BOOK REVIEW

Important Bird Areas of California, by Daniel S. Cooper. 2004. Audubon California. 286 pages, 3 tables, 8 maps, 3 appendixes. Paperback. Available for $19.99 + $5.00 shipping and handling through Audubon California, 11340 Olympic Blvd., Suite 209, Los Angeles, CA 90064.

California is one of the richest and most threatened reservoirs of biodiversity on earth (Conservation International 2004: www.biodiversityhotspots.org/xp/Hotspots/california_floristic/). So it should come as no surprise that on a global scale the state itself may be viewed as an important bird area, if not for its wealth and diversity of bird species and subspecies, many of which are in jeopardy, then for its high level of endemism (Stattersfield et al. 1998). Inevitably, some areas within the state are more important for birds than others—but only recently has there been a focused effort to identify and describe these areas, let alone protect them.

BirdLife International started the Important Bird Areas (IBAs) Program in the 1980s to identify priority sites for bird conservation on a regional scale throughout the world. In 1989 it published the first directory of IBAs, *Important Bird Areas in Europe*, which covered nearly 2500 IBAs in more than 30 countries. The program has since expanded greatly, and today there are IBA efforts underway worldwide. In 1995 the American Bird Conservancy and the National Audubon Society jointly launched an IBA program in the United States. While the American Bird Conservancy has focused on identifying sites of national, continental, and global significance (see Chipley et al. 2003), the National Audubon Society has worked on developing state-based efforts. California's IBA program began in 1996, but, because it relied on local Audubon chapter volunteers to nominate sites, many areas of the state were neglected. Recognizing the need for a systematic approach to ensure that all areas of California were represented, Audubon California expanded the program in 2000, refining its site-selection criteria and appointing a bird-conservation director who could oversee and guide the program. This important book is the result of that effort.

Cooper consulted experts on bird distribution and conservation from most counties around the state, solicited them for information on appropriate sites in regions they knew best, and supplemented that information with literature research. The book treats 148 sites representing 56 counties. To qualify as a California IBA, each site had to meet the following criteria: (1) be less than 100,000 acres in extent, (2) support a bird community distinct from the surrounding region, and (3) satisfy one or more of the following general IBA criteria: (1) host more than 10% of California's, or more than 1% of the world's, breeding and/or wintering population of one or more sensitive species; (2) host more than nine sensitive species; (3) host more than 10,000 shorebirds on a one-day count; and (4) host more than 5000 waterfowl on a one-day count.

Sensitive "species," which are listed in a table in the book along with estimates of their population sizes, are those species and subspecies considered threatened or endangered by various state and federal agencies, as well as most candidates for the California Department of Fish and Game's bird species of special concern (BSSC). Cooper points out that some of the latter taxa were not included because their ranges were either too broad (e.g., Olive-sided Flycatcher) or too poorly defined (e.g., Modesto Song Sparrow). Although the Redhead and Yellow-headed Blackbird are listed as sensitive species in site accounts, they are missing from the table. The Rhinoceros Auklet, a BSSC candidate, was not included at all—but Cassin's Auklet, whose breeding population in California is more than 30 times greater than that of the Rhinoceros, and which breeds at about twice as many sites (Carter et al. 1992), was included. Also, coastal populations of the Cactus Wren, other than the subspecies that is a BSSC candidate, are also considered "sensitive" in this book.

Preceding the site accounts, which make up the bulk of the book, are descriptions of the state's bioregions. Although the descriptions convey the essence of the various regions and the birds they support, I found numerous oversights in every description. For example, although the Modoc region is the primary breeding ground for the Northern Pintail, Blue-winged Teal, and Bufflehead in the state, these species do not breed exclusively in this region, and I know of no substantiated nesting record for the Common Goldeneye anywhere even near California.

Eight maps showing the general locations of the IBAs follow, but the bioregions they depict are not the same ones described. And some IBAs seem to be misplaced. For instance, the Clear Lake Area IBA, which is in Lake County and by all accounts within the North Coast Range, is on the Sacramento Valley map. The Sierra Meadows–Southern IBA, which includes several locations in five counties, is not shown at all.

Bioregions are rarely mentioned in the actual site accounts, which are arranged alphabetically, not by bioregion. When bioregions are mentioned they do not seem to correspond to either the descriptions or the maps. Furthermore, each site account shows a "BCR" number, which corresponds to one of five "bird conservation regions," but these also do not match either the described or mapped bioregions.

