

BOOK REVIEWS

Handbook of the Birds of the World. Vol. 4: Sandgrouse to Cuckoos.—J. del Hoyo, A. Elliot, and J. Sargatal [eds.]. 1997. Lynx Editions with Birdlife International, Barcelona. 679 pp., 70 color plates, 236 color photographs, 837 distribution maps, 13 figures and tables. ISBN 84-87334-22-9. \$185.00 (cloth).

The fourth volume of this ambitious work (here after referred to as HBW) has appeared no more than 5 years after Volume 1. This is an impressive feat. Positive comments by reviewers of earlier volumes (F. M. Gill, *Condor* 96:566–567; J. R. Jehl Jr., *Condor* 100:405–406) are equally valid for Volume 4. These are spectacularly elegant books with a substantial amount of information. At the time of his review, Gill noted that the editors were not well-known ornithologists, but that this work would take care of that. This is certainly true. For Volume 4, Josep del Hoyo, Andrew Elliot and Jordi Sargatal enlisted the help of a number of notable ornithologists with experience on specific groups. The groups covered include sandgrouse (E. de Juana), doves and pigeons (L. F. Baptista, P. W. Trail, and H. M. Horblit), parrots (I. Rowley and N. J. Collier), cuckoos (R. B. Payne), and turacos (D. A. Turner).

The sections introducing families are long and well-written. They discuss topics ranging from systematics to conservation. The species accounts are concise yet informative (all behavioral information is presented in the introductions). I found at least one error in the introductory section on parrots. Pesquet's Parrot (*Psitrichas fulgidus*) of New Guinea is described as being unique in the order because it possesses a "flap, flap, glide" flight pattern that resembles a Black Vulture (*Coragyps atratus*); yet, the Red-fan Parrot (*Deroptryx accipitrinus*) of Amazonia also flies in this manner. Such errors are rare.

I agree with Gill's criticism that the value to the scientific community is diminished somewhat by including references only at the end of species accounts and family introductions and not within these sections. Thus, even though the material referenced is impressively current, the reader has no easy way to check primary sources of information. This practice is hardly original to this project. It also was used in Austin and Singer's classic work *Birds of the World* (Golden Press, New York, N.Y., 1961). To no small extent, it was frequent perusal of that text and Arthur Singer's illustrations that convinced me that I wanted to pursue an ornithological career working outside the U.S., and any one of the HBW volumes will have similarly strong potential to spark someone's interest in the world's avifauna. Because the groups covered in this volume include some of the most varied and colorful avian families, this volume is particularly appealing in terms of simply marveling at the plates and photos.

I do have a basic philosophical difference with the authors that many readers may not agree with. Volume 4 begins with an elegantly illustrated Forward on species concepts written by Jurgen Haffer. Reading this Forward reminded me that HBW is yet another mag-

nificent homage to the arbitrary designations of polytypic species under the Biological Species Concept, and to me this is a flaw. Adherents to the BSC will rejoice, but as I read Haffer's Forward and his discussions of superspecies and subspecies and then flipped through the wonderful plates, I could not help but worry about what the application of this arbitrary taxonomic concept will mean to many populations of birds in the long run. Haffer denigrates the Phylogenetic Species Concept (PSC) as an alternative to the BSC because "no attempt is made to express taxonomically the hierarchy of increasingly differentiated geographical representatives." Yet to me, this volume illustrates why the PSC is more appropriate than the BSC.

Throughout the Forward, Haffer acknowledges the subjectiveness of each of the taxonomic levels that accompany the BSC. The problem is that this subjectivity implies an understanding of evolutionary relationships that all too often does not exist and, at worst, is actually misleading. Reconstructing evolutionary relationships requires phylogenies (trees) not just taxonomy. For example, in discussing the "superspecies" of *Pipra* "coronata" manakins, Haffer excludes two species (*Pipra caeruleocapilla* and *P. isidorei*) that belong in this group based on phylogenetic studies (Prum 1992, *Am. Mus. Novitates* 3043). There also are apparently different kinds of superspecies. In one example from the main species accounts, the lorikeet *Trichoglossus euteles* is called a member of a "broad" superspecies. Because the same can be said for species and subspecies, we are confronted throughout the volume with similar arbitrary taxonomic treatments of geographically separated populations.

