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ORNITHOLOGICAL LITERATURE

AUDUBON TO XANTUS: THE LIVES OF THOSE COMMEMORATED IN NORTH AMERICAN BIRD NAMES. By Barbara and Richard Mearns. Foreword by Dean Amadon. Academic Press, London and San Diego, 1992: xx + 588 pp., bird drawings by Dana Gardner; maps and portraits of biographers. $45.00.—In my enthusiastic review of "Biographies for Birdwatchers" (1989. Wilson Bull. 101:658–659), the earlier book by the Mearnses, I stated "It is apparent that a book of comparable size could be compiled on those persons commemorated in the names of North American birds. I wonder if, in North America, there is an author or authors interested and willing enough to do such a superbly thorough job of it as has been accomplished by Mr. and Mrs. Mearns." It somehow never occurred to me that this challenge would be picked up, not by a North American, but by the Mearnses themselves, and they have indeed lived up to their own standards.

I may say parenthetically that I had wondered how the authors pronounced their name, as I had heard a British colleague mention the name of the eminent American ornithologist E. A. Mearns as if it had the vowel sound "Meerns," whereas I had always heard the name pronounced to rhyme with "terns." Andrew Richford of Academic Press, who edited both of the books in question, tells me that the name does indeed rhyme with "terns".

There are 98 major biographical entries in the present book. Five names actually precede "Audubon" alphabetically, but I can understand that "Abert to Xantus" would have less public sales appeal. There is a brief general bibliography, and ample footnotes for each chapter.

Next comes a 25 page Appendix with its own bibliography, devoted to "a miscellaneous selection of naturalists commemorated by well-known races or hybrids, by recently obsolete names, or by species that are only accidental visitors to the United States and Canada." There are 60 of these, ranging chronologically from Archilochus (c. 720 BC–c. 680 BC) to the still living John Cox and Christian Jouanin. The Mearnses, incidentally, properly identify Archilochus as an early Greek lyric poet, famed for his savage satires, and point out that the generic name (of the Ruby-throated and Black-chinned hummingbirds) is one of several created for hummingbirds by H. G. L. Reichenbach in 1854 to commemorate classical Greeks. Lest anybody still rely on E. S. Gruson's "Words for Birds" for the derivations of bird names (see my review, 1974. Auk 91:443–445), here is his explanation of the generic name *Archilochus*: "Greek for 'chief brigand,' coined from *archos,* 'chief' or 'first in importance,' and *lochos,* 'ambush or a company of men.' But why? Because the bird steals the pollen from the flower and dashes away?"

The choice of names to include in the Appendix was obviously somewhat arbitrary. Almost half of the 60 short biographies commemorate persons after whom subspecies were named. Some of these names are still current in a vernacular sense, so biographies for William Bullock and Lord Baltimore (for example) are obvious choices. Older readers of this review will remember that in the A.O.U. Check-list through the 4th (1931) edition, English names were assigned to every subspecies. I counted 44 persons whose names appeared in the *English* patronymics in 1931 and who are not included in the Mearnses' book. A few, like Outram Bangs and E. H. Forbush, were among the most prominent ornithologists of their day, and perhaps need biographical entries less than do the more obscure honorees. To illustrate my point, the names of *all* of the following nine people were attached to subspecies of ptarmigan: can you identify Alexander, Chamberlain, Dixon, Evermann, Kellogg (*not* Peter Paul of Cornell), Reinhardt, Sanford, Turner, or Welch?

Perhaps the most glaring omission from the Appendix is George Miksch Sutton (1898–

1982), whose claim to a place in the list exactly parallels that of William Brewster (who *is* included), being attached to a hybrid warbler first described as a new species.

Only two of the patronymics in the main entries were published by ornithologists now living, and both cases involved renaming. When the Akiapolaau and the amakihis are considered congeneric, *Hemignathus wilsoni* (Rothschild) is preoccupied by an earlier *wilsoni,* so in 1979 Douglas Pratt renamed the Akiapolaau *H. munroi,* thus giving the Mearnses justification for a five-page biography and portrait of G. C. Munro (1866–1963). In the notes for this chapter (p. 537), incidentally, the Mearnses were so used to writing the name Munro with a u that they inadvertently spelled the name of Sibley's co-author as "Munroe" instead of Monroe.

In 1939 Allan Phillips found that the holotype of *Empidonax wrightii* Baird, the name long used for the Dusky Flycatcher, was actually a specimen of Gray Flycatcher, so he published a new description of the Dusky Flycatcher under the name *E. oberholseri* after Harry Church Oberholser (1870–1963), who, incidentally, was the only figure listed in the main body of the book whom I knew personally.

The editing of this volume was excellent, and I found few errors. One of the most unfortunate is the substitution of "1842" for 1942 as the date of publication of Hume's important *"Ornithologists of the U.S. Army Medical Corps"* (p. 165). In my experience, British authors and editors tend to be a little shaky in New World geography, so it is not surprising to find "Columbia" for Colombia on p. 203. I don't know where the Mearnses got the locality "Sierra del Ranges," a suspiciously non-Hispanic-appearing locution, for Gundlach's discovery of *Dendroica pityophila* in Cuba; no such locality appears in the original description.

