captures 1501 ± 82 of the country's species), and not much worse than a ''greedy'' set of areas which represent 1625 species in the same area. Further, IBAs represent all but one Kenyan endemic species (the gerbil *Gerbillus cosensi* from Ngamatak on the Turkwel River) and all but two globally threatened species (*G. cosensi*, and the bat *Taphozous hamiltoni* from the Kaitherin Hills).

A neat summary of the degree to which IBAs capture biodiversity more generally comes from Leon Bennun's own paper at the Tenth Pan-African Ornithological Congress. He compared Kenyan IBAs to conservation priorities for other taxa in the country, and classified IBAs into three categories as a result. The first are the *obvious*, sites clearly important for other biodiversity as well as birds, like Arabuko-Sokoke Forest (IBA 7). The second are the *overlooked*, sites which once discovered to be important for birds have also been seen to be important for other taxa, such as the Kinangop Grasslands (IBA 4). And the third are the *odd*, sites which although important for birds are of little importance more generally, exemplified by Nairobi's sewage facility at Dandora Ponds (IBA 35). Happily, it seems likely that a fourth category of sites not included as IBAs but nonetheless important for biodiversity—the *omitted*—is a small one.

There is little else to criticize with the book. Of course, a few typos have slipped through. Those that caught my eye include the omission of two dots from the priority matrix (both from the threat 2 row, one each from the biological importance 7 and 6 columns) on p. 51, and the designation of the coordinates for the Cherangani Hills (IBA 43), on p. 187, as south of the equator whereas they are actually north. The referencing is also not perfect, with some references given in the text but not listed, some mis-cited, and a few inconsistencies in the reference list format. The chaotic volume numbering for the *Journal of the East African Natural History Society* is a historical legacy, but it would have been possible to give logical volume numbers for their *Bulletin*, and very nice to have provided page numbers for the excellent series of *Research Reports of the Centre for Biodiversity, National Museums of Kenya: Ornithology*.

The trivial nature of these problems only serves to highlight the quality of this work. To conclude, if you have any interest whatsoever in African birds, or in conservation priority-setting, you simply must buy this book. As a practical example of how to select areas for conservation on the ground, it is unrivalled.—THOMAS BROOKS, Center for Applied Biodiversity Science, Conservation International, 2501 M St., NW, Suite 200, Washington, DC 20037, e-mail: t.brooks@conservation.org

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Important Bird Areas in Europe. Priority Sites for Conservation.—Melanie F. Heath and Michael J. Evans [eds.]. 2000. BirdLife Conservation Series No. 8, BirdLife International, Cambridge, U.K. 2 volumes, 1657 pp., numerous text figures, plates, and tables. ISBN 0-946888-36-1 (paper), 0-946888-37-X (cloth). £75.00 (paper), £99.98 (cloth).

Monumental is not really a term that comes easily to my mind. However, in this case, the description is inescapable. This is a truly monumental work. Comprising two volumes, over 1600 pages, masses of data, and hundreds of figures, tables, and plates, the book is a landmark in a series that is characterized by landmarks. There are now eight volumes in the BirdLife International Conservation Series. All have been extremely important works in international bird conservation. They include volumes on important endemic-bird areas, important bird areas in the Middle East, and key areas for threatened birds in the Neotropics. These are now joined by this two-volume set that identifies and describes all of the important bird areas (IBAs) in northern and southern Europe.

The task that the authors set themselves is staggering. Over 3600 sites in 51 countries are listed and described, their important bird populations quantified, and their protection status and conservation threats evaluated. Obviously, depth of treatment varies depending on the availability of site information. Some well-studied, internationally important sites in western Europe (e.g., the Wash Estuary in eastern England) may get almost a full foolscap-size page, while less well-known sites may get only a few lines. Regardless, each site is more or less thoroughly described in terms of the birds that make it important, and its conservation status and threats.

I carefully reviewed the information on several sites with which I am familiar in Scotland, England, and mainland western Europe and found the accuracy of the information presented to be generally high. There were occasions where I might have stressed the importance of bird populations not covered by the authors, and where a more in-depth treatment might have

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been merited, but these are small matters of taste and are to be expected from experts at individual sites who always want their area to get bigger headlines.

