



EDITED BY ROBERT M. ZINK

The following critiques express the opinions of the individual evaluators regarding the strengths, weaknesses, and value of the books they review. As such, the appraisals are subjective assessments and do not necessarily reflect the opinions of the editors or any official policy of the American Ornithologists' Union.

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The Birds of South America, Volume II. The Suboscine Passerines. – Robert S. Ridgely and Guy Tudor. 1994. University of Texas Press. Austin, Texas. xii + 814 pp., 1,043 maps, 52 color plates. ISBN 0-292-77063-4. Cloth, \$85.00. – Although many visitors to the Neotropics are captivated by its gaudy tanagers, hummingbirds, motmots, and toucans, it is the suboscine birds that define the region for hardcore Neotropical field people. Thus, volume 2 treats what some would consider the soul of the Neotropical avifauna, namely the woodcreepers, ovenbirds, antbirds, tapaculos, tyrannids, manakins, and cotingas. This volume is dedicated to the memories of Eugene Eisenmann and Ted Parker.

The introductory sections contain the usual prefatory material-a guide to using the book, a list of species considered migratory, and a 13-page section on conservation that briefly outlines the plights of 83 species of suboscines. The heart of the volume is its 52 color plates by Tudor and 758 pages of species accounts. Each account contains four topics: "Description," "Similar Species," "Habitat and Behavior," and "Range," plus a range map. Some accounts also are followed by notes on species limits and rationale for new English names. No Spanish, Portuguese, or French names are included, and I support the authors' decision not to standardize these because this thorny topic should not be the job of those whose first language is English. Families and genera are introduced by useful paragraphs summarizing their natural history.

My major problem with this book (hereafter BSA) is that it has the veneer of a reference volume for ornithologists but the content of a field guide for birdwatchers. In trying to fill both niches, it cannot succeed.

First, let's consider BSA as a reference work. Although the authors make no pretense of producing a comprehensive reference, the book's phenotype nevertheless invites comparisons to such volumes from other regions. Its dimensions, even larger than volume 1, are similar to other reference works, e.g. *The* Birds of Africa, Birds of the Western Palearctic, and Handbook of Australia, New Zealand, and Antarctic Birds. However, BSA contains none of the data on the general biology of Neotropical birds that the works from other continents include. For example, species accounts in Birds of Africa have sections on food, breeding behavior, nests, eggs, laying dates, incubation, development of young, parental care, breeding success, mortality, measurements, body mass, and type locality. This information is not included in BSA, yet, most would consider inclusion of these categories as obligatory to be classified as a general reference work. Thus, many ornithologists will be disappointed in the narrow range of topics covered (essentially only the same short list of topics in a field guide), especially given the volume's ponderous size. Even the simple entry "no data" for a topic would have highlighted gaps in knowledge. In particular, BSA missed the opportunity to fill the biggest void in the literature in Neotropical ornithology, namely, whether a nest has been described for each species. The field-guide phenotype continues in the arrangement of species within many families into look-alike rather than taxonomic groups and the insertion of occasional bird-finding information (e.g. "can be found near the public pool at Brasília Nat. Park" for Philydor dimidiatus). Another disappointment to many ornithologists will be the skimpy bibliography of only approximately 245 titles (versus roughly 1,500 in Fry et al. [1988], which covers only 400 species). The small bibliography is partly a consequence of the few topics covered, the relatively small body of literature on Neotropical birds, and the partial citation of many papers omitted from the bibliography (a topic further developed below), but it is also partly the consequence of unambitious scholarship (see below). For example, Hilty and Brown's (1986) A Guide to the Birds of Colombia contains almost 700 references despite being "just" a field guide, and it covers a comparable range of topics over a more limited geographic area.

Although BSA's target audience might be birdwatchers, it is definitely not a field guide, not only because its weight and large dimensions limit drastically its use in the field, but also because only twothirds of the species are illustrated. The contrast between BSA and Hilty and Brown, the best field guide for anywhere in South America, is striking. BSA treats 1,047 species, and Hilty and Brown treat 1,695 species; both use Tudor's gorgeous illustrations. Whereas 706 species (68%) are illustrated in BSA, roughly 1,440 (85%) are illustrated in Hilty and Brown. In addition, virtually all of the species not illustrated by BSA are residents, whereas those not illustrated by Hilty and Brown are mostly widespread waterbirds and migrants from North America for which the absence of illustrations is of minimal importance. Whereas BSA weighs 2.3 kg (5 lbs), Hilty and Brown weighs 1.5 kg (3.2 lbs) and can actually fit in field gear.

So, the obvious question is, why is BSA so big yet deliver so little? Part of the answer, as noted by Rosenberg (1995), lies in the relatively large print, generous spacing between lines, and space-wasting format. The width of the between-margin section of each page is 14.5 cm, but only 10 cm (69%) is occupied by text. In addition, the left-most 4.5 cm is reserved for range maps, of which there usually are only one or two per page. Thus, large expanses of blank areas are left on each page, in some cases the entire left-most third. Wiser formatting, such as wrapping text around maps, probably could have reduced the number of pages by 50% or more, at substantial cost savings.

If neither a reference work nor a field guide, what is BSA? It is a compilation, but not a synthesis, of natural-history information that anyone interested in South American birds will find indispensable. A more accurate title for BSA would have been "Identification, Natural History, and Distribution of the Birds of South America." For the families treated so far, it provides the only up-to-date summary of natural history for South American species. The plumage descriptions and distributions, with range maps, are vastly superior to those of BSA's predecessor, Meyer de Schauensee (1970). BSA also provides the latest updates on the many taxonomic changes in South American birds, especially at the species level. For example, roughly 67 taxa treated as subspecies by Meyer de Schauensee (1970) or Traylor (1979) are elevated to species rank by BSA, and 12 other taxa treated as species by these same authors are demoted to subspecies. Thirteen new species described since 1979 also are included. Roughly 20 species are placed in different genera than they were by Meyer de Schauensee or Traylor. Of great value are taxonomic comments that point out potential changes in species limits or generic allocation in at least 83 species. These comments illustrate how much is not known about the taxonomy of South American birds, which, in my opinion, is the most valuable feature of BSA because of the research it should stimulate. BSA also regularly points out how little is known of the natural history

of many species, some of which are described as "unknown in life" (e.g. Cranioleuca muelleri and Thripophaga cherriei).