In my review of "Biographies for Birdwatchers," I suggested that the maps might better have been collected together in the front or back of the volume instead of scattered through the text, adjacent to the alphabetically first biography of several whose routes appear on a single map. In the new book, the maps are still scattered through the text, but at least there are page references to the maps included with the biographies. The maps themselves are often vastly oversimplified; that on p. 498, for example, showing places visited by Couch, McCown, Oberholser, and Wright, shows no state or international boundaries, whether modern or historical; the names of four Mexican states are given, but of no U.S. states; Tucson could be interpreted as being in Sonora.

The scratchboard illustrations by Dana Gardner are not unlike those of Darren Rees in the earlier volume, but are much coarser in texture. Like Rees, Gardner has chosen some highly unorthodox poses for his birds, and has made some unusual decisions as to what to portray. He drew the "nothing-looking" female for Bachman's Warbler; for one of the only two species that appears twice, *Oporornis tolmiei* under both Tolmie and MacGillivray, he chose to draw two similar alternate-plumaged males, varying only the surrounding foliage. For the Crested Honeycreeper, *Palmeria dolei,* which appears under both Palmer and Dole, Gardner simply repeated the same picture. Strickland's Woodpecker and the three doves of the genus *Zenaida* are represented by study skins. The standing Leach's Petrel is a typical 19th Century museum mount, complete with numbered tag and stand. Brandt's Cormorants are mere silhouettes, doubtfully diagnostic beyond the generic level. Say's Phoebe is even less diagnostic; a silhouetted passerine whose apparent size depends on the size of the rusty old wheel it is perched on. Bulwer's Petrel is far out to sea, and dubiously identifiable, but that's how petrels are usually seen! Cook's Petrel has come somewhat closer to the boat. Cassin's Kingbird is represented by the upper portion of a utility pole and associated wires, on one of which is perched a small passerine with a breast-band. A Henslow's Sparrow could conceivably perch in a rosebush as drawn, but it is overwhelmingly a grassland species. Gardner has completely missed the peculiar bill shape of Swainson's Warbler, thus losing

the *Gestalt* of the species. The Elf Owl is beautifully detailed, but so close in the foreground that its status as the tiniest of our owls is not evident.

Lest these critical remarks weigh too heavily, I must also say that Gardner's drawings do add greatly to the appearance of what is already an attractively printed book. He has a keen sense of design, which shows in some of his more complicated drawings. I particularly liked the Bendire's Thrasher at the nest, half hidden in a mass of cactus thorns. Some of his drawings, like that of Clark's Nutcracker, incorporate evocative landscapes. His desire to use offbeat habitats or poses is wittily displayed in the drawing of a Townsend's Shearwater that has flown on shipboard at night.

As was true of my reading of "Biographies for Birdwatchers," I picked up any number of "gee whiz, I never knew that" facts. It had never occurred to me that the Townsend of the shearwater and that of the solitaire and the warbler were two different men. The former, Charles Haskins Townsend, was the Director of the New York Aquarium until 1937, which means that I probably passed right by his office during my boyhood visits to that marvelous old building at the Battery, the southern tip of Manhattan. John Kirk Townsend was a contemporary of Audubon and Nuttall. The unique *Emberiza Townsendi* Audubon is still described by the Mearnses as possibly a hybrid or "the very last remnant of a now extinct species." They understandably missed my analysis of this bird (1985. Natural History 94 (4):88–92), in which I came to the conclusion that "Townsend's Bunting" is an abnormally pigmented Dickcissel.

As a museum curator, I have encountered many sad instances of inadequate care of valuable specimens, but the description of the 20th Century vandalism of much of the Edward Harris collection, mostly taken on his expedition of 1843 with Audubon, triggers a helpless indignation comparable only to the effect of the story of the last mounted dodo having been thrown in the fire by a museum custodian.

Mr. and Mrs. Mearns have also added a most delightful word to my vocabulary. They describe Gundlach in the following passage: "Constantly traveling, dressed simply in drill and carrying little in the way of baggage, he became a henspeckle figure." The Random House Dictionary identifies "henspeckle" as a word from Scotland and the North of England, meaning "conspicuous; easily seen or recognized."

The Mearnses have added so much to my historical knowledge in their two books that I am delighted to be able to reciprocate with an item unknown to them. In their entry for the Verreaux brothers (p. 472), whom they describe as "amongst the leading exponents of the art of taxidermy," they mention "one of their most ambitious and spectacular pieces . . . an Arab courier mounted on a camel being attacked by two lions. It won a gold medal at the Paris Exposition of 1867 and was afterwards bought by the American Museum of Natural History at New York to help draw in the public." In 1899 the American Museum exchanged this exhibit to the Carnegie Museum in Pittsburgh, where it is much beloved by the public. It has been partially restored twice, and will be refurbished again to take its place near the entrance of a new African Hall, opening in 1993, as part of the Carnegie's centennial celebrations.—KENNETH C. PARKES.

