

## ORNITHOLOGICAL LITERATURE

HANDBOOK OF NORTH AMERICAN BIRDS. By Ralph S. Palmer (ed.), illus. by R. M. Mengel. Yale University Press, New Haven and London. Sponsored by the Smithsonian Institution. 1988. Vol. 4 Diurnal Raptors (Part 1): 433 pp., numerous maps and drawings without legends, one color plate. ISBN 0-300-04059-8. \$40.00. Vol. 5 Diurnal Raptors (Part 2): 465 pp., numerous maps and drawings without legends, one color plate. ISBN 0-300-04060-1. \$40.00. ((ISBN 0-300-04062-8 (v. 4 & 5 set. \$80.00)).)—At last, the fourth and fifth volumes of the “Handbook of North American Birds” are out in print! It has been several years since the editor, Ralph Palmer, first corresponded with this reviewer requesting information on species to be included in this addition to his continuing series. After reading the volumes, the long delay since the last two volumes were published in 1976 is understandable. Palmer has written most of the text himself while enduring the problems associated with a switch in sponsorship from the American Ornithologists’ Union to the Smithsonian Institution. Without a doubt, the set represents the result of years of hard work and personal sacrifice.

The editor basically follows the same format used in previous volumes. There are species accounts for 42 species of raptors. Volume 4 covers vultures through the genus *Asturina*, and volume 5 includes the remainder of the family Accipitridae (Broad-winged Hawk [*Buteo platypterus*] through Golden Eagle [*Aquila chrysaetos*]) through the family Falconidae. The accounts range from two pages or less for hypothetical and controversial North American types such as the King Vulture (*Sarroramphus papa*), Roadside Hawk (*B. magnirostris*), and Northern Hobby (*Falco subbuteo*) to more than 50 pages for widely occurring species such as the Bald Eagle (*Haliaeetus leucocephalus*), Northern Harrier (*Circus cyaneus*), Golden Eagle, and Peregrine Falcon (*F. peregrinus*). Over 2500 references are cited with the average number per species ranging from approximately 100 each for the American Swallow-tailed Kite (*Elanoides forficatus*), Cooper’s Hawk (*Accipter cooperii*), Northern Goshawk (*A. gentilis*), Red-tailed Hawk (*B. jamaicensis*), Rough-legged Hawk (*B. lagopus*), and Merlin (*F. columbarius*) to more than 200 for the Bald Eagle, Northern Harrier, Golden Eagle, American Kestrel (*F. sparverius*), and Peregrine Falcon. A total of 24 authors, most of whom are well known raptor experts such as S. R. Beissinger, K. L. Bildstein, D. M. Bird, J. M. Gerrard, C. J. Henny, J. A. Jackson, W. J. Mader, B. A. Milsap, D. P. Mindell, J. A. Mosher, J. C. Ogden, J. W. Parker, W. B. Robertson, Jr., J. H. Schnell, M. V. Stalmaster, and C. M. White either wrote or co-authored portions. Names of contributors occur at the ends of their respective sections.

Each account is divided into topics such as description, subspecies, field identification, voice, habitat, distribution, migration, banding status, reproduction, survival, habits, and food. Because of the symbolic nature of raptors in various societies, rather lengthy discussions have also been included in these volumes on human-related subjects. They range from uses of species such as California Condors (*Gymnogyps californianus*) and Golden Eagles in ceremonies of native Americans to the use of Peregrine Falcons in the sport of falconry. There is one color frontispiece in each volume, with the remainder of the illustrations consisting of black-and-white maps showing breeding and wintering distributions and numerous, uncaptioned line drawings by R. M. Mengel.

Many of the criticisms expressed about earlier volumes continue to apply to volumes 4 and 5. The initial goal of the project which was begun in 1950 was to produce a series in telegraphic style similar to that of the “British Handbook” (Auk 68:384–385, 1951). The many abbreviations used in this style of writing at first make comprehension of the text awkward. This is definitely not leisure reading. The editor frequently lapses from telegraphic style in making anecdotal comments on species in a fashion similar to that used in Bent’s

"Life Histories." These discussions are more amusing than factual and have previously been published. Since the original concept was to use a concise, space-saving style, it would have been preferable for it to have been used throughout the text. Lengthy discussions of "The numismatic eagle," "The Washington Eagle," "A famous eagle," and "The culinary eagle" (Vol. 4, pp. 230-232), for example, rehash previously published information that could have simply been referenced, saving two printed pages in the species account on the Bald Eagle.

I felt there were two more serious problems with the set. The first concerns the editor's decision not to adopt common and scientific nomenclature used in the sixth edition of the A.O.U. Check-List (1983). He arranges the species accordingly, but when naming representatives of North American "hawks," he differs drastically. For example, Harris' Hawk (*Parabuteo unicinctus*) is referred to as the Bay-winged Hawk and Roadside and Red-shouldered hawks (*B. lineatus*) are placed in the genus *Asturina* while the scientific name for the Gray Hawk is completely changed from *Buteo nitidus* to *Asturina plagiata*. A less serious but troubling flaw concerns the editor's treatment of subspecies classifications. Controversial subspecies of the Osprey (*Pandion haliaetus*), Red-shouldered Hawk, Rough-legged Hawk, and American Kestrel are treated as valid, but in presenting the Red-tailed Hawk, "Harlan's" (*B. j. harlani*) and "Krider's" (*B. j. krideri*) subspecies are considered to be merely color morphs without taxonomic status. I felt this presentation is based mainly on the editor's opinion and could be misconstrued as scientific fact by uninformed or otherwise naive laypersons for whom even the editor admits these volumes are intended. In view of current controversy over subspecies classifications in birds in general and classification of the *Buteo* group specifically, I would have preferred a more standard taxonomic arrangement, or at least a presentation of the various views to enable readers to come to their own conclusions concerning the taxonomic status of such a variable group of raptors as *Buteo* hawks.

My second criticism concerns the distribution maps in individual species accounts. I noted several errors and missing information. For example, there is a shading error on the distribution map for the Black-shouldered Kite (Vol. 4, p. 137). The lack of recent breeding records for Swainson's Hawk (*Buteo swainsoni*) in Alaska and Northwest Territories make it questionable if the species actually breeds as far north as shown (Vol. 5, p. 55), the map showing Ferruginous Hawks (*B. regalis*) as breeding residents of central and northern Idaho is wrong since there have never been any nests recorded in this part of the state (Vol. 5, p. 139) and the map of the historical breeding range of the Peregrine Falcon fails to show the species as a breeding resident of the province of Saskatchewan in historical times (Vol. 5, p. 340).