Even as a natural history compilation, however, BSA has defects. Foremost is the erratic nature of the literature citations. Although many observations in the species accounts are referenced, especially in the small-print "Notes" section, a substantial portion is not. Take, for example, the first species account in the text, Geobates poecilopterus. The species' sudden appearance at, and possible reliance on, recent burns are noted. Neither the observation nor the hypothesis is referenced, and so the reader assumes that both are original. However, a paper (Bates et al. 1992) in the "References" section contains both the observation and the hypothesis. (Additionally, BSA's description of the display flight omitted potentially important details reported by Bates et al.) Dozens of examples exist of information presented in the text without direct referencing. If future volumes of BSA are to be taken as serious scientific works, then I recommend that citations be provided for all information in the "Habitat and Behavior" section and for all new distribution information. I also recommend that all references should be full citations in the References section rather than abbreviated citations in the text for those references used just once or twice (this would help alleviate the conspicuous skimpiness of that section).

More serious are the cases in which the appropriate reference is not cited at all, as noted by Rosenberg (1995). For Siptornis striaticollis, BSA's text on "Habitat and Behavior" seems to paraphrase the only paper ever published on these topics (Eley et al. 1979), but the paper is not cited. The vocal description of the species is referenced to "J. W. Eley," without citing the paper in which it was described. The similarity in foraging between Cinclodes nigrofumosus and certain shorebirds noted by BSA had been studied by several authors (see Atkins [1980] and references therein), none of whom are credited. Likewise, the similarity in foraging behavior between Pygarrhichas albogularis and Sitta noted by BSA was discussed at length by Short (1969), but Short is not credited. Under Knipolegus aterrimus, BSA states that "The very isolated Brazilian population (franciscanus) may warrant full species status." Silva and Oren (1992) wrote a paper on precisely this, but they are not credited. The remarkable convergence between Knipolegus lophotes and Phainopepla nitens was discussed by, but not credited to, Willis (1976). These and many more examples give the unfortunate and certainly erroneous impression that BSA seeks to get credit for observations that should be credited to others. In other cases, BSA is clearly unaware that the reference exists. For example, the controversy over the nest structure of Poecilurus spinetails was laid to rest by Bosque and Lentino (1987). In addition, detailed studies of the natural history of many species seem to have been overlooked (e.g. Skutch [1969] on *Phacellodomus rufifrons*; Haverschmidt [1953] on *Sakesphorus canadensis*; Silva [1988] on *Formicivora grisea*; Théry [1990] on *Corapipo gutturalis* and *Pipra serena*; Smith (1971) on *Muscisaxicola*; E. O. Willis and Y. Oniki on various antbirds and woodcreepers; B. K. Snow and D. W. Snow on cotingas and manakins; R. M. Fraga on many Argentine birds; M. S. Foster on manakins; and A. Lill on manakins).

A more general problem is that BSA often overlooks important quantitative or synthetic papers directly relevant to topics covered. For example, anyone interested in the behavior of tyrannid flycatchers knows the importance of two papers by Fitzpatrick (1980, 1981) on foraging behavior and search tactics, which are often critical to field identification. Yet, neither paper is cited. The importance of dead-leaf searching as a foraging behavior in suboscines also is well known, but Rosenberg's (1990) paper is not cited. Behavior of antwrens is critical to their identification, but Wiley's (1971, 1980) and Pearson's (1977) studies are not cited. Finally, I was surprised that Munn's (1985) classic paper was not referenced somewhere because mixedspecies flocking is such a prominent feature of the social systems of Neotropical birds. In not citing these and many other quantitative papers, BSA missed the opportunity to synthesize this literature for readers who might not have easy access to it. Although no bibliography can ever be 100% complete, most readers will share my high expectations for a volume with the lofty title "Birds of South America." Given the difficulty that most South American ornithologists face in access to bibliographic resources, these readers in particular need to recognize that BSA does not provide anything close to a complete bibliography.

Another problem is the introduction of novel taxonomic changes with minimal explanation and no real analysis. Hopefully, ornithology has seen the end of the era of authoritarian taxonomic changes based on opinion and anecdotal information. Novel changes in species limits demand explicit analyses, or minimally, detailed outlines of the rationale for changes. At least 21 of the 79 changes in species limits presented by BSA are essentially "taxonomy by authority," with only a sentence or two of rationale provided. For example, the novel elevation of Pachyramphus xanthogenys to species rank is supported by the following: "Not only are their ranges widely disjunct, but their habitats are quite different." The habitat difference in this case is one of montane versus lowland woodland; however, numerous taxa currently treated at the rank of subspecies show this pattern, with lowland populations of southern South America represented in the Andes by different subspecies (e.g. Pachyramphus validus). Although the populations of almost all bird species consist of sub-populations that show a continuum of degrees of isolation, with no defensible conceptual thresholds along that continuum, BSA sometimes, as above, uses "disjunction" as a criterion for ranking taxa at the species level (e.g. *Cranioleuca dissita* on Coiba Island), but not in others (e.g. *Formicivora grisea* on Pearl Islands).

Although many of these changes probably are correct, I urge all those considering adopting such changes to consider carefully the philosophical consequences of accepting taxonomic changes documented only by anecdote or opinion. On the other hand, I sympathize with the predicament for BSA. Our current specieslevel taxonomy has been inherited from a generation of workers who, in retrospect, applied the Biological Species Concept too broadly given what we now know concerning the importance of vocalizations. Furthermore, many taxa once recognized as species were demoted to the subspecies level by these same workers without even an anecdote of published rationale. As a result, species-level biodiversity was exterminated by pen-strokes.

Another problem with BSA is the practice, continued from volume 1, of meddling with English names, most in use since at least 1966. BSA evidently cannot resist the opportunity to "improve" on English names, thereby preventing their stabilization. When will this process end? When will the name-meddlers recognize what everyone else already knows, that the never-ending quest for the "perfect" English name is pointless? Why not learn to live with a standard set of names, good ones and bad? If we can live, for example, with Philadelphia Vireo, Hermit Warbler, and Mountain Plover, then we can live with any name. In fact, the history behind incorrect English names is interesting in itself. For instance, see Farrand's (1992) account of how the Evening Grosbeak received its silly name. Yet, BSA provides new English names for at least 40 species. Shall we trust BSA to improve on English names? Let's consider two examples.

