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The Purple Martin

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BOOK REVIEWS

EDITED BY BARBARA E. KUS

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Biology of Marine Birds.—E. A. Schreiber and Joanna Burger (editors). CRC Press LLC, Boca Raton, Florida. xvi + 722 pp., numerous text figures and photographs, ISBN 0-8493-9882-7. $84.95 (cloth).

Biology of Marine Birds, a multi-authored volume edited by E. A. Schreiber and J. Burger, is a monumental achievement. The book contains 19 chapters ranging in topic from the evolutionary history of seabirds based on the fossil record (Warheit) to current seabird-conservation needs and management practices (Boersma et al.). Chapters on avian taxa normally not included in texts on marine birds (shorebirds, by Warnock et al., and wading birds, by Frederick) round out an impressive array of chapters written by world-renowned seabird ecologists and physiologists.

New material is presented throughout the volume, but the chapters by Weimerskirch, Hamer et al., Bried and Jouventin, and Ellis and Gabrielsen stand apart from the others. These authors conducted original meta-analyses, investigating interspecific variability in the demographic, life-history, behavioral, and physiological traits of marine birds. These chapters appear in the middle of the volume, tempting one to speculate that the editors also saw these chapters as the cornerstones of the book. One of the clear, though not particularly novel, results of each of these meta-analyses is the importance of body size in determining physiology, life-history trade-offs, and population dynamics of seabirds. Notably, the meta-analyses conducted by Weimerskirch (seabird demography and its relationship with the marine environment) and Hamer et al. (breeding biology, life histories, and life-history–environment interactions) are supported and based upon an unusual and remarkably thorough dataset presented in Appendix 2, in which the editors and contributors compiled life history and demographic variables for 335 different species of seabirds. The meta-analyses conducted by Bried and Jouventin (site and mate choice in seabirds: an evolutionary perspective) and Ellis and Gabrielsen (energetics of free-ranging seabirds) are supported by extensive tabular material (Table 9.1 and Tables 11.2 and 11.5, respectively). I am unaware of other thorough compilations on these topics; therefore, Appendix 2 and these tables should be of exceptional value to students and professional marine ornithologists for decades to come. Unfortunately, the references as presented in Appendix 2 are pooled by species, rather than by the parameter of interest, which will make it difficult for those using the data to find the original sources of information.

As with any multi-authored volume, the book does suffer from some inconsistencies in the quality and quantity of information presented, including photographs and figures. While I enjoyed the line drawings sprinkled throughout the book immensely, many of the photographs are poorly reproduced. Some of the chapters contain superbly detailed reviews (e.g., Montevecchi; interactions between fisheries and seabirds) while others seem more focused on the contributor's previously published material. Other balanced and thorough reviews include Burger and Gochfeld's contribution on the effects of chemicals and pollution on seabirds. However, a major omission from this chapter concerns the use of stable-isotope analysis to assess biomagnification of contaminants in marine ecosystems. Numerous researchers have used this technique to understand the mechanisms of contaminant uptake, and it has important applications for pinpointing and minimizing pollutant loads in seabirds. Schreiber's review on the effects of weather and climate on marine birds is balanced, but some important recent insights on coupled climate-ecosystem fluctuations are missing. Although much is written in this chapter on El Niño, little attention is paid (one paragraph) to the opposite climate extreme, La Niña, and its *positive* effect on seabird populations on a global scale. Moreover, lower-frequency (i.e., interdecadal) climate variability and ecosystem fluctuations are not addressed in this chapter, yet this time scale of analysis is required for understanding the effects of global warming on marine systems and seabirds. Given the extensive literature on this topic (much of it published in the oceanographic rather than ornithological literature), I consider this a substantial omission. Descriptions of the Pacific Decadal Oscillation and North Atlantic Oscillation, to name two very well known interdecadal climate patterns, would have been appropriate inclusions in a chapter on climate and seabirds published in 2002.

The main shortcoming of this compendium of otherwise excellent material is that the ''marine'' part of ''marine birds'' is mostly omitted. In the volume, we see extensive, thorough reviews of much of what has been learned about seabirds while on land and ice. This ''colony-centric'' perspective has plagued seabird biology for decades, but is natural considering the difficulties and expense in studying these organisms where they spend the majority of their lives—at sea. Only Shealer's chapter, on the foraging behavior and food of seabirds, attempts to deal with this complex and poorly understood aspect of seabird biology. I give Shealer credit for a well-written and relatively comprehensive review on this topic, but if the editors had truly wanted a treatise on the biology of *marine* birds, they could have devoted 3–4 chapters to this topic, similar to their emphasis on life histories and demography (6 chapters), development and energetics (4