Despite these criticisms, the set is overall a sound collection of current information on North American raptors. These volumes will undoubtedly find their way into the libraries of raptor specialists, but they should also be seriously considered for inclusion in the reference collections of all professional ornithologists. I intend to adopt them as required texts in my North American Birds of Prey class. Both volumes should be included in the holdings of college and university libraries striving to maintain authoritative collections of works on this group of birds.—MARC J. BECHARD.

THE VALUE OF BIRDS. By A. W. Diamond and F. L. Filion (eds.). International Council for Bird Preservation, Technical Publication No. 6, Cambridge, England. 1987:viii + 267 pp., text figs. and tables. £18.50 (paper).—Based on studies presented in 1986 at the 19th World Conference of the ICBP in Kingston, Ontario, this soft-cover volume contains two groups of papers, the first resulting from a symposium on birds as socioeconomic resources, and the second, a workshop on birds as bioindicators of environmental conditions. Most

of the papers are recently completed case studies, but a few are proposals for future work. The title of this publication results from the conviction that, although the "cash value" of wildlife is often an effective argument for conservation, especially when dealing with government officials, it should never be allowed to become subservient to ethical values. Thus this volume is filled with studies of economic ornithology, yet the total worth of birds is not forgotten.

The section on socioeconomics not only contains several general discussions and dollars-and-cents evaluations of avian economic impact in both industrial and "emerging" nations but also has some interesting specific case studies such as one by H. A. Isack on the impact of birds on the culture and economics of the Boran people of Kenya. I found the report by I. J. Skira on muttonbirding in Tasmania particularly enlightening: The annual commercial take of ca 400,000 *Puffinus tenuirostris* chicks for meat, feathers, and oil by aboriginal Tasmanians is still an important cultural tradition. It is also a cottage industry for people who have little other source of income (it produced a profit of \$81,500 in 1985) and has generally been conducted on a sustained-yield basis for centuries. In contrast, the modern noncommercial take for meat (and presumably also for "sport") involves an additional 300,000 chicks and has led to "problems of over-harvesting, physical damage to habitat, alleged cruelty to birds, and general anti-social behaviour of muttonbirders caused partly by alcohol, particularly on opening day" (p. 63). Shades of the first day of deer season in Pennsylvania!

The section on socioeconomic factors concludes with a brief but solid overview of the subject by A. W. Diamond. This chapter could be highly useful for anyone preparing a lecture on modern economic ornithology.

The second part of the book, on birds as bioindicators of environmental conditions, contains papers on a spectrum of contamination of aquatic and marine environments and dry-land habitats and on various groups of birds and their eggs as indicators. Of particular current interest are papers on acid rain in North America and Europe.

The only drawback I found to what is otherwise a valuable resource book lies not in its content but its presentation. Presumably in an economy move (the volume is currently priced at \$37.50 by a major American dealer; the back cover notes that it is available from the Smithsonian Institution Press at an undisclosed price in U.S. dollars), the book is printed in small type with inadequate spacing between words and leading between lines. The resultant pages are an effort to read—not impossible, but a real nuisance. Several people to whom I showed my copy agreed. Would that the publishers had foregone the unnecessary luxury of beginning each paper on a right-hand page, leaving 14 blank pages scattered through the book, and instead spread that wasted space among the words and lines of text. The figures are mostly (all?) computer-generated, adequate if often unattractive. Aside from the ICBP logo, the only representation of a bird in the entire book is on the cover—a pedestrian line drawing of a Maleo (*Macrocephalon maleo*), which is an endemic Sulawesi megapode being driven to extinction despite its economic potential for tourism and trade. The only color in the publication is purple on the cover.

This volume has packed type and good information; it is well worth the effort to read but it is unappealing and overpriced. If birds have esthetic and ethical values, shouldn't *books* on birds have the same qualities?—MARY H. CLENCH.

**THE BALD EAGLE: HAUNTS AND HABITS OF A WILDERNESS MONARCH.** By Jon M. Gerrard and Gary R. Bortolotti. Smithsonian Institution Press, Washington, D.C. 1988: 177 pp., 54 figs. in text, 11 appendices (figs. and tables), 10 pp. notes on chapters. \$24.95 (cloth), \$12.95 (paper).—Gerrard and Bortolotti have produced a delightful, informative and well-written

book; not in a “hard” scientific writing style. It follows closely on the heels of another book on the Bald Eagle (*Haliaeetus leucocephalus*) by M. Stalmaster (see review, *Wilson Bull.*, 100:330–331, 1988) published in 1987, and thus, in some ways, invites comparison. Briefly, both books have about the same number of chapters covering roughly the same generic types of material but the emphasis differs somewhat. For example, while Stalmaster had a nice discussion on energetics not in Gerrard and Bortolotti, he lacked some of the interesting flight data given by Gerrard and Bortolotti. While the Stalmaster book is more a review of literature sources, Gerrard and Bortolotti draw heavily on their field experiences and on data gathered at a study area at Besnard Lake, Saskatchewan, Canada.

Gerrard and Bortolotti have 12 chapters more or less chronicling the life history of Bald Eagles through the annual cycle from arrival on the breeding grounds, pairbonding, and reproduction back to the non-breeding “wintering” quarters. The book also contains chapters on historical aspects of man’s interaction with Bald Eagles, systematics, and morphology. There is a pleasant departure from the standard chapter title; such as “Talons Awaiting” (meaning diet and hunting techniques), “Whither the Wind Blows” (meaning migration), etc. Each chapter is introduced by one or the other author with a personal evocation of a field experience, usually on their study area, that serves as a starting point for the material that follows. About half of the appendices are of data gathered at Besnard Lake. The book is relatively error free, but one sentence on page 40 says the eagles avoid nesting in sections of habitat where cabins occur and “. . . so restrict their breeding to the more remote locations . . . where there has been substantial development.” Shouldn’t it have read “. . . where there has *not* been . . .”? It was nice to see the authors use the term historical correctly. Most raptor types have a penchant for talking about the long term use of nesting sites as historic (being famous or an important event) rather than historical (having a character of history or of long standing). It was also nice to see the authors not engage in the old standby discussion of reversed sexual size dimorphism as many do without any empirical data of the right kind.

