

## BOOK REVIEWS

**Raptors of New Mexico**, edited by Jean-Luc Cartron. 2010. University of New Mexico Press. 728 pages, over 700 color photographs and 50 color distribution maps. Hardback, \$50. ISBN 978-0-8263-4145-7.

As the title suggests, this book reviews the birds of prey regularly occurring in New Mexico with additional information on the vagrant species that occasionally appear in the state. This is no small task given that New Mexico is the fifth largest state in the U.S. and boasts the fourth highest number of avian species recorded, so raptors are well represented in the Land of Enchantment. Forty-four documented raptor species, including breeding species as diverse as the Boreal Owl and Aplomado Falcon, make it unique among the 50 states. Each of the 37 regularly occurring species of raptors has its own lengthy section, ranging from 10 to 28 pages, that contains a detailed analysis of the species within New Mexico. Besides Cartron, the chapters are written by a number of authors who have studied a particular species in depth. Additionally, contributions of photographs came from over 100 individuals, so this book is truly a collaboration. This is a landmark publication for New Mexico ornithology as the first publication to take on only the raptors. For each species account and migration data the book pulls an enormous amount of information from the peer-reviewed literature, but it is worded in a fashion that amateur ornithologists and birders can easily follow. The editor breaks the book into the introduction and two main parts, the introductory chapters and the species accounts. Each section is extremely detailed, and the editor sets the stage for the species accounts well. The introduction and introductory chapters address the origin and definition of the term "raptor," the plant communities of New Mexico, and long-term data on raptor migration from monitoring sites within the state.

"Raptor" has a seemingly new meaning in the wake of new hypotheses about the birds' relationships arising from recent molecular studies. It is essential then that Cartron introduces the definition of the term "raptor," where it came from, and how it is applied in this book. He does a nice job of this by introducing the first ornithologists to use "raptor" and the criteria they used to define one. The introduction also speculates about the potential phylogenetic relationships of the raptors and how these relationships may affect our understanding of their evolutionary history.

The plant communities of New Mexico provide raptors a wide variety of habitats. The section addressing them provides a clear overview of their distribution, valuable for the reader interpreting habitat descriptions in the species accounts. For instance, it is important to know the difference between "montane conifer forest" and "Great Basin conifer woodland" because their avifaunas differ.

The migration data presented in this section are impressive. Thirty-five pages are dedicated to long-term banding and observation of migrating raptors, primarily in the Sandia and Manzano mountains of central New Mexico. Migration timing, temporal shifts in abundance, mark-and-recapture studies, satellite-transmitter data, and measurements of birds captured in the field are just some of the topics covered in this section. A good example of the data in this chapter is Figure 2.5 (p. 43), which depicts the movements of 11 individual Golden Eagles that were fitted with satellite transmitters in the Manzano Mountains and subsequently found to move as far north as Alaska and south to Mexico. Such information makes this chapter valuable for anyone who wants to understand the movements of raptors through or within New Mexico.

The 37 species accounts of raptors regularly occurring in New Mexico make up the bulk of this book, nearly 600 pages. They present detailed information on distribution, habitat associations, life history, status, and management. Also, each account has a large map of the species' distribution in New Mexico, with clear symbols representing breeding, migration, etc. Each species account is carefully constructed so that each presents roughly parallel information, but some accounts lack information that others

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have. For instance, the account for Cooper's Hawk has a section "Migration" under "Life History" while a similar section is lacking in the account for Swainson's Hawk. As one might expect with many authors, the writing style differs noticeably from account to account, but this in no way takes away from the information presented to the reader. Each account is well written, and it is obvious that the authors have a passion for their respective species. For example, in the account for Harris's Hawk are several photographs of author James C. Bednarz holding fledglings or monitoring a nest. The species accounts end with ten pages dedicated to seven species of vagrants that have been confirmed in New Mexico. Each of these accounts contains information on the records from the state and speculation on population trends for the species as a whole. Some include photographs of the species from New Mexico, such as of the rufous morph of the Eastern Screech-Owl in Portales in 2003.

It is hard to imagine a bookshelf of anyone interested in ornithology in New Mexico or the Southwest without *Raptors of New Mexico*. With detailed information on migration dynamics, 44 in-depth species accounts, and over 700 color photographs it is a major contribution to New Mexico ornithology and sets the bar for future publications dedicated to raptors.

Matthew J. Baumann

**Twelve Hundred Miles by Horse and Burro: J. Stokley Ligon and New Mexico's First Breeding Bird Survey**, by Harley G. Shaw and Mara E. Weisenberger. 2011. University of Arizona Press, Tucson. xv + 244 pp., 36 black-and-white photographs. Paperback, \$26.95. ISBN 978-0-8165-2861-5.