The unusual antbird Xenornis setifrons has been known as "Gray-faced Antbird," "Speckle-breasted Antshrike," "Spiny-faced Antshrike," and "Speckled Antshrike," with no English name clearly predominating or having a historical tradition. Thus, this is a case in which BSA could legitimately pick the "best" name. Ridgely and Gwynne (1989) used "Speckled" for the following reasons: "We favor continuing to use [Speckled], in part because the short black bristles at the base of the bill and below the eye are so inconspicuous, in part because Xenornis is the only antshrike with a speckled pattern." The BSA's stated preference for "Speckled" echoed these reasons, including describing the bristles as "virtually impossible to discern in the field" and with a slight modification from Ridgely and Gwynne (1989) "...because Xenornis is the most generally speckled of the antshrikes." Thus, although inconspicuousness of a feature is used to support the BSA name, it provided no deterrent in the case of changing the long-established name of Brownish Flycatcher (Cnipodectes subbrunneus) to "Brownish Twistwing," the twisted primaries of which are virtually impossible to discern in the field (and the bird itself is conspicuously brown). Even so, the bristles of X. setifrons may be inconspicuous, but Whitney and Rosenberg (1993) recently revealed their significance. They found that this antbird makes aerial sallies after prey, much in the manner of Thamnomanes antshrikes, which also have bristles around the bill (see Schulenberg 1983). Such bristles are typically associated with aerial foraging. Their presence in both Xenornis and Thamnomanes might represent convergence, or it might be another reflection of the close taxonomic relationship proposed by Whitney and Rosenberg (1993). Thus, the name Spinyfaced, invented by Wetmore (1972) and followed by the AOU (1983), calls attention to this important feature as well as mirroring the scientific name. Finally, Ridgely's claim that "Xenornis is the only antshrike with a speckled pattern," or even retreating in BSA to "the most generally speckled of the antshrikes," is open to question. First, the species isn't really speckled, which implies to most people a dotted or spotted pattern, but rather it is streaked. In fact, the written plumage descriptions in BSA itself use "streak" or "streaking" three times, but "speckled" not once. Likewise, the plumage descriptions in Ridgely's (1976, 1989) Panama guides, and all other literature I can find (including Chapman's type description), use "streaked" but never "speckled." How can "Speckled" be such a good name? Even so, some other antshrikes (e.g. Mackenziaena leachii and Hypoedaleus guttatus) have at least as much claim to being speckled, and female Thamnophilus nigriceps are almost as streaked.

A second example concerns Anabacerthia variegaticeps. This furnariid was known as "Scaly-throated Foliage-gleaner" for the first 75 years of this century, which seemed not to bother anyone. The species does indeed have a scaly throat. Then, the name was changed by Ridgely (1976) to "Spectacled Foliagegleaner." Since then, Middle American literature has mostly followed Ridgely (1976), whereas South American literature has not. BSA used "Scaly-throated" with the following explanation: "Because so many South American foliage-gleaners are equally 'spectacled' (even if few in Middle America are—this is why E. Eisenmann suggested changing A. variegaticeps's name in the first place), we favor the name Scaly-throated." Thus, not only has Ridgely retreated from his earlier invention, but he also "blamed" Eisenmann for "Spectacled," although Eisenmann himself (1955) used "Scaly-throated." Is there a lesson here for those preoccupied with "improving" English names?

These examples illustrate the perils of meddling with English names and the need for careful consideration of the new ones installed by BSA. The majority of these are probably slightly better than their predecessors, although often trivially or questionably so (e.g. Flame-crowned Manakin becomes "Flame-crested Manakin," Yellow-bellied Antwren becomes "Creamy-bellied Antwren," and Rufous-fronted Thornbird becomes "Common Thornbird"), and this will tempt other authors to adopt them. Consequently, English names will never stabilize, because there will always be future authors who believe that they can further improve existing names. It's time to take a stand and just live with the names we have, imperfect as they inevitably are.

My final complaint about BSA as a compilation of natural history concerns the form of the distribution maps. Those in BSA, like those in most books, use shading to indicate ranges. Although this technique may be appropriate for regions where distributions are well known, I believe that it should not be used for a region like South America. Use of shading to depict a range implies continuous distribution. Yet, in South America, we cannot be confident in the outlines of the ranges of most species, much less whether they are continuously distributed within them. My solution would be to depict known localities for a species with dots and then use shading to present hypotheses for the region within which it will be found to occur. Another advantage of plotting localities is that they could be coded for the quality of evidence that supports them (e.g. specimen, tape-recording, photo, or sight record). This would permit the reader to see, for example, that the "sympatry" between Hylexetastes uniformis and H. stresemanni portrayed by BSA is entirely the consequence of a single, almost certainly erroneous, sight record (see Haffer 1992). Although BSA is commendably conservative in use of sight records (and points out some examples of erroneous published ones), the reader is left unable to evaluate their influence on the distribution maps.

For me, the highlight of the volume is the spectacular artwork of Guy Tudor. The 52 plates are stunning. They convey the beauty and the oddity of the suboscines so well that they alone will inspire interest in birds of the region. Tudor's lively portraits are the sort that ornithologists and birdwatchers gaze at for hours, just wishing they could have the chance to study or see those birds.

My only complaint with the plates has nothing to do with the illustrations but with their labeling. Unfortunately, many books nowadays, BSA included, label individual birds on a plate with coded numbers and letters so that names or age/sex/subspecies information must be extracted from text on the facing page. Such a system is necessary when so many birds are illustrated that no room remains for full names; however, this is not the case for most plates in bird books, including at least three-fourths of those in BSA. Thus, the reader must spend considerable time making sure that names from the facing pages correspond with the codes on the plates, often making errors in the process. Because the purpose of the plates is to link visual images with names, this coding system impedes learning. Publishers who think that adding names next to the corresponding illustrations is not feasible need only consult any guide by Roger Tory Peterson. No matter how small the labels, they improve the utility of the plates dramatically.

In spite of these shortcomings, this volume (as well as volume 1) represent major advancements for South American ornithology. The authors are to be commended for the tremendous amount of work that went into their compilation of facts. However, the BSA volumes will become obsolete the day a true "Birds of South America" (in the sense of its analogs from other continents) appears. As a field guide, the BSA volumes simply don't work. Nevertheless, until a true reference work on the continent is published, and until all regions have field guides of the Hilty-Brown caliber, the BSA volumes will be extremely helpful and will find prominent places on the bookshelves of all those interested in South American birds.-J. V. REMSEN, JR., Museum of Natural Science, Foster Hall 199, Louisiana State University, Baton Rouge, Louisiana 70803, USA.

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Swifts: A Guide to the Swifts and Treeswifts of the World. - Phil Chantler and Gerald Driessens. 1995. Pica Press, Sussex, United Kingdom. 237 pp., 24 color plates, 62 figures, 8 tables. ISBN 1-873-403-31-3. Cloth, \$40.00.—This volume, treating 92 species of swifts and four species of treeswifts, is the latest monograph dealing with separate families of birds and the second by Pica Press. It is designed to be "first and foremost an identification guide." With this in mind, the bulk of the book consists of separate species accounts that concentrate on identification at the species level, distribution, range, and a detailed description of one subspecies. Also included in the species accounts are sections on movements, geographical variation (if any), voice (when known), habits, breeding information, measurements (when available), and references. The relatively brief introductory chapters are entitled "Relationships and Taxonomy," "Breeding Behavior," "Feeding and Ecological Separation," "Mortality and Predators," "Molt," "Flight," "Conservation," "Undescribed Species," and "Watching Swifts." The latter chapter emphasizes characteristics useful in identifying swifts in the field.