An interesting bit of data gathered at their study site was that immatures (with larger wings than adults and thus lighter wing loaded) had an average flapping rate of 167/min while adults were 188 flaps/min. The suggestion that eggs getting buried in the nest and not hatching served the equivalent function of the “Cain/Abel” battle of other *Aquila* eagle species (p. 83) was of interest. Perhaps more data could be gathered on this circumstance of egg burial and the idea further elaborated.

The book would have been easier to use if the many notes appeared as foot notes at the bottom of the page where that note was referenced rather than as a series of notes by chapter at the back. I did not like their use of “in the seventies and eighties” when referring to years. In the first place they were not consistent in the use of numerical or written years, and why not use 1970s—or did they mean 1870s? Some times I had to go back and reread to make sure I was in the right century. The authors used the word chick for a semi-altricial nestling when they were small and then called them young or nestlings later. Why not just call them eaglets—but at least avoid the word chick? At what point did they change from being a chick to a nestling?

Overall, I liked the book. It is a good review of Bald Eagle biology. It was written such that both the layman and professional will enjoy and benefit from it. The price for the paper back is very attractive.—CLAYTON M. WHITE.

ERIC HOSKING’S BIRDS OF PREY OF THE WORLD. By Eric and David Hosking, text by Jim Flegg. Stephen Greene Press, Lexington, Massachusetts. 1988:176 pp., 158 color and 34 black-and-white photographs. \$19.95.—This most recent addition to the already crowded field of photo albums for raptorphiles suffers from a problem typical of works of the genre.

Although a few of the photographs in this 9 × 11 in. "coffee-table book" are quite stunning, readers wanting to know more about the birds depicted will find little satisfaction in the text. And, despite both a title and a passage in the introduction that suggest the inclusion of both diurnal and nocturnal birds of prey, coverage of owls is limited to less than 1% of the text and a single photograph of a Common Barn-Owl (*Tyto alba*).

More than half of the brief text consists of a lengthy chapter entitled "Family Portraits" that concentrates coverage on well-known diurnal raptors, such as Golden (*Aquila chrysaetos*) and Bald eagles (*Haliaeetus leucocephalus*), and Peregrine Falcons (*Falco peregrinus*). The remainder of the text is made up of three rather sketchy introductory chapters on vultures, hawks, eagles, caracaras, falcons, and the Secretary Bird (*Sagittarius serpentarius*), together with chapters on their conservation, distribution, and use in falconry. There are no references in the text. My major complaint with the work is not that what is said is necessarily wrong—although there do appear to be a fair number of at least questionable passages—but that what is said is often far from complete and, therefore, frequently misleading. For example, a statement in the chapter on conservation that "Falconers found themselves as a lone militant group opposing" the devastation of birds of prey earlier in this century is almost certain to infuriate a number of hard-working non-falconer conservationists. There are also a number of minor problems. The book was originally published in Great Britain, and although the subject matter appears to address a world-wide audience (there is, for example, a 6-page section on Australian raptors) novice North American readers are likely to be confused by the introduction and then inconsistent use of the term "buzzard" in the text and figure legends (i.e., "Red-tailed Buzzard" but "Red-shouldered Hawk").

In sum, while the book may be of limited value for its photographs, I cannot recommend it for its text. Readers wishing to purchase a colorful introductory work on diurnal birds of prey would do better trying to locate a copy of Leslie Brown's "Birds of Prey: Their Biology and Ecology" (A & W Publishers, New York, 1977).—KEITH L. BILDSTEIN.

**BIRDING IN THE SAN JUAN ISLANDS.** By Mark G. Lewis and Fred A. Sharpe. The Mountaineers Books, Seattle, Washington. 1987:220 pp., 75 black-and-white sketches. \$9.95 paper.—This is not your ordinary "Birds of . . ." book. It contains a wealth of information for those birders who want to know more than just how to identify or where to find birds. The main body of this attractive book is divided into the following sections: Introduction, Going Birding, Species Accounts, Appendices, Bibliography, and Index.

The Introduction extolls the virtues of the diversity of birds and habitats in the San Juan Islands and tells the reader how best to utilize the information in the book. The authors are obviously concerned about the potential future negative impact of humans on the San Juans because they tell us that "Perhaps the most important goal of this book is to make readers aware of the effects human activities have upon the birdlife of the San Juan Islands and to emphasize the fragility of the environment found here." There is a nice description of the San Juan Island environment. These 350 rocks and islands lie in the rainshadow of the Olympic Mountains. The highest point in the archipelago is the 2409 foot high Mt. Constitution but most are well-below 1000 feet. Both the terrestrial and marine habitats are diverse. This allows the birder ample opportunity to see a cross-section of mainland birds as well as many resident and migrant marine birds. Perhaps the most unusual terrestrial habitats are the dry sites occupied by open woodlands of Oregon white oak (*Quercus garryana*) and Rocky Mountain juniper (*Juniperus scopulorum*) which are uncommon in western Washington. Most of the islands are covered by coniferous forest dominated by Douglas fir (*Pseudotsuga menziesii*), western red cedar (*Thuja plicata*), and western hemlock (*Tsuga heterophylla*). There is also a long discussion of the history of humans in the San Juans. With European colonization came dramatic changes in vegetation, much of it coming from

the introduction of the European rabbit (*Oryctolagus cuniculus*) by the British in the mid-nineteenth century. This has been a mixed blessing. On the one hand, its periodic large numbers have devastated parts of San Juan Island but have also attracted large numbers of raptors, particularly the Bald Eagle (*Haliaeetus leucocephalus*), Golden Eagle (*Aquila chrysaetos*)—rare in other parts of western Washington, Red-tailed Hawk (*Buteo jamaicensis*), Cooper's Hawk (*Accipiter cooperi*), and Great Horned Owl (*Bubo virginianus*). The best area to see these birds is at American Camp on the south side of San Juan Island. This spot is also the only place in the contiguous United States where you can observe the Eurasian Skylark (*Alauda arvensis*) which made its way across Haro Strait from Vancouver Island where it was introduced in 1903. The authors briefly discuss other threats to birds such as construction of homes and roads, commercial fishing, oil pollution, toxic chemical pollution, aquaculture, and recreational boating.