I do not mean to imply that the PSC would make all issues of species limits clear-cut, but I do believe that the treatment it would provide would be far more honest about our knowledge of hierarchical relationships at the tips of the avian tree. I also believe that, in the current climate of "splitting," species status is now allotted to some populations under the guise of the BSC, when the concept that is actually being applied is the PSC; the "splitters" just do not admit it. For instance, I was pleased to see that a distinctive population of Monk Parakeets, endemic to central Bolivia, is recognized as a species (Cliff Parakeet, *Myiopsitta luchsii*) in HBW. According to the species account, these birds are distinct from other populations of Monk Parakeet (*M. monachus*) in their morphology and nesting habitat (cliffs as opposed to trees). These differences apparently fit with Haffer's description of what constitutes good biological species in a situation where the populations in question are allopatric (even though there is no information on ability to interbreed), but throughout the volume, such decisions are made in some cases and not in others. For instance, these same kinds of differences occur in distinctive "subspecies" of Band-tailed Pigeon (*Columba fasciata*). Surely the cloud forests of the Andes, where morphologically distinct populations of *C. fasciata* occur, are sufficiently distinct from the conifer/oak forests of Central Amer-

ica and western North America under this approach to warrant designating these populations as different species (the PSC would certainly do this).

In another case, two populations of *Pionus* parrots (given species status by Forshaw, *Parrots of the World*, 1989, Landessdowne Editions, Melbourne, Australia), that are quite distinguishable and allopatric, are lumped together into *P. tulmultuosus*. The explanation is that differences are "slight and superficial;" yet species status is given to the Veracruz Quail-dove (*Geotrygon carrikeri*) from the Sierra de las Tuxtlas in Mexico. In this case, we are told that a primary reason for separating it from its presumed sister taxon, the Purplish-backed Quail-dove (*G. lawrencii*) is that the closest population of *G. lawrencii* occurs 1,500 km away. Greater distances separate morphologically distinct populations lumped under the biological species, Maroon-faced Parakeet (*Pyrrhura leucotis*). Upon finding examples of such arbitrary decision-making beautifully depicted on almost every plate, I can only conclude that a primary goal of the BSC is to guarantee that taxonomic decisions will not be applied similarly across lineages. Is this a useful or desirable outcome of our taxonomy?

In his review, Gill lauded the sections on conservation that are found in each species account (which are based on Bird Conservation International's Red Data Books), and these are a great addition to a general description of each of the world's biological species; however, readers should remember that, even though the conservation status of some subspecies may be mentioned in an account, conservation efforts outside developed countries focus almost exclusively at the species level. Determining the conservation status of biological species clearly has been useful from a global priority-setting perspective, but I believe it may fail at the level of regional conservation. My guess is that for the people of islands such as Tanahjapea, Kalao, Kalamatoa and the southern Moluccas, the Mauritius Pink Pigeon (*Nesoenas mayeri*) might not be as high a conservation priority as their own distinctive and endemic populations of Pompadour Green-Pigeon (*Treron pompadora aromatica*), but given that these constitute only a subspecies under the BSC, there might be little notice if populations dwindle. I had been using the population now called the Cliff Parakeet (*M. luchsi*) as an example of where the BSC failed to recognize a distinctive locally distributed population endemic to Bolivia. Now thanks to an arbitrary decision to give it biological species status, it will receive more attention. However, I do not consider *M. luchsi* to be any more distinctive (or diagnosable) than many other populations of other biological species that are part of this volume. Many of these populations are locally distributed and, if not currently in need of conservation action, certainly warrant monitoring in the decades to come.

