BOOK REVIEW

The Contra Costa County Breeding Bird Atlas, by Steven Glover. 2009. Mount Diablo Audubon Society, Walnut Creek, CA. 260 pages, 56 black and white illustrations by Dana Gardner. Two color maps and numerous black and white maps. Paperback $26.80 (with shipping and taxes). Purchase through www.diabloaudubon.com. ISBN: 978-0-615-30194-5.

Situated in northern California, Contra Costa County is one of nine counties that make up the San Francisco Bay Area. It extends from San Francisco Bay north to the San Joaquin Delta and east to the western edge of the Central Valley. Located in the heart of the county is Mount Diablo, a major geographic feature and focal point. These diverse regions contribute to the avian richness of the county, which supports habitats for such nesting species as the Black Oystercatcher, Swainson's Hawk, and probably the Black Rail. Additional breeding birds of conservation concern include the Tricolored Blackbird, Yellow-billed Magpie, and Least Tern. In size, Contra Costa County ranks 48th among California's 58 counties, but as of 2008, it was the ninth most populated, with over a million people.

This atlas presents accounts for 161 species, of which 149 were confirmed breeding during the study from spring 1998 through summer 2002. Additional information updates the accounts to 2008. Glover notes that publication was "long overdue," but frustration over the six year delay was offset by online access to excellent color maps for each breeding species. At this writing, the maps are still available at www.flyingemu.com/ccosta/.

Compared to other published atlases for the San Francisco Bay Area, this book is longer than the ones for San Mateo, Sonoma, and Napa counties but shorter than those for Marin or Santa Clara. Fifty-six fine scratchboard drawings of local birds by the famous illustrator Dana Gardner, 53 of which were originals created especially for this atlas, add a consistent touch of beauty to the book. All but two drawings are located near the corresponding species accounts.

Printed on the inside front and back covers are two attractive color maps of the county. That in the front is an enhanced version of the maps in the species accounts and one of the most valuable features of this atlas. There is nothing to fold out or lose, and the map can be located immediately when needed. It shows bays and waterways, some relief in the Coast and Diablo ranges, regional and state parks, and major reservoirs and watershed lands. Key features such as town and city names, major highways, and the atlas's block grid make this map very useful for identifying additional locations that were necessarily omitted from the smaller maps. The land-cover (vegetation) map on the inside back cover shows the county with a key to the colors identifying various habitats. Readers unfamiliar with the county's exact location may have also benefited from a simple map showing Contra Costa County within California.

The text for this atlas is quite reader-friendly. After the introduction and three pages of extensive acknowledgments, a section addresses the topography and geography of the county, including climate. The section on plant communities is followed by a description of methods employed for this atlas. The number of breeding species, new species (no fewer than six were confirmed breeding for the first time during the atlas period), and other highlights, as well as questions left unanswered, are discussed in the results section. Also included is a table ranking the species by number of blocks, though it is apparently missing two species. The section on birds of conservation concern presents a preliminary list of species of concern for Contra Costa County, as well as those on federal and state lists and Audubon's watch list. As a resident of this county, I found the pages comparing the breeding birds in 1927 and 2008 especially interesting, a glimpse into the avian world of a less populated Contra Costa County I will never know.

After a brief introduction, the species accounts begin on page 25, most fitting onto one page, some slightly longer, all written by Glover. Beneath the family, common, and scientific name of each species is an atlas map with its key. The maps are smaller, less detailed, gray-scale versions of the color map on the inside front cover. The only place name on each map is Mount Diablo, reducing cluttering text. The maps contain 107 5-km squares, defined by the Universal Transverse Mercator grid. Just as in the atlas for Marin County (Shuford 1993), three small circles, black, half black, or white, indicate confirmed, probable, and possible breeding respectively, allowing for easy viewing of the map beneath.

In each account, the text begins with a brief introduction, many with charming and perceptive quotes by Dawson (1923), followed by four standardized sections that follow the format of the Monterey County atlas (Roberson and Tenney 1993). "Current Status and Distribution" examines where the species can be found within the county, comments on abundance, and comments briefly on habitat. "Historical Occurrence" was well researched, with many references to Grinnell and Wythe (1927), Grinnell and Miller (1944), Bousman (2007), and others. "Breeding and Natural History" distills atlas data and information from other resources to interpret each species' chronology of breeding. Detailed aspects of breeding and natural history were covered in depth in the Marin and Monterey County atlases so are not included here. The accounts conclude with "Conservation." Comments on the future of many species take on a foreboding sense of doom, or at least of decline. Loss of suitable habitat is often cited as a primary reason, especially in the eastern part of the county. But other species are stable or increasing, often adapting to human development or protected by the county's extensive parklands and watersheds.

The appendices complete the atlas with comments on former breeding species (2), species confirmed after 2002 (2), potential breeding species (41), scientific names of plants mentioned in the text, and, last, a comprehensive chart of the atlas's blocks, with numbers of species, hours, and observers. Take note of how many blocks were surveyed by Glover himself. Eight pages of references cited present many wonderful resources. Glover notes, "The finished product is the result of the best efforts of a group of amateur field ornithologists." These people are to be commended, especially the author himself, who worked hard to present an atlas worthy of a place in California's ornithological history. As one who has birded extensively in this county, I return to this reference repeatedly. I highly recommended *The Breeding Bird Atlas of Contra Costa County* to anyone who wants to learn more about the breeding birds of this county of the "opposite coast," as well as the amazing avian diversity of the San Francisco Bay area and California.

LITERATURE CITED

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