The Going Birding chapter discusses the general principles of birdwatching and introduces the reader to major habitat types which include four marine/freshwater types, two open terrestrial types, five forest/shrub types, a town and garden type, and the aerial type. A site guide section directs the reader to specific locations where particular bird species can be found. My own particular favorite sites are the San Juan ferry route from Anacortes on the mainland to Friday Harbor on San Juan Island. There are usually stops at Lopez, Shaw, and Orcas Islands. If you walk on as a passenger, this is a great inexpensive way to see marine birds and Bald Eagles, particularly in the fall, winter, and early spring when there are large numbers of Bald Eagles, waterfowl, and seabirds in the area. My other favorite is the grasslands on the south side of San Juan Island where raptors are common, and you can see many marine birds from Cattle Point at the southeast tip of the island.

The bulk of the book is dedicated to Species Accounts. The authors follow the names established by the A.O.U. Checklist of North American Birds (1983 and supplements). Besides the basic information on occurrence and helpful hints on identification, most accounts have interesting tid-bits of natural history information that make the reading enjoyable and informative. For example, for the Rhinoceros Auklet (*Cerorhinca monocerata*—a species with which I am very familiar) we learn that "Busying themselves during the daylight hours with capturing sandlance and herring, Rhinoceros Auklets fill their beaks with a half-dozen fish apiece before heading home. Both 'Rhinos' and puffins possess especially stiff tongues which they use to pin fish against their upper mandibles." This chapter is liberally supplied with attractive illustrations of birds by Fred Sharpe, many seen engaged in some type of characteristic behavior or in typical habitat.

The appendices contain three major parts. There is a checklist with typical data on status and abundances as well as a calendar that shows when a species is most likely to be observed. A second part, which reflects the authors' interest in bird conservation, lists the authors' addresses as well as those of state and federal agencies responsible for bird and mammal protection in the San Juan area. The third part is a list of 127 references cited under the species accounts. Even then, I expect that the authors did not include several references. There is also a Bibliography which lists another 60 general references. There are some inconsistencies in the citation format used here.

This book is relatively free of typographical errors and is nicely illustrated. It is small enough (5.5 × 8.5 in.) to fit into a small day pack and is filled with more information than most bird books of its type and size. If you visit Washington State to see birds, you should buy this book and enjoy the San Juan Islands.

It is fitting that this book was dedicated to the memory of Frank Richardson, a gentle, sensitive man who, after many years as a faculty member at the University of Washington, spent his retirement years in the San Juan Islands. Frank would have been proud of this book.—DAVID A. MANUWAL.

BIRD FINDING IN NEW ENGLAND. By Richard K. Walton, illus. by Barry Van Dusen. David R. Godine, Publisher, Inc., Boston, Massachusetts. 1988:xx + 328 pp., 8 black-and-white drawings, 31 maps. \$14.95.— This attractive, “flexibound” field guide size book introduces birders to a sampling of the best birding habitats in New England. The reader is introduced to the area with a six-page description of “New England’s Landscape” in which Walton points out that a particular species of bird is usually bound by fairly strict habitat parameters. He then describes the major physiographic characteristics of New England, including the major mountain ranges, the effects of glaciation on topography and soils, and the characteristics of the continental shelf, coastal, and forest communities. This brief description provides a pleasant and suitable introduction for those birders unfamiliar with New England.

The remainder of the text is divided into three parts. Part One presents detailed descriptions of particular birding sites, each with site map, for the New England states: six in Maine, five in Connecticut, Massachusetts, and New Hampshire, and four each for Rhode Island and Vermont. The verbal directions to the sites are clear and concise, and they utilize common sense landmarks such as McDonald’s restaurants. The site maps are easy to read and follow. In a visit to one site, I had no trouble whatsoever in locating all the recommended stops. In the text, the places which are considered likely to be the most productive are indicated in bold face type, and each site is prefaced by the season or seasons when it can provide the best birding. The text is lively and chatty, with tidbits of history and gossip, as well as notes on the flora and mammals, which perk interest in a site. For example, in the Plum Island description, Walton included a few lines about the famous ornithologists who have studied birds there, and for Newburyport, a paragraph on the well known 1975 sighting of a Ross’ Gull (*Rhodostethia rosea*). In the description of Concord and the Sudbury Valley, Massachusetts, we are treated to a few anecdotes about Henry David Thoreau. Some of these historical interludes may put off some hard-core birders, but I think that these brief digressions, along with the eight full-page drawings by Van Dusen, add a touch of elegance to a book on bird finding. Overall, the text is well written in a clear, simple, readable style. On the more practical side, the text includes addresses and telephone numbers for such things as motels, ferry and charter boats, and state and federal park headquarters. In addition, there are numerous practical tips such as the necessity for long-sleeved shirts at Plum Island in August when the greenhead flies are active. At the end of the section for each state is a supplemental list of a half dozen or so additional birding localities, together with brief annotations describing what might be found and when.

Part Two, entitled “Seabirds & Hawks,” contains a 10-page chapter on hawk watching localities and a 20-page chapter on pelagic birding in New England by guest author Wayne R. Petersen. The hawk chapter includes a chart showing the migration seasons for more than a dozen raptors, a discussion by season, and a list of 24 hawk watching sites and how to get to them. The pelagic birding chapter includes an “Oceanographic Primer” which discusses factors responsible for the production and concentration of food resources utilized by pelagic birds off the New England coast. This introduction is followed by a section “Pelagic Birding Through the Seasons.” The coverage is thorough and should be very helpful to anyone not experienced in pelagic birding in this area. The chapter concludes with a long list of names, addresses, and telephone numbers for whale watching and pelagic birding tours and two pages of helpful hints for surviving a first pelagic birding adventure. This is a very useful and important chapter.

Part Three, “New England Specialties: Species Accounts” is an annotated list of 66 species. The species accounts include where and when to find the birds. However, since many of the localities mentioned are not listed in the index or in the site descriptions, you had better have your road maps handy. One can quibble with the inclusion of some species (e.g., Black Duck [*Anas rubripes*]) or the exclusion of others (e.g., American Woodcock [*Philohela*

*minor*)), but the coverage is broad, and additional short paragraphs on wood warblers and winter finches are included.

The appendices are full of valuable information, including lists of pertinent state organizations such as Audubon societies, New England bird alerts, floral and faunal references, regional and state journals, all with addresses and telephone numbers where appropriate.