To conclude, I would urge every ornithologist with an interest in birds of the world to find a way to have access to this beautiful volume and the entire set. However, as you are enjoying learning about these birds and gazing at the wonderful plates and photographs, keep in mind that many distinctive subspecies depicted may receive little protection when it comes to national conservation legislation. There is no doubt that we

have our hands full protecting all the biological species in the world, but continued use of such an arbitrary species concept would be an unfortunate excuse to explain why a distinctive population slipped through our fingers into extinction.—JOHN M. BATES, Department of Zoology, The Field Museum, Roosevelt Road at Lake Shore Dr., Chicago, IL 60605-2496, e-mail: jrbates@fmnh.org

Endemic Bird Areas of the World: Priorities for Biodiversity Conservation.—Alison J. Stattersfield, Michael J. Crosby, Adrian J. Long, and David C. Wege. 1998. BirdLife International. Cambridge, U.K. BirdLife Conservation Series No. 7. 846 pp., 10 color photographs, 6 color maps, 189 black-and-white photographs, 211 halftone maps, 20 halftone figures, 333 halftone tables. ISBN 0-946888-33-7. \$60.00 (paper).

Six years ago, the International Council for Bird Preservation summarized their Biodiversity Project in the ground-breaking *Putting Biodiversity on the Map* (ICBP 1992). The project had compiled 51,000 locality records for the quarter of the world's terrestrial bird species which have "restricted-ranges" (less than 50,000 km²). By calculating overlap between these ranges, the authors were able to map hotspots of biological endemism, termed "Endemic Bird Areas" (EBAs). This was the first ever quantitative global map of endemism.

The publication met with widespread acclaim from conservation biology, and its summary data were extensively and successfully used. In 1994, in recognition of its importance, *Putting Biodiversity on the Map* received the prestigious Amsterdam Prize for the Environment. But in some ways the document left ornithologists hanging. We did not know which birds were where! Now, one name-change later, BirdLife International has produced the encyclopedic *Endemic Bird Areas of the World*. Our wait has been well worthwhile.

The EBA approach is straightforward and powerful. Many species have small ranges, and, because these species' ranges are limited for similar reasons (for example, by the ocean around an island or the lowlands around a mountain), they often overlap. Birds are the best known of all taxonomic groups, and so it is a possible—although still awe-inspiring—task to pinpoint exactly where these species with small ranges are found. If we know the localities, we should be able to conserve a large proportion of the world's birds in a small amount of its area. Hopefully, high levels of avian endemism will be reflected in high levels of endemism in other taxa, and so by protecting EBAs we will be protecting much of biodiversity. Stattersfield et al. tell us not just where these EBAs are but also exactly which endemic birds they contain, how important they are, and what conservation measures they require.

The structure of the book is simple. It opens with an appropriate dedication to Robert Wallace, a long-time supporter of the Biodiversity Project, and with a succinct and enthusiastic foreword by Her Majesty Queen Noor of Jordan. The acknowledgments run to four pages and more than 500 names, testimony to the degree of collaborative research involved in the project. Seven fairly short introductory chapters follow,

detailing the background and methods of the project, and presenting some key analyses and recommendations for an EBA-based conservation strategy.

The mechanics of defining the EBAs are familiar from ICBP (1992). Restricted-range species are defined as those 2,623 species with breeding ranges of less than 50,000 km² since 1800. Waterbirds are excluded, but 62 recently extinct species are sensibly included. Taxonomy generally follows Sibley and Monroe (1990). EBAs are defined as the 218 areas encompassing the total range of at least two restricted-range species. Overlap between potential EBAs is resolved by the simple rule that separate EBAs must hold more endemic restricted-range species than they share. Stattersfield et al. also establish a new category of 138 "Secondary Areas" which hold one or more restricted-range species but have less than two endemic restricted-range species. These areas account for the 5% of restricted-range species not occurring in any EBAs.

Useful summary statistics of the Biodiversity Project database are given from three perspectives. First, restricted-range species are analyzed by taxonomic affinities, habitat types, and threat status. Second, EBAs are analyzed by distribution, size, uniqueness and threat. Third, the distribution of and threat to restricted-range species and EBAs are analyzed by country. The most dramatic of these analyses is a synthesis of habitat loss across the EBAs. Half of the EBAs have lost more than half of their area. Thus, while historically 20% of the world's birds were concentrated into 2% of its land area, today they are concentrated into a mere 1%.

Endemic Bird Areas of the World next ranks EBAs by conservation priority. As in ICBP (1992), Stattersfield et al. base this on biological importance and current threat level, each ranked critical, urgent, or high. However, they update the methods of calculating these criteria. The final rank order of EBAs is fairly similar to that of ICBP (1992), although there are some notable differences. Perhaps most obvious is the change in rank of the critical EBAs. Of the 12 EBAs ranked critical for both criteria in 1992, Stattersfield et al. retain only three, instead adding four different EBAs to this group.

