BOOK REVIEWS

Colorado Breeding Breeding Bird Atlas. Hugh E. Kingery, editor. Illustrated by Radeaux. 1998. Co-published by Colorado Bird Atlas Partnership and Colorado Division of Wildlife. 636 pages. 16 pages with color photographs. Line drawings. Hardbound, \$39.95. ISBN 0-9668506-0-2.

A fact-filled tome at 600 pages, the Colorado Breeding Bird Atlas is a must-have for anyone interested in atlasing and is required reading for anyone interested in the breeding distribution and biology of the 265 species of birds that breed in Colorado. It includes chapters on Colorado ecosystems, post-settlement changes to Colorado habitats, Colorado ornithologists, and color photographs of Colorado habitats, nests, nestlings, fledglings, and biogeographic regions. For each species, the atlas provides a breeding phenology table that lists specific dates or date ranges for nest building, occupied nest, nest with eggs, nest with young, feeding young, and fledged young. The cover has beautifully stylized artwork, and the Habitat Division of the Colorado Division of Wildlife prepared the individual species' maps.

The book provides a wealth of information on Colorado's breeding birds including 13 previously unknown breeding species, although five of the latter are probably oneevent instances. Of the other eight new breeders, two were real surprises: the Bufflehead and Northern Waterthrush in North Park. The atlas turned up new information on the range of common breeding birds like House Finches expanding their range onto the plains and Gray Catbirds nesting in as many blocks on the western slope as on the eastern slope of the Rocky Mountains.

The atlas project, assisted by Audubon chapters, bird clubs, and government wildlife agencies in Colorado, surveyed the state for breeding birds from 1987 to 1994. Over 1170 people participated, sampling blocks three miles on a side, one in each 7.5-minute topographic map in Colorado, and the book explains the data turned in from the resulting 1745 blocks.

The species accounts were written by 30 Colorado atlasers who interpret the information gathered by this massive effort and also give insight into the species' past and future. It is no surprise, with so many volunteers in the field, that incomplete findings and mistaken identifications were reported, and the volunteers' range of field abilities presented problems. The editors and account authors had to identify such problems, and they or other experienced atlasers revisited blocks that had errors or had been only partially worked by previous atlasers.

In any book of this scope, there are problems at the publishing stage. One confusing feature on the maps that accompany each species account is that the number of dots (entries) on the map is frequently very different from the number of entries listed in the caption for that map under breeding evidence. For example, the caption for the Eared Grebe lists 4 possible, 3 probable and 12 confirmed nestings in priority blocks, but the map below the caption shows 8, 4 and 21 entries, respectively. For the Canvasback the caption says 2 possible, 3 probable, and 2 confirmed nestings, but the map shows 3, 1, and 6, respectively. The answer to this discrepancy is found on page 38, which explains that the maps include nonpriority-block data while the tables reflect only priority-block data. Apparently, where there were three probable Canvasback nestings, there must have been two additional confirmed nestings in an adjacent nonprority block on the same topographic map. Technically this is not a flaw, but since it occurs on most maps the discrepancy should have been addressed with a footnote to each map. Once explained, the maps and their captions make sense.

In total, the atlas gives more information on statewide breeding status than the best information previously published in the long out-of-print *Birds of Colorado* by Bailey and Niedrach (Denver Mus. Nat. Hist. Press, 1965) and the more recent *Colorado*

Birds by Andrews and Righter, (Denver Mus. Nat. Hist. Press, 1992.) The best testimonial, besides accolades from Coloradoans, is that the atlas has already found its way on to tables at agency and resource-planning meetings—one main reason it was undertaken.

Bruce Webb

Bird Songs of the Rocky Mountain States and Provinces, by Robert Righter and Geoffrey A. Keller. 1999. Library of Natural Sounds, Cornell Laboratory of Ornithology. Set of 3 cassettes (ISBN 0-938027-45-X), or 3 compact disks (ISBN 0-938027-43-3). Price \$29.95.

This set of recordings covers an impressive variety of vocalizations from 259 bird species characteristic of the Rocky Mountain states and provinces—from the Horned Grebe to Hepatic Tanger, Mountain Plover to McCown's Longspur. The species are arranged in AOU (1998) sequence, and cuts were compiled from the work of 47 sound recordists. An accompanying booklet provides context for most calls and gives the location of each recording (at the state level only). In addition, and something I find useful, is that the booklet includes written transcriptions for each vocalization and often articulates helpful comparions for distinguishing songs, sounds, and calls from similar species, e.g., the various woodpeckers' drumming.

The selection of species is somewhat eclectic, presumably reflecting the material available, but most if not all regional specialities are represented, such as the Sage Grouse (including the disjunct Gunnison population), both prairie-chickens, and all three rosy-finches. "Mundane" species are not ignored, which is nice, including the Northern Shoveler and Ruddy Duck—the latter sounds like it was displaying directly into the microphone! One can make useful comparisons between the Clark's and Western grebes, Trumpeter and Tundra swans, or Bohemian and Cedar waxwings. All four North American breeding swifts are included, as are songs and calls of all four longspurs. The recordings range from good to excellent and seem not to have been edited excessively for "purity" of sound. Thus the vocalizations sound "natural," with other species sometimes audible in the background, but always softly and not interfering with the main subject.

For most species more than one type of vocalization is included, usually distinguished in the booklet as song or call. In some cases the recordings were made outside the region, as in Alaska or New York, while the Golden Eagle was a captive bird from Scotland. The geographic provenance of vocalizations touches on an issue that I would like to see treated more critically by series of recordings, or even of photographs: exact location and date are much more informative than simply "Alaska" (e.g., song of Fox Sparrow) or "Venezuela" (call of Red-eyed Vireo). Such data make the recordings far more useful—birds may sing away from the breeding grounds, and different subspecies can sound quite different. For example, multiple subspecies of Fox Sparrow occur in Alaska, and the variation in this species' songs and calls is just beginning to be appreciated. In such cases, noting the exact location and/or relevant subspecies would be helpful.

Another comment that might be addressed by a reprinting is that, while the geographic area covered is presumably intuitive for the authors, a simple map would help those of us less familiar with western North American geography. This would also give potential buyers an idea of how useful the recordings might be for an area they plan to visit. These minor recommendations aside, the compilers are to be congratulated on a first-rate product, and anyone interested in the vocalizations of North American birds would do well to own a copy of these sound recordings.

Steve N. G. Howell