The bibliography lists more than 70 titles including many "where to find birds" articles in local journals. It is not exhaustive, however, and fails to include three of the references given at the end of Petersen's pelagic birds chapter.

The few quibbles that I have with the book are minor. I found no errors in the text, but there is a noticeable clash between the writing styles in Walton's text and Petersen's pelagic chapter, which a firmer editorial hand could have smoothed over. Although the maps are clear and well referenced in the text I would have preferred to see more of the distances described to the nearest tenth of a mile, and a map showing the major New England highways would have been helpful. The local bird journal listed for Massachusetts is *Bird Observer*, not *Bird Observer of Eastern Massachusetts* (the name was changed several years ago). The only problem with the book is its enormous scope. To limit, for example, Massachusetts to five birding sites means that a significant number of "good spots" went undescribed. If, however, you consider the book a sampling among the better birding localities in New England, the book should prove very useful to visitors from other areas, and, perhaps prompt some New England birders to probe new sites in their own region. Anyone planning to seriously bird New England should own a copy of this book.—WILLIAM E. DAVIS, JR.

THE BIRDS OF NORTH CENTRAL TEXAS. By Warren M. Pulich, illus. by Anne Marie Pulich. Foreword by Keith A. Arnold. Contribution No. 9 by the W. L. Moody, Jr., Natural History Series, Texas A&M University Press, College Station, Texas. 1988:439pp., 134 figs., including 112 maps, 22 black-and-white drawings, and one color frontispiece. \$45.00 (cloth), \$16.95 (paper).—Although the publication of H. C. Oberholser's two-volume "The Bird Life of Texas" (1974, Univ. Texas Press, Austin) provided a long-awaited and valuable synopsis of the state's avian natural history, the distribution and status of many species were inadequately described or completely omitted. Consequently, several authors have recently produced books which, for smaller regions of the state, provide detailed and up-to-date information on avian occurrence, migratory patterns, peak numbers, breeding status, and change in population status. This is such a book.

This book focuses on 32 counties covering approximately 25,000 square miles in a zone surrounding the Dallas-Ft. Worth metropolitan complex. Not only is this one of the more densely populated regions in Texas (and home to thousands of birders), but the region also includes some of the state's most agriculturally abused lands, historically speaking. Despite extensive urban and agricultural tracts, much open terrain persists and 62 percent of the 555 species recognized in Texas regularly occur there. North central Texas also serves as an important migratory corridor and offers winter habitat to many species, such as longspurs, which rarely reach other parts of the state.

The introduction furnishes a short but well-stated justification for the book. However, most of the chapter is devoted to descriptions of climate, topography, vegetative associations, and other environmental conditions found in the four vegetational complexes that occur in the area of coverage. The chapter closes with a brief overview of some of the better public-access areas in which to observe birds. Although this section provides no details such as route maps, the visitor who is unfamiliar with birding locales in north central Texas will nevertheless find this information worthwhile.

The second chapter describes how the data that went into the species accounts were



obtained and evaluated. In the process of describing how he traced the existence of some of the older records, Pulich supplies a thumbnail account of the ornithological history of the area. This leads to a brief discussion of the methods used to judge the validity of sight records and includes a testimonial for the collection of specimens. The terms that are used to describe abundance, frequency, and seasonal occurrence are defined near the end of this chapter.

The bulk of the book (395 pp.) is devoted to the species accounts of 385 species now known to occur within the area. Each species account includes a brief statement of abundance and occurrence for the region. Following this, the author provides extreme arrival and departure dates of species for which many data are available. Where necessary, erroneous or improbable sight records are discussed, as are unusual occurrences, changes in status, and other facts of reported interest. Species accounts close with a discussion of specimen records and identification of the specimens to subspecies. Distribution maps complete the accounts for most species.

The final chapter adds accounts of 33 species which are either extinct, extirpated from the study area but not the state, hypothetically present but unsubstantiated by valid specimen or sight records, or introduced by the state wildlife agency as game birds. Some might find this the most interesting chapter. I was unaware, for example, that Ivory-billed Woodpeckers (*Campēphilus principalis*) were collected in the Trinity River bottoms near Dallas as late as 1910. This section of the book will undoubtedly direct the attention of ornithologists to the documentation of species for which better records are needed. The checklist of species in the counties, a cross-tabulated index of county occurrence which follows the last chapter, is a handy means of determining if a species has been properly documented in a given county.

The 22 pen-and-ink sketches and the color frontispiece are by Anne Marie Pulich, the author's wife. Most of the sketches are excellent and add to the volume. Unfortunately, a few of the drawings suffered loss of detail when they were reduced by the printer, but none was too poorly reproduced to be rendered unrecognizable.

This well-written volume is nicely produced and is virtually free of typographical errors. Although it is not to be confused with a field identification guide, it is an excellent source of reference for both the birding and the scientific community. Furthermore, the detail that is present in this book should be useful in future assessments of the effects of urbanization in an area undergoing tremendous ecological change.—BRIAN R. CHAPMAN.

THE BIRD BIOGRAPHIES OF W. H. HUDSON. By William H. Hudson, with a foreword by Jonathan Maslow. Capra Press, Santa Barbara, California. 1988:208 pp., with illustrations. Paper \$9.95.—W. H. Hudson lived on the pampas of Argentina during the last half of the 19th century, when a sea of tall grasses extended for hundreds of miles and when the Rio Plata had many lagoons and marshes. Hudson lived intimately with the natural world and was an ardent field ornithologist. His major written contribution was "Birds of La Plata" (2 vols., 1920), and it is selections from this work that form the current small edition.

