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The Auk 123(4):1203–1205, 2006
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 Printed in USA.

Birds of Oregon: A General Reference.—David B. Marshall, Matthew G. Hunter, and Alan L. Contreras, Editors. 2003. Oregon State University Press, Corvallis. 752 pp., line illustrations. ISBN 0-87071-497-X. Cloth, \$65.00.—This voluminous work is an excellent reference of the spatial and temporal distribution of birds in Oregon and its coastal waters. It is a rich

avifaunal natural history with useful habitat and foraging descriptions. The book covers the 486 species recognized at publication by the Oregon Bird Records Committee. The breeding distribution maps, derived from the Oregon Breeding Bird Atlas, are presented for the 205 confirmed Oregon-breeding species. Species nomenclature and sequence follow the 7th edition of the *Check-list of North American Birds*, the 42nd and 43rd supplements (American Ornithologists' Union 1998, 2000; Banks et al. 2002), and subsequent supplements. Coverage of subspecific taxa is based on specimens verified by the book's taxonomic editor, M. Ralph Browning. We have actively used this book as a reference for just over a year, and we apply that experience in writing this review.

The book opens with a synopsis of avifaunal changes in Oregon since 1935 (chapter 1). The editors acknowledge that their effort is the successor of the previously essential, though outdated, *Birds of Oregon* by Gabrielson and Jewett (1940; reprinted in 1970 as *Birds of the Pacific Northwest*). Gabrielson and Jewett included data and reports compiled through 1935. This and the following chapter, which describes avian habitats in Oregon ecoregions, document the considerable changes to the physical state of Oregon, avifaunal distribution, and the coverage by investigators and birders since 1935 that made this new Oregon avifaunal reference necessary.

The second chapter, "Avian Habitats in Oregon Ecoregions," provides complete and accessible delineations of the state's diverse biomes. The editors made the astute decision to incorporate the state's ecoregion concept, described in the most recent editions of the *Atlas of Oregon* (Loy et al. 2001) and the Oregon Natural Heritage Plan (Oregon Natural Heritage Advisory Council 2002). The sections on the Klamath Mountains, the Cascades, the "Eastern Cascades Slopes," and the "Foothills Ecoregion"—state delineations with which we are familiar—are very accurate. The descriptions, accepted by Oregon conservation organizations and state and federal agencies, are the most thorough and inclusive of the various state physiographic delineations to date. The extent and content are appropriate for this kind of reference work.

The species accounts in chapter 3 are the body of this book, in which the editors have done an exemplary job of compiling a complete

list of Oregon birds. One hundred authors, including some of Oregon's most accomplished ornithologists, contributed the accounts. Each account begins with an introductory section that provides a physical description, as well as any appropriate notes of interest. Sections of each account follow the format of "General Distribution, Oregon Distribution, Habitat and Diet, Seasonal Activity and Behavior, Detection, and Population Status and Conservation." The species accounts blend metrics (counties or specific locations, dates, and numbers) and anecdotal reports, and are quite readable for both the professional and the layperson.

The habitat and diet, seasonal activity, and behavior sections provide accessible detail for birds within Oregon. These accounts address habitat-specific information that, in a brief examination, was much more detailed in many cases than other references (e.g., *Birds of North America* accounts).

Overall, we have found excellent information in referencing distribution, population, and conservation status of most species. A conspicuous shortcoming we found at times, however, was the uneven inclusion of Partners in Flight (PIF) conservation concepts, whether avifaunal biome delineations, or conservation status and plans for focal landbird species. An examination of the 29 focal species from three Oregon-Washington PIF habitat conservation plans (Altman 1999, 2000a, b) revealed just two that included PIF population status and conservation information. The completeness of "Population Status and Conservation" accounts of the remaining focal species, with or without PIF-plan reference, varies from brief to excellent.

The book has been useful in researching rare or unusual encounters. However, close examination has brought to light some inconsistencies and shortcomings. There is a general tendency for the species accounts to be rich in the breeding status and distribution of birds, but a bit paltry in postbreeding dispersal, fall migration, and winter (except Christmas Bird Count data) status and distribution. Several species accounts lack winter distribution or status information. This is very likely attributable, in large part, to the dearth of consistent monitoring or research work done during these months, and not to any fault of the authors. There is an occasional inconsistency between species accounts in the use of unpublished data from research and monitoring

projects in the state, and museum specimen data. Some account authors included much of these resources, whereas others included very little to none. The authors who sought out and included this information compiled richer accounts for the effort. The accounts generally lack reference to data collected in long-term mark-recapture databases, such as the U.S. Geological Survey Bird Banding Laboratory or continental and regional long-term monitoring programs using banding data; these data would have provided additional information on fall and winter records.