The site accounts comprise the bulk of the two volumes. However, preceding and subsequent to these are important analyses of major conservation issues that arise out of the data presented, focusing on identifying the most important regions and sites and also on a species-by-species basis (which areas and sites are most important for a particular species).

Who will use these volumes? First of all, they are not for the globe-trotting birder. If you are planning a birding trip to Europe, there are easier ways of identifying sites to visit than by lugging 10 kilos of paper around. The people to whom this work will be most valuable are conservationists, policy makers, regulators, conservation scientists, and planners. For these groups, these books are a major tool.

Do I have any criticisms of this work? Not really, except that (and this is more jealousy than criticism) it raises the bar very high for the rest of us. Having seen these volumes, I am going to be very aware just how much we are missing here in North America by not having their equivalent. If it can be done for a continent the size of Europe, with countries like, for example, many in the Balkans, where information is sparse, it can surely be done for North America. Any takers out there?—HECTOR GALBRAITH, Galbraith Environmental Sciences, 633 Furman Way, Boulder, CO 80305, e-mail: hgalbraith2@home.com

Birding in the American West.—Kevin J. Zimmer. 2000. Cornell University Press, Ithaca, NY. x + 402 pp., 74 photos, 34 text figures. ISBN 0-8014-3257-X. $49.95 (cloth). ISBN 0-8014-8328-X. $25.00 (paper).

This book is a revised and expanded edition of Zimmer's *The Western Bird Watcher* (1985; Prentice-Hall, NJ). Zimmer states that this is not a field guide or bird-finding guide, but a companion to those books, and I agree. He does an excellent job of providing a framework needed to develop bird-finding and identification skills, and gives information on habitat requirements and the identification of similar-appearing species beyond that in most field guides. My major criticism is the lack of references to important recent literature, some of which are in the Literature Cited below.

Chapter 1, Techniques of Finding Birds, discusses habitat requirements, ranges, and the seasonal dependence of birds. Zimmer illustrates these points by citing examples of bird-plant associations, such as the Golden-cheeked Warbler (*Dendroica chrysoparia*) and cedar (*Juniperus* spp.) on the Edwards Plateau of Texas, that should enlighten readers to the importance of recognizing habitats, as well as knowing ranges and seasons of occurrence, when looking for specific birds. Techniques used to lure birds into view, such as ''pishing'' and the use of tape recorders, are well covered, along with a lengthy discussion of birding ethics. This is information most long-time birders know, but is essential for beginners.

Chapter 2, Techniques of Identifying Birds, discusses structure, plumage patterns, and behaviors the reader should know when identifying birds in the field. Zimmer gives a detailed and well-illustrated listing of feather tracts and soft parts, and gives a clear account of molts and plumage sequences using the terminology developed by Humphrey and Parks (Auk 76:1–31. 1959). He also stresses the importance of preparation prior to going into the field, and gives a list of key characteristics of bird families occurring in western North America. By absorbing this information, and following Zimmer's advice, the beginning birder will become more competent, and the intermediate birder will better him- or herself.

Chapter 3, Keeping Field Notes, covers a subject rarely touched in popular birding books. Zimmer gives reasons for keeping a journal that should encourage most readers to do so, and using the format developed by Joseph Grinnell decades ago, details the type of information to include. Too few of today's birders maintain notes of this type, and as a result much information is lost. Some readers should be converted.

Chapter 4, Difficult Identifications: Beyond the Field Guide, takes up a major portion of the book (200 pages), and synthesizes current knowledge concerning the identification of many similar-appearing species groups. This is written to be used, primarily by intermediate birders, to supplement information in field guides, but most experienced birders should learn something. Species covered include groups such as the five loons *Gavia* and four longspurs *Calcarius,* and pairs such as the scaup *Aythya marila* and *A. affinis* and meadowlarks *Sturnella.* Zimmer obviously knows these birds and the pitfalls facing those attempting to identify them. However, he also wisely gleaned tidbits from many of America's most talented field observers, and incorporated these tidbits into this chapter. Zimmer states that his selection of the species or groups is arbitrary, and this is evident when going through the chapter. I believe an in-depth discussion on separating Long-billed Murrelet (*Brachyramphus perdix*) from Marbled Murrelet (*B. marmoratus*) would be ideal for this chapter. However, it is barely touched upon within the discussion of Kittlitz's Murrelet (*B. brevirostris*) identification; in addition, Mlodinow's (1997) article on the subject is cited within the ''where to find'' account for Marbled Murrelet as if it were a last-minute addition. Maumary and Knaus's (2000) well-illustrated article on the subject is not cited.