STORKS, IBISES, AND SPOONBILLS OF THE WORLD. By James A. Hancock, James A. Kushlan, and M. Philip Kahl; illus. by Alan Harris and David Quinn. Academic Press, London, England. 1992: 385 pp., 49 color plates, 40 color photographs, 49 range maps, 148 tables. $139.00.—Despite its large 9 × 12-inch format and generous 49-portrait series of original, full-color art, "Storks, ibises and spoonbills of the world" is simply not a coffee-table book, at least not a typical coffee-table book. True, the volume is handsomely illustrated, but the

text accompanying the art is the real heart of the book, and not vice versa. Unlike many recent global treatments of avian taxa, the three co-authors of this work have seen, photographed, and, in many instances studied, all but eight of the 49 species described. As a result, the work represents an honest, accurate, and eminently useful volume on one of the more diverse associations of Ciconiiforms. The fact that the book is also well illustrated is but icing on the ornithological cake. Indeed, in many ways the work is reminiscent of Leslie Brown and Dean Amadon's often cited 1968 classic, "Hawks, eagles, and falcons of the world."

The book's text begins with an introduction, followed by a series of crisp and succinctly written chapters on classification, conservation, courtship and reproduction, and feeding behavior and ecology. The essence of the effort, however is a series of two- to nine-page species descriptions of the world's six species of wood storks and openbills, 13 species of typical storks, giant storks, and adjutants, 23 species of ibises, six species of spoonbills, and the Shoebill (*Balaeniceps rex*). Species' accounts alone comprise 63% of the work. Although some—including this reviewer—might quibble with several of the finer points of the authors' taxonomy, the book provides thorough and surprisingly up-to-date accounts for each of the species included.

Each account is accompanied by a useful range map. Presumably sedentary species are depicted in blue, while migratory, or at least partially migratory, species are depicted in red and green with arrows indicting their principal migratory pathways. A cursory perusal of the maps shows 86% of the 49 species are, for the most part, nonmigratory; and that 61% of the species have trans- or circum-equatorial distributions. The maps reveal such details as the occurrence of a small (incipient?) population of nonmigratory White Storks (*Ciconia ciconia*) in the extreme southern tip of Cape Province, South Africa. Depictions of species' distributions, however, are a two-edged sword. The authors themselves suggest that, "Range maps are always troublesome." And indeed, many of those included in the book suggest far greater precision in our understanding than actually exists. At least several of the maps are incomplete. But, perhaps, that is why none is gridded longitudinally or latitudinally.

An exceedingly valuable 44-page tabular appendix presents both body and egg measurements, together with regional egg-laying dates for each species. A 4000-entry bibliography, compiled by Malcolm Coulter and the ICBP Storks, Ibises, and Spoonbills Group, is appended to the work. Regrettably, this extensive bibliography, which includes many references that are not cited in the book, is not keyworded.

Each of the 49 described species is portrayed in full-color by Alan Harris (39 species) and David Quinn (10 species). Most portraits manage to capture at least a field-guide gist of each species, and several of the illustrations, including Quinn's Marabou Stork (*Leptoptilos crumeniferus*) and Harris's Waldrapp (*Geronticus eremita*) and Bald ibises (*G. calvus*) are striking works of art. None of the portraits is captioned. As a result, in the case of species with distinctive subspecies' plumages, it is not always clear which morph is being portrayed. Although most illustrations portray breeding adults in typical poses, it would have been nice—but perhaps prohibitively expensive—to have included color or black-and-white sketches of nestlings, nests, and eggs as well. Harris and Quinn's portraits alone merit placing the book in a conspicuous location for browsing.

As is true for all too many avian taxa, the authors are forced to concede that 20% of the species depicted in their work are currently threatened or endangered and suggest that "in the last 50 years populations of most storks, ibises, and spoonbills have been reduced by at least half. . . ." Given, as the authors indicate, that many of the species "epitomise a near total dependency on water" and that wetland losses continue unabated in many regions of the world, the prospects for a rapid turn-around in the situation seem faint indeed. One can

only hope that when a second worldwide account of storks, ibises, and spoonbills is written sometime in the 21st century, that the number of species treated remains the same.

In sum, Hancock, Kushlan, and Kahl are to be congratulated for providing the ornithological community, and Ciconiiform specialists in particular, with an extremely attractive, practical, and timely reference to the world's storks, ibises, and spoonbills. Although some may question several of the details contained therein, "Storks, ibises, and spoonbills of the world" reflects a monumental and successful joint effort by three of a handful of experts in the field who could have crafted such a work.—KEITH L. BILDSTEIN.

