

**Atlas of Breeding Birds, Orange County, California**, by Sylvia Ranney Gallagher, (Editor and Principal Author). 1997. Sea & Sage Audubon Press, Irvine, California. 264 pages, numerous black-and-white photographs. Spiral-bound \$25.00 (tax included). ISBN 0-965311-1-X.

California's fourth breeding atlas and the first for southern California, this volume reports on data collected from 1985 to 1990, plus selected records through 1994. Dividing the county into  $5 \times 5$ -km squares yielded 61 full and 50 partial blocks, a respectable 79 percent of which Gallagher deems to have been covered to a "good" or "excellent" degree; because the Santa Ana Mountains account for most of the area afforded "poor" to "marginal" coverage, I expect that exciting discoveries still lurk in this poorly known range. Gallagher properly notes that drought prevailed during the six years of atlasing, which undoubtedly depressed populations of many species.

A lengthy introductory table summarizes each species' habitat usage (nesting and foraging) and status (threatened, endangered, or a subjective assessment of the local status). The habitat information is generally accurate, but treat with caution the "status" column. Among breeding birds said to be "declining," the Tree Swallow and Western Bluebird seem clearly to be increasing in Orange County (following earlier decline), and the Royal Tern colonized Orange County in 1988 and maintains a tiny outpost at Bolsa Chica State Ecological Reserve; meanwhile, the elusive Long-eared Owl receives no status, though the "rare" code is applied to such uncommon (to locally common) species as Allen's Hummingbird, Downy Woodpecker, and Purple Finch, as well as the Northern Shoveler, which is not known to nest in the county.

The layout and execution are comparable with, but a step below, those found in Betty Burridge's 1995 *Sonoma County Breeding Bird Atlas* (Madrone Audubon Society, Santa Rosa, Calif.). As in that atlas, acetate overlays are provided for placement over range maps to augment the information provided; their utility is marginal, however, mainly because of the tiny scale of the maps and the large size of the atlas blocks. The species accounts in these two atlases are also comparable, but Gallagher did not limit her treatments to a single page; readers will find welcome extra detail for many scarce and declining species, including the Great Blue Heron, Clapper Rail, Snowy Plover, Least Tern, Cactus Wren, California Gnatcatcher, Bell's Vireo, and Tricolored Blackbird. Each account includes a black-and-white photograph and a range map showing blocks where breeding was considered "possible," "probable," or "confirmed," plus the estimated breeding abundance (order of magnitude) within each block. Gallagher found it necessary to adjust participants' abundance estimates for "many blocks" on the basis of "more credible reports in near-by [sic] blocks," and she warns that this information "should be used with caution."

Atlas participants documented nesting, or at least probable nesting, for the vast majority of species expected within parts of the county that were adequately covered, and owls are surprisingly well represented. Abundance codes do not appear to be inflated for any species, and reports of rare species are generally credible, though skepticism is occasionally warranted. For example, Orange County's only "confirmed" nesting record of Cattle Egret amounts to "a small number of Cattle Egret nests with young on the small island in the lake in Laguna Niguel Regional Park [observed] during the spring of 1987 or 1988." A detailed description, year, and date(s) should be mandatory for such an exceptional claim.

The species accounts overcome indifferent organization to impart worthwhile information, including natural history gleanings from 159 cited references, many local and regional. Among the book's more important contributions is the liberal provision of dates for locally observed nesting behaviors, such as nest-building, egg-laying, and fledging; original descriptions of breeding behavior, habitat composition, nest placement, etc., are occasionally furnished. As atlas projects are particularly well suited to generating location-specific breeding information, atlas compilers are encouraged to solicit its accurate collection for incorporation into future publications.

## BOOK REVIEWS

Typographic errors are rare, but a few layout miscues are evident: the Osprey's map is missing, the account of the Peregrine Falcon features a photograph of a Northern Harrier, and the Prairie Falcon account shows a Peregrine. More importantly, readers occasionally may be confused by the mix of atlas-period and post-atlas records, and it's often hard to ignore the considerable lag between the 1990/1994 data cutoff and the 1997 publication date. For example, "Category 2" candidacy for federal listing is cited for several species, but this classification has been defunct since February 1996, and the book's sole account of nesting by a pair of Western or Clark's Grebe at Oso Reservoir in "May 1988" tells a dated and incomplete story, since dozens of pairs of each species nested there in 1995 and 1996; Doug Willick and I published this information in *The Birds of Orange County, California; Status and Distribution* (Sea & Sage Audubon Press, Irvine, Calif.), a 1996 publication cited as a 1994 manuscript. These types of difficulties cannot be overcome easily once publication falls substantially behind schedule, a point to be carefully considered by would-be atlas compilers.

Each species account concludes with worthwhile tips on viewing the species in Orange County and, usually, one or more management recommendations. Gallagher properly encourages birders to provide nest boxes for embattled secondary cavity-nesters, and is at her best urging land managers to preserve weedy patches and emergent vegetation while eliminating invasive exotic species. Regrettably, however, some recommendations betray a lack of sophistication regarding land-use policies and regulations. Most grievously, I detected no mention of the Natural Communities Conservation Plan (NCCP), the comprehensive land-planning venture that has relegated great chunks of Orange County to destruction in order to create a massive (37,000 acres to date) and reasonably cohesive natural reserve system intended to conserve local (and ultimately regional) populations of the Cactus Wren and California Gnatcatcher, plus a host of other biologically "sensitive" species.

Following the species accounts is a section of "Former, Hypothetical, and Possible Future Breeders," which would seem the proper place for consideration of most species that were not "confirmed" or at least "probable" breeders between 1985 and 1994 (e.g., the American Bittern, Least Bittern, Osprey, Prairie Falcon, Willow Flycatcher, Purple Martin, Solitary Vireo). Among background material presented in 10 appendices, Appendix F contains brief descriptions of habitats and imminent changes within each atlas block that may be of use to certain researchers.

As distributional references and conservation tools, breeding bird atlases possess great intrinsic value due to the breadth and depth of information gathered across large areas over extended periods. Thus, while this atlas may not serve as an ideal model for others to follow, it is highly recommended to biologists, birders, land planners, and others interested in the status and distribution of breeding birds in southern California. Those involved are to be commended for producing an atlas before most California counties have commenced such a project; it will serve as a useful benchmark. Copies may be purchased at Sea & Sage Audubon House in Irvine, or ordered by telephone for mail delivery: (714) 261-7963.

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