The authors have extracted information from 332 references, including some rather obscure sources and personal communications from various field observers. Some published sources appeared less than a year prior to publication of this book. Even so, some older references are inexplicably omitted, including several by M. A. Andrade on the nesting biology of *Streptoprocne biscutata*, although secondary sources are cited.

I found a troubling unevenness and a lack of consistency in several parts of the book that detracted from both its use and enjoyment. Text citations are provided in both the opening chapters and the species accounts for particular bits of information. These references sometimes appear in the more general citations provided at the end of each species account. Unfortunately, the sources of many intriguing statements and seemingly unique facts (e.g. the lack of pure white eggs in Alexander's Swift [Apus alexandri], and that some swiftlet nests are valued at \$1,200 per kg), are not cited in the text, although it would have been highly appropriate. On the other hand, one could question the need to cite a secondary source indicating that a published record of the White-collared Swift (Streptoprocne zonaris) in California had been accepted by the California Birds [sic] Records Committee. The terminal bibliography is a nightmare of inclusions and exclusions. Among other things, author lines include "et al.," titles are missing from two references, issue numbers are occasionally included, "Annon. 1988" is in fact Lasley and Sexton (1988), and Garrett is misspelled "Garnt" in both the text and bibliography. At least four references are not in the bibliography, if cited correctly in the text, and several that are listed in the bibliography did not appear to be cited in the appropriate places in the text. Further inconsistencies include the use of "du Pont" (correct) in the text and "Du Pont" in the bibliography, and the citation of papers by A. De Roo as "de Roo" alphabetized under "R." Most of these errors (and a number of others), could have been avoided by much more careful editing and proof-reading.

Many minor grammatical errors appear, particularly in the opening chapters. Factual errors abound in the section on flight, bespeaking an unfamiliarity with the avian skeleton and soft anatomy. The section on molt seems to indicate a much greater diversity of molt patterns in the swifts than I am prepared to accept at face value. A more general synthesis would have been appropriate. The molt terminology used adds nothing to clarity.

Range maps should be a strong point in an identification guide that deals with highly similar species that sometimes have restricted distributions. Unfortunately, the range maps in *Swifts* are not completely satisfactory. Ranges are shown by large shaded areas on some maps, whereas in others individual specimen localities are shown as dots, with outlying records depicted by an "x." The reasoning is not clear, because shaded areas are used for some species represented by fewer specimens than other species for which individual localities are shown. Arrows and circles are used to direct the eye to specific locations or smaller parts of the range, but the technique is applied inconsistently. At times, it is used when not really needed and omitted when it would have been helpful. The shaded areas on continental-scale maps frequently are broken up, implying discontinuous ranges, but I do not feel that our knowledge of the distribution of many of these species warrants the degree of accuracy implied.

Many swifts show a distinct greenish gloss in fresh plumage. This color changes with wear to a bluish or purplish gloss that eventually is lost (Collins 1968). Early writers failed to recognize this and incorrectly used differences in gloss as the basis for taxonomic separations, particularly at the subspecific level. This seasonal change in gloss is correctly noted in the species accounts for Hirundapus cochinchinensis, H. caudacutus, and Mearnsia picina, but is completely reversed in the account of Collocalia linchi. No mention is made of the color of the gloss in the account for Chaetura chapmani, even though the subspecies C. c. viridipennis originally was described largely on that basis (see Collins 1968). Furthermore, the bluish or purplish versus greenish gloss is included in the subspecies accounts for Chaetura brachyura, Collocalia esculenta, and C. linchi, implying that it is taxonomically useful. It is distressing to see these errors perpetuated in this work.

Species limits in the Apodidae, particularly in the highly similar cave swiftlets, often has been touted as one of the most perplexing in avian systematics. The authors take a middle road in picking and choosing, largely without comment, from among the recent treatments of the group by Sibley and Monroe (1990, 1993), Dickinson (1989a, b), and Browning (1993). One can hardly quibble with their choices, because much remains to be learned before a consensus list of species is produced. Regardless, the choice to follow recent treatments that have reverted to the inclusive genus Collocalia (but excluding Hydrochous) and not the separation of Aerodramus from Collocalia proposed by Brooke (1972), is unfortunate in light of recent mtDNA sequence analyses that support this separation (Lee et al. 1996). To continue separating Tachymarptis from Apus (contra Cramp 1985), and not following Parkes' (1960) review of subspecies limits in Hemiprocne comata, seem to me similarly unfortunate choices.

Despite a detailed review of several Neotropical Chaetura species presented elsewhere (Chantler 1995) and included here, Chantler and Driessens failed to notice the extreme plumage similarity of Chaetura egregia and C. spinicauda. This plumage similarity suggests a closer relationship between this species pair than between C. egregia and C. cinereiventris, a traditional view uncritically repeated here. The placement of the enigmatic Schoutedenapus somewhere other than in the Apodini is appropriate. Placing it in the Collocalini calls attention to basic structural differences between the Apodini and Chaeturini/Collocalini, meriting a review of the subfamily limits in the Apodidae. The continued separation of Hydrochous from the other swiflets is a wise choice in light of new information on its breeding biology (J. H. Becking pers. comm.).

Production of color plates for a group of birds largely characterized by shades of black and brown is daunting. Likewise, the accurate depiction of the nuances of wing shape and proportions, which may be critical to field identification, is a challenge that has been met, in my opinion, by only a few artists. The plates by Gerald Driessens generally are useful and may serve the goal of separation of species in the field. They are better than some currently in use in other identification guides. Unfortunately, Driessens shows an extreme backward curvature of the outer primaries of many species, particularly in *Chaetura*, which is not lifelike. Thus, I would not include these plates among the few that capture the real essence of these dynamic aerialists.

The trend to produce specialized guides and monographs on particular groups of birds will (and should) continue. Perhaps these works should be fully researched summaries of all aspects of the group, and not just identification guides, because they are unlikely to be taken into the field or on long trips. *Swifts* is not, and was not intended to be, a reference text. Accordingly, it will find a limited audience among only the globetrotting birding community. Even as an identification guide, it could have been done better.—CHARLES T. COLLINS, *Department of Biological Sciences, California State University, Long Beach, California* 90840, USA.

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The Auk 114(1):154-155, 1997

The Birds of Israel. - Hadoram Shirihai, 1996, Academic Press, San Diego, California. lxxxix + 692 pp., 96 color plates, 200 line drawings. ISBN 0-12-640255-8. Cloth, \$95.00.-For ornithologists, Israel is one of the most exciting countries in the Western Palearctic. Millions of birds from Europe and Asia migrate through the region to Africa in autumn and back again in spring. In addition, because Israel is the only land bridge between the three continents, many African species reach the northern limits of their distribution in this region, the Asian species their westernmost, and many European species their southernmost limits. To write a comprehensive book on so diverse and complex an avifauna requires a special kind of ornithologist. Just such a person is Hadoram Shirihai, who put the last seven years of his life on hold to write this monumental work. Further, he convinced the leading Israeli birdwatchers and scientists to team up and contribute their unpublished data and/or expertise and knowledge. The result is a unique book for the Middle East that caters to all levels of bird enthusiasts.