OISEAUX DE GUYANE [The Birds of French Guiana]. By O. Tostain, J.-L. Dujardin, Ch. Érard et J.-M. Thiollay. Préface de L. P. Sanite. Alauda-Société d'Études Ornithologiques, Muséum National d'Histoire Naturelle, 4 avenue du Petit-Château, 91800 Brunoy, France. 1992: 1–222 pp., 77 photographs, 118 range maps, 105 drawings. 260 French Francs + 35 Francs for postage.—Guyane, a French overseas department in northeastern South America, is surrounded by Brazil, Surinam, and the Atlantic Ocean. It includes an area of about 90,000 km^2, and most of the territory is covered by tropical rain forests except for a narrow coastal belt of mangroves, plains, and savannas. Its topography is relatively flat, and its higher areas do not exceed 800 m. Considering the ecological diversity of the territory, its geographic position near the equator (between 2° and 5° latitude North), the diversity of the bird fauna recorded in adjacent countries, and the attention given to the birds of that area for several centuries, it is not surprising to find that nearly 800 species of birds may occur within such a small area, as reported in the book.

Even if the book has an English sub-title, it contains little English text: the name of the birds in the captions, a few titles, an extensive summary (pages 193–199) which includes a very brief introduction to the bird fauna of Guyane, with a description of the habitats recognized by the authors, and an index of English names. Otherwise the text is in French which could be a serious problem for those not familiar with the language. Is this approach more than a marketing strategy?

The authors provide a short section in which they describe briefly several of the best birding places in the department and lists some of the characteristic species. The section on species is the major part of the book. Each species account starts with the French, Latin, English, Creole, and Brazilian names of the species. A brief section entitled 'Habitat' describes the environment in which the species occurs. The next section 'Distribution' deals with the range of the species. It may contain a general statement based on the habitat where it occurs and/or the names of the localities where the species has been recorded, which is usually adequate to obtain a general overview of the species range in the department. An attractive range map provides additional information on the distribution but is limited to only 118 species. Although there is no extensive gazetteer, the localities used in the text are listed with their coordinates in the introduction. A section on 'Nidification' follows and varies much in length depending on whether the species breeds in Guyane or whether general breeding information is available for that species. Finally, although there are no formal descriptions in the entries, the section called 'Diagnose' contains details that will help the reader to distinguish a given species from similar ones. The authors have added a list of 119 species known to occur in adjacent areas but yet to be recorded in Guyane. This may be a stimulant to prospective "listers" planning to travel to this part of the world.

The design, color illustrations, photographs, maps, and the overall layout contribute to make this book a very attractive production. It provides a good introduction to the birds of Guyane and should encourage and attract bird watchers to this part of South America where one can still find relatively undisturbed and extensive tropical forest habitats. In

summary, in spite of its shortcomings, this little book will be useful to whoever plans a trip to Guyane or to look for some of the rarer Neotropical species in the forests of northern South America.—HENRI OUELLET.

L'OURAGAN HUGO: GÉNÈSE, INCIDENCES GÉOGRAPHIQUES ET ÉCOLOGIQUES SUR LA GUADELOUPE [Hurricane Hugo: origin, geographic and ecological consequences on Guadeloupe]. Editors F. Pagney Bénito-Espinal and E. Bénito-Espinal. Parc national de la Guadeloupe et Agence Guadeloupéenne de l'Environnement, du Tourisme et des Loisirs. Pointe-à-Pitre, Guadeloupe. 1991: 208 pp., 72 photographs, 42 figures, 17 tables. No price given.—Hurricane Hugo, the most violent hurricane to hit Guadeloupe in this century, caused serious damage to the areas it encountered in its path on 16 and 17 September 1989. The destruction was particularly severe in parts of Guadeloupe. The purpose of this small book is to explain, through a series of reports and articles by different authors, what hurricanes are all about and to summarize the effects of Hurricane Hugo on Guadeloupe. The first part explains how hurricanes are formed, the kind of damage "Hugo" caused on Guadeloupe, and how the territory was not devastated equally. The second part deals with its effects on the vegetation, including all ecological types. The third part contains two articles. The first one, by Édouard Bénito-Espinal and his associates, treats of the hurricane's impact on the bird fauna of Guadeloupe and is well documented. The authors conclude that the hurricane did not cause the disappearance of birds even in the most severely damaged areas. Bird populations declined a week or so after the storm but soon regained their previous levels as demonstrated by the data obtained on Bananaquits (*Coereba flaveola*). The authors show that the Bananaquit population of a study area had reached, a month after the storm, the levels it had in previous years (1987, 1988) but that the structure of the population had changed. They conclude that this hurricane appears to have had little effects on bird populations in Guadeloupe and that its main effect was the displacement and modification of populations in different parts of the islands. The second article describes the consequences of the hurricane on the coastal ecosystems. In the last part, it is concluded that, a year after the cataclysm, although most ecosystems of Guadeloupe have regenerated rapidly, the consequences of Hugo's passage will be seen and remembered for a long time. It is hoped that additional information on avian populations will be available in the near future to determine the effects of the storm on the entire bird fauna of Guadeloupe. In conclusion, I found this small book well-produced, attractively illustrated, as well as properly documented. It will be useful to anyone interested in the effects of severe tropical storms on the environment, and I take pleasure in recommending it to ornithologists, biologists, and to all who have an interest in Guadeloupe or the Caribbean Region in general.—HENRI OUELLET.

