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Texas Quails: Ecology and Management

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Source: The Condor, 109(4) : 985-987

Published By: American Ornithological Society

URL: https://doi.org/10.1650/0010-5422(2007)109[985:TQEAM]2.0.CO;2

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Texas Quails: Ecology and Management.—edited by Leonard A. Brennan. 2007. Texas A&M University Press, College Station, TX. 512 pp. ISBN 1-58544-503-7. $40 (cloth).

The North American Bird Conservation Initiative restoration plans have been set. Biologists and administrators are busy. Unfortunately, there's not enough government money to do the job! This was made clear by the Lerner et al. (2007) paper *What's in Noah's Wallet? Land Conservation Spending in the United States*. Clearly, then, bird conservationists need to embrace something that is central to quail conservation in Texas—capitalism as a way to fund habitat conservation. Two themes emerging from *Texas Quails* are that management of quail populations is enhanced by capitalist approaches and that management of quail populations also benefits the conservation of other wildlife. For example, "Quail can be considered an economic keystone species in many parts of Texas" (p. 404), and "The increasing

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popularity of quails in Texas represents a genuine benefit to nontarget wildlife species. As more of Texas is improved for quails, more of Texas will be improved for native wildlife'' (p. 406), and ''People who are interested in wildlife species that have habitat requirements similar to those of quails should embrace this development'' (p. 404).

Texas Quails is a comprehensive review of ecology and management of the four species of quail found in Texas and of the hunting culture that is the driving force behind the state's interest in quail. There are three sections: I. Ecology and life history of the four quail species, Northern Bobwhite (*Colinus virginianus*), Gambel's Quail (*Callipepla gambelii*), Montezuma (Mearns') Quail (*Cyrtonyx montezumae*), and Scaled Quail (*Callipepla squamata*); II. Quail populations in the 10 ecoregions of Texas: management opportunities and research challenges; and III. Culture, heritage, and future of Texas quails. Each chapter provides a thorough compilation of information, with ample citation of pertinent work, from both within and outside Texas. For example, in Chapter 6, ''Diseases and Parasites of Texas Quails,'' M. J. Peterson (Texas A&M University, College Station) covers a topic pertinent to all wild bird populations, thoroughly reviews research, and provides a provocative critique of avian disease ecology.

If you are not particularly interested in quail per se, but want to better understand how management of quail populations for hunting influences bird conservation in general, I suggest you begin with Chapter 23, ''Effects of Quail Management on Other Wildlife'' by W. P. Kuvlesky Jr. (Texas A&M University, Kingsville). Kuvlesky observes that because income from hunting leases can reach $62 per hectare per year, management for hunted species can have a profound effect on all wildlife. The strongholds for quail capitalism are the Rolling Plains (Chapter 7) and South Texas Plains (Chapter 16) ecoregions.

The demand for quail hunting in Texas is geographically uneven, however, thus capitalism is a less effective system for restoration in some areas. One example is in the Piney Woods ecoregion in eastern Texas (Chapter 9, R. M. Whiting Jr., Stephen F. Austin University), where wildlife diversity and the needs of endangered species provide motivation for restoration. According to Whiting, up until World War II this region was known as the quail hunting capital of Texas. Following decades of change in land use, quail abundance and hunting have diminished to a tiny fraction of their past glory. Today, the fate of Piney Woods' bobwhites is tied to U.S. Forest Service lands and restoration of habitat for Red-cockaded Woodpeckers (*Picoides borealis*). In other areas of the state where bobwhite abundance and hunting are significantly reduced, the future is dim, however, because there is little impetus for increasing quail-friendly land use. Demand by hunters is low, and the obstacles to changing land use are large. These areas include the Cross Timbers and Prairies (Chapter 8), Blackland Prairies (Chapter 10), and Post Oak Savannah (Chapter 14) ecoregions. The obstacles to changing land use are most often agriculture and expansion of human populations (see p. 146 and 264).