The IBAs in this book range from the familiar (e.g., the Salton Sea) to the obscure (e.g., Lone Willow Slough), from highly localized (e.g., Bolinas Lagoon) to highly dispersed (e.g., Colorado Desert Microphyll Woodland), from publicly owned (e.g., Cima Dome) to privately owned (e.g., Tehachapi Oaks), from remote (e.g., the Farallon Islands) to near (e.g., Lower Los Angeles River), from untamed (e.g., Big Sur) to man-made (e.g., Terminal Island Tern Colony), from secure (e.g., Carrizo Plain) to imperiled (e.g., Lancaster). But all are important for birds.

The sites are fairly evenly distributed around the state, with about half in northern and half in southern California. Every county in California except two (Trinity and El Dorado) is represented by one or more IBAs. San Diego, Riverside, San Bernardino, Los Angeles, and Kern counties are each represented by 11–13 IBAs, more than any other counties. This suggests that these are the most important counties for birds in the state, while Trinity and El Dorado are the least important. Likewise, only two of 24 Sierra–Modoc sites are west of the Sierra–Cascade axis, possibly because the habitat, while undeniably important for a variety of birds, is generally too uniform and not distinct from the surrounding habitat. But it seems more likely that IBA-quality sites in these lesser-known regions have just escaped notice. I am sure many readers will know of sites not treated in this book that qualify as IBAs and should probably be nominated. For instance, the Fresno–Clovis Regional Water Reclamation Facility supports >1% of the global population of the Long-billed Curlew in winter, 10 sensitive species, >10,000 shorebirds on peak days, and >5000 waterfowl through most of the year (pers. obs.). Many sites in this book with far less qualified as IBAs.

The accounts, which are each one to three pages long, include the following headings: nearest town(s), size, threat, local Audubon chapter, bird-conservation region, IBA criteria, source/notes, description, birds, and conservation issues. The IBA's size, in acres, is shown as (1) <1000, (2) 1000–10,000, (3) 10,000–50,000, or (4) >50,000. Unfortunately, the areas' boundaries are not drawn or even well described. This shortcoming will likely hamper conservation planning, which to be most effective must be directed toward a distinct unit with defined boundaries. Most sites (64%) are in size classes two and three. Some sites are larger than shown (e.g., Big Morongo Canyon IBA is said to cover 1000–10,000 acres, but the preserve alone is about 31,000 acres). A few sites are larger than the IBA criteria allow (e.g., Edwards Air Force Base is 300,000 acres).

The accounts are well written and informative, but most are plagued with typos. Those for sites I know well are also weakened by factual inaccuracies. For example, the account for the Año Nuevo Area IBA (p. 40) does not include the Snowy Plover

or Black Swift in its list of sensitive species, although both occur there; conversely, the Spotted Owl is listed, but I know of no convincing evidence that it occurs regularly anywhere in the Santa Cruz Mountains; the description implies there are islands besides Año Nuevo Island; Vaux's Swift and Pileated Woodpecker are said to reach their "southernmost regular distribution limit" here, though both occur regularly farther south to Monterey County; the grassland in the area is said to support "colonies" of Grasshopper Sparrow, which presumably is just a figure of speech. Año Nuevo Island is said to support one of the few California colonies of Heermann's Gull away from Mexico, but in reality a single pair (hardly a colony) attempted to nest in three consecutive years in the 1990s, failed each time, and has not tried since (Roberson et al. 2001). Such discrepancies do not give me confidence that accounts for areas I don't know well are any more accurate.

Regardless, there is much authentic and valuable information in these pages, and thought-provoking facts are often highlighted. For example, did you know that 12 species of sparrow breed around Baldwin Lake, or that the largest nesting aggregation of White-faced Ibises in California is at Mendota Wildlife Area? Because Cooper describes the vegetation and mentions other animals that also rely on these sites, reading the book cover to cover is a great introduction to California's natural heritage. It is also a sobering look at just how much of it is at risk. Almost half (45%) of the sites are classed with a threat level of high or critical. There is a laundry list of threats, which are well outlined in the accounts, including habitat loss and degradation, disturbance, competition, predation, and pollution.

Overall this book succeeds in its mission of identifying sites that are critical for the long-term viability of California's bird life. The task of safeguarding and monitoring these places, however, will be infinitely more difficult. Local Audubon chapters are apparently adopting some IBAs, which is a start. But the work will require partnerships with many stakeholders outside Audubon, including land trusts, politicians, granting agencies, governmental and nongovernmental organizations, and individual birders and nature enthusiasts.

It is a shame that this book was not better edited and reviewed for accuracy—I could go on about such flaws—but this drawback is almost inconsequential. Everyone who cares about the future of California's birds should have this book.

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Jeff N. Davis