J. Stokley Ligon (1879–1961) was a New Mexico ornithologist and conservationist during one of the most dynamic periods in the state's history. Dale Zimmerman noted that Ligon "Probably ... covered New Mexico more thoroughly than any other naturalist before or during his lifetime." Born and raised on a ranch in Texas, Ligon was a self-trained ornithologist who spent his twenties drilling wells and fixing windmills in west Texas and southern New Mexico. He was well acquainted with trapping predators and fur-bearers from his time on the ranch and family hunting trips. Later in life he was paid to manage teams of trappers that extirpated the Mexican wolf and grizzly bear from New Mexico. He eventually softened his views on predator control and in 1927 successfully lobbied the state legislature to designate bears as game animals, rather than pests to be shot on sight. Ligon is probably best known to contemporary ornithologists and birders from his *New Mexico Birds and Where to Find Them* (1961), an ambitious but relatable work that describes the state's bird life and birding locations, along with more general topics such as life zones and bird conservation.

*Twelve Hundred Miles by Horse and Burro* is an account of a little-known period of Ligon's life: his first job as a professional biologist working for the U.S. Biological Survey (USBS), to assess breeding waterbirds around New Mexico in the summer of 1913. The book begins by describing Ligon's life prior to the start of his survey and his appointment to the USBS. The bulk of the book consists of day-by-day accounts of the survey, which contain many excerpts from Ligon's field diary and an unpublished report on his work. As the book notes, Ligon's diary entries are usually brief and fairly vague. Although Ligon likely kept a personal account of his travels, it seems to have been lost to history (Ligon sent his field diary and report to the USBS, and they are currently housed at the Smithsonian). In the diary he rarely mentions events that do not directly relate to the survey and does not provide complete species lists for each day. Most of his entries are focused on waterbirds, as per his instructions, so references to land birds are often scant. The authors compensate for the lack of detail by providing meticulously researched narration that retraces Ligon's route as closely as possible while providing a historical context to the locations he visited. In addition to

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Ligon's personal writings, over a dozen of his pictures from the survey are included, and many are compared to current photos of the same location. The authors note that the book is meant to be not only an account of Ligon's travels but also an exploration of the changes in the way of life and landscape of New Mexico over the past century. In order to accomplish this aim they revisited a number of sites along Ligon's route and compared the habitats and wildlife Ligon reported to what they observed.

One of the most appealing aspects of the book is its extensive use of primary sources. The authors faithfully transcribed seemingly every entry from Ligon's diary and much of his formal report, including errors and edits made by Ligon and his supervisors. The authors infer that Ligon did not have access to any field guides before and during the survey because of frequent misspellings and the incorrect use of bird names in the diary. Besides the diary and report, details of Ligon's correspondence with the USBS and other naturalists are also included. Descriptions of the letters or the letters themselves offer unique perspectives; in one instance, Ligon is chided for the poorly prepared and improperly labeled specimens he sent to the USBS. The authors also explore the occasionally amateur and naïve nature of Ligon's writings, due to his lack of formal scientific training. These shortcomings were apparently evident to his supervisors, who rejected some of his observations, including an April report of a Scarlet Ibis near the Gila River at close to 7000 feet elevation.

The book generally does a good job correcting Ligon's errors, but it does contain a number of its own. Although most are minor, some are puzzling. For example, under the species accounts it suggests that Scissor-tailed Flycatchers reached New Mexico by following forests along the Canadian River (the Scissor-tailed Flycatcher is just now expanding its range to the Canadian River basin), and refers to brood parasitism by cowbirds on Willow Flycatchers as "nest predation." The authors specify that 20 species of shorebirds nest at Bosque del Apache National Wildlife Refuge, and that a similar number nest at Bitter Lake National Wildlife Refuge (the correct total is about five). The attempts to describe changes in habitat and birdlife in the time since Ligon's journey are commendable but often fall flat. Ornithologists and serious birders will find many of the book's reports uninformative (e.g., "I observed perhaps fifty coots... so they are still in the area"; p. 154) or too brief to be useful.

This work provides a firsthand account of New Mexico's first breeding bird survey and contains valuable insights to the development of one of the state's first modern ornithologists. Those familiar with the region are not likely to gain new information on bird distributions, but the many photographs and writings from over a century ago make it a vivid and entertaining read for anyone interested in the history of ornithology in New Mexico and the southwestern United States.

*Cole J. Wolf*