FINDING BIRDS IN THE NATIONAL CAPITOL AREA: Second Edition. By Claudia Wilds. Smithsonian Institution Press, Washington and London. 1992: 267 pp., unnumbered maps and illustrations. $14.95, paper cover.—Maps of the world are constantly changing with the politics of the day and just as maps get out of date, guides to finding birds also quickly go out of date. They must either be periodically replaced or they become increasingly obsolete with the passage of time. The problem is more than a loss of local wetlands and woods or even the changes from new highways and access points. There are just more birders out there exploring new areas for that potential rarity. Along the way, these birders discover more and more places to go to see birds.

In 1983 the first edition of this work was hailed as a new standard in bird finding guides.

Those accolades were richly deserved. This revised edition improves on that strong foundation. There are actually more places to bird in the region around Washington now than there were 10–15 years ago. These locations, for the most part, were largely unexplored, but we now can benefit from the legions of local birders who visit these spots on a regular basis. Claudia Wilds has tapped into that reservoir of information and expanded the coverage. The revised edition contains nearly 25% more pages devoted just to directions, maps, and other detailed information regarding finding birds in the region.

This second edition follows the same basic outline, although a few of the chapters have been renamed. All chapters and maps have been extensively revised. Coverage extends from extreme western Maryland to the Delaware marshes, south to the Outer Banks of North Carolina, westward to the Blue Ridge of central Virginia, and the mountains to the west. Precise directions are given to each area. Many tips on time of day or year are offered; others provide important information once the reader has arrived at the location. All mileages have been rechecked, routes rerun, and new roads taken into account. Many of the rarities seen in recent years are mentioned, but the observer is warned not to expect them on any given visit. Many of the subsections or chapters have been supplied by the experts who have extensive knowledge of a particular area. The author is an expert on Chincoteague, Virginia; this chapter alone is well worth the guide's modest price.

I carefully checked several of the chapter accounts against my own experience and found none of the choice stopping or access points left out in their mile-by-mile directions. As with any such work, any reviewer could still find a favorite local birding spot left out (mine was Patuxent River State Park near Olney, Maryland, for warblers, flycatchers, and winter sparrows, but with so many to choose from in the immediate vicinity of Washington, one cannot fault the author for leaving out some close-in areas. I believe the only major birding area, within the total region covered, that should have been included is that of the Allegheny Front of West Virginia for summer and fall birding. Dolly Sods and the other nearby West Virginia mountain areas are no farther than Garrett County, Maryland, or Highland County, Virginia.

All the species that regularly occur in the region are amply covered. The index or the species accounts of Chapter 3 often refer the reader to a half-dozen or more sites for finding a given species. All the maps have been redrawn and appear in a crisper, more detailed format than in the first edition. There are special chapters on finding owls, pelagic trips, and hawk watching. The latter of these three is worth the price of the book alone. I, for one, can hardly wait to visit that more accessible spot described just north of world famous Hawk Mountain, Pennsylvania.

Throughout the text there are ample notes on how and when to locate some of the more difficult birds (e.g., rails) once you get there. Some places require extensive hiking to get to some of the best birding areas (e.g., Assateague, Chincoteague), and their directions come with ample warnings about the insects and distances involved. Midwinter to summer, spring and fall, all seasons are covered, with the appropriate stress placed upon each area's best times for particular species. A wealth of information on driving times and suggested trips is provided for the weekend birder.

One of the most important themes throughout the text and in a new appendix concerns birding ethics. Even though most of the areas discussed are in the public domain, neither the habitat nor the birds can withstand thousands of bird-watchers if they do not practice sufficient restraint. While the number of birders increases, the amount of natural habitat continues to dwindle. Paths to the same tree for the same bird would soon be worn bare without some serious concern for the welfare of the habitat and the birds. Claudia Wilds strongly cautions her readers to be concerned about their individual impact on the environment and the birds.

The very few typographical or cartographical errors that I was able to find do not pose any problem. The map of the Bombay Hook National Wildlife Refuge road system is still misleading, but everyone uses the refuge's own map so this is not an obstacle.

Anyone who has the first edition should replace it with this revised edition if he or she wants to find all the 'new birding spots' or revisit an old site after many years absence. Anyone contemplating visiting the U.S. Capitol will find this an excellent guide. Public transportation is described in the immediate vicinity of the downtown area. There are many great birding places amidst the numerous parks and monuments of Washington. This book also remains a model for anyone contemplating writing a bird finding guide to her or his region. The nominal price is well within the means of any birder. This is a must-have birding book for any active birder who lives in or visits this area.—JAY M. SHEPPARD.

THE AUDUBON ARK: A HISTORY OF THE NATIONAL AUDUBON SOCIETY. By Frank Graham, Jr. with Carl W. Buchheister. Alfred A. Knopf, N.Y. 1990: 334 pp., numerous b/w photos.—George B. Grinnell's editorship of "Forest and Stream Magazine" in the late 1870s lead the campaign to outlaw market hunting and toward other reforms, including prevention of the widespread killing of birds.