The rest of the book's text outlines the relevance of EBAs to conservation. EBAs are shown to cover the ranges of threatened birds very well: 74% of the species listed in the *World List of Threatened Birds* (Collar et al. 1994) have restricted-ranges. Congruence between EBAs and centers of endemism for other taxa is discussed (rather briefly) and shown to be variable but high. The role of EBAs in global conservation is assessed, with particular reference to the Convention on Biological Diversity. Finally, regional introductions map and summarize EBA data on the continental scale.

The bulk of the book (two-thirds of its length) is devoted to the EBAs themselves. This is a treasure trove of information, and is the crowning achievement of the Biodiversity Project. EBA accounts average 2.5 pages each and range from 1 page (e.g., 069 Fernando de Noronha) to 8 pages (078 Atlantic forest lowlands). A useful header summarizes data for the EBA and maps it in its regional context. Most accounts give a detailed map of the EBA, and all give a table detailing

status, altitude, and habitat of its restricted-range species. Many of the sections for more heterogeneous EBAs also have additional tables for distribution patterns of species within the EBA. The text is divided into three sections, covering the geography, species, and conservation of the area. Following the EBA accounts, another 25 pages detail each Secondary Area with one paragraph per area.

The book is concluded with five appendices, the first two of which are very long. Appendix I is a systematic list of all restricted-range species, noting range, EBAs, habitat, and threat to each. Appendix II presents summary information and species lists by country for all nations holding EBAs. The final three appendices document changes between ICBP (1992) and this publication, and note other studies that have used the Biodiversity Project's data. The book is concluded with an extensive reference list and an index of scientific and common names of all restricted-range species.

It is not easy to find anything to criticize in *Endemic Bird Areas of the World*. I found a few very minor printing (e.g., the displaced table on p. 129) and typographic (e.g., "Moluku" on p. 32) errors. It might have been worthwhile to include in Appendix I the taxonomic data used to calculate biological importance scores. One could raise questions as to the EBA approach. Why were EBA boundaries drawn here and not there? Why was this particular taxonomic decision made? Why does the priority ranking of EBAs differ from ICBP (1992)? How much do gaps in our knowledge affect the approach? Do EBAs really reflect hotspots of endemism for all biodiversity? But these questions actually reflect the strength of the book in directing research priorities. Stattersfield et al.'s aim is to detail which of the world's birds have restricted-ranges, and where they are found. They do this admirably.

What is the next step? This incredible dataset is now in our hands—it is the responsibility of ornithologists worldwide to put it to use. I anticipate that the book will inspire an avalanche of research publications and symposia, but the real challenge will be to translate the priorities that Stattersfield et al. outline into meaningful conservation. I give the book the highest recommendation to anyone with an interest in biodiversity, from academic evolutionary biogeographers to applied resource managers, and it is an essential acquisition for all research libraries. In conclusion, I have no hesitation in saying that this is one of the most important contributions to global conservation ornithology ever published.—THOMAS BROOKS, Department of Biological Sciences, University of Arkansas, Fayetteville, AR 72701, e-mail: tbrooks@cast.uark.edu

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American Bird Conservancy's Field Guide to All the Birds of North America: A Revolutionary System Based on Feeding Behaviors and Field Features.—Jack L. Griggs. 1997. Harper Collins Publishers, New York. 400 pp., range maps, 172 color plates, 7 color digital illustrations. ISBN 0-06-273028-2. \$19.95 (vinyl).

This guide does not have all the birds (some accidentals are missing), but it is unusual among field guides in that it is sprinkled throughout with bird conservation information. However, the main contribution of this inch-thick (2.5 cm) volume with its $4 \times 8\frac{1}{2}$ inch (10×21.3 cm) pages lies in its attempt to be the most functional field guide on the market. Everything from the vinyl cover and plastic-coated pages to the large bird drawings and the two-step hierarchical key used to direct the reader quickly to the proper group of species is aimed at making the book better under field conditions than other field guides. Unfortunately, this aim also contributes heavily to its shortcomings, which prevent it from being an above-average guide.