The book includes 49 "bird biographies." As an enthusiastic naturalist, Hudson describes the most interesting behaviors of each of the 49 bird species. He lived many years in the Argentine countryside, and he was one of the first to observe closely and write about these birds. True, the accounts are sometimes anecdotal and anthropomorphic, but remember that his field notes were written before 1875. Keen ornithological skills were reflected in his many interesting discoveries; here I'll briefly mention a few from the text. He found, for example, that the *migrant* White-banded Mockingbird (*Mimus triurus*) returns with songs

learned a thousand miles away, that various species compete with Ovenbirds (*Furnarius rufus*) for use of their earthen nests, and that Bay-winged Cowbirds (*Molothrus badius*) raise their own young. Frequently the interactions of the pampas gauchos and the birds are described (e.g., how hunting gauchos fed Carancho Hawks [*Polyborus plancus*] that then flushed quail), and for a variety of birds he describes their behavior in captivity. Sadly, even in his time, a host of pampas species were already declining; the Common Rhea (*Rhea americana*) "... is now becoming rare, and those who wish to have a hand in its extermination must go to a distance of three or four hundred miles from the Argentine capital before they can get a sight of it." Hudson was a conservationist who believed we should set our goals toward a return to more natural conditions. The scientific merit of his writings are shown by his corrections of earlier authors, by many discoveries, and by some predictions that have been verified recently. Throughout the accounts it is evident that Hudson had literary skills (he also wrote the popular book, "Green Mansions").

In addition to the text are a foreword that succinctly reviews the naturalist's life and an afterword that "revises" the 1920 species nomenclature of the book. Alas, some errors of revision are evident (e.g., *Bolborhynchus monachus* of Hudson is clearly *Myiopsitta monachus* today, but the afterword lists it as *B. aymara*).

The book will be appreciated by a variety of bird students, particularly those interested in Argentine birds and behavior. (Hudson does include field experiences from elsewhere in South America.) Overall, it is an inexpensive and enjoyable introduction to the birds of the pampas from an era gone by.—CHARLES F. LECK.

**BIODIVERSITY AND CONSERVATION IN THE CARIBBEAN: PROFILES OF SELECTED ISLANDS.** By Timothy H. Johnson. International Council for Bird Preservation. Monograph No. 1, Cambridge, United Kingdom. 1988:144 pp., 3 Appendices.—During the 17th and 18th centuries, a mammalian species invasion (*Homo sapiens* explorers, conquerors, and entrepreneurs from the European continent) and subsequent *Homo sapiens* introductions (slaves from the African continent) altered for all time the biodiversity of the New World via the Caribbean. The "human introductions" have become the beneficiaries of a largely depleted, indeed threatened, biodiversity for which these disparate, agricultural peoples must now take responsibility in an increasingly interdependent and technological world.

Johnson has "fleshed-out" species lists for 11 Caribbean islands produced from the ICBP's Island Database established in 1985 to document extant single-island endemic bird species. Mammals, reptiles, amphibians, fish, invertebrates, and plants are also described from the best available sources. Known or presumed extinctions since 1600 are also noted.

Biodiversity and Conservation in the Caribbean (BCC) is a collection of such lists forming profiles with concise subsections on geopolitics, important ecosystems, conservation infrastructure, conservation action, and reference information for 11 islands from the Greater (Jamaica and Puerto Rico) and Lesser Antilles (Dominica, Grenada, Guadeloupe, Martinique, Monserrat, St. Lucia, St. Vincent), a continental island, Cozumel, off Mexico and a true outlier, San Andres, in the southwestern Caribbean Sea.

Rather rigid criteria were employed to determine which islands would be profiled. Islands having an area less than 20,000 km<sup>2</sup> and at least one extant single-island endemic bird were chosen. In a region of islands where political units sometimes encompass other large islands or cays with single- and two-island endemics, a large number of West Indian species deserving management recommendations have been excluded. The presumption here is that small islands forming larger political units may be excluded as are islands larger than 20,000 km<sup>2</sup>,

because they have a large core of endemic diversity. Agreed, a primary caveat in the introduction excludes group-island endemics. Yet from a biogeographic point of view, potential users of this planning and management tool may be left with the impression that there are far fewer West Indian endemics to be concerned with, which is certainly not the case with the ICBP, and that small islands close to large ones (Cuba and Hispaniola) may not be as crucial because biodiversity is less of a priority or is more stable on such real estate.

A case in point is Isle of Pines, which has an area of 2560 km<sup>2</sup>, is 49 km from its nearest neighbor, and has 11 two-island endemic bird species. Another case is Islas Saona and Beata, Dominican Republic, and Gonave Island, Haiti, which harbor several endemic species whose last chance for survival may be these off-shore refugia critical for endemic species losing habitat by the minute on Hispaniola. Other examples include the Bahamas archipelago where Andros Island has four species of endemic birds found on only two or three islands but were not included in this treatment.

Apart from this philosophical difference, some technical shortcomings include lack of appendices for listing two-island endemics, for example, which may be discussed in a future monograph, the lack of an index of all species mentioned in the text, which would have been useful, and the absence of island or regional maps illustrating the biogeographical relationship of these 11 islands. There are inconsistencies of single-island species totals for Jamaica and Puerto Rico in the profiles and Appendix 2. And the repeated notion that Peregrine Falcon (*Falco peregrinus*), a migrant in the Lesser Antilles, be included in the West Indian native fauna is puzzling. If Peregrine, why not Bachman's Warbler (*Vermivora bachmanii*), Kirtland's Warbler (*Dendroica kirtlandii*), Piping Plover (*Charadrius melodus*), and Roseate Tern (*Sterna dougallii*), also listed as endangered in North America and recorded in the Caribbean region?

Continental islands off South America were excluded from this collection of profiles, a convention perhaps acknowledging Bond's *Birds of the West Indies* biogeographical description of the region. BCC in contrast includes Cozumel, a continental island off Mexico, which has far less diversity and governmental commitment than Grand Cayman, for example, excluded on the basis that the Grand Cayman Thrush (*Turdus bairdii*) has not been seen since 1938. Grand Cayman also has the Yucatan Vireo (*Vireo magister*) which exists at Cozumel, although not mentioned in its profile as a species with very limited Caribbean distribution. Other West Indian endemics, although not single-island species, are the Bahama Yellowthroat (*Geothlypis rostrata*) (Abaco, Grand Bahama, New Providence, and a few others), Olive-capped Warbler (*Dendroica pityophila*) (Grand Bahama, Abaco and limited areas of Cuba), Vitelline Warbler (*D. vitellina*) (Grand Cayman, Swan Island), and Green-tailed Ground Warbler (*Microligea palustris*) (Beata Island, Dominican Republic).

Notwithstanding minor short-comings from my perspective, this monograph is an important first step in providing concise lists of endemic flora and fauna and conservation recommendations for some of the unique small islands of the Caribbean region. The ICBP suggests that successive publications, though not in book form or comparable depth as this quatro-sized monograph, will include island-group endemics and that another publication covering Atlantic islands will be forthcoming. Perhaps the Bahamas will be represented there.

