However, that approach overlooks some important areas, such as the Red Hills of Southern Georgia and Northern Florida, an important conservation area for longleaf pine–wiregrass systems and the birds they contain. Is that because of an oversight, or because the region was judged as less important, or because it is a mosaic of privately owned lands mostly inaccessible to birders? Other private lands are included as parts of regions, such as the mouth of the Altamaha River in Georgia, or the ACE Basin in South Carolina. But this is a minor criticism; everybody will probably have one or two favorite sites that were not included for one reason or another.

So, is this book written for birders or for those primarily interested in conservation? The answer, happily, is yes. Birders primarily interested in learning more about great places to bird and what they can expect to see there will be pleased to have so much information in one book. But there is also a conservation theme throughout, so birders will learn a great deal about the state of bird conservation in the U.S. as of 2003, as will conservationists.

There are some other features of this book that I really liked. Paul Ehrlich provides a nice foreword that focuses on the relationship between birding, bird conservation, and conservation of biodiversity. The theme that birds can serve as catalysts for conservation is repeated throughout the book. Also, a series of boxed essays, almost all of which cover conservation topics such as important legislation, conservation planning, and management of individual species or ecosystems, are found throughout the book in appropriate places. They provide the reader who is uninformed about bird conservation with a lot of important information; anyone who reads this book hoping to find out about great birding spots will also come away from it much better informed about the state of the art regarding bird conservation in the beginning of the 21st century.

In my opinion, all birders should be conservationists. And all conservationists, and the political decision-makers they seek to influence, should recognize the enormous economic and political force made up by those who like to watch birds. I strongly recommend this book for birders and conservationists, and it would not hurt if a few politicians read it as well.—ROBERT J. COOPER, University of Georgia, Athens, Georgia 30602, USA. E-mail: rcooper@smokey.forestry.uga.edu

_The Auk_ 121(3):978–980, 2004

**Effects of Habitat Fragmentation on Birds in Western Landscapes: Contrasts with Paradigms from the Eastern United States.**—T. Luke George and David S. Dobkin, Eds. 2002. Studies in Avian Biology No. 25, Cooper Ornithological Society. x + 270 pp. ISBN 1-891276-34-4. Paper, $22.—From numerous fragmentation studies over recent decades, ecologists have developed substantial empirical and theoretical foundations for understanding consequences of habitat fragmentation for bird populations. However, this book casts that understanding as an “eastern paradigm” of fragmentation, given that it was developed largely from studies in the eastern United States. The eastern paradigm of fragmentation may not be easily generalized to western North America, because western landscapes are dominated by different land uses and exhibit a higher degree of natural heterogeneity resulting from disturbance regimes and topography. What is lacking in ecological and ornithological literature is a careful examination of the extent to which western bird communities conform to the eastern paradigm of fragmentation, and that is precisely the intent of this well-edited book.

George and Dobkin have assembled 15 contributions from participants of a 1999 symposium at the annual meeting of the Cooper Ornithological Society. Indeed, they have attracted an impressive group of contributors, who are highly regarded scientists working on fragmentation issues in North America. The book is grouped into three sections that cover theory and continental-scale comparisons, effects of fragmentation in specific western ecosystems, and studies of focal species.

The book’s theoretical and conceptual contributions should be valuable for anyone interested in fragmentation, even for those working only in eastern ecosystems. On the basis of studies of birds in eastern forests, F. R. Thompson III, T. M. Donovan, R. M. DeGraaf, J. Faaborg, and S. K. Robinson propose a hierarchical model for
effects of forest fragmentation where large-scale phenomena (e.g. regional or landscape patterns in cowbird abundance) provide constraints or context for smaller-scale effects (e.g. how nest sites affect probability of brood parasitism). The conceptual framework and testable hypotheses they propose are especially useful tools for ecologists working on habitat fragmentation as well as other landscape-scale issues. A. B. Franklin, B. R. Noon, and T. L. George review the concepts of habitat loss, habitat fragmentation, and habitat heterogeneity and find that the terms are often applied so generally that they have lost much of their usefulness. To remedy that, the authors suggest an approach to developing situational definitions of fragmentation based on explicitly defining what is being fragmented; the scale, extent, and pattern of fragmentation; and the mechanisms causing it. T. D. Sisk and J. Battin review the literature on edge effects in western ecosystems and discuss possible mechanisms that may create the different types of edge effects often described in studies. From their review, it is clear that little research on edge effects has occurred in the western United States. In addition, most research has emphasized forest edges, overlooking other common types of habitat edges. The authors also show that few species- and community-level responses to edges are consistent across landscapes or regions.

