

Essential Readings in
Wildlife Management & Conservation

Edited by
Paul R. Krausman *and* Bruce D. Leopold

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Frontispiece: Aldo Leopold writing at the Shack. Dog “Flick” is in the foreground (c. 1940).

Closing photo: Aldo Leopold in his University of Wisconsin office reading. Dog “Gus” is on the floor
(c. 1943).

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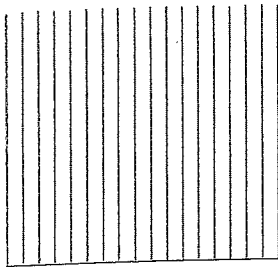
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Introduction

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It has been over 30 years since The Wildlife Society published *Readings in Wildlife Conservation* (Bailey et al. 1974). That book has been out of print for some time, but it was a staple in undergraduate introductory wildlife management courses during the 15 or so years it was in print. Both of us were required to buy a copy, and the books sit prominently on our shelves.

Every profession has a core literature that is the foundation of the principles on which that vocation depends, and Bailey et al. was part of that core. Wildlife conservation and management is no exception, especially when you consider that the primary value of The Wildlife Society is science-based management. *Wildlife* is any free-ranging vertebrate or invertebrate organism, and *management* is any active or passive action that addresses an animal's reproduction or survival. We define *conservation* as maintaining sustainable natural resources for the well-being of the earth and its peoples. Wildlife management is still a young profession, but our science has come a long way, as have our wildlife population and habitat management techniques and policies.

The trend of summarizing the literature (and data) upon which our management is based actually started with Leopold's (1933) *Game Management*. In this seminal text, Leopold gathered an impressive array of data sets from which he derived his management principles. The field of wildlife management and conservation had come far since Leopold first published *Game Management*, and 40 years later it was appropriate for Bailey et al. to assemble the current literature. Now, almost 40 years after Bailey et al., it's time once again to assemble the key literature that has formed the principles of wildlife management. Our text differs from Bailey et al., a compendium of relevant literature of the time, in that ours is a collection of the classic and fundamental papers that form the core of the science of wildlife management.

Both of us have taught introductory wildlife management classes and advanced undergraduate and graduate courses in the theory and practice of wildlife management. When comparing notes and speaking with other faculty, we found that all were consistently citing a suite of key literature, whose concepts remain relevant today, on how we manage wildlife populations and wildlife habitats, implement policy and administration, and deal with the utilitarian and non-utilitarian user. We also observed that our top students were eager to have access to the core literature and to analyze it in formal and informal discussion groups. Every wildlife management curriculum has some form of undergraduate and graduate seminar course where key concepts and principles are presented and discussed. Thus, a need existed to assemble this literature to facilitate dialogue among professionals.

While we were developing this book, some colleagues expressed concern about why a published collection was necessary, given the level of access students and professionals have to the literature by electronic means. There are many reasons that a printed collection is needed. First, university libraries (at the instigation of publishers) are growing more diligent about stopping unauthorized copying of journal articles for classroom use. With a collection of articles for which permission to reprint has been secured, faculty need not be concerned about violating copyright by providing students with copies of this literature. Second, students, even in this digital age, prefer the written medium for their textbooks. As recently as 12 November 2010, the *Chronicle of Higher Education* reported on a survey by the National Association of College Stores, in which 76% of students surveyed ($n = 627$) said they prefer a printed copy of a book over an e-copy. Third, there are many smaller universities with outstanding wildlife programs that, because of limited budgets, may not have access to all of the key journals (physically or electronically) in our field. Last, a printed collection of core literature is an invaluable resource that is quickly accessed and may be the only means of obtaining it (e.g., when in a remote field location with limited or costly internet access).

This book addresses the needs of wildlife academicians, professionals, students, high school science teachers, and even interested laypersons. We assembled foundational literature to form the basis for a semester-long undergraduate or graduate seminar. For undergraduates, it is an introduction to the literature of the profession; for graduate students, it is the basis for discussing the past and current relevance of the theories developed by the authors and how current research has evolved from these papers. The book may be used throughout an undergraduate curriculum. For example, the section on philosophical roots could be used in an introductory freshman class, while the sections on animals, ecology, and populations and on habitat could be used in an upper-level wildlife management course. We believe that this book also belongs in the library of every wildlife professional.

In addition, this collection of papers would be a useful resource for high school science teachers, who may find the information applicable to their lesson plans. It is consistent with the standards of environmental education established by the National Council for the Accreditation of Teacher Education. The paper on the North American Model of Wildlife Conservation as well as papers by Leopold would be particularly useful for high school classes. Finally, the general public has a greater vested interest in our natural resources than ever before. These papers would be of interest to them and, we hope, to their children, as the essays would expand their understanding of our natural resources and how (and why) they are managed.

The most challenging task in preparing this collection was selecting the 42 articles from the 120 or so we believed were classics in the field. This was an even more daunting task when we considered that since Leopold's 1933 publication, our profession has expanded to include human dimensions, advanced harvest management, and policy and administration. We ultimately decided to collect papers within four major areas: Our Philosophical Roots; Animals, Ecology, and Populations; Habitat; and Human Dimensions. We chose papers that were at the core of the topic at hand and are widely cited. For example, at the time of this writing, Hardin's "The tragedy of the commons" has been cited 15,562 times; Holling's "The components of predation as revealed by a

study of small-mammal predation of the European pine sawfly," 1,408 times; and Johnson's "The comparison of usage and availability measurements for evaluating resource preference," 1,697 times.

All papers in this book were obtained from our private collections or libraries and are presented in their original format. Unfortunately, we could not locate pristine copies of all the papers included in this text. Thus, some show more wear than others.

In the first section, the papers address the social and professional basis for the wildlife profession. What makes us a profession? What are the fundamental values of a wildlife biologist? We go from early writings about the scientific method to an essay that remains even more relevant today than when it was first published, "The tragedy of the commons," to the significance and worldwide uniqueness of the North American Model of Wildlife Conservation. The second and third sections deal with animals and their habitats, respectively. The collection also includes a few papers that stirred some controversy when first published. We hope that faculty, and their students, use these papers as launching points to explore current literature on wildlife populations and their habitats and to discover what new theories are being constructed.

Also in the collection are papers on succession, population growth and regulation, interspecific competition, and predation. The processes explored are essential to the dynamics of any animal or plant population. Some of the essays address terms that are often used incorrectly, such as *carrying capacity*, *biodiversity*, and *optimal foraging*. We also included a section on human dimensions, which is likely the most important part of the text. Human intervention, positive and negative, has had and will continue to have a profound impact on the viability of our wildlife populations and their habitats.

The profession of wildlife management and conservation has, for quite some time, been considered an art. There is an art to what we do as wildlife managers, but the profession has evolved as science based. Unlike Leopold, who had to base most of his analyses on state and federal game surveys and on anecdotal data sets, we have amassed a profound collection of science-based management procedures and processes. For each paper selected, we list articles for further reading. We hope that the text will afford both young and seasoned professionals an opportunity to read and appreciate the essential literature in the art and science of wildlife management and conservation.

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RELATED READING ୩ ୩ ୩

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