No other volume presents a species balance-sheet of the post plantation era in the West Indies. Essential descriptions of single-island endemic biodiversity, physical and political geography, government and non-government accomplishments in conservation, and specific recommendations for managing remnant biodiversity are now available in Johnson's ICBP Monograph No. 1. I am a little disappointed that more species were not dealt with and that no summary was attempted to put into perspective the state of biodiversity and conservation in the Caribbean based on these profiles. And I suppose that editorializing to focus attention

on the conservation responsibility of former and current parent-nations and world conglomerates, that have reaped enormous power and wealth from these tiny nations over the last three centuries, was not attempted in order to remain scientific and objective. That, I suppose, will be left to the users, or bio-auditors, of this essential first step.

This monograph is a must for every student of Caribbean biota for several reasons. It supports continuing efforts of the ICBP, the world's longest established conservation organization whose primary aim is the protection of wild birds and their habitats. Success of this volume implies data-base profiles for other West Indian islands, large and small, which harbor endemic subspecies and relicts. This volume establishes international recognition and impetus for conservation work in these 11 islands or countries under very difficult economic conditions. It illustrates how much more committed support developing nations require to "turn the corner" on habitat and species loss during the next half-century. Tim Johnson and ICBP are to be congratulated for producing this Caribbean collection first from its Island DataBase and for that we are grateful.—ROBERT L. NORTON.

LOVEBIRDS, COCKATIELS, BUDGERIGARS: BEHAVIOR AND EVOLUTION. By J. Lee Kavanau. Science Software Systems, Inc., Los Angeles, California. 1987:1001 pp., 3 figs., 4 tables. \$69.00.—The topics of this book are by no means limited to Peach-faced Lovebirds (*Agapornis roseicollis*), Cockatiels (*Nymphicus hollandicus*), and Budgerigars (*Melopsittacus undulatus*), nor are they limited to just parrots. Instead, this book includes comprehensive discussions on the behavior, morphology, physiology, ecology, biogeography, and evolution of all birds. This is reflected in an impressive reference list (1408 citations) that encompasses almost all aspects of avian biology. The author "aspires to provide extensive factual bases that will facilitate the progress, not only of other students of avian evolution, but also of workers interested in other aspects of avian biology." The author also strives to illustrate the validity and importance of laboratory studies in avian biology and the potential importance of aviculturists to studies of avian behavior. The author himself shares data from over five years of laboratory studies on lovebirds, cockatiels, and Budgerigars, including 17 clutches of eggs by cockatiels alone. Through the use of these studies, the author presents fascinating ideas on the evolution of bird reproductive behavior from their reptilian ancestors to modern day birds.

Chapter 1, "The Birds and the Continents," begins with a thorough description of the paleobotany and paleoclimatology of Australia and the evolution of its present day avifauna. The author then gives an in-depth description of the morphology and general behavior of Budgerigars and cockatiels. This treatment continues with a similar description of Africa and the lovebirds. Included within this chapter is a very informative section on vocal mimicry in birds. Chapter 2, "Housing and Care," includes avicultural information on the housing of lovebirds, Budgerigars, and cockatiels, and their health and veterinary needs. Chapter 3, "Challenging the Lovebird Pair Bond," uses aviary observations to investigate the nature of the pairbond and courtship behavior in lovebirds. This chapter also includes an extremely detailed discussion of the avian brain. Chapter 4, "Reproductive Cycles, Relict Egg-Care, and Avian Evolution," presents the central theorem of Kavanau's book, that cockatiels in their egg-care behavior retain many behavioral features that trace back to ancient times in the reptilian-avian evolutionary lineage. The author recognizes five stages in the line of evolution from late or post-Triassic stem-reptilian ancestors to a modern day bird, the cockatiel. These stages include pre-aves (early post-reptilian ancestors), primitive pro-aves, advanced pro-aves, ancestral birds, and modern birds. This discussion includes

how such factors as endothermy, terrestriality, arboreality, foraging behavior, and habitat have influenced parental egg-care from the Mesozoic to the present day. The basis for much of Kavanau's ideas on the evolution of incubation behavior and the use of cockatiels to illustrate "relict" behavior is his belief that behavior shows a high degree of evolutionary conservatism. This chapter should provide much fuel for thought and some debate among students of avian evolution. Chapter 5, "Atypical Pair Bond Formation in Lovebirds," Chapter 6, "Care of Eggs and Young, and Behavior of Young," and Chapter 7, "Behavior and Social Interactions," provide detailed accounts of various aspects of lovebird, cockatiel, and Budgerigar breeding behavior based on numerous laboratory observations and experiments.

The scope of this book is impressive. The amount of information conveyed by the author is almost overwhelming. Nonetheless, the material is presented in an organized fashion and the text is well written. My only complaint about the book is its price (\$69) and the paperback binding, which began to fall apart almost immediately. Extended use of this book would soon result in numerous loose pages.

Nevertheless, this book is a must for anyone seriously interested in avian evolution and should be in every major library. It may also be of use to aviculturists who are interested in a more scientific approach to aviculture. Finally, the book's detailed descriptions of captive bird breeding and experimentation provide numerous ideas for undergraduate and graduate research on captive birds.—STEWART T. SKEATE.

AUDUBON WILDLIFE REPORT 1988/1989. By William J. Chandler (ed.). Academic Press, New York. 1988:xviii + 817 pp., many black-and-white photos, maps and graphs. \$49.95 (cloth), \$24.95 (paper).—This is the fourth volume in a series of summaries that emphasize the wildlife management activities of various agencies of the Federal Government. The 1987 volume was reviewed earlier (Wilson Bull. 100:707–708, 1988) and the current volume follows the format outlined in that review.

"The Featured Agency" in this volume is The National Marine Fisheries Service. Part Two discusses the other federal programs or agencies in less detail. Part Three reports on six "Conservation Challenges." These include discussions of the Wildlife and Water Projects on the Platte River, International Wildlife Trade, The International Orchid Trade, Plastic Debris and Its Effects on Marine Wildlife, The 1985 Farm Act and Its Implications for Wildlife, and Restoring the Everglades.