In 1883, the AOU was founded in New York, and in 1886 issued the "Model Law," the basis for state laws to segregate and protect non-game from game birds. Through lobbying efforts, the Bureau of the Biological Survey was established.

Between 1876 and 1886, wagonloads of herons and shorebirds were removed from Florida by meat and plume hunters, and the AOU estimated that five million birds of 50 species in North America alone were sacrificed annually. In 1886, Grinnell proposed the formation of an association for the protection of wild birds to be called the Audubon Society. In February 1887, Grinnell published the first issue of *The Audubon Magazine* but was forced to abandon it in 1888.

On February 10, 1886, the Massachusetts Audubon Society was formed in Boston. The movement grew rapidly, and within two years chapters in 17 states had been established. Massachusetts Audubon began to push for passage of the Model Law.

The heart of the bird protection problem lay with the millinery industry in New York City. In 1900, the Lacey Act was passed by Congress, prohibiting interstate shipment of birds and other animals killed in violation of state laws. The same year, William Dutcher took over the Massachusetts Audubon Society, and with vital fundraising help from Abbot Thayer, originated the sanctuary and warden system.

By 1901, there were 36 Audubon Societies in the country, but they were not united by modern transportation and communication systems. With the founding of *Bird-Lore* (later *Audubon Magazine*) in 1899, Frank M. Chapman of the AMNH reunited the faltering Audubon movement. In 1906, Dutcher hired as secretary a young college instructor from North Carolina, T. Gilbert Pearson.

Theodore Roosevelt became president in 1901. In 1903, Roosevelt established the first U.S. wildlife refuge (Pelican Island, FL), the first of 53 before the end of his presidency.

On July 8, 1905, a plume hunter in Florida shot Audubon warden Guy Bradley and got off Scot-free. The public responded with empathy and outrage, and support for feather fashions began to wane.

Audubon actively promoted passage of several laws early in this century that protected birds, including the Audubon Plumage Bill, Bayne Bill, Weeks-Mclean Bill, Norbeck-Andregen Bill, and the Migratory Bird Treaty. Within eight years of Guy Bradley's murder, the traffic in wild bird plumages went wholly underground.

Upon Dutcher's death in 1920, Pearson succeeded him at the helm and led Audubon for the next 30 years. In 1934, John H. Baker replaced Pearson as head of Audubon, where he was to remain for the next 25 years. He built an elite staff of young ornithologists, including Roger Tory Peterson and Robert P. Allen. Vigorous new educational programs under RTP succeeded. Between 1910 and the early 1940s, more than nine million children had become members.

In 1934, after 36 years, Frank M. Chapman retired as editor of *Bird-Lore.* Grinnell died in 1938 at the age of 89, and the next year the Biological Survey became the U.S. Fish and Wildlife Service. *Bird-Lore* was renamed *Audubon Magazine* in 1940, and the "National Association of Audubon Societies" became "The National Audubon Society" (NAS). Land bequests to National Audubon increased in the 1940s, resulting in numerous new sanctuaries and Audubon camps throughout the country.

After World War II, several milestone works were published as National Audubon Society Research Reports, including works on the Ivory-billed Woodpecker, California Condor, Roseate Spoonbill, Whooping Crane, and the Greater Flamingo.

NAS helped lead the crusade that led to passage of the Wilderness Bill in 1964. It gave wilderness status to extensive remote areas on public lands.

In 1968, Elvis Stahr II was named president. He prevented the damming of Kentucky's Red River Gorge and led the successful fight against a huge Everglades jetport. The Florida Barge Canal was killed by President Nixon when he read about it in *Audubon Magazine. Audubon Field Notes* was redesigned and the name changed to *American Birds* in the 1970s.

In 1969, multimillionaire-adventurer George Whittell, Jr., bequeathed NAS more than twelve million dollars. With it, valuable habitat was procured, sanctuaries added to and new ones established, and research on endangered and threatened animals was funded.

Russell W. Peterson became president in 1979 and brought a global outlook to Audubon but was ineffective in Washington because "The election of Ronald Reagan brought in an administration whose leaders were more hostile to conservation principles than any other since the heyday of natural-resource exploitation in the nineteenth century."

Peter Berle became president in 1985. At this time, a financial crunch was apparent due to the oil glut. Operating expenses were increasing rapidly, and the society almost collapsed in 1987. Only widespread Draconian financial cuts saved Audubon from bankruptcy.

A shortcoming of this book is the lack of a table of contents. Another is the absence of chapter titles and list of illustrations. This makes it especially difficult to locate specific photographs.

The Audubon Ark is a treasure trove of fascinating and often humorous stories about famous ornithological personalities and their work, and it is replete with important and often hard to locate historical references. The many valuable photographs retrieved from NAS archives greatly enhance the well-written text. It is a valuable history of the conservation movement in this country and belongs in every school and on the bookshelf of anyone interested in wildlife preservation.—JACK D. TYLER.