Zimmer lists a number of books dealing with the identification of specific groups of birds, such as Grant's 1986 book on gulls, as essential reading for birders interested in in-depth identification. However, Olsen and Larsson's (1997) excellent book on jaegers is not among them, nor is it cited within the section on jaeger identification.

Chapter 5, Finding the Western Specialties, details the status, distribution, and habitat requirements of about 270 species considered by Zimmer to be restricted to, or most easily found, in western North America. These species range from such widespread birds as the Clark's Nutcracker (*Nucifraga columbiana*) and Cactus Wren (*Campylorhynchus brunneicapillus*), to those with very restricted ranges such as the recently split Gunnison Sage-Grouse (*Centrocercus minimus*) and the Colima Warbler (*Vermivora crissalis*), and casual stragglers such as the Plain-capped Starthroat (*Heliomaster constantii*). Specific locations are given for spe-

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cies with restricted ranges. The statement that the Tamaulipas Crow (*Corvus imparatus*) is common at the Brownsville Dump was true until recently, but readers should be aware that numbers have been declining, and it was absent last winter.

The Appendix is a list of species mentioned in the book, along with their scientific names. The Bibliography consists of just over six pages, with most of the citations pertaining to identification. However, it includes only half a dozen or so more recent than 1996, and omits works such as that on Baird's Sparrow (Jones et al. 1998), dowitchers (Chandler 1998) and Thayer's Gull (Garner and McGeehan 1998), which contain information that would add to Chapter 4.

I am generally impressed with this book, and believe it offers something for virtually all birders from the novice to the expert. I find no obvious errors. However, it appears there was a delay between the completion of the manuscript and publication. This results in some minor criticism, but I remain convinced that it is a good companion to the popular field guides and bird-finding guides. I recommend it to all birders.—GUY McCASKIE, San Diego Natural History Museum, P.O. Box 121390, San Diego, CA, 92112, e-mail: guymcc@pacbell.net

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Birds of Delaware.—Gene K. Hess, Richard L. West, Maurice V. Barnhill III, and Lorraine M. Fleming. 2000. University of Pittsburgh Press, Pittsburgh, PA. xvii + 635 pp., numerous black-and-white illustrations, graphs, tables, and distribution maps. ISBN 0-8229-4069-8. $65.00 (cloth).

Located along Delaware Bay and the Atlantic coast, the state of Delaware's significance for bird conservation has been well established for decades. The extensive tidal habitats and marshes bordering Delaware Bay host shorebird and waterbird populations of hemispheric importance, and protecting these populations has become an urgent conservation priority in recent years. Other habitats found in the state vary from barrier beaches to dry coniferous woods on the coastal plain and mesophytic communities along the Piedmont in the north, allowing a diverse avifauna to prosper within a small geographic area. Ornithologists and birders have actively studied birds within the state for more than a century, but surprisingly, no single reference has provided a complete summary of the status and distribution of the state's birds until publication of the *Birds of Delaware.*

This book initially was intended to be only a breeding bird atlas, but its scope was later expanded. The format of *Birds of Delaware* is similar to other state bird books. The first chapter briefly summarizes the physical features, climatological data, and vegetative communities that are essential for understanding the state's patterns of avian distribution. Two introductory chapters describe avian conservation and the history of ornithology within Delaware, while another two are devoted to the breeding bird atlas methodology employed in Delaware and understanding the atlas results presented in the species accounts. Most of the book is devoted to these species accounts, describing the status and distribution for the more than 400 species reported within the state's boundaries. The appendices describe in detail some of the data sources used in the species accounts, summarize information on population trends, and estimate the sizes of statewide breeding populations for each species.

