

BOOK REVIEW #8

Askins, Robert A. *Restoring North America's Birds: Lessons from Landscape Ecology*. 2000. xiii + 320 pp.; 72 illustrations; lists of organisms with common and scientific names; notes; references; index. Yale University Press, New Haven and London. Hard Cover. Price: US\$35.00. Available from Yale University Press, P.O. Box 209040, New Haven, CT 06520-9040.

As the published works in the science of ecology become evermore abstruse and mired in advanced statistical techniques and computer wizardry, the need for more easily accessible and usable syntheses of information has become increasingly evident. Askins' *Restoring North America's Birds*, therefore, is exactly what restoration managers, conservationists, and bird enthusiasts need to help address new and more difficult issues as bird habitats continue to be destroyed or degraded by human impacts. The book, however, provides more than a dispassionate synthesis of scientific studies. It lays a firm foundation for viewing natural systems from a landscape perspective, which the author considers essential for conserving birds in habitats increasingly influenced by human activities.

The facing page of each chapter has an excellent artistic rendition of a bird species (by Julie Zickerfoose) in its habitat that will be discussed in the chapter. In addition, the title of each chapter is followed by a relevant quotation. Quotations were drawn from a variety of literary sources including one selection from a poem by Emily Dickinson. This provides the true impression that the text will be easily accessible and not bogged down in scientific minutia; it also encourages a freedom to expand one's viewpoint beyond the familiar and immediate. Photographs of birds and their habitats, liberally scattered throughout the book, also increase the accessibility of the information. Askins gradually introduces the concepts of landscape ecology with examples and case studies rather than formal definitions, with a more structured definition waiting until the final chapter entitled simply "Landscape Ecology." Therefore, the sequence of chapters tends to develop as a finely crafted story might, pulling the reader forward to find out what happens next. Readability is enhanced by referencing citations by numbered superscripts rather than the often unwieldy author-year method that is common for scientific writings.

Nine of the ten chapters each cover a specific habitat type. In his habitat descriptions and historical perspectives, Askins references a variety of older writings, scientific and otherwise (a procedure increasingly lacking in recent years [Pechenik et al. 2001]). He frequently uses quotations from those writings; but at the same time, his discussions are grounded in the latest ornithological studies. Not all habitat types in North America are covered, and in this aspect the book is far from comprehensive. Nevertheless, grasslands, shrub lands, forests, riparian ecosystems, and other habitat types are examined adequately to illustrate Askins' main point that viewing bird habitats from a landscape perspective is the most effective way to approach the restoration of bird populations. General recommendations for conservation of birds appear at the end of each chapter for the specific habitat under consideration. Figures of data and other information are sparingly used with discussions of statistical methods and results avoided entirely. Hardliners may complain the book lacks rigor; but the motivated reader seeking details merely has to consult the original references, while the rest of us may continue to read happily onward.

A great deal of emphasis is given to the importance of disturbance as an integral, natural factor influencing the structure, composition, and overall appearance of landscapes, within which specific bird habitats may be embedded. Natural disturbances include periodic fires, floods, wind, grazing pressure, widespread disease, and insect damage. Askins, in fact, suggests that a disturbance-dependent natural landscape, such as a grassland, should be viewed as a "...‘shifting mosaic’ of habitat patches," the dynamics of which are a function of the disturbance regime. Askins discusses the grasslands and forests of Illinois in several examples.

Most of Illinois' natural terrestrial communities were historically shaped by fire for thousands of years in combination with the topography of the landscape. Fire frequency was largely responsible for whether a particular piece of land developed into grassland, forest, or the transitional savannas (Anderson 1991). Many ecological restorationists in Illinois have, in fact, been using the landscape approach for some time (Schwartz 1997). Even though Askins admittedly did not attempt to make *Restoring North America's Birds* a comprehensive synthesis of the literature on ecosystem dynamics and habitat management, the book may easily stand alongside such excellent syntheses of recent ecological thought as Botkins (1990) and the more technical Huston (1994), where disturbance and change are given full recognition, but older ideas of unchanging, long-term stability of mature ecosystems and the balance of nature are de-emphasized.

Throughout the book, Askins advocates active management of bird habitats to restore and maintain specific habitat types. Indeed, he states that "Letting 'nature take its course' to reestablish a presumed 'balance of nature' can lead to severe loss in biological diversity. The resulting natural areas may be much more homogeneous than the diverse landscapes that preceded European settlement." The author provides many examples of bird habitat management in a wide variety of systems where disturbance dependence, successional processes, and interactions with surrounding landscapes are central to the discussion. Throughout the book, he stresses the need to view specific bird habitats in relation to surrounding areas; that is, in terms of the overall surrounding landscape, in addition to relationships with other habitats across larger regions (e.g., for the total picture on Neotropical migrants, one must consider that overwintering areas are not in North America). Again, the author discusses examples drawn from Illinois, which provides some of the best examples and comprehensive studies of habitat fragmentation, edge effects, and the problem of cowbird parasitism on forest-dwelling songbirds (Schwartz 1997). And he stresses the importance of maintaining a diversity of habitat types (e.g., a grassland area should contain patches of tallgrass, mixed grass, and shortgrass with burned and unburned areas) "...to support a full range of successional stages, from newly disturbed areas where vegetation is regenerating, to long undisturbed sites where the vegetation is relatively stable." He even suggests the use of limited clearcutting of woods in carefully selected patches (not old growth) to create a mosaic of habitat types (for example, shrublands within a larger forested matrix), allowing for greater overall species diversity on a landscape scale. At the same time, Askins warns that "...conservation efforts that benefit one species will inevitably harm other species. Creating grassland habitat for Grasshopper Sparrows may destroy or degrade the woodland habitat of Cerulean Warblers." Resource managers must make the choice.

Askins views humans not only as the main agent controlling the disturbance regime, but as part of the landscape itself, suggesting that "...we must try to find ways to maintain ecological processes and the species that depend on them across landscapes that are used by people for economic purposes." Such purposes include farming, timber harvesting, and ranching. He cites the Texas Hill Country near San Antonio and Austin as a case study worth replicating. Undoubtedly, working together pro-actively should work better than confrontation and fighting, which usually occurs after a great deal of damage has already been done.

Restoring North America's Birds is not a step-by-step handbook for restoring and managing bird habitats. Instead, the book presents examples of how a landscape perspective can be used to guide how bird habitats are managed. Permeating the book is the idea that restoring and maintaining bird populations can only be accomplished by restoring and maintaining habitats. For this reason, it may be one of the most important books in recent years, forming a strong and needed link between theoretical ideas of ecosystem dynamics and processes (although with little theory explicitly mentioned) and practical implementation in the real world. Bird populations are sure to benefit from habitats being managed from a landscape perspective.

Reviewer: Thomas V. Lerczak, Illinois Nature Preserves Commission, 17500 E. CR 1950N, P.O. Box 590, Havana, Illinois 62644.

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