Book Reviews

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Source: The Auk, 127(4) : 956-958

Published By: American Ornithological Society

URL: https://doi.org/10.1525/auk.2010.127.4.956

Book Reviews

EDITED BY R. TODD ENGSTROM

The following critiques express the opinions of the individual evaluators regarding the strengths, weaknesses, and value of the books they review. As such, the appraisals are subjective assessments and do not necessarily reflect the opinions of the editors or any official policy of the American Ornithologists' Union.

The Auk 127(4):956–958, 2010

Conservation Biology of Hawaiian Forest Birds: Implications for Island Avifauna.—Thane K. Pratt, Carter T. Atkinson, Paul C. Banko, James D. Jacobi, and Bethany L. Woodworth, Eds. Yale University Press, New Haven. 2009. 707 pp. ISBN 9780300141085. Hardcover, $69.99.—For many years, following the publication of *Studies in Avian Biology* No. 22 by Scott et al. (2001), ornithologists interested in Hawaiian birds have waited for the next synthesis volume on Hawaiian bird research. Finally there is one, and it is excellent. Thane Pratt and his colleagues from Hawaii have added another milestone in the punctuated equilibrium of information surrounding Hawaiian ornithology. Pratt states in the preface that he initiated this book because a U.S. Geological Survey review panel identified a recent lack of published information in the peer-reviewed literature and the need to consolidate recent research efforts on birds in the Hawaiian Islands. This book goes a long way in solving that problem.

When this book first appeared, I asked Pratt what he would have done differently. He said, "I would have made the book shorter." It is a very large volume, with 707 pages and over 40 mm thick. The book is organized into a preface, 25 chapters, an appendix that provides the proper Hawaiian pronunciation of words used in the text, a listing of the 43 names and addresses of contributors, and a 60-page bibliography. All of the 32 color plates are placed together in the middle, and the quality of the graphics is excellent. The chapters are divided into five major "Parts" of the book, and for the purpose of this review I will deal with these parts as groupings, rather than reviewing in extensive detail individual chapters. Part 1 provides an introduction and background; Part 2 covers species status, biology, and limiting factors; and Part 3 applies research to management. Part 4 presents summaries of four individual recovery efforts, and Part 5 provides a look into the future of native Hawaiian forest birds.

Several themes are nicely woven throughout this edited volume. These include (1) the ecological complexity of the situation in Hawaii and our lack of knowledge of all the various factors involved in the demise of the native Hawaiian birds, (2) the integration of science into management of native Hawaiian forest birds, (3) the role of mankind in the cause of native Hawaiian bird declines, (4) actions that can be taken to prevent future negative impacts on native birds, and (5) the need for a greater appreciation of the unique situation in the Hawaiian Islands and for greater financial support.

Part 1 has three chapters, including an introduction on origins and evolution, a second on decline and extinctions, and a third that deals with the use of forest birds by the native Hawaiian culture. The origins and evolution chapter is merely an expansion of previous published works on this subject (e.g., Berger 1970, 1972), but it does set a foundation for future chapters. The second chapter provides another foundation, of historical declines and extinctions, focusing on the fates of generalist versus specialist native birds. Quite a bit of time is spent in this chapter suggesting that lack of food resources has been a major extinction factor, but other than an earlier work by Baldwin (1953), this hypothesis still remains to be addressed. The third chapter is a new and refreshing look at birds in the native Hawaiian culture and the possible role that these people played in the early decline of native forest birds. The authors provide a thorough background on what is presently known about native birds in the Hawaiian culture, and the "noble savage" concept that Carlquist (1970) put forth, about how the native Hawaiian culture lived in harmony with the wildlife, is clearly brought into question.

Part 2 is the core of the book's scientific contribution, updating the status of native birds and providing new information on breeding biology and an assessment of limiting factors. This part of the book will no doubt be welcomed by readers who are unfamiliar with Hawaii and the plight of the native birds. A major thread is the attempt to tie together the long-term monitoring of Hawaiian forest bird numbers. Since the seminal work of Scott et al. (1986), scientists in Hawaii have continued a sustained monitoring of forest bird numbers. Chapter 4, by Camp et al., summarizes these monitoring efforts for the first time. This has allowed a wider evaluation of the process (Camp et al. 2010) and suggestions for further improving the scientific rigor of that monitoring effort (Freed and Cann 2010). Chapter 5 documents the present status and provides a short summary for each individual native bird. It is here that we begin to see redundant figures and appendices that

The Auk, Vol. 127, Number 4, pages 956–963. ISSN 0004-8038, electronic ISSN 1938-4254. DOI: 10.1525/auk.2010.127.4.956

are sprinkled throughout the book. Chapter 6, by Linda Pratt and James Jacobi, provides one of the better treatments on an assessment of habitat alteration in the islands, an important underpinning to the future survival of all native forest birds. The chapter on the evolution of food exploitation in native forest birds by Banko and Banko is a further development of their hypothesis put forth in chapter 2—that food could possibly act as a limiting factor for native Hawaiian birds—but few new data are provided. The subsequent chapter by Woodworth and Pratt provides a synthesis of factors influencing life history and demography, including an excellent summation of known life-history parameters, with an emphasis on recent scientific studies. But what is missing, or not treated in adequate depth, is some of the more important earlier information on forest birds (e.g., Baldwin 1953). Although the effect of introduced disease is alluded to earlier in the book, chapter 9 does an outstanding job of providing the reader with a synopsis of what is presently known about avian disease in Hawaii. The final chapter in Part 2, chapter 14, goes further into disease aspects, with modeling efforts that predict disease prevalence over a wider landscape.