The two sets of 96 beautiful photographs, many line drawings by Alan Harris, and succinct text convey the true measure of diversity that exists. The opening chapters present information on the current status of species and on problems ranging from identification to conservation. Not surprisingly, Hadoram deals in great detail with avian migration, Israel's geographic location, and the conservation consequences of failing to realize Israel's role as a major flyway and staging area. The book presents a mass of information for anyone interested in avian migration and population changes. It is really a handbook that contains far more information than the atlases, identification guides, and bird books of many European countries.

To completely comprehend this book, and to come to grips with the numerous symbols and codes needed to understand all of the maps and other diagrams, one should read "Part 2: Relevant Introduction" thoroughly. A very user-friendly idea was to print a synopsis of these symbols and codes on the inside covers along with the geographic regions of Israel. This makes it easier for the reader to find a forgotten symbol.

Each species that has been recorded in Israel (including the Gaza strip, Judea, and Samaria) is presented in a similar format, making it easy to find information. Also included are the distribution and status in the neighboring Sinai Peninsula of Egypt. Each species account starts with a brief summary of the world and Middle East distribution followed by subheadings that speak for themselves: "Status, Habitat and General Occurrence," "Distribution, Numbers and Annual Cycle," and if required "Subspecies in Israel" and "Subspecific Identification." In this last section, Hadoram is at his best and shows how well he knows his birds. The longest section I found was almost 1.5 pages on the Yellow Wagtail (Motacilla flava) and dealt with 14 different subspecies, forms, and hybrids. These accounts are detailed, and many include morphometrics either from the Israeli Bird-Banding Scheme or from the banding station of the International Birding Center in Elat. Most of the species accounts are accompanied by range and status maps, and these maps in turn are accompanied by transparent overlays enabling the reader to relate the distribution of the species to climate, vegetation and landform habitats, elevation, surface and soils, cultivation, and aquatic habitats. In addition, a small bar chart depicts the periods of occurrence and migration during the year, and the periods of the reproductive cycle for resident species. This work presents much more information than can be found in any other avian book published for the region.

Another point of interest is the way the various species and subspecies are discussed on a zoogeographical scale. For some species, one gets the impression that Hadoram's suggestions for splitting are overdoing it a bit, but then there are other species for which he argues for lumping. His taxonomic discussions are valid and raise points that either have been overlooked or have been ignored in past studies.

The bibliography is voluminous in itself and a good reference for all of the work that has been done in Israel over the past decades. Researchers and birders that wish for more background material on certain species will find this a very informative section.

If I have a criticism, it is the lack of consistency in presenting the many beautiful photographs. The captions are not presented in the same way throughout and may cause a few mix-ups if the reader is not careful or aware of the species presented.

The scope of this book ranks with those that are usually compiled by a team of authors (e.g. *The Birds* of the Western Palearctic, or *The Birds of North America*), but this publication has been put together by one person. As the most significant book on the avifauna of Israel (and the Middle East), it belongs in both personal and reference libraries. Although the price may seem a bit steep at first, an in-depth look will prove that the book really provides a lot for comparatively little money. Also, one should take into account that this book was voted "The Book of the Year 1995" by the British Ornithologists' Union. I strongly recommend this book to everyone interested in any aspect of the birdlife of the Middle East.—REUVEN YOSEF, International Birding Center, P.O. Box 774, Elat 88106, Israel.

The Auk 114(1):155-156, 1997

Bird Atlas of Botswana. - Huw Penry. 1994. University of Natal Press, Pietermaritzburg, South Africa. viii + 319 pp., 9 color plates, 24 text figures, 495 maps. ISBN 0-86980-894-X. No price given.—This scholarly work is a welcome addition to the growing number of bird atlases being produced around the world. It is far more than a collection of maps, although that in itself would be a worthwhile achievement. It might be described as an "atlas plus." The 41 pages of introductory material provide a broad overview of the avifauna and contain full details of mapping methods. Also included is an excellent chapter on factors affecting bird distribution in Botswana, such as physical geography, geology, climate, vegetation (with 24 color photos of habitat types), and human factors. The section on vegetation concludes with lists of birds characteristic of the major habitat types. This chapter is well worth reading on its own, just as an avifaunal study. I cannot think of anything that I would wish to appear in these introductory sections that has not been included.

Although full credit is due the author as the instigator and coordinator of the Botswana Atlas Project, the result is a joint effort by many birders under the aegis of the Botswana Bird Club. No fewer than 190 contributors are acknowledged by name; 9 of whom contributed more than 100 field cards, the author leading the pack with 501. The country was mapped in squares, the boundaries of each being a degree of latitude and longitude (i.e. a latilong). For example, one square would consist of the area bounded by 23 and 24°S and 22 and 23°E. Each square was subdivided into four quarters, A through D. The extent of coverage can be gauged by the fact that every single full square was visited (though not every quarter of every square). This is a remarkable achievement, considering that nearly half of Botswana consists of the Kalahari Desert, and large areas are roadless. The map

in figure 2 shows that fully half of all the quartersquares were visited only by camping, further proof of the dedication of the atlasers.

The main body of the work contains maps and text for 495 species (the introduction claims 496) that have been recorded in four or more squares or have occurred in Botswana more than 10 times. An additional 59 species classed as rare are listed in an appendix, without maps. Another appendix ("Species which may occur") contains unaccepted records and a list of species expected to occur as range extensions from neighboring countries. There also is an extensive gazetteer.

Each of the 495 species given full treatment is allotted half a page, comprising range map and text. On the map, the presence of a species in each quartersquare is indicated by a small black, hatched, or white square showing three different abundance levels. In the top right-hand corner of each map is a miniature map of sub-Saharan Africa with the species' African range, to place Botswana in perspective. Maps also contain a histogram showing the months in which the species has been recorded.

The text beside the map is divided into three sections. "Status" (5–10 lines) gives a short descriptive distribution, often with localities, and brief notes on abundance, movements, and breeding. One note of caution: the breeding information given often is incomplete. As admitted in the introduction, "The months mentioned [for egg-laying] are not necessarily the only months in which the species may breed." Readers who miss this statement will be misled, because the text reads as though it were telling the whole story. Pity the poor researcher (such as the *Birds of Africa* author looking for laying dates) who fails to read the fine print in the introduction and thinks that the breeding data under "Status" are comprehensive.