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chapters), and conservation issues (3 chapters). In their preface and introductory chapter, Schreiber and Burger note that technology has contributed substantially to our understanding of seabird ecology at sea. But, in actuality, little is devoted to describing the substantial and novel work of seabird researchers using technology such as satellite telemetry (e.g., the work of Watanuki, Croxall, and Weimerskirch). Nor is there adequate attention paid to the considerable body of work on the foraging ecology of seabirds at sea. A scant two pages of text is devoted to relationships between seabirds and the physical ocean environment (contained within Shealer's chapter); this seriously underrepresents what is known, and unknown, about ''seabird oceanography.'' Major contributors to this field (Ainley, Ballance, Briggs, Haney, Hunt, Schneider, Spear, and Tasker, to name a few) would be justifiably disappointed with this presentation.

Notwithstanding these concerns, *Biology of Marine Birds* is an essential volume for the personal libraries of professional marine ecologists, ornithologists, and conservationists, and would be an excellent choice for a graduate- or undergraduate-level seminar or course on marine vertebrates. At $85, the book will be expensive for students and young professionals, but considering its nearly 750 pages of content, the price is not unreasonable at all.—WILLIAM J. SYDEMAN, Marine Science Division, Point Reyes Bird Observatory, Stinson Beach, California. E-mail: wjsydeman@prbo.org

The Purple Martin.—Robin Doughty and Rob Fergus. 2002. University of Texas Press, Austin. viii + 93 pp., 18 text figures. ISBN 0-292-71615-X. $19.95 (cloth).

Martin mania is serious madness, a contagious affliction affecting thousands of otherwise ordinary people in North America. I myself am a happy victim—each spring, all day and every day for week after week, we blast Purple Martin (*Progne subis*) dawn song from speakers located underneath our long-empty martin houses in the hopes of establishing a new colony. In *The Purple Martin,* Robin Doughty and Rob Fergus try to explain this madness to martin lovers and to bewildered onlookers. Purple Martins have long been one of America's favorite birds because they give us a unique window to the natural world from our own backyards. Martin landlords and bird enthusiasts will enjoy this book.

This book provides a detailed and accurate species account of the classification, breeding range, and natural history of the species. These are the tools that martin landlords will need to truly understand the birds they devote so much time and energy to. The writing style in these chapters is somewhat dry and academic, so casual readers may have to work a bit to digest the information. For example, one of the more recently discovered and titillating aspects of Purple Martin behavior is their extra-pair mating system. Older males routinely copulate with the mates of young males, and DNA fingerprinting has shown that yearling males sire few young in their own nests! Older males even use dawn song to attract youngsters to join the colony. Yet, Doughty and Fergus describe this without enthusiasm by saying ''older males may cuckold yearling counterparts as they copulate with untended yearling females.''

The highlight of the book for me was the historical account of the early interest in martins by colonists and ornithologists during the 1700s and 1800s. Colonists observed Native Americans providing natural gourds as nest sites for martin colonies, so adopted this tradition and built birdhouses for martins. Martin houses were widespread and common in the eastern and southern U.S. even in the 1800s. Just think: people provided housing for and had a keen interest in martins before House Sparrows (*Passer domesticus*) and European Starlings (*Sturnus vulgaris*) began their rampage on North America. The next chapter is equally entertaining, as it describes the special role that Purple Martins played in the developing national interest in bird protection. The founder of the Audubon Society, George Grinnell, used martins as one of his examples for why the nation should protect, rather than harvest, birds.

People have long housed, and even marketed, Purple Martins due to their presumed ability to eat pest insects. This book does a good job of presenting the facts on martin diets, which show they have a highly varied diet of flying insects of all sorts. The chapter on Purple Martin promotion details the many societies devoted to Purple Martins and their welfare. The book even features a classic photograph (p. 64) of a sign that claims that ''martins can eat 2000 mosquitos a day.'' This claim has been the subject of some disagreement among martin promoters and societies, though the book does not discuss this controversy.

This book will be useful as a general reference on the species for academics as well as a somewhat technical treatment for your average birder and Purple Martin landlord with no specialized training in biology. It also has a review of some of the key scientific literature on Purple Martins, which will be helpful to martin landlords and birders who are interested in pursuing these topics further. I recommend this book especially for martin lovers; its matter-of-fact style delivers a wealth of facts that martin landlords will enjoy learning.—BRIDGET J. M. STUTCHBURY, Department of Biology, York University, Toronto, ON M3J 1P3. E-mail: bstutch@yorku.ca

Birds of the Baja California Peninsula: Status, Distribution, and Taxonomy.—Richard A. Erickson and Steve N. G. Howell (editors). 2001. Monographs in Field Ornithology No. 3. American Birding Association, Colorado Springs, Colorado. 264 pp. 134 figures. 592 pp., 114 color, 20 black-and-white photographs and illustrations. ISBN 1-878788-39-6. $39.95 (paper).