Though its utility remains untested, the hierarchical key is particularly innovative: first one determines whether the bird one is viewing is a pelagic bird, a nonpelagic waterbird, a perching bird (in the behavioral, not taxonomic, sense), or a nonperching landbird. Next, within the selected group, one tries to match the shape of the bird to be identified with a symbol (called an icon) located on the book's inside covers. These icons are cross-referenced to a particular key number that marks the beginning of the illustrations of the birds with the selected shape. The key number is used in place of page numbers and consists of pairs of pages with bird drawings that face each other. Each pertinent key has the icon corresponding to this shape reproduced in the margin near its bottom, so that one leafs through the keys with the proper icons in the margin until finding the bird in question. In theory, the result is a fast way of locating the illustration in the book that matches the bird seen in the field without the need to know any taxonomy. The system seems directed at novice birders who may not know a coot from a grebe. However, such birders may also have trouble telling a nonperching landbird from a perching bird or even sometimes a landbird from a waterbird.

Each group of icons is given a name that refers to either some habitat or anatomical feature. For example, perching birds are grouped according to bill shape: fly-catching, curved, straight, and conical bills. Each of these groups is introduced in the text by one to three pages of material about their behavior, ecological needs, and conservation.

Following each introduction are the keys which contain, besides the bird illustrations, the range maps and explanatory text. The attractive bird paintings take up the top 50–60% of each key, providing considerably larger illustrations than most other guides. The text begins below with some introductory identification notes that discuss distinguishing the birds in the key from each other. This is followed by individual species accounts. They consist of a very brief description of the bird's abundance and habitat (and sometimes conservation issues) followed by a brief discussion of its

field identification. Range maps are provided immediately to the left of each account.

As in most field guides, the range maps are to be taken with a grain of salt. The illustrations for the most part are better than the text. The large attractive figures generally show even subtle details, and for most species an adequate range of plumages is given. For example, the Pacific Coast, mountain, and eastern forms of the Fox Sparrow (*Passerella iliaca*) are each illustrated, and for the Solitary Vireo (*Vireo solitarius*), the subsequently split Cassin's (*V. cassinii*), Plumbeous (*V. plumbeus*), and Blue-headed (*V. solitarius*) forms are illustrated. However, only one race of Song Sparrow (*Melospiza melodia*) is shown and the Asian subspecies of the Marbled Murrelet (*Brachyramphus marmoratus*), which is casual in North America and now considered a separate species (Long-billed Murrelet *B. m. perdix*), is missing. The illustrations contain some errors as well, e.g., Baird's Sparrow (*Ammodramus bairdii*) has a malar stripe and breast streaking typical of a Savannah Sparrow (*Passerculus sandwichensis*), and the "immature" Cerulean Warbler (*Dendroica cerulea*) most resembles a female with faint back streaking (which females lack).

The text is reduced to a series of blurbs that do not always have room for a full discussion of identification intricacies. Key 152, for example, treats the *Carpodacus* finches (excluding the Common Rosefinch *C. erythrinus* which is treated separately in a section on "Arctic birds"), redpolls, and the Brambling (*Fringilla montifringilla*). The key is fairly well illustrated, but the text is poor. For the *Carpodacus* finches, it fails to discuss variations in underpart streaking that could lead to misidentifications. Other marks such as differences in the contrast of the upperpart streaking, and differences in bill shape are not even mentioned, although they are illustrated. The redpolls suffer from a similar problem. Hoary Redpolls (*Carduelis hornemanni*) are said to be identifiable by their lack of streaks on the rump and undertail coverts. However, some streaks are sometimes present in those areas on Hoary Redpolls, but this is not mentioned, and the reduced flank streaking in Hoarys is not discussed. For the Brambling, the text omits all discussion of identification, leaving the reader to rely on the two reduced-size drawings that are provided.