For many species the primary emphasis of the accounts is the results of the Breeding Bird Atlas project conducted between 1983 and 1987. These atlas data are the strength of this book. For each breeding species, the atlas results are described in detail and accompanied by maps exhibiting statewide patterns of distribution and relative abundance. This information is placed within the context of the species' historic breeding status and distribution, which for some species extends back into the early eighteenth century. Each account contains summaries of the breeding habitat preferences and chronology of nesting activities. However, this information is as likely to be gleaned from studies conducted outside of Delaware as from studies within the state, and its applicability to Delaware can be rather tenuous. Unfortunately, these atlas data are already 13 years old at the time of publication and updated in only a handful of accounts. Any changes in the status and distribution of the breeding species during the 1990s are poorly documented.

While all state bird books are out of date as soon as they are published, the absence of timely information is clearly evident in this book. The species accounts contain reports only through 1995, and a brief addendum hidden near the index highlights a few noteworthy rarities reported through 1997. Other data sources are even more out of date. Migration counts and estimates of Breeding Bird Survey population trends extend through 1991, while Christmas Bird Count summaries include data only through 1989. Hence, the *Birds of Delaware* effectively describes the status and distribution of birds as of the early 1990s rather than 2000.

A unique aspect of the *Birds of Delaware* is the eleven essays scattered among the species accounts, describing specific topics related to Delaware ornithology. These informative essays expand upon subjects only briefly addressed in the species accounts, such as Delaware's coastal impoundments and their birds, spring shorebirds on Delaware Bay, forest fragmentation and forest birds, birds and the law, and irruptive northern visitors to Delaware. These essays are not scientific treatises, but are aimed at a more general

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audience and at individuals unfamiliar with the state. This concept has merit and is worth emulating in other state bird books.

The species accounts also summarize status and abundance during the migration and winter seasons. This information is frequently condensed into single paragraphs for each season, although migration counts and banding information are used to complement field sightings for some species. Christmas Bird Counts provide much of the information for winter. To their credit, the authors provide citations for every report so that the original sources and observers can be independently verified.

Other aspects of the species accounts are disappointing. The authors included every species ever reported from Delaware, even those with no supporting documentation. More mystifying is the inclusion of species such as Eskimo Curlew (*Numenius borealis*), Red-cockaded Woodpecker (*Picoides borealis*), and others that have never been reported from the state. The authors' criteria for distinguishing between hypothetical reports and accepted records are subjective and inconsistently applied, as is their evaluation of the evidence that supports some of these reports. For example, my examination of evidence cited but not provided in this book indicates that a purported Three-toed Woodpecker (*Picoides tridactylus*) was actually an aberrant Hairy Woodpecker (*P. villosus*). The photos of the Mew Gull (*Larus canus*) pertain to a Ring-billed Gull (*L. delawarensis*), reflecting that the observer's doubts concerning this identification were ignored by the authors. Citing reports of accidental and vagrant species from the *Birds of Delaware* should be done with caution, and independent review of the supporting documentation is recommended.

The migration information is slanted toward the status of birds in the northern half of the state. Many species have different migration status and timing in southern Delaware, both in spring, when temperatures normally moderate more rapidly along the lower coastal plain, and in autumn when the passerine migration through coastal habitats differs markedly from their movements through inland locations. These regional differences are frequently poorly represented or sometimes dismissed as inaccurate simply because they do not conform to observations from northern Delaware.

The information for some species complexes does not reflect current bird identification standards. For example, no effort was made to distinguish the seasonal differences in status and distribution for dowitchers (*Limnodromus* spp.) and jaegers (*Stercorarius* spp.). The migration status of *Empidonax* flycatchers is based largely on specimen and banding data, ignoring the fact that many individuals are safely identified in the field with appropriate caution. Some valid reports were unfairly dismissed, such as October records of Semipalmated Sandpipers (*Calidris pusilla*), which regularly linger into the third week of the month.

The limitations of this book are significant, especially the information during the nonbreeding seasons and the inconsistent treatment of accidental and vagrant species. Some accounts accurately reflect the current status of species in Delaware, but others do not. The *Birds of Delaware* summarizes a considerable amount of information on the state's avifauna, but unfortunately provides an incomplete and somewhat dated picture of statewide bird distribution patterns. Despite these limitations, this book will still prove to be a useful resource for anyone with an interest in the avifauna of the First State.—BRUCE PETERJOHN, USGS Patuxent Wildlife Research Center, Laurel, MD 20708-4038, e-mail: bruce_peterjohn@usgs.gov

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