At-Sea Distribution and Abundance of Seabirds Off Southern California: A 20-Year Comparison

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when consulting a new field guide or monographic compilation, is to see how well the artist has illustrated the Rufous-winged Sunbird (*Cinnyris rufipennis*), a species first described in 1983. Despite an illustration that appeared with the original species description, its depiction in subsequent texts has varied from fantasy (e.g., Stevenson and Fanshawe 2002) to average (Cheke and Mann 2001) to exceptionally accurate (this book).

I own all the previous volumes of the HBW, and I admit that the one aspect of these books that gives me the most pleasure is the out-of-this-world photography. Volume 13 is no different, including 536 stunning photographs. This lavish illustration, together with an informative text (over 6,000 references, including a specific section devoted to bibliographic details of every genus, species, and subspecies accepted by HBW) makes this one of those very rare books that can pass as both an outstanding coffeetable book and an exceptional reference. To those who have already purchased the previous volumes: you will not be disappointed, for this one lives up to the very highest standards set by the HBW production team. To those who have not yet invested in a volume of the HBW series and have an interest in Old World birds or some of North America's more enigmatic species and families—for example, Verdin (Remizidae: *Auriparus flaviceps*), Bushtit (Aegithalidae: *Psaltriparus minimus*), Brown Creeper (Certhiidae: *Certhia americana*), and the nuthatches (Sittidae: *Sitta* spp.)—buy this book! It will prove a fundamentally important reference and a fascinating read, and provide a great sense of pleasure when you come back to it time and time again.— Rauri C. K. Bowie, *Museum of Vertebrate Zoology and Department of Integrative Biology, 3101 Valley Life Science Building, University of California, Berkeley, California 94720, USA. E-mail: bowie@berkeley.edu*

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At-Sea Distribution and Abundance of Seabirds off Southern California: A 20-Year Comparison.—John W. Mason, Gerard J. McChesney, William R. McIver, Harry R. Carter, John Y. Takekawa, Richard T. Golightly, Joshua T. Ackerman, Dennis L. Orthmeyer, William M. Perry, Julie L. Yee, Mark O. Pierson, and Michael D. McCrary. 2007. Studies in Avian Biology no. 33. Cooper Ornithological Society, Camarillo, California. ix + 101 pp., 45 figures, 17 tables. ISBN: 9780943610726. Paper, $15.—Thirty years ago, the U.S. Department of the Interior, Minerals Management Service (MMS), organized the Outer Continental Shelf Environmental Assessment Program to gather the information necessary to meet requirements under the National Environmental Policy Act toward development of minerals extraction on the U.S. continental shelf. A portion of the assessment involved marine birds, especially their abundance and distribution in waters off California, which were deemed by industry to have significant hydrocarbon potential (in production since the 1960s). A few years of intense aerial censusing on a grid extending from the U.S.–Mexico border to the California–Oregon border resulted in an impressive data set, available electronically and summarized in *Studies in Avian Biology, no. 11* (Briggs et al. 1987). As of 1983, therefore, the status and distribution of marine birds in California and waters within 50 miles (80 km) of the coast were well quantified. These data were used to approve lease sales and, subsequently, to assess effects of oil spills in California waters. Since completion of that project, several studies have detailed significant changes in the populations of a number of avian species in these waters (e.g., Ainley et al. 1995a, Veit et al. 1997, Ainley and Divoky 2001, Oedekoven et al. 2001, Hyrenbach and Veit 2003). Those findings apparently led to the study under review here—a reassessment, again using aerial censusing, of seabird populations in the portion of California's continental-shelf waters still available, or currently being used, for minerals extraction.

Mason et al.'s study area included waters from the coast to the outer edge of the continental shelf (3,000 m isobath, 80–100 km from the mainland beach) from Morro Bay to San Diego. Flights were flown on 102 days during three months: January, May, and September (May 1999–January 2002). Using the data obtained and reanalysis of Briggs et al.'s (1987) data, the present volume compares spatial distributions and populations of seabirds in

1975–1978, 1980–1983, and 1999–2002. The methods used were carefully considered, and the data are of high quality.

This work is in the same vein as many of the early volumes of *Pacific Coast Avifauna* and *Studies in Avian Biology*: sound, informative reporting on the status of various populations on the West Coast. The present volume is 101 pages long, but 70 pages are taken up by tables and figures. Therefore, this "monograph" would fit better into the category of a "long paper." A short introduction and short discussion, two pages each, bracket a series of 32 species accounts, with a map showing January, May, and September survey results accompanying each. Given that the study was designed to provide data for environmental assessment reports, and to determine the extent to which seabird population size had changed in the study area, no hypotheses were involved in study design and no findings were directly related to answering ecological questions. However, pertinent literature was reviewed in each account with regard to the status of each species, including a substantial amount of unpublished information on colony sizes in the study region. Acquisition of the survey data represents a valuable achievement, and no doubt the data will be extensively used in the near future.