Sometimes the text and illustrations contradict each other. There are two contradictions in the case of the Prairie Warbler (*Dendroica discolor*), for example. Here all Prairie Warblers are said to have white undertail coverts, while in the illustrations, they are portrayed as being white in the "female" and the "immature," yellow in the "male." Also, although the "immature" and "male" are shown as having distinct wingbars, in the text they are said to be lacking in the immature. Instead, the "female" is drawn with indistinct wingbars. Actually all Prairie Warblers have yellowish undertail coverts, and the wingbars range from inconspicuous in immature females to where the anterior wingbar is prominent and the posterior wingbar is fairly inconspicuous in adult males.

Incredibly, the book's introduction section is in the middle of the book (after Key 62). Because the book has no Table of Contents, it not only makes finding

this section very time consuming, but leads the reader to believe that it does not exist. The introduction explains how the book is organized, the interpretation of range maps, the terminology used in the text, and includes a section on bird conservation. The part on bird topography lacks any figure illustrating the body of a bird (it contains figures of heads and appendages) leaving such terms as breast, belly, flanks, and rump undefined. Here is an innovation that should not be repeated.

All the Birds, contrary to the claim on the book's cover, is not the most useful guide available. The guide's best features, its durability, compactness, and esthetic appeal, are nice but not fundamental. The most important qualities are accuracy and thoroughness in presenting field marks, but this field guide has a substantial number of errors, and its text is excessively brief. Though all field guides have shortcomings, this one is no better than average, when compared with them. Because only the best guides deserve recommendation, I do not recommend *All the Birds*.—MICHAEL MLODINOW, Apt. E, 545 N. Gregg Ave., Fayetteville, AR 72701.

Atlas of the Breeding Birds of Maryland and the District of Columbia.—Chandler S. Robbins, Senior Editor, and Eirik A. T. Blom, Project Coordinator. 1996. University of Pittsburgh Press. Pittsburgh, PA. xx + 479 pp., 18 figures, numerous maps and drawings. ISBN 0-8229-3923-1. \$55.00 (cloth).

The Maryland and District of Columbia atlas is a fine example of what state atlases can be—would that states like my own Oklahoma could hope to produce such a document. Of course, small states in heavily populated areas have an advantage over us westerners in their ability to reach high coverage. The Maryland atlas project surveyed nearly all blocks (each one-sixth of a 7.5 minute USGS quad map), included mini-routes (similar to Breeding Bird Survey routes but only 15 stops long) in nearly every block, and in some cases recorded data by quarter blocks. Of all 1,262 blocks in the state, only 6 were not covered, and a total of 194 species were confirmed breeding in the state.

The Maryland atlas is similar in format to other state atlases, such as the recent *Missouri Breeding Bird Atlas 1986–1992* (B. Jacobs and J. D. Wilson, 1997, Missouri Department of Conservation Natural History Series No. 6) or *The Atlas of Breeding Birds of Michigan* (R. Brewer, G. A. McPeck, and R. J. Adams Jr., 1991, Michigan State University Press, East Lansing, Michigan). It contains an opening section of background information, coverage data, habitat maps, historical perspective, and conservation discussion, followed by species accounts for 201 species (8 species were not confirmed breeding, but 4 of these have been confirmed since 1987). Each species account is laid out on two facing pages, with text giving pertinent details of biology and breeding, dates of migration for migratory species, and conservation status. Fifty-four authors and co-authors wrote the species accounts, and the editors have done an admirable job of maintaining style and quality from author to author. In addition to the distribution map for each species, most accounts also include a comparison with historic data from the

Birds of Maryland and the District of Columbia (R. E. Stewart and C. S. Robbins, 1958, North American Fauna 62, Washington, D.C.). For 129 reasonably abundant species, contoured relative abundance maps also are given, based on the mini-route data, along with a graph showing trends from an analysis of Breeding Bird Survey data. The index in the back includes references to all species by common and scientific names, and to names of all species account authors and co-authors.

This atlas has one problem that some other atlases have had, in that its publication was long delayed (nine years) after the fieldwork was completed in 1987. This produces a historical document. It is no less useful than a current one would be, but nine-year-old maps do not necessarily represent the current status or distribution of the birds of Maryland. Breeding bird atlases are large projects, requiring much coordination among account writers, editors, data analyzers, and mapmakers, but nonetheless this long lag time produces a document that is less than up-to-date. Of course, once printed, all atlases will age, but it would be nice if they were once current.