Part Four discusses 15 species (seven mammals, five birds, one reptile, and two crabs) that are either endangered or are of some concern. The Bird species are Common Barn-Owl (*Tyto alba*) by Carl D. Marti, Greater Flamingo (*Phoenicopterus ruber*) by Alexander Sprunt IV, Eskimo Curlew (*Numenius borealis*) by J. Bernard Gollup, Bachman's Warbler (*Vermivora bachmanii*) by Paul B. Hamel, and Sanderling (*Calidris alba*) by J. P. Myers. These accounts include an outline of some of the natural history of the species, an Historical Perspective, and sections on Current Trends, Management, Prognosis, and Recommendations. As in the earlier volume, the selection of forms ranges from one that may be extinct (the warbler) to several that are abundant but may have specific problems facing them in the future.

A series of Appendices provides a set of directories for the various agencies as well as other useful information, including a listing of the Federal Endangered and Threatened Species.—GEORGE A. HALL.

## ANNOUNCEMENTS

## NORTH AMERICAN LOON FUND GRANTS

The North American Loon Fund (NALF) announces the availability of two grant programs for support of new or current research, management, or education projects that may yield useful information for Common Loon conservation in North America.

The first of these programs, the Robert J. Lurtsema Research Award, consists of a \$1,000 stipend available annually for a suitable research project focused on a member of the Family Gaviidae. Preference will be given to students and independent researchers with limited availability of other funding.

The second program offers modest grants in support of research, management, or educational projects directly related to the conservation of Common Loons as a breeding species. Proposals in the range of \$500.00 to \$3,000.00 are most likely to be considered for funding.

Further guidelines for prospective applicants are available upon request from the NALF Grants Committee. Deadline for submission of proposals is December 15, 1989. Funding awards will be announced by March 15th, 1990.

Please submit guideline request to:

North American Loon Fund Grants Committee  
North American Loon Fund  
RR 4, Box 240C, High St.  
Meredith, NH 03253

---

**INFORMATION FOR AUTHORS**

*The Wilson Bulletin* publishes significant research and review articles in the field of ornithology. Mss are accepted for review with the understanding that the same or similar work has not been and will not be published nor is presently submitted elsewhere, that all persons listed as authors have given their approval for submission of the ms, and that any person cited as a personal communication has approved such citation. All mss should be submitted directly to the Editor.

*Text.*—Manuscripts should be prepared carefully in the format of this issue of *The Wilson Bulletin*. Mss will be returned without review if they are not properly prepared. They should be neatly typed, double-spaced throughout (including tables, figure legends, and "Literature cited"), with at least 3 cm margins all around, and on one side of good quality paper. Do not use erasable bond. **Mss typed on low-quality dot-matrix printers are not acceptable.** The ms should include a cover sheet (unnumbered) with the following: (1) Title, (2) Authors, their institutions, and addresses, (3) Name, address, and phone number of author to receive proof, (4) A brief title for use as a running head. All pages of the text through the "Literature cited" should be numbered, and the name of the author should appear in the upper right-hand corner of each. The text should begin in the middle of the first numbered page. For the first numbered page. Three copies should be submitted. Xerographic copies are acceptable if they are clearly readable and on good quality paper. Copies on heavy, slick paper, as used in some copy machines, are not acceptable.

*Tables.*—Tables are expensive to print and should be prepared only if they are necessary. Do not repeat material in the text in tables. Tables should be narrow and deep rather than

wide and shallow. Double space all entries in tables, including titles. Do not use vertical rules. Use tables in a recent issue of the *Bulletin* as examples of style and format. Tables should be typed on separate unnumbered pages and placed at the end of the ms.

**Figures.**—**Illustrations must be readable (particularly lettering) when reduced in size.** Final size will usually be 11.4 cm wide. Illustrations larger than 22 × 28 cm will not be accepted, and should be reduced photographically before submission. Legends for all figures should be typed on a separate page. Photographs should be clear, of good contrast, and on glossy paper. Drawings should be in India ink on good drawing board, drafting paper, or blue-lined graph paper. All lettering should be done with a lettering instrument or adhesive transfers. Do not use typewriter or computer lettering. Designate the top of each illustration and label (on the back in soft pencil) with author's name, ms title, and figure number. Submit 2 duplicates or readable xerographic copies of each figure as well as the original or high-contrast glossy photo of the original.

Authors of accepted papers are urged to submit voucher photographs of their work to Visual Resources for Ornithology (VIREO) at the Academy of Natural Sciences of Philadelphia. Accession numbers from VIREO will then be published within appropriate sections of the paper to facilitate access to the photographs in subsequent years.

**Style and format.**—The current issue of *The Wilson Bulletin* should be used as a guide for preparing your ms; all mss must be submitted in that format. For general matters of style authors should consult the "CBE Style Manual," 5th ed., Council of Biology Editors, Inc., Bethesda, MD, 1983. Do not use footnotes or more than two levels of subject sub-headings. Except in rare circumstances, major papers should be preceded by an abstract, not to exceed 5% of the length of the ms. Abstracts should be informative rather than indicative, and should be capable of standing by themselves. Most units should be metric, and compound units should be in one-line form (i.e., cm-sec<sup>-2</sup>). The continental system of dating (19 Jan. 1950) and the 24 hour clock (09:00, 22:00) should be used.

**References.**—In both major papers and general notes, if more than 4 references are cited, they should be included in a terminal "Literature cited" section. Include only references cited in the ms, and only material available in the open literature. ("In-house" reports and the like should not be cited.) Use recent issues of the *Bulletin* for style, and the most recent issue of "BIOSIS," BioScience Information Service, Philadelphia, PA, for abbreviations of periodical names. If in doubt, do not abbreviate serial names. Manuscripts with fewer than 5 references should be cited internally, e.g., (James, *Wilson Bull.* 83:215–236, 1971) or James (*Wilson Bull.* 83:215–236, 1971).

**Nomenclature.**—Common names and technical names of birds should be those given in the 1983 A.O.U. Check-list (and supplements as may appear) unless justification is given. For bird species in Central and South America the *Bulletin* uses the common names appearing in Eisenmann, "Species of Middle American Birds," 1955 and Meyer de Schauensee "The Species of Birds of South America," 1966. Common names of birds should be capitalized. The scientific name should be given at first mention of a species both in the abstract and in the text.

The editor welcomes queries concerning style and format during your preparation of mss for submission to the *Bulletin*.—CHARLES R. BLEM, Editor.