"Habitat" usually is adequately described in two to five lines, but six or seven lines may be given to species with varied preferences, like the Long-billed Pipit (*Anthus similis*). The third section, "Analysis," chiefly will be of interest to statisticians. This section shows the number of squares in which the species has been recorded (expressed as a percentage of the 230 squares in Botswana), the total number of records for the species, and the proportion of the total database occupied by that species' records.

Bird Atlas of Botswana is an attractive book. The pages are large ($30 \text{ cm} \times 20 \text{ cm}$) and not crowded, the paper quality is good, and the maps are very clear and readable. It contains a monumental amount of data. Because the data are mainly based on sight records, the usual caveats apply. However, all unusual records were screened by a Records Subcommittee, and the list of major contributors includes many well-known and experienced birders from Botswana and elsewhere in southern Africa, in addition to professional ornithologists. Consequently, the margin of error probably is small. This book belongs in all libraries with a section on ornithology, and no student of African birds should be without it. I hope it will serve as a model for future African atlases.—STUART KEITH, 19356 Lee View Lane, Redding, California 96003, USA.

The Auk 114(1):156, 1997

Photographic Guide to the Shorebirds of the World. – David Rosair and David Cottridge. 1995. Facts on File, New York. 175 pp. ISBN 0-8160-3309-9. Cloth, \$29.95. — David Rosair and David Cottridge have produced a very nice first attempt at combining concise text and photographs of a majority (208) of the 212 species of shorebirds, "this most enigmatic group of birds." To accomplish the task, they gathered photos from sources around the world and traveled extensively to acquaint themselves with as many species as possible. It is clear from the description of their travels that they enjoyed their task immensely!

The book, after a brief (less than a page) introduction and a figure of shorebird topography, launches directly into the heart of the project with written descriptions on the left pages and photographs of the species on the facing pages. Each pair of pages covers 1 to 4 species with texts ranging from 160 to 360 words and 1 to 12 photos of the species described. The text includes common name, scientific name, length (in inches), breeding range, plumage description (adult, juvenile, and in flight), description of the voice, designation of races (with geographic and/or morphological distinctions), descriptions of typical habitat and characteristic behaviors, and descriptions of movement patterns. This text/photo section occupies 164 of the 175 pages of the book. The book ends with a listing of the species in systematic order, photographic acknowledgments, bibliography, and index.

The text is concise, as noted in the introduction, and is written in a telegraphic style that usually is unambiguous and informative. The descriptions of plumage are thorough, covering breeding and nonbreeding adults as well as juveniles, and they include a very useful description of the bird in flight. The comments on habitat and behavior provide a good, though brief, sketch of the species. There are, however, some minor lapses in precision and consistency that are distracting. For example, the description of the Northern Jacana (Jacana spinosa) includes reference to a "three-lobed yellow wattle." This fleshy protuberance clearly is a frontal shield and bears no resemblance to the depiction of a wattle from the shorebird topography page. In addition, the Killdeer (Charadrius vociferus; the specific epithet is misspelled in the text) is described as having a "bright red orbital ring," which obviously refers to an eye-ring as described in topography. This may cause confusion for some, especially because the next description of the

Three-banded Plover (C. tricollaris) mentions a "conspicuous red eye-ring." There also are some other errors that detract from the work. For example, the range of the spinosa race of the Northern Jacana is described as "W Panama south to Guatemala and Belize."

The sequence of species in the text follows closely the list presented in the systematic order given at the end of the book, but there are departures from the list. This discrepancy was done intentionally to place together similar species with overlapping ranges. This is a useful tactic for a field guide, but this book is not a field guide (measuring 22×29 cm), and it is disconcerting to encounter a species substantially separated from its congeners. For example, a member of *Vanellus* appears among *Charadrius*, separated from its congeners by 20 pages, and the Asian Dowitcher (*Limnodromus semipalmatus*) is with the godwits, 40 pages from the other dowitchers.

The vast majority of photographs are high quality and illustrate well the diagnostic features of the species as well as any sex, age, or race differences that occur. The photos are printed with a semi-matte finish that is easy to view and sharp enough to pick out detail. A few photos probably could have been omitted (e.g. Giant Snipe [Gallinago media]), but they were included to come close to completing the stated mission of the book. For the shorebirds, it is especially useful to have photos of the birds in flight. Rosair and Cottridge have tried to include such pictures whenever possible. Whereas most of the flight photographs are informative, others could have been left out without diminishing the usefulness of the book (e.g. Eurasian Dotterel [Eudromias morinellus] and Double-banded Plover [Charadrius bicinctus]).

The captions for the photographs appear on the left-hand page with the text and are keyed to a diagram of the photo page for identification. In most cases this system works well, allowing quick and easy correlation of caption to photograph. Several pages, however, have letters arranged in an odd order causing a little confusion, but this is only a minor inconvenience. The captions themselves are clear, but occasionally lack consistency or specificity that would be helpful. For example, two very different-looking pictures of European Golden-Plovers (*Pluvialis apricaria*) are labeled "adult breeding" and "breeding male." In this case, it would be helpful to have a clarification of "adult."

This book will make a good addition to the library of anyone interested in shorebirds. Other than some minor annoyances, it is thorough and well done and contains a nice collection of shorebird photographs that is a unique resource in itself. It is not a replacement for the excellent shorebird guide of Hayman, Marchant, and Prater, but it certainly is a good supplement. At \$29.95, it is an excellent value.—TERRENCE R. MACE, Department of Biology, University of Puget Sound, Tacoma, Washington 98416, USA.

The Auk 114(1):157-158, 1997

Seabirds on Islands: Threats, Case Studies and Action Plans. - David N. Nettleship, Joanna Burger, and Michael Gochfeld (Eds.). 1994. Birdlife Conservation Series No. 1. BirdLife International, Cambridge, United Kingdom. 318 pp. ISBN 0946888 23X (Europe); ISBN 1-56098-526-7 (USA). Paper, \$32.00.—The standards of editing and presentation of this volume are extremely high, and I thoroughly recommend this book as a rare example of exceptional value for the money. It contains 19 chapters grouped into three sections. The first section, "Threats to Seabirds," includes three excellent reviews, one on pollution, one on fisheries interactions, and one on effects of predation and humans. The bulk of the book falls into section two, entitled "Major Seabird Problems," whereas five chapters in section three are headed "Action Plans, Progress and Solutions." I found the separation between sections two and three to be somewhat misleading. Many of the topics in section two deal with highly effective conservation programs that might better be placed in section three. For example, in "Seabirds of the Chatham Islands," the New Zealand Department of Conservation's strongly handson approach to conserving endangered populations merits more detailed treatment. In contrast, "Status and Conservation of Seabirds in the Cape Verde Islands" is placed in section three, although the implementation of long-overdue conservation measures there remains embryonic at best.