OKLAHOMA BIRD LIFE. By F. M. and A. M. Baumgartner. Univ. of Oklahoma Press, Norman, Oklahoma. 1992: 443 pp., 51 color plates, 3 maps, 26 tables, 159 photos. $49.95.—This long-awaited book lives up to its advanced billing. Quarto size, it is bound in durable blue cloth, and the paper is of high quality. Spelling and grammatical errors are comparatively rare. Preliminary sections give background and explanatory information, including a checklist of Oklahoma birds (through 1987) that follows the latest AOU checklist (1983). Seasonal and regional statuses for each of 447 species are listed, plus the color plate number where each is illustrated in the center of the book.

Part I begins with a comprehensive historical account of ornithological investigations in

the state. Next comes a brief listing of the 83 residents, 98 summer residents, 69 winter residents, 85 migrants, and 19 visitors of regular occurrence in the state. Together with the 93 species listed in Appendix A (stragglers) and the five in Appendix B (extirpated species), the overall number of species known for Oklahoma is 452. By region, 231 species are found state-wide, 59 primarily in the east, 40 in western Oklahoma, and 24 in the far western Black Mesa country.

A strong point of this book is the 20-page section that treats the ecology of Oklahoma's avifauna. Tables, maps, and 20 photographs supplement short discussions of the physical and biological factors characterizing the nine biotic associations of the state. The map illustrating these should be consulted before the book is explored further. Tables of typical nesting species in each of these areas are helpful.

The following segment explains how birds can be attracted through careful selection of plantings by region (Table 7) and foods preferred by various species (Table 8). In the next sections, economics, conservation, and educational aspects of birds are considered, as well as banding information. Especially useful are analyses of the annual state Christmas Bird Counts and Breeding Bird Surveys.

Part II, covering 357 pages, constitutes the bulk of the book. A brief discussion of each of the 51 families occurring in Oklahoma is preceded by a small line drawing of a representative species by Wallace Hughes. The geographical (eight regions), numerical (seven categories), and seasonal (five time periods) status is given for each species, together with comments on behavior, preferred habitats, history, and conservation. Also included are population and nesting data gleaned from Breeding Bird Surveys, Breeding Bird Censuses, and Christmas Bird Counts. This section updates through 1986 records in "Oklahoma birds" (Sutton 1967) and "A Check List of Oklahoma Birds" (Sutton 1974). The authors have done an admirable job of collating information from a variety of sources, and this, the most scientifically valuable part of the book, appears to be quite thorough. Many useful supplementary tables and drawings are strategically placed throughout.

The centerpiece of the volume consists of 51 color plates by Wallace Hughes depicting 257 species of regular occurrence in Oklahoma. The general quality of these paintings is quite good, particularly the owls and cuckoos shown on Plates 21 through 23, the picids in Plate 25, the grosbeaks on Plate 40, and the gallinaceous birds on Plate 14. The worst color aberration occurs on Plate 50 where the Orchard Orioles (*Icterus spurius*) are apple green.

The pen-and-ink drawings preceding each family write-up are generally good, but the male American Goldfinch (*Carduelis tristis*) appears inexplicably both before the family Fringillidae and between the Sittidae and Certhiidae on page 267. The photographs are good to excellent, and the Baumgartners made use of a variety of sources, including many Oklahoma photographers. However, the Wood Ducks (*Aix sponsa*) on page 84 are badly out of focus, and a major oversight is the Red-headed Woodpecker (*Melanerpes erythrocephalus*) on page 216 that should be vertical, not horizontal.

There are several inconsistencies in Appendix A, "Stragglers in Oklahoma." In brackets are 35 species said to be ". . . through 1987, sight records only, unsubstantiated by specimens or photographs." But five of these accounts clearly state that the bird was photographed, and for three others, pictures that had been published in the *Bulletin of the Oklahoma Ornithological Society* are not noted. In some places, full citations of references are given, but only author and date in others, many of which were omitted from the Literature Cited.

There is a good deal of wasted space in this volume. For instance, on page xxvii, only seven lines are used at the top; page xxiv and 6 are blank; and pages 5, 42, 48, 416, 422, and 425 are also extravagantly spacious. Conversely, Appendix E on page 423 is badly in need of more space between lines.

Confusing is the authors' referral in the Preface and on page 423 to The Scissortail

(newsletter of the OOS) as the *Scissortail Bulletin* and *The Scissortail News-Bulletin,* respectively, because the society's journal is also called the Bulletin.

Taken altogether, "Oklahoma bird life" is an impressive work. It represents the end product of a very long labor of love by the authors and will be the standard reference for both laymen and scientists for many years to come.—JACK D. TYLER.