Consistent with the above-referenced studies detailing significant avifaunal change, this one confirmed that overall seabird density has declined in the southern portion of the California Current (CC) during recent decades. Accordingly, particularly large decreases were evident in three of the more abundant CC species, Sooty Shearwater (*Puffinus griseus*), Bonaparte's Gull (*Chroicocephalus philadelphia*), and Common Murre (*Uria aalge*); but increases were found in 10 species that contribute much less to the overall California seabird fauna (i.e., "common" instead of "abundant"), including Ashy Storm-Petrel (*Oceanodroma homochroa*), Brown Pelican (*Pelecanus occidentalis*), Brandt's Cormorant (*Phalacrocorax penicillatus*), Western Gull (*Larus occidentalis*), Xantus's Murrelet (*Synthliboramphus hypoleucus*), and Cassin's Auklet (*Ptychoramphus aleuticus*). These indications of increase may be problematic for wildlife managers given the proposed removal (warranted, in my opinion) of the Brown Pelican from the federal list of endangered species and proposals now being considered to add Xantus's Murrelet and Ashy Storm-Petrel to the list. In the Discussion, the authors attempt to reconcile their findings with other data that indicate these species are in jeopardy. In regard to the spatial results of this study, they confirm, demonstrating consistency over time, Briggs et al.'s (1987) results showing that waters between the northern Channel Islands and Point Conception form an avian "hotspot"—owing, I might add, to a conspiracy of oceanographic factors that enhance ocean production and zooplankton retention. Such information on the spatial occurrence of CC seabirds will be informative in the process currently gathering momentum, nationally and internationally, to designate at-sea "important bird areas."

The monograph ends with a very brief statement about what factors may account for the reduced avian density in the CC over recent decades. Fingers are pointed, of course, to global (climate) change, with little elaboration. In that regard, the most surprising gap in the interpretation of the study's results is apparent ignorance among the authors of the oceanographic monitoring program that completely overlaps this study, both spatially and temporally: the California Cooperative Oceanic Fisheries Investigations (Cal-COFI), underway annually since the 1950s. A seabird component of Cal-COFI has existed since 1987 (Veit et al. 1997, Hyrenbach and Veit 2003, continued by PRBO Conservation Science). Cal-COFI is, to date, one of the most comprehensive biological oceanographic efforts anywhere on the planet and has contributed hugely to our understanding of changes in ocean foodwebs of the southern CC specifically, and of climatic and other impacts on marine foodwebs generally. Like the present MMS aerial study, Cal-COFI vessels and remote vehicles occupy a closely spaced grid, though oriented perpendicular to CC flow rather than along latitude lines as in the MMS study. Should MMS have an interest in understanding the factors behind changes in marine bird populations off Southern California (i.e., the extent to which they may be linked to remotely driven vs. immediate environmental factors), I must disagree with the authors' recommendation that this aerial effort be repeated periodically and recommend that the continuous Cal-COFI effort be supported instead. Monitoring efforts of this latter sort, especially multidisciplinary ones based on more than just remote sensing or snapshots, are increasingly difficult to fund; thus, available resources should be directed toward maintaining their continuity when appropriate (the case here). The present volume spends about one third of its Discussion assessing the degree to which MMS snapshots have been representative of patterns in general or to what degree each has been skewed by El Niño and La Niña events—and, I might add, El Niño-like non-El Niños—known to perturb seabird patterns off California dramatically (Ainley et al. 1995b, and references above). The long-term, annual effort of Cal-COFI would overcome this problem. Fear not, I have no financial or vested interest in Cal-COFI or in the Long-Term Ecological Research grant that the National Science Foundation recently bestowed to facilitate, in part, its continuation. It's just great science that could be used to develop a better understanding of the spatial and temporal variation in bird populations, at sea in a world of accelerating change. In any case, for the latest on the status of marine birds in coastal and offshore waters of Southern California, *Studies in Avian Biology, no. 33* should be your go-to reference.—David G. Ainley, *H.T. Harvey & Associates, 983 University Avenue, Building D, Los Gatos, California 95032, USA. E-mail: dainley@penguinscience.com*

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The Northern Goshawk: A Technical Assessment of Its Status, Ecology, and Management.—Michael L. Morrison, Ed. 2006. Studies in Avian Biology no. 31. Cooper Ornithological Society, Caramillo, California. 369 pp. ISBN: 0-943610-68-0. Paper, $23.—On my first day as a biologist, my supervisor told me that I would be studying the Bald Eagles (*Haliaeetus leucocephalus*) of Florida Bay. He then thrust into my hands a copy of Ian Newton's *Population Ecology of Raptors* (1979) and said, "Read this." By that evening, I was a self-proclaimed raptor biologist.