The 16 chapters on particular sites range from Svalbard to Amsterdam Island, and appear as a rather disconnected set of case studies. However, this book essentially is part three of a series, the predecessors being *Status and Conservation of the World's Seabirds* (Croxall, Evans, and Schreiber, 1984, International Council for Bird Preservation, Technical Publication No. 2) and *Seabird Status and Conservation: A Supplement* (Croxall, 1991, International Council for Bird Preservation, Technical Publication No. 11).

All seabird biologists should have all three of these volumes on their bookshelves, as they provide by far the most detailed review of the status, numbers, and threats to seabirds, as well as inspiration for planning or imagining trips to remote island groups. Students of conservation biology, ecosystem management, geography, and restoration ecology, also will find the chapters a gold mine of detailed historical examples of over-exploitation of resources or careless management, followed by varying degrees of success in restoration ecology.—ROBERT W. FURNESS, Graham Kerr Building, University of Glasgow, Glasgow G12 8QQ, Scotland.

North American/World BirdArea and BirdBase. -Santa Barbara Software Products, Inc. 1996. [Available from Santa Barbara Software Products, 1400 Dover Road, Santa Barbara, California 93103; phone 805-963-4886].—These two programs, BirdArea and BirdBase, come in both DOS and Windows (95 or 3.1) formats. BirdBase is a database manager that allows one to record sightings of birds in a variety of formats. A built-in master list of species taken from Clements' Birds of the World: A Check List is used to select sightings for individual lists. One can then produce lists of birds seen for many regions and different field trips. Notes of interest can be added to every sighting. The master list can be changed if taxonomic changes are made (a virtual certainty in North America), and some might want to incorporate other world lists of species, such as that in preparation by Charles G. Sibley (pers. comm.). The program keeps track of sightings on individual lists and keeps a running tally of your overall list of species (i.e., your life list). I have used it to record my "yard list," the only list I keep. Unfortunately, I found the manual somewhat non user-friendly and labor intensive to use, and the instructions took some time to follow. For example, interrupted half-way through entering my list, it was difficult to find out how to continue to add sightings. The manual is pretty dense reading and there is no on-line help; many of the procedures require a lot of keystrokes.

BirdArea is a companion program that "knows" the geographic range of every existing bird species (again following the Clements list). Thus, one can select a geographic area, such as South Africa, and generate a list of all birds that occur there, with endemics for the region highlighted. I checked the list included for Minnesota and found it basically accurate, missing only a few recently sighted species. Thus, one could produce a generally accurate list of birds for a given area. Ranges in the master list can be amended as new information becomes available. The problems inherent in such an undertaking include the fluid nature of bird ranges, and the difficulty in telling a truly continuously distributed species from one that is widespread but occurring only sporadically (in either space and time). That is, one cannot evaluate the abundance of particular species from the lists provided. For example, both Baird's Sparrow (Ammodramus bairdii) and Song Sparrow (Melospiza melodia) are listed for Minnesota, yet the latter is widespread and common, and the former is very localized in occurrence. However, for those needing a starting point for comparing lists of species found in different regions of the globe, BirdArea would be a good choice. BirdArea and BirdBase can be used together such that each bird in the many hundreds of area lists that can be produced will be marked to show if you have seen it in the particular area specified. I suspect that these programs will be of greatest interest to serious amateurs and professionals, and those with the time and patience to master the programs. The programs could also be of value for teaching. One nice aspect is the ability to print out a list of birds that are known to occur in an area but have not been seen during some period. This list could focus the attention of students on what they have missed during a semester or what they might expect to see later in spring migration, for example. With these programs, one would have a powerful set of tools on hand for serious birding, teaching, or basic compilation of species lists for more scientific endeavors, subject to the caveats noted above.-ROBERT M. ZINK, Bell Museum of Natural History, 100 Ecology Building, University of Minnesota, St. Paul, Minnesota 55108, USA.

The Auk 114(1):158, 1997

Peterson Flash Guides (Hawks, Eastern Trailside Birds, Western Trailside Birds, Atlantic Coastal Birds, Pacific Coastal Birds, Backyard Birds). - Roger Tory Peterson. 1996. Houghton Mifflin Co., New York. U. S. Patent No. 5,063,637. \$7.95 each.-These "flash guides" present a new concept in field aids for bird identification. Each of the six guides covers either a different group of birds (e.g. backyard birds) or a specific area, with 50-100 species detailed per guide. Each guide consists of 12 plates (11.5 × 21.5 cm) printed on each side that are laminated together (the lamination does repel coffee stains). The guides open out or fold into a map-like 11.5 × 21.5 cm composite. In the Backyard Birds is a color coded map to six "ecoregions" of North America. Each species account (without scientific names) contains information on total length of the species, feeding preferences, where the bird occurs and where it is abundant or rare, and sometimes descriptions of vocalizations or other anecdotal information. For example, in Backyard Birds, a red star followed by a purple circle tells you that the Rose-breasted Grosbeak (Pheucticus ludovicianus) is commonly found in ecoregion 1 in summer, a blue plus red circle in parentheses tells you it is less abundant in ecoregions 2 and 4, a brown and orange circle indicates migrant-only status in ecoregions 3 and 5, a black silhouette of a birdfeeder tells you that it frequents above-ground feeders, and line drawings of large seeds tells you what to put in the feeder. Unfortunately those of us who are at least partially red-green colorblind will (do) not appreciate this coding scheme, and I had to ask a colleague to identify the colors for me. Distinguishing field characteristics are illustrated in hallmark Peterson-field-guide style. The paintings are for the most part adequate, some directly from Peterson field guides, although others lack critical details (especially the hawks); these illustrations are not for serious student of bird identification. However, without all of the other species found in a full-length field guide to confuse the issue, those in the early stages of bird watching might have a better chance of correct identification (and be encouraged to try). Of course, in my neighbor's backyard, Cooper's Hawks (Accipiter cooperii) are more common than Sharp-shinned Hawks (A. striatus), but the former is not depicted in Backyard Birds. Many other species occur in backyards than what are figured in this guide, but perhaps most of the common ones are figured for most areas. Such problems are not likely fatal to the intended use of these flash guides.

The intent of the flash guides is for field use by those such as hikers who do not want to be weighted down by one or more field guides (I am not sure about the durability of the flash guides in the back pocket of a camper). I suppose that anything that increases the public awareness of birds is a good idea. Therefore, I suspect that there is niche for these flash guides. For those unfamiliar with birds, having the species culled to the most probable ones to be encountered in an area might stimulate those not willing to page through a field guide. Those bird watchers who already have a field guide and are not intimidated by it will not use these flash guides often, if at all. Serious birdwatchers will opt for complete field guides, and these will not replace field guides for ornithology classes. I would recommend these guides as educational tools for youngsters or as enticement to others who have not yet been introduced to the wonders of birds.-ROBERT M. ZINK, Bell Museum of Natural History, 100 Ecology Building, University of Minnesota, St. Paul, Minnesota 55108, USA.