This is a well designed and executed atlas, and would be a fine resource for those studying birds, their populations and distributions, and what may be causing changes in those distributions. This atlas provides an excellent baseline for studies comparing bird population changes in an area experiencing rapid development and growth of its human populations. And the atlas can have its fun side, too—it's an excellent resource for bird watchers and hobbyists.—DAVID A. WIEDENFELD, George M. Sutton Avian Research Center, P.O. Box 2007, Bartlesville, OK 74005, e-mail: dwieden@aol.com

Shrikes: A Guide to the Shrikes of the World.—Norbert Lefranc; illustrated by Tim Worfolk. 1997. Pica Press and Yale University Press, New Haven, CT. 192 pages, 16 color plates. ISBN 0-300-07336-4. \$35.00 (hardbound).

True Shrikes are an interesting family of birds that have attracted a lot of attention in recent years owing to their world wide declines and the campaign of the International Shrike Working Group. Thus, it is no wonder that one of its most prominent members has authored the book that offers us a glimpse into the complicated lives of these conspicuous birds. Norbert Lefranc is a well-known shrike biologist who has dedicated almost three decades in the field to their study. This comes through in the book and in the very unique way of presenting the reader with the biology of the True Shrikes.

I make it a point to keep writing "True" because in ornithological circles when we say only shrikes, we usually relate also to a whole slew of other genera (e.g., helmetshrikes *Prionops* sp., Vanga Shrikes, boubous and bushshrikes, *Laniarus* sp.). This is one of the few negative comments I have about the book. The author would have avoided a lot of confusion if they would have named the book—*True Shrikes of the World*—and this would then justify why they have included only 27 species in *Lanius* and two each of *Corvinella* and *Eurocephalus*. I agree that they have pre-

sented the reasoning well in the chapter on taxonomy and relationships, and yet suspect that the author will be criticized for the above mentioned.

The first chapter presents the reader with the controversies and complexities of this small but very similar family of birds—the Laniidae. In the second chapter the author has presented, in a very concise and polished manner, material relating to the various aspects of the biology of the True Shrikes. This is an especially difficult task if one takes into account that a lot of the shrike literature is not in English or French (the author's mother tongue) but in German, Russian, Japanese, Chinese, etc., and that very few of the species have been studied in detail. Truly a challenge to any author worth his ink! The chapter includes overviews of very diverse subjects such as morphology, plumages, molt, origins, present distribution, migrations and wintering areas, habitat, social organization and general behavior, food, feeding habits and larders, foraging behavior, nests, eggs and breeding behavior, aspects of population dynamics, population changes and their presumed causes, and conservation. Then there is an descriptive overview of the genera *Corvinella* and *Eurocephalus*, an introduction to the layout of the species accounts, and useful addresses, i.e., those pertaining to shrike research and conservation.

The next section of the book is comprised of 16 color plates. In general, Tim Worfolk should be congratulated for having caught the spirit of the shrikes. However, I personally prefer to see more biological detail included as background. In many a case, birds are presented on a gray background. It appears that the plates were drawn mostly for identification purposes only and not necessarily to please the eye of the general reader. The plates are uncluttered and present 6–8 birds per plate and make it easier to pick out details. The facing page of each plate has a short global distribution and habitat description and pointers for each of the birds depicted are described.

The remainder of the book presents species accounts for the 31 species that comprise the True Shrikes. The species accounts is comprised of sections dealing with general species identification, descriptions of the various sex and age related morphs, biometrics, distribution and status with range maps, geographical variations across the species breeding range, hybrids where they occur, movements (including migration, dispersal, and vagrants), molt sequences when known, when and how of vocalizations, habitats frequented on breeding grounds and in the wintering areas, behavioral "habits," the diet spectrum, breeding ecology, and finally a list of all the references used for compiling the species account. The bibliography at the end is exhaustive and includes about 600 references. The last two pages make up the index of scientific and English names.

Pica Press is to be congratulated for having put forward this book to the public. It differs from the previous publications of the same series (skuas and jaegers, woodpeckers) in that there is far more background information about behavioral and breeding ecology and conservation included, and the maps have their international boundaries marked. The latter has prevented a lot of guess work, and frustration, on the part of the reader.