Raptors bring out a uniquely intense passion in ornithologists and the public at large. People may fret over the decline of songbirds, but they will fight for the preservation of the Spotted Owl (*Strix occidentalis*) or Northern Goshawk (*Accipiter gentilis*; hereafter "goshawk"). It is no coincidence, therefore, that many of the long-term studies that are all too rare in ornithology are conducted by scientists dedicated to understanding the ecology of birds of prey. Two of these scientists—Richard Reynolds of the Rocky Mountain Research Station and Robert Kenward of the Centre for Ecology and Hydrology (Dorset, United Kingdom)—are well represented in *The Northern Goshawk: A Technical Assessment of Its Status, Ecology, and Management*. The full list of authors in this volume includes most of the prominent North American experts on the species. It is safe to say that *The Northern Goshawk* represents the state of the art in goshawk research as it stood in 2006.

More than a decade earlier, many of the same authors contributed to *Studies in Avian Biology, no. 16* (1994, *The Northern Goshawk: Ecology and Management*, edited by William Block, Michael Morrison, and M. Hildegard Reiser), which was equally valuable in furthering the understanding of North American goshawk ecology. Comparing these two publications, one has a rare glimpse into the evolution of scientific knowledge. The 1994 work demonstrates predominantly basic knowledge (nest-site location, basic habitat descriptions, etc.), and the 2006 volume builds on these basics to explore the mechanisms driving goshawk populations, habitats, and resource use.

The only bothersome peculiarity of this book is the layout. Somewhat contrary to the subtitle, which lists "status, ecology, and management," the book is organized in three sections: Regional, Ecology, and Management. When discussing the goshawk, placing regional contributions in a separate section is justified because the species exhibits some plasticity in its feeding and breeding behavior. Unfortunately, this arrangement puts an onus on the reader to jump between sections to get all of the information available. For example, one finds "Habitat, food habits, and productivity of Northern Goshawks nesting in Connecticut" by Becker et al. in Section I: Regional and "Northern Goshawk food habits and goshawk prey species habitats" by Drennan in Section II: Ecology. The Ecology section also has "Diet, prey delivery rates, and prey biomass of Northern Goshawks in east-central Arizona" by Rogers et al. Should that not be in the Regional section? This quirk of organization only slightly lessens the quality of the book.

The Regional section includes two papers focused on Europe and 10 on North America; only three of the latter concern goshawks east of the Mississippi. The Ecology section includes two papers on feeding ecology and three on movement and habitat use, one of which is focused on winter activity. Reynolds et al. conclude the Ecology section with an exceptionally good review of factors limiting goshawk populations. The final section, Management, includes a design for monitoring goshawks at the bioregional scale by Christina Hargis and Brian Woodbridge—a method that has been used successfully across the United States since the publication of this paper. Also in Management are a paper on using resource-selection function models and a description of an ecosystem-based conservation strategy. The final contribution in the volume is the obligatory discussion of "where do we go from here?"

The nearly two dozen contributions to this volume are required reading for anyone interested in the ecology of the goshawk in North America. I suspect that anyone involved in goshawk work already owns a copy, but those interested in raptor ecology in general will also find the book useful. Many of the techniques and references (44 full pages) are applicable across raptor taxa. Of 20 goshawk papers published in various journals since 2006, I found references to *The Northern Goshawk* in all of them. These were not just authors citing their own work; they included work from North America, Europe, and the recent cutting-edge papers written by Shigeki Asai of the Yamashina Institute for Ornithology in Chiba, Japan. Hopefully, in 10 more years, many of these same authors or their protégés will return with the same quality of knowledge to help us deal with the challenges on the horizon.— John Curnutt, *Regional Wildlife Ecologist, U.S. Department of Agriculture, Forest Service Eastern Region, 626 East Wisconsin Avenue, 7th floor, Milwaukee, Wisconsin 53203, USA. E-mail: jcurnutt@fs.fed.us*

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The Second Atlas of Breeding Birds in New York State.—Kevin J. McGowan and Kimberley Corwin, Eds. 2008. Cornell University Press, Ithaca, New York. xxii + 688 pp., 507 maps, 243 black-and-white illustrations, 25 color illustrations. ISBN: 9780801447167. Hardcover, $59.95.—Twenty years after the publication of *The Atlas of Breeding Birds in New York State* (Andrle and Carrroll 1988), New York has become the first state to publish