The Auk 114(1):158-159, 1997

Bird Identification: A Reference Guide. – Kristian Adolfsson and Stefan Cherrug. 1995. Wallin and Dalholm Boktryckeri AB, Lund, Sweden. 379 pp. ISBN 91-86572-24-5. Paper, 220 SEK. [Order from Skanes Ornitologiska Forening, Ecology Building, S-223 62 Lund, Sweden].—This book contains references to more than 11,800 articles that deal with field identification tips for approximately 870 species of birds found in the western Palearctic and Arabia, culled from 66 ornithological journals published between 1975 and 1994(5). The purpose is to put under one cover references that deal with problems in, or aids to, field identification of specific species. In many instances, references also are made to articles that contain photographs. This reference should be of interest to all serious birders visiting the region covered.—ROBERT M. ZINK, Bell Museum of Natural History, 100 Ecology Building, University of Minnesota, St. Paul, Minnesota 55108, USA.

The Auk 114(1):159, 1997

Birds to Watch 2. The World List of Threatened Birds. - Nigel J. Collar, M. J. Crosby, and Alison J. Stattersfield. 1994. BirdLife International, Cambridge, United Kingdom. 407 pp. ISBN 1-56098-528-3. Paper, \$25.00.—BirdLife International (formerly the International Council for Bird Preservation) has as its central commitment "the prevention of global extinction through the identification and documentation of threatened species." The publication of the Red Data Book has been a part of their program since 1964. This book is an updated version of the first Birds to Watch by N. J. Collar and P. Andrew. Both serve to update information on globally threatened birds as the Red Data Book is being updated. This latest volume is the official source for birds for the IUCN and uses their criteria for assessment of risk of extinction. Entries for each species includes four items: Distribution, Population Status or Trend, Habitat(s), and Threat(s). Data analyses indicate some cause for concern for more than one-fifth of all bird species, making this resource valuable to avian conservationists.—JEAN M. VESALL, Bell Museum of Natural History, 100 Ecology Building, University of Minnesota, St. Paul, Minnesota 55108, USA.

The Auk 114(1):159, 1997

Shrikes (Laniidae) of the World: Biology and Conservation. – Reuven Yosef and Fred E. Lohrer (Eds.). 1995. Proceedings of the Western Foundation of Vertebrate Zoology, Volume 6, No. 1. Western Foundation of Vertebrate Zoology, Camarillo, California. 343 pp, numerous figures and tables. ISSN 0511-7550. Paper, \$25.00.—This collection of papers is the Proceedings of the First International Shrike Symposium, which was held (11-15 January 1993 in Lake Placid, Florida) to focus attention on the worldwide decline of shrike populations. Of the 30 species of The main objectives of the symposium were to review current research, understand the global status of shrikes, create a "World Working Group on Shrikes," set research priorities, and develop conservation guidelines. The Proceedings contain the papers presented in subject order. The five broad subject topics are systematics and biogeography, status and population trends, ecology, reproductive ecology, and reproduction in captivity and associated techniques. This publication should be of value to anyone interested in knowing the status of research on shrikes.— JEAN M. VESALL, Bell Museum of Natural History, 100 Ecology Building, University of Minnesota, St. Paul, Minnesota 55108, USA.

The Auk 114(1):159, 1997

Important Bird Areas in the Middle East. - M. I. Evans (compiler). 1994. BirdLife International, Cambridge, United Kingdom. 410 pp. ISBN 1-56098-525-9. No price given.-This study is the second in a global program by BirdLife International to identify all "Important Bird Areas" of the world (the first being Important Bird Areas in Europe, 1989). The region covered includes Afghanistan, Bahrain, Iran, Iraq, Israel and the Occupied Territories, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, the United Arab Emirates, and Yemen. The main text is an inventory of 391 sites important for the conservation of birds that also have their own intrinsic value as ecosystems. On a global scale, the Middle East generally has a higher level of biodiversity (more than 800 species of birds, of which more than 60 are endemic) than the temperate areas of the Northern Hemisphere. Each entry in the site inventory includes the following components: site name, coordinates, size of area, international protection status, national protection status, site description, summary of birds, other threatened/endemic wildlife, conservation issues, and further reading and references. Those interested in the coordination of land-use and nature conservation in the Middle East should find this resource an important tool in planning and decisionmaking. - JEAN M. VESALL, Bell Museum of Natural History, 100 Ecology Building, University of Minnesota, St. Paul, Minnesota 55108, USA.

The Auk 114(1):160, 1997

Songbirds of Turkey: An Atlas of Biodiversity of Turkish Passerine Birds. – C. S. Roselaar. 1995. Pica Press, East Sussex, United Kingdom. 240 pp. ISBN 90-74345-07-7. Paper, L 24.—Turkey is a key area for the study of geographic variation in Western Palearctic birds. However, the author noted that detailed maps of breeding areas of Turkish passerines were not available. This book aims to present all of the available information on taxonomy, morphology, and distribution of Turkish songbirds and compare it with similar information from other countries in the Middle East and southeastern Europe.

Each species account gives details of the habitat in which the species is found and its distribution according to the subdivisions of Turkey recognized by the Ornithological Society of the Middle East. Data on geographic variation for all subspecies presented are the result of field and museum research gathered over the 20-year program for Birds of the Western Palearctic. The author's intent is that the book will increase the awareness of the unique nature of Turkish birds and the importance of conservation of subspecies and populations at the local level.—JEAN M. VESALL, Bell Museum of Natural History, 100 Ecology Building, University of Minnesota, St. Paul, Minnesota 55108, USA.

The Auk 114(1):160, 1997

U.S. Department of the Interior Biological Report No. 28. Endangered Ecosystems of the United States: A Preliminary Assessment of Loss and Degradation. - Reed F. Noss, Edward T. LaRoe III, and J. Michael Scott. 1995. U. S. Department of the Interior, National Biological Service, Washington D.C. 58 pp. No price given.-Through a literature review and survey of conservation agencies and professionals, the authors report estimates of the decline of natural ecosystems in the United States. They identify 30 critically endangered, 58 endangered, and more than 38 threatened ecosystems. Conservation plans based on detailed studies of ecosystem status and trends may help forestall the significant loss of biodiversity occurring at the ecosystem level in the United States. The protection of pristine sites and the restoration of disturbed sites are recommended. Of particular interest are the estimated declines of ecosystems in the United States, which are presented as concise and documented statements in Appendix A. This section alone clarifies the need for a broad-based conservation agenda.—JEAN M. VESALL, Bell Museum of Natural History, 100 Ecology Building, University of Minnesota, St. Paul, Minnesota 55108, USA.