It was only a matter of time before avid birders began in earnest to dedicate significant effort toward exploring the vast Baja California peninsula. Akin to alta California in the late 1960s and early 1970s, previously unrecorded distributions and occurrences of numerous bird species on the peninsula represent a treasure trove for the dedicated birder. Considering the vast armies of birders nearby in the United States, it is surprising this surge in interest did not occur sooner.

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The benchmark for bird distribution and status on the peninsula has always been Joseph Grinnell's 1928 *A Distributional Summation of the Ornithology of Lower California* (University of California Publications in Zoology 32). One needs look no further than this comprehensive analysis for any and all information up until its time of publication. Strangely however, over five decades passed with almost zero investigation or published information on Baja's birds. Checklists of the birds of Mexico published in the 1950s, and all the AOU checklists, added negligible amounts of new information to the record. Wilbur's 1987 *Birds of Baja California* (University of California Press, Berkeley, California) unfortunately contained considerable erroneous information.

Momentum to explore the peninsula began to build in the late 1970s and then really took off in the 1990s, with a small cadre of adventurous birders making regular weekend and longer forays south of the border. They soon began amassing new and interesting records, resulting in many brief papers and notes on their findings. It is this cadre, led by the editors of this book, that spurred this effort to assemble an updated picture of the peninsula's avifauna.

The monograph contains a seemingly eclectic collection of eight papers and five appendixes. At first glance, the title seems misleading, as most of us would understandably expect a neat, annotated synoptic list and supporting material. I had to delve deep into this book to overcome that initial disappointment. The editors readily acknowledge that this is not the tidy, straightforward, species-by-species summary that most would prefer. Once you read the entire book, the reasons become more apparent. Bringing together the extensive efforts of the various authors could probably not have taken place in any other manner.

The first paper (by Howell) provides a useful analysis of the known distribution of breeding birds within the roughly nine distinct faunal regions of the peninsula, ranging from the northwestern coastal slope (very similar to habitats found on the United States side of the border) through the high mountains and dry deserts to the cape district, the decidedly subtropical center of Baja's endemism. The paper by Devillers et. al. presents distributional data for just 20 species that was gathered by the authors between 1967 and 1971. Originally written in 1978 and never published, the editors deemed the contents to have significant enough value to warrant inclusion in this collection. The brief papers on the breeding birds of the Cerro Prieto geothermal ponds, the Vizcaíno Desert, and observations from Baja California Sur contain mostly noteworthy data on a limited number of species from these areas, with little information on more common species. The paper by Patten et al. on the Colorado Desert avifauna most closely resembles the comprehensive species-by-species summary that would have been desirable for the peninsula as a whole. The paper on migrant birds in the northern and central portions of the peninsula contains a massive amount of detailed information and documentation on noteworthy occurrences of 205 species. This paper presents the bulk of new information in the monograph. Lastly, Howell et al. provide an annotated checklist of the 464 species recorded from both of the Mexican states on the peninsula through July 2000. Unfortunately, this list uses a variety of codes to indicate the status, breeding, and documentation for each of the species. This is about the least user-friendly way that such information could be presented. Nevertheless, all the available pertinent information is there to be found for those who dig.

As is typically the case when birders venture forth to document avian distribution, an inordinate amount of attention is given to unusual or unexpected occurrences. This, after all, is what makes birding fun. In the end, information on common and sometimes abundant species often has more relevance for science and conservation. Perhaps someday an atlas of Baja California birds will fill this need.

The monograph is quite free of typographical and other errors. This is a credit to the editors and to the editor of the series, Kenneth P. Able. I would have liked to see more detailed maps or a location gazetteer. Good maps of the peninsula are very hard to come by. The binding of the monograph may not stand up to the many years of handling it is likely to be put through.

My only other criticism of the monograph is of the cover photo of the Yellow-footed Gull (*Larus livens*). Adults of this distinctive, nearly endemic gull are instantly distinguishable in the field by their extremely bright-yellow legs and feet. The color reproduction of the photograph does not do justice to this characteristic. Readers unfamiliar with this species may well wonder what is so special about the gull on the cover.

Despite the weaknesses of this monograph, the authors and editors have done a very admirable job. In particular, the enormous amount of documentation provided is precedent-setting for a work of this kind. Every unusual sighting has undergone severe critical review, and the facts substantiating the records are often provided for future investigators to evaluate. The monograph also contains 114 color figures, most of them photographs of rare or unusual species. In addition, 20 black and white figures contain copies of original field notes detailing individual sightings and historical photographs illustrating habitat degradation around the Colorado River delta.