The broad-scale, continental comparisons presented in the book are also important contributions to the habitat-fragmentation literature. In their review, M. L. Morrison and D. C. Hahn find that the response of Brown-headed Cowbirds (*Molothrus ater*) to fragmentation in eastern and western landscapes is remarkably similar in that the key factor influencing presence and parasitism patterns was proximity of feeding areas. They propose that the broad east–west contrast in cowbird abundance and parasitism is at least partly related to time since fragmentation occurred, rather than different responses of cowbirds to fragmentation *per se*. Having examined >10,000 nests of 23 focal species from the Breeding Biology Research Database, J. F. Cavitt and T. E. Martin show that effects of fragmentation are not consistent across eastern and western regions. Most notably, they found that forest fragmentation tended to increase both brood-parasitism and nest-predation rates east of the Rockies, but not in the West. In fact, rates of nest predation were inversely related to fragmentation in the West, a result consistent with the findings of Tewksbury et al. (1998). Using data from the “Birds in Forested Landscapes” project of the Cornell Laboratory of Ornithology, R. S. Hames, K. V. Rosenberg, J. D. Lowe, S. E. Barker, and A. A. Dhondt found that tanagers and thrushes in both the eastern and western United States display similar negative responses to fragmentation, despite greater numbers of avian and mammalian predators in the east. Interestingly, they show that Brown-headed Cowbirds had a stronger positive response to fragmentation in the west than in the east.


Because this book combines theoretical and broad-scale treatments of fragmentation with habitat-based studies, there seems to be something for everyone. The authors take a variety of methodological approaches for papers, which include topic reviews, meta-analyses, and original research. Within each paper, the authors synthesize previous studies of their focal ecosystem or species. Most papers emphasize the effects of fragmentation on abundance, nest predation, and brood parasitism, but there are a few notable exceptions. For example, Knick and Rotenberry propose that alternative
mechanisms, such as lack of natal philopatry and dispersal behavior, might constrain avian community structure in intermountain shrub-steppe habitats. Bolger highlights the importance of bottom-up mechanisms (e.g., availability of arthropod prey), which may cause area-sensitivity and edge-avoidance in birds of coastal sage scrub and chaparral habitats in urbanizing southern California.

The book is organized as a series of independent papers rather than interwoven chapters that build on one another. One criticism is that it lacks a chapter that synthesizes findings from individual papers, but that is often true of edited works. Such a summary chapter would be especially useful to provide context and discussion of some of the contradictory findings (e.g., conflicting regional patterns of cowbird abundance and brood parasitism). The overarching purpose of the book—to evaluate whether the eastern paradigm of fragmentation fits western bird populations—has been addressed but not completely resolved. Nevertheless, the book provides an excellent literature review and presents new research findings that will prove useful to ecologists—scientists, managers, and students alike. For most readers, the thoughtful coverage will also challenge our preconceptions of fragmentation and stimulate new discussions on this important topic.—AMANDA D. RODEWALD, School of Natural Resources, The Ohio State University, 2021 Coffey Road, Columbus, Ohio 43210, USA. E-mail: rodewald.1@osu.edu

Literature Cited


Essentials of Conservation Biology (3rd ed.).—Richard B. Primack. 2002. Sinauer Associates, Sunderland, Massachusetts. 698 pp. ISBN 0-87893-719-6. Cloth, $72.95.—This is one of five current textbooks (that I am aware of) on conservation biology. Essentials of Conservation Biology was first published in 1993 (the second edition in 1998) and was the first textbook to focus on the subject. Conservation biology, as a scientific discipline, is still very young—barely >15 years old. Of course, many essential facets of the subject are as old as biology or its many subdisciplines, such as ecology, evolution, behavior, genetics, or specialties like ornithology. All are extremely critical to conservation biology and are woven nicely into the book. The field of conservation biology has grown out of tremendous concern over the deterioration of the living world and especially the unprecedented loss of species and continued threats to biological diversity.

Overall, Essentials of Conservation Biology is very well written and organized. The subject matter is handled in a balanced way, with examples from many disciplines and biota. The book has six major parts: (I) Major Issues That Define the Discipline, (II) Valuing Biodiversity, (III) Threats to Biological Diversity, (IV) Conservation at the Population and Species Levels, (V) Practical Applications, and (VI) Conservation and Human Societies. Each of the 22 chapters is assembled around a theme and each includes a summary, a discussion section (which is a series of questions), and suggested readings. Each chapter has tables, figures, black-and-white illustrations, and “boxes” (a total of 31 in the book) that are sidebars of information on specific topics ranging from sea turtles, sharks, fungi, and beetles to scientists as activists and the cost of the Three Gorges Dam in China.

The book begins with a clear description of “What is Conservation Biology” and provides a solid introduction to the complexities associated with biological diversity (Chapters 1–3). There is early reference to Genesis and the Bible (on page 14), with a negative emphasis on the exploitative aspects of man’s “dominion over every living thing that moves on earth.” Unfortunately, not until Chapter 6 (page 144) is it pointed out that Genesis also describes our human responsibilities as stewards of the earth; those two references should have appeared together.

Two issues that are inadequately considered in the initial chapters are (1) “What is a Species?”—answered with only a brief description, and (2) the fact that ecological processes are part of most definitions of biological diversity. The definition of a species should have