This is a well-rounded, encompassing book on True Shrikes that will disseminate a lot of general information. However, it is not an exclusive guide to identification of the various morphs, hybrids, and freak occurrences of the shrikes of the world as the title may imply. I consider it an important addition to any researcher or institute that is even remotely addressing the subject of research and conservation of grasslands in general, and True Shrikes in particular. However, one must take into account that the book does not present the science behind the data and is intended for a more general audience.—REUVEN YOSEF, International Birdwatching Center in Eilat, P.O. Box 774, Eilat 88000, Israel, e-mail: ryosef@bgumail.bgu.ac.il

The Golden Eagle.—Jeff Watson. 1997. T & AD Poyser, London. xx + 374 pp., 2 color plates, 76 figures, 73 tables. ISBN 0-85661-099-2. \$49.99 (cloth).

It has been over four decades since publication of Seton Gordon's 1955 treatise entitled *The Golden Eagle: King of Birds*. This latest synthesis of information on Golden Eagles (*Aquila chrysaetos*) by Jeff Watson provides an excellent update on the state of our knowledge regarding the life history of this species. This information is presented in an informative, but easy to read style. Much information presented in the book is based on Watson's long-term research on Golden Eagles in the Scottish Highlands and Islands, but he also makes extensive use of the literature and his knowledge of research being conducted elsewhere throughout the species' range worldwide.

The book is organized into 22 chapters and 6 appendices, and is presented in a logical fashion. The volume is beautifully illustrated with black-and-white drawings by Keith Brockie and landscapes by Donald Watson. One color plate by Brockie and one by Watson also appears in the book. The early chapters introduce and define the scope of the volume, describe the species' field characteristics, morphology, size dimorphism, and taxonomy, identify the eagle's range throughout the Palearctic and Nearctic, and characterize habitats supporting Golden Eagles in Watson's Scottish Highlands study areas. Subsequent chapters focus in on various aspects of the behavior and ecology of Golden Eagles; including hunting behavior, food, nest sites, ranging behavior, nest spacing and density, and population estimates and trends. The reproductive biology of Golden Eagles is treated in the five succeeding chapters: pre-breeding season, eggs and incubation, nestling period, post-fledging period and independence, and breeding performance. The timing and pattern of molt is discussed briefly in Chapter 16. Chapters on movements and migration, mortality, threats, conservation, history and tradition, and further research complete the volume.

Use of published literature from throughout the Golden Eagle's range, plus presentation of comparative findings with other *Aquila* species, is one of the major contributions of this book. Virtually all previous volumes devoted to Golden Eagles have focused principally on presenting site-specific information gathered by the authors. Watson also relies heavily on information from eagles he studied in the Scottish Highlands; however, the additional data he presents on this

species, from throughout its range, provides a context for appreciating the ecologically diverse habitats within which it occurs and how it compares with other members of the genus *Aquila*. As a consequence, this creates some unevenness in treatment of different aspects of the Golden Eagle's life history, but this can be attributed more to the lack of available data than to any shortcoming on the part of the author.

As with all books published in this excellent series, the figures are presented in the body of the text; however, the tables are reported at the end of the book after the appendices and bibliography. From my perspective, having the tables at the end of the volume is inconvenient and may result in many readers not examining the tables at the time they are cited in the text (or at all, for that matter). If so, the excellent data summaries and syntheses from Watson's and other

Golden Eagle studies may be overlooked and not appreciated as much as is warranted. This difficulty is the result of the layout used for books in this series and is not unique to this volume.

Watson's thorough, yet very readable, synthesis of our current knowledge of Golden Eagles, makes this volume a must for anyone interested in a detailed account of this widely distributed, yet relatively little studied species. In my opinion, this book will be a valued addition not only to the libraries of colleges, professional ornithologists and raptor biologists, but to bird watchers, raptor enthusiasts, and others with a more avocational interest in learning about this remarkable raptor.—MICHAEL W. COLLOPY, Forest and Rangeland Ecosystem Science Center, Biological Resources Division, USGS, 3200 S.W. Jefferson Way, Corvallis, OR 97331, e-mail: collopym@fsl.orst.edu