

BOOK REVIEW

Condors in Canyon Country: The Return of the California Condor to the Grand Canyon Region. 2007. Sophie A. H. Osborn. Grand Canyon Association, Grand Canyon, AZ. \$18.95. 150 pp. ISBN: 978-0-938216-98-8.

The story of the California Condor is a famous one that will be told for many years to come (Cohn 1993, 1999). Sophie A. H. Osborn has recorded her experiences with this flagship species in what will likely become the 1st chapter of the California Condor in 21st-century Arizona (see Mee and Hall 2007).

The book is divided into 7 chapters: The Natural History of Condors; Condors in the Past; Captivity and Reintroductions; Condor Behavior; Condors at Grand Canyon; Can Arizona's Condors Survive?; and Wild Condors, Once Again. A bibliography of key condor literature starting on page 144 is provided. Also distributed throughout the book are informative text boxes that focus on certain aspects of the condor recovery project or general condor ecology and that are usually accompanied by full-color photos.

Osborn does the condor great justice by presenting a well-written account of condor biology, and she effectively communicates her struggles and elations with her efforts at condor recovery. Important themes in the book include the collaboration of condor recovery efforts in California and Arizona as well as the ever-present lead-poisoning problem. Long hours of observation in the field led to an accumulated knowledge of condor ecology, which became vital in understanding how condors will become wild once again. Condor play and dominance hierarchies had to be understood, as well as how to minimize the interactions between humans and condors. Even sneaking up on a condor to get that perfect photo may prevent a condor from learning how to stay away from people.

The presence of lead shot and fragments in hunter-culled wildlife has continued to be a significant problem for condors. Lead poisoning is lethal, and Osborn's team was quick to treat poisoned condors via chelation (see Cade 2007). Other threats to condors include electrocution, predation, and West Nile virus. In fact, the 1st California Condor fatality attributable to the virus occurred in California in 2005 (p. 141). Another threat emphasized by Osborn is the effect of a highly polluted and littered landscape on the condor. Most condor chicks had bits and pieces of trash in their crops, including glass, bottle caps, and shotgun shell casings. These items obstruct the digestive tract of young condors, potentially leading to death if the items are not surgically removed.

Osborn's book, however, is not to be taken as a peer-reviewed scientific work. The book appears to be directed more toward the popular audience than the scientific community. Although the book is not a scientific volume, the author provides metric parenthetical conversions of English measurements in the text, which is distracting and unnecessary. The range map on page 26 does not accurately reflect the current range of the California Condor. The Big Sur area is not delineated on the map as being presently occupied by condors, which were reintroduced there to perhaps feed on marine megafauna as their ancestors once did (Chamberlain et al. 2005, Fox-Dobbs et al. 2006).

In summary, Osborn's account of the California Condor in Arizona is heartfelt and poetic. She writes on page 137, "...the Grand Canyon is a magical place at night. Devoid of people, the canyon embraced us in velvety darkness. The deep shadows of tall cliffs loomed around us; a tapestry of stars sparkled above. We walked to the musical accompaniment of feeding bats, dodged the occasional scorpion, and relished the peaceful stillness and the cool air."

She concludes by writing, "Condors' numbers are still too few to leave their future to chance . . . the day will come when California Condors will fly into the future unfettered by the trappings that symbolize our desperate attempts to right the wrongs we have inflicted on them. They will fly free, as they once did, fresh wind whistling through their unadorned wings, vast landscapes unfurling beneath their ever-curious, somehow all-knowing gaze."

The book is a great read for those interested in the efforts directed toward the recovery of the California Condor in Arizona. Saving an endangered species is not easy, and most of the time, new ground must be broken by trial and error. But researchers must keep in mind that experimentation with the recovery of an endangered species is tricky, because too many mistakes may push the species further toward the brink of extinction!

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