The appendices, containing tabular information on sightings, specimens, documentation, birds in the pet trade, and conservation status, demonstrate that the authors and editors attempted to pack this monograph with every piece of data they could reasonably lay their hands on. Equally admirable is the effort that has been made to include Mexican ornithologists and their work in this monograph. Until recently, avian studies on the peninsula have too often been imperialistic in nature, with little or no regard for local scientists or their efforts.

The editors seem to understand that the ultimate purpose of this publication is not necessarily to be definitive. Where they have greatly succeeded is in pulling together the majority of data available since Grinnell's seminal work. As with Grinnell, future compilers will not have to look much beyond this monograph and the literature it has gathered to produce the inevitable avian tome that the peninsula deserves. In the meantime, this monograph is clearly an essential addition to the

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library of anyone with an interest in the status and distribution of Baja California birds.—WILLIAM T. EVERETT, Endangered Species Recovery Council, P.O. Box 1085, La Jolla, CA 92038. E-mail: everett@esrc.org

Birds of the Texas Hill Country.—Mark W. Lockwood. 2001. University of Texas Press, Austin. xi + 228 pp., 32 color photos, 16 black-and-white illustrations, 2 tables, 4 maps. ISBN 0-292-74726-8. $24.95 (paper). ISBN 0-292-74725-X. $60.00 (cloth).

State biologist Mark Lockwood has written about the approximately 420 species of birds that inhabit the vast 28 million-acre Edwards Plateau, or Texas Hill Country, the southern terminus of the Great Plains in Texas. This region has a unique combination of soils, climate, and vegetation that harbors a variety of bird communities. For example, riparian areas facilitate the spread of what we consider western birds, such as the Cactus Wren (*Campylorhynchus brunneicapillus*), toward mesic woody growth in the east, and of several eastern birds, such as the Carolina Wren (*Thryothorus ludovicianus*), into the more arid uplands of westerly counties. The north-south Central Flyway carries migratory waterfowl, shorebirds, and other water birds from the Neotropics to the Nearctic and back again. On a more local level, Lockwood describes species from the Trans-Pecos and South Texas Brush Country that spill onto this predominantly dissected limestone plateau, as well as its own endangered specialists, such as the Golden-cheeked Warbler (*Dendroica chrysoparia*) and Black-capped Vireo (*Vireo atricapilla*). In sum, Lockwood characterizes the Texas Hill Country as a biological crossroads.

The author summarizes the works of early observers, ornithologists, foreign-born residents interested in natural history, and collectors, who established the occurrence and distribution of bird species in the region. He devotes more than half of this 228-page volume to an annotated bird list detailing the occurrence, distribution, seasonal abundance, and movements of birds throughout the Hill Country. Lockwood reports on 23 additional species for which better documentation is needed with regard to occurrence. He provides information on nine species that more avid birders may be especially interested in locating. Color photos of representative Hill Country habitats and the species found in them add an extra visual pleasure to this helpful text. The book concludes with a selection of references cited in the text and recommended for further reading, and a species index.

This is a well-written, concise, and useful book. My one caveat relates to the title. Local parlance restricts the Hill Country to the easternmost edge of the Edwards Plateau as it is defined by the Balcones Escarpment. But the reader needs to understand that Lockwood's Texas Hill Country includes a 26-county area with accessible birding areas (19 are mapped) as far flung as Lake Amistad on the Rio Grande to the west and Emma Long Park on the outskirts of Austin to the east. From the Rio Grande to the outskirts of Austin is a good four-hour drive, so birding the plateau is neither a quick nor easy undertaking. Also, travelers need to be aware about the likelihood of spring and early summer freshets, which cover low places on rural roads with swift water, making driving hazardous.

But as Lockwood suggests, the effort is well worth it. There are many birds to be seen, although introduced pasture grasses, brush clearing, and overgrazing by sheep and goats have modified their habitats. Lockwood notes this and directs readers to fish hatcheries, landfill sites, and other areas that entice opportunistic or adaptable species. An index of places he mentions would have been a useful addition for those wishing to venture into areas not on the maps of parks and natural areas. Instead, a less effective 30-page table summarizes what has already been covered in earlier accounts.

In general, Lockwood's treatment is succinct, accurate, informative, and well illustrated. Birders traveling to Texas are well advised to slip this slim volume into their luggage. Others interested in the basic geography and history of the Hill Country and its avifauna will learn a great deal from this elegant book.—ROBIN W. DOUGHTY, Department of Geography, University of Texas at Austin, Austin, TX 78713. E-mail: rdoughty@mail.utexas.edu

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