Also in Part 2, chapter 10 by Jarvi et al. provides a summary of what is presently known about the genetics and conservation of native Hawaiian birds. Here we see an explanation of genetic molecular methodologies presented in an inset box, a technique that is used very effectively throughout the book. In chapter 11, Lindsey et al. deal with the difficult issue of predation and effects on native birds, and in chapter 12, Klavitter summarizes conservation of the raptor community in Hawaii. Introduced birds are covered in chapter 13, by Foster, who does a very thorough job of assessing the past literature, a depth of evaluation that we do not see in some of the other chapters.

In Part 3, the book moves into the arena of how research can be applied to manage and preserve the native forest birds. This portion is what truly sets this synthesis apart from previous scientific works on Hawaiian birds, and the editors are to be commended for this important aspect of the book. Chapter 15, by Loop and Kraus, stresses the importance of preventing the establishment of any exotic organism, whether a plant, mammal, pathogen, snake, or bird. In the past, Loop has demonstrated that early detection and immediate eradication is one of the most effective ways to deal with invasive species that might have a negative effect on Hawaiian forest ecosystems (Loop et al. 2001). The view of conservation is greatly increased in the next chapter (16), in which Price et al. focus on using geographic-information-system data to address conservation issues over the entire island archipelago. In chapter 17, LaPointe et al. provide suggestions on how best to manage avian disease. Chapter 18 focuses on controlling small predatory mammals, and chapter 19, the final chapter in Part 3, updates the captive-breeding program.

Part 4 has summaries of four individual species recovery programs. This is one area where the editors could have significantly shortened the book. Much of the information in this part is also found embedded in the other chapters and in recovery plans available from the U.S. Fish and Wildlife Service. Even though redundant, it is convenient to have information on recovery plans handy, as this type of information rarely finds its way into the published scientific literature.

Part 5 closes out the scientific portion of the book. In chapter 24, Leonard, a biologist with the Hawaii Division of Forestry and Wildlife, outlines the many social and political obstacles that presently exist in Hawaii. This is a conclusion chapter and it is excellent. He does a commendable job of listing the realities and then provides some achievable remedies, given that Hawaii is a complex political arena. The final chapter (25) is by the co-editors and Loyal Mehrhoff, who ask the question "Can Hawaiian forest birds be saved?" They begin the chapter by pointing out that since the Hawaii Forest Bird Survey ended in 1983 (Scott et al. 1986), "10 species of endemic Hawaiian birds have been lost to extinction—an average of 1 extinction every two years," then review several concepts and much of what has been discussed in earlier chapters. It is stated that some of the more generalized native forest birds may persist, but the fate of the more specialized species is not as clear. Finally, the authors list the many factors that affect Hawaiian forest birds, but they never clearly bring all the factors together to assess levels of relative importance, nor do they discuss at what scales management actions need to be taken so that they are ecologically and conservationally relevant. This would have been useful, especially for managers who are often overwhelmed with the daunting task of saving the native Hawaiian avifauna.

A close reading of any book, particularly edited volumes, usually results in the discovery of several shortcomings and errors. This is especially true for a book of this size and one that has the added complexity of Hawaiian names and punctuation. The copy editor is to be commended on the small number of minor errors that I found; only a handful of words were used incorrectly by authors. There are several problems, mostly minor in nature, that I felt could have been avoided by the co-editors. One of these is that each chapter seems to stand alone, which results in redundancy of information. An effort was made to reference other chapters with parentheses after statements, but this seemed to have been done after the fact. It would have been much more useful if the co-editors could have worked with the individual authors to modify text and provide more continuity in the writing.

A larger issue is that much of the discussion in the book was built primarily around the more recent literature on forest birds, with much less attention paid to the details of earlier works (e.g., Baldwin 1953, Richardson and Bowles 1964, Eddinger 1970). The earlier works are cited, but only in passing, and the pithy data from those early studies are not adequately compared with the more recent findings. This lack of coverage is most likely related to the interest and experience of the authors. Nevertheless, there is a body of knowledge on aspects of birds and mammals that should have been more thoroughly mined for comparable baseline data.

Many of the tables contain references to the source of the information given but some do not. The same is true of the text in places, where specific examples are given and no reference is used to support the information and provide a source of more data on the information. On the positive side, many citations that are given in the text are of great value in leading the reader to more detailed information. In fact, some of these references were quite useful to me in providing an update on the present status of our knowledge of native forest birds.

The problems mentioned above do not detract from the overall value of this book; it is an important addition and will not only be used as a reference to the present status of Hawaiian forest birds, but will also be a stimulus to those managers who are interested in utilizing research findings to better manage the precious

resources under their guardianship. All people interested in the status of native Hawaiian forest birds owe a great deal to the co-editors for crafting such a significant and useful book.—Charles van Riper III, *U.S. Geological Survey Southwest Biological Science Center and School of Natural Resources and the Environment, 110 FCS Building no. 33, University of Arizona, Tucson, Arizona 85721, USA. E-mail: charles_van_riper@usgs.gov*

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