The treatments of extirpated, introduced, escaped, and unaccepted-record species in the "Supplemental Species List" (chapter 4) were thorough and presented in an appropriate historical perspective. The chapter covers extirpated and questionable species as well as those that have been introduced but have not become established. This list includes accounts for "Unaccepted Records of Wild Birds."

The book's concise glossary will be useful to readers for defining or clarifying ornithological and biological jargon used in the book. The editors also included several helpful references as appendices. There is a complete "List of Common and Scientific Names of Plants and Animals" (appendix A). Appendix B is a compilation of "Changes in Scientific Bird Names Since Publication of Gabrielson and Jewett (1940)," which is helpful for cross-referencing historical and modern records. Appendix C contains descriptions of the three most-referred-to survey methods for bird population trends: the Oregon Breeding Bird Atlas, the Breeding Bird Survey, and the Christmas Bird Count.

Besides synthesizing most of the knowledge of Oregon's avifauna in one source, the book provides a thorough bibliography for further detailed reference. The vast list of sources cited, both published and personal communications (including unpublished reports and data), is well documented and is a valuable reference work in itself. Continuing their meticulous stewardship of the references, the editors have posted and maintain errata for the book, including recent (since publication) Oregon Rare Bird Committee-recognized species (available at home.comcast.net/~matt.hunter/bogerrata/).

In the course of our professional reporting and writing since we acquired this book, we have often cited it as a reference. Although its size—752 pages and ~1.5 kg—

makes it a bit cumbersome, this book will serve the professional, student, avid birder, and those otherwise ardently interested in Oregon's avifauna very well. It is the new definitive identification guide, companion, and species status reference for the birds of Oregon. We highly recommend it as the most thorough, up-to-date, and serviceable regional and state reference.—ROBERT I. FREY and JOHN D. ALEXANDER, *Klamath Bird Observatory, P.O. Box 758, Ashland, Oregon 97520, USA. E-mail: bif@klamathbird.org*

The Auk 123(4):1205–1207, 2006
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Printed in USA.

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Wildlife Demography: Analysis of Sex, Age, and Count Data.—John R. Skalski, Kristen E. Ryding, and Joshua J. Millsbaugh. 2005. Elsevier-Academic, San Diego, California. xiii + 636 pp., 90 text figures. ISBN 0-12-0088773-8. Cloth, \$69.95.—Collection of data on the age and sex composition of birds harvested by state and federal agencies has a long history, whereas less effort has been focused on estimation via capture–recapture, distance sampling, and other procedures. Yet in reading the literature on wildlife statistics, one would obtain the opposite impression, with most of the advances since the 1960s having been in areas of capture–recapture, tag recovery, and distance sampling (e.g., Otis et al. 1978, Burnham et al. 1980, Brownie et al. 1985, Pollock et al. 1990, Buckland et al. 1993, Williams et al. 2002). By contrast, there has been relatively little progress in the analysis of count-based data since the development of these methods between the 1940s and 1960s. Until recently, little formal statistical theory existed for many of these methods, so that variance estimates, confidence intervals, and assumption tests were generally unavailable. This book attempts to remedy the situation.

Chapter 2 provides an excellent review of population dynamics, especially of harvest theory, which is important because many of the data sources later considered derive from hunter and angler harvests. Subsequent chapters cover count-based approaches (direct counts, harvest surveys, age, and sex ratios) but also include methods such as capture–recapture and distance sampling for comparison and assumption testing. Chapters cover estimation of sex ratios (chapter 3), productivity and survival (chapters 4 and 5), harvest and harvest morality (chapter 6), population change (chapter 7), population indices (chapter 8), and abundance (chapter 9). Chapter 10 provides examples using multiple approaches to estimate parameters. Despite the chapter title, most of these are not “integrated” analyses. A notable exception is a study of Ring-necked Pheasants (*Phasianus colchicus*) in which change-in-ratio, catch–effort, and capture–recapture data were incorporated into a single likelihood, providing more precision (and fewer assumptions) than each method separately.