A highlight of *Texas Quails* is a critical review of resource science and management. Many of the chapters identify management and research issues and solutions, and Chapter 24 (''The Science of Quail Management and the Management of Quail Science,'' F. S. Guthery, Oklahoma State University, and L. A. Brennan, Texas A&M University, Kingsville) and Chapter 16 (''Bobwhites on the South Texas Plains,'' Hernandez et al.) offer provocative discussion: ''Why does bobwhite management appear to be a backwater science, given an extensive knowledge base?'' (p. 296). These chapters are mostly based on previously published work of F. S. Guthery in the *The Journal of Wildlife Management* (JWM), *Wildlife Society Bulletin*, and two books. Guthery, who holds an endowed 'quail' chair at Oklahoma State University, has focused his efforts recently on the critique of wildlife management and science, and on the development of new concepts for quail ecology and management. Guthery's critiques have resulted in heated debate in JWM, most recently in the summer of 2007 as researchers challenged his claims of bias in estimation of vital rates derived from studies of radio-tagged quail. Guthery's critiques and formulation of new concepts and hypotheses explicitly invite challenges. Along these lines, a common thread in the book in the context of restoration is the use of Guthery's model calculations of minimum viable population size and space needs. In Chapter 21 (''Strategies for Forming a Quail Management Cooperative'') the concept is elevated to a plan for implementation. Lest quail conservationists become victims of ''group-think'' (p. 407), we are reminded that models need to be tested: ''*If* model probabilities are representative of actual processes…'' (p. 265). Challenges to the way we do science and management are healthy for the profession, and as such should be of keen interest to avian ecologists, students, and laymen. Guthery is clearly the leader, both in empirical work and concepts, for much of *Texas Quails*, with >50 literature citations, far more than any other author. Other key concepts of Guthery's, ''usable space'' and ''slack,'' are found in chapter 16. Because these concepts are used in various chapters by other authors, readers should understand chapter 16 before moving on to species and ecoregion reviews in other chapters.

Don't let some of the chapter titles fool you. In Chapter 17 (''Quail Regulations and the Rule-Making Process in Texas''), J. L. Cooke (Texas Parks and Wildlife Department) provides an interesting review of Texas history in regard to lawmaking and a frank discussion of politics in game management. This chapter is worth reading for the insights it provides about the balance between citizen desires, biology, and policy. Chapter 18 (''Economic Aspects of Texas Quails'') by J. R. Conner (Texas A&M University, College Station) has no economic data, but instead reviews all the components of quail hunting that could be assigned economic value.

Once bird enthusiasts realize the benefit of hunting as a conservation tool, the next logical step is to understand quail culture. ''Game birds in general,

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and quails in particular, have a cultural advantage over most other wildlife species. The root of this advantage is that many people who are passionate about hunting upland game birds, and especially about hunting quails, are relatively wealthy'' (p. 416). The details of quail hunting culture are covered in Chapters 18, 19 (''Managing and Releasing Pen-Raised Bobwhites''), and 20 (''Operating a South Texas Quail Hunting Camp''). Quail culture is put into a conservation context in Brennan's introductory and concluding chapters, and the latter part of Chapter 24. On one hand he extols the virtues of the traditional quail capitalist approach, and on the other recognizes the limited scope of this system and calls for future alignment with sustainability science. As part of this shift, Brennan suggests that quail conservation should be a value held by the general citizenry (i.e., taxpayers would foot the bill for conservation). While this is an ideal held by many wildlife enthusiasts, the stark reality is that quail capitalism works more efficiently, and reduces the public burden for conservation. There is, however, a dark cloud on the horizon—hunting participation is rapidly declining. In quail capitalism, a reduction in demand leads to a reduction in supply (habitat). This trend should be of concern to *all* bird enthusiasts.

No book is perfect. In *Texas Quails*, formatting is inconsistent to the point of distraction, as some graphs are difficult to read because of tiny fonts and missing axes. Among many typographical errors, one is notable: on p. 4, Brennan extols the superabundance of quail in some areas: ''…2.5 birds per acre, or a bird per acre.'' It should read, ''2.5 birds per hectare, or a bird per acre.'' Another weakness is the absence of color illustrations or photographs, particularly in the life-history section. Content-wise, the greatest weaknesses are the lack of human dimensions information (e.g., hunter or landowner attitudes and demographics) and economic data. Several chapters mention the importance of economic data (e.g., p. 135 and 247) and there are bits of economic data scattered in the book (e.g., p. 381, 421, and 423), but nothing comprehensive. In addition, Silvy et al. (p. 88) identify the economic aspects of Scaled Quail management as a high priority for research, but clearly this is an overall need because economics is *the* primary driving force behind the relative success of quail in Texas.

Overall, I highly recommend this book to libraries, avian ecologists, and bird enthusiasts, whether or not they have a keen interest in quail. For quail enthusiasts across the United States, *Texas Quails* is an essential resource.—THOMAS V. DAILEY, Missouri Department of Conservation, Columbia, MO 65201. E-mail: tom.dailey@mdc.mo.gov

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