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# Ecology and Conservation of Lesser Prairie-Chickens

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BOOK REVIEW

## Ecology and Conservation of Lesser Prairie-Chickens

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**Ecology and Conservation of Lesser Prairie-Chickens** edited by David A. Haukos and Clint W. Boal. 2016. *Studies in Avian Biology* 48. CRC Press, Boca Raton, FL, USA. x + 394 pp., 8 color and 50 black-and-white illustrations. \$179.95 (hardcover), ISBN 978-1-4822-4022-1. \$125.97 (ebook), ISBN 978-1-4822-4023-8.

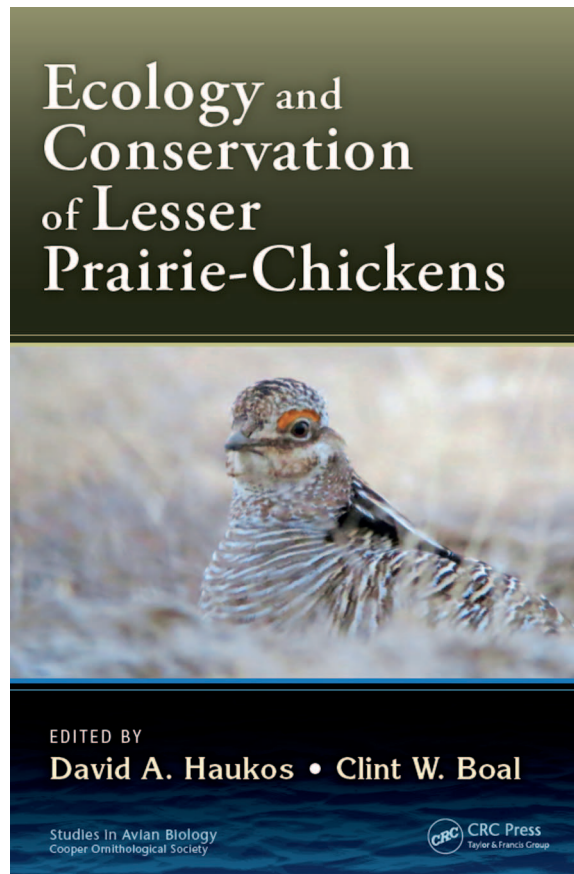
Scholars, conservationists, policymakers, and students will find critical information and a detailed case study on an avian species of conservation concern in this edited volume. Haukos and Boal have gathered work by 29 contributing authors in a well-designed set of 18 chapters that showcases current information about the Lesser Prairie-Chicken (*Tympanuchus pallidicinctus*). The book is timely in covering this species, which has found itself in the throes of the court system recently, having been designated with federal protection as a threatened species in 2014, only to have the courts vacate the listing rule in 2015, just as this volume went to press. In 2016, the U.S. Fish and Wildlife Service removed the species from the Federal List of Threatened and Endangered Wildlife in accordance with the court decision. However, in November 2016, the agency determined that a new petition for listing had merit, which suggests further controversy in the future as states with large agricultural interests argue against federal policy intrusion.

Regardless of the status of the Lesser Prairie-Chicken, many chapters in the book are reviews of the best current information for the species on infectious and noninfectious diseases, genetic structure, habitat, harvest, energy development, and climate change. The topics are covered efficiently and with accessible language, which is important, because policymakers will likely become an eager set of users of this book in the near future.

I found R. Rodgers's chapter on historical perspectives especially insightful and useful. Indeed, I had not contemplated how the Dust Bowl factored in the species' decline. The overview of land-use change is accessible to both lay and scientific audiences, and this chapter may be useful as a reference to anyone working with landscape conservation in the southern Great Plains. I also appreciated a short chapter on the legal status of the species by W. Van Pelt. Such a state-by-state review is not typically available to students of conservation biology, and this introductory chapter should serve as a useful tem-

plate for similar publication efforts for other species.

A chapter by D. Elmore and D. Dahlgren on the dichotomy of public and private land conservation makes a critical point that the Lesser Prairie-Chicken exists mainly on private land. Thus, the flavor of conservation planning



and the federal conservation response is different than in similar efforts to support Spotted Owls (*Strix occidentalis*) or Red-cockaded Woodpeckers (*Picoides borealis*), which have larger patches of public land to use as refuges and core habitat areas. This chapter should be useful to anyone wishing to work on private land, given the tool sets for conservation that are described. In fact, I am considering its use as a required reading in an undergraduate wildlife-management course. The editors continue to explore this critical topic with a case study by P. McDaniel and B. Williamson on conservation efforts that have found successful ways forward under the complications of private land ownership and agricultural use of landscapes in the southern Great Plains.

This 48th volume of *Studies in Avian Biology* contains less original research than some previous volumes, but the reader does find new sources of information on topics of population predictions, predation, and characteristics of lek sites with regard to landscape disturbances. As an example of the broader impacts of the book, the chapter on genetic variation and population structure contains a figure that represents hypothetical metapopulation structures as affected by habitat change; this figure could easily become a standard in textbooks on conservation biology.

The editors and authors chose to use a laser focus to describe the Lesser Prairie-Chicken. I found that only one chapter, a description of grassland use in western Kansas led by D. Dahlgren, spent much time contrasting Lesser Prairie-Chickens with Greater Prairie-Chickens (*T. cupido*). The contrasts between sister species are appropriate in this chapter because of sympatry and hybridization in this area of Kansas. However, in a close inspection of several chapters' literature-cited sections, I was surprised that

most of the higher-level research was restricted to Lesser Prairie-Chickens. Granted, the goal of many chapters was to review known information pertaining to the title species—and I, too, have been a victim of self-imposed navel-gazing in the past. But, as I set the book down to begin writing this review, I began to ponder how conservation planners and policymakers could benefit from comparisons to lessons learned from research on other grassland birds or other species of conservation concern that have benefited from planning that incorporated private landowners.

The chapter on population projections comes early in the book, but its lessons are appropriate at the close of this review. The authors, led by E. Garton, used empirical demographic information to parameterize models to make predictions for future population size, and their simulations highlight the importance of dispersal in the future among population fragments. In their conclusion, the authors underscore the challenge of conservation that is in competition with row-crop agriculture in the region and the need for “a strategic approach to habitat conservation.” A fault that I encountered throughout the book was understatement of the nature of this challenge. Perhaps those of us involved in conservation of birds throughout the world are, by nature, stalwart, and we refuse to buckle under large challenges because of our inherent optimism for the future? I suggest that the best reason to own this book is to have a reminder on your bookshelf of the challenges for avian conservation that loom as the human population grows and landscapes feel the burden of demands for food, fuel, and water.

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