ON THE BIOLOGY OF FIVE SPECIES OF SWIFTS (APODIDAE, CYPSELOIDINAE) IN COSTA RICA. By Manuel Marin A. and F. Gary Stiles. Proceedings of the Western Foundation of Vertebrate Zoology. Vol. 4, No. 5., 1992: pp. 286–351, 2 color plates, 36 text figures, 13 numbered tables. $15.00 (W.F.V.Z., 439 Calle San Pablo, Camarillo, CA 93010).—As Marin and Stiles point out, swifts "are among the least studied neotropical birds. This is especially true of the subfamily Cypseloidinae, members of which typically fly very rapidly, often erratically, and usually high above the ground covering great distances in the course of their daily foraging." This volume fills a near void in our knowledge of the breeding biology and foraging ecology of two species, the White-chinned Swift (*Cypseloides cryptus*) and Spot-fronted Swift (*C. cherriei*), and adds substantially to what has already been published on the Chestnut-collared Swift (*C. rutilus*) and the Central American population, of the Black Swift (*C. niger*) and the White-collared Swift (*Streptoprocne zonaris*). Marin and Stiles have utilized a previously overlooked concentration of nests of these swifts, only 13 km from the capital city of San Jose, to provide extensive information on nests and nest sites, eggs, chick behavior, and diet. Their data on wing shape, wing area, flight characteristics, and nest building are the first of their kind for this subfamily.

This study reinforces the view that no salivary glue, typically used by swifts in the Chaeturinae and Apodinae, is found in the nests of the Cypseloidinae. They further document that the strong adherence of some nests to damp shaded rock surfaces may be due to an actual "rooting" to the substrate by the living mosses and liverworts used in nest construction.

The detailed analysis of natal, juvenal, and adult plumages, enhanced by two excellent color plates executed by John Schmitt, should dispel several lingering misconceptions regarding age and sex plumage differences in these swifts. Although the data on nestling growth are thin, due to widely spaced visits to the study area, they are sufficient to show interspecific differences, particularly the extended nestling period (65–70 days) found for *C. cherriei.* This is the longest prefledging period documented for any swift species, including those with an adult mass several times greater than that of the diminutive *C. cherriei* (adult mass 22.46 g.).

This volume greatly reinforces the overall picture derived from previous studies, mostly of *C. rutilus* and temperate nesting *C. niger,* of birds utilizing a damp, dark, nearly predator-free environment near, or at times behind, waterfalls. They have a reduced clutch size (1 or 2), slow nestling growth and prolonged fledging period, utilizing a diet emphasizing temporally and spatially clumped insect food resources such as swarming Hymenoptera and Isoptera. Even so, their discussion makes it clear that there is still much to be learned about these swifts. This is especially true when considering that very little is known about several other *Cypseloides* species, and the nests and eggs are still unknown for the White-breasted Swift (*C. lemosi*) and newly described White-faced Swift (*C. storeri*; Wilson Bull. 104(1992): 55–64).

The most controversial suggestion eminating from this study is the suggestion that *C. rutilus* and the Tepui Swift (*C. phelpsi*) should be transferred from *Cypseloides* to *Streptoprocne.* This would unite in one genus all of the collared (partial or full) species which lay two-egg clutches despite the enormous difference in their adult size. Several characteristics,

including lighter grey semiplume covering of nestlings and more rapid chick growth, support this new alignment. Intriguing though this is, a more thorough analysis of skeletal morphology of the whole subfamily as well as genetic and biochemical characteristics should be undertaken before this proposal is totally accepted.

Like any good study, this one provides not only a strong data set for others to build on, but it also points the way for further useful investigations of these birds which show such singular adaptations even within as distinctive a group as the swifts. This well produced and illustrated volume has much which will be interesting reading for a wide spectrum of avian biologists, and it is a "must-have" reference for swift enthusiasts.—CHARLES T. COLLINS.

ALSO RECEIVED

THE BIRDS OF TIKAL. By Randell A. Beavers. Texas A&M University Press, College Station, Texas, 1993: 153 pp., colored cover painting, 16 black-and-white photos, 3 maps. $29.59 (cloth), $12.95 (paper).—The archaeological site at Tikal, Guatemala, has become an attractive port-of-call for the world-travelling birder. The present book consists mainly of a conventional checklist with bar graphs showing seasonal and habitat occurrence of the 404 species known for the Department of Petén. A Supplemental Species Account provides short annotations that update the information in Smithe"s "The Birds of Tikal" (1966). Most of these are sight records by visitors to the area, but an appendix lists those species for which specimens have been taken and gives literature citations for those records. The first-time visitor to Tikal will find this book to be a useful adjunct to his field guide.—G.A.H.

BIBLIOGRAPHIE D'ORNITHOLOGIE FRANÇAISE 1945–1965, By Yves Muller. Secrétariat de la Faune et de la Flore, Muséum National d'Histoire Naturelle, 57 rue Cuvier, 75231 Paris Cedex, France. 1992: 260 pp., 230 FF.—An invaluable compilation (in French) of 2400 references, together with a Geographic Index and a Taxonomic Index to these citations.—G.A.H.

UCCELLI. I, By Pierandrea Brichetti, Paolo De Franceschi, and Nicola Baccetti, Eds., Fauna D'Italia Vol, XXIX, Calderini, 31 Emilia Levante, 40139, Bologna, Italy. 1992: xxviii & 920 pp., 40 colored plates. No price given,—The first volume (in Italian) of an ambitious monograph on the birds of Italy covering the families Gaviidae through Phasianidae in the Wetmore order.—G.A.H.