

BOOK REVIEWS

A FIELD GUIDE TO ADVANCED BIRDING

Kenn Kaufman. 1990. The Peterson Field Guide Series No. 39, Houghton Mifflin Co., 2 Park St., Boston, Massachusetts 02108. Illus. 299p. Paperback. \$14.95

If you have ever been fortunate enough to bird with Kenn Kaufman, you have been impressed by his ability to identify difficult birds with ease. In this long-awaited Field Guide, Kaufman sets out the methods by which such identifications are made. After an introductory chapter which gives details of topography, molt, plumage, and basic rules of field identification, the book presents a series of chapters each on a hard-to-identify group. For each group, Kaufman discusses the basic identification problem, preliminary points (general range, size and seasonal changes, etc.) and field marks. The field marks are broken down into three major categories: absolute (i.e. Species A has an eye-ring and Species B does not), relative (i.e. Species A has a longer tail than Species B) and percentage field marks (i.e. Species A usually but not always has dark lores while Species B usually but not always does not). Among the groups discussed are: winter loons, Western Grebe complex, dark ibis, shorebirds, gulls, hummingbirds, *Empidonax* flycatchers, fall warblers and sparrows.

Every birder, whether beginner or expert, will benefit from a careful reading of this book especially the introductory chapter on the techniques of bird identification. I strongly recommend this to all who are interested in improving their bird identification skills.—Dennis M. Forsythe

THE ECOLOGY OF BIRD COMMUNITIES

John A. Wiens. 1990. Vol. 1, Foundations and Patterns, Cambridge Studies in Ecology. Cambridge University Press, 40 W. 20th St., New York, NY 10011. Illus. 539p. Hardcover. \$80.00

John A. Wiens. 1990. Vol. 2, Processes and Variations. Cambridge Studies in Ecology. Cambridge University Press, 40 W. 20th St., New York, NY 10011. Illus. 539p. Hardcover. \$65.00.

The study of bird communities has always been an area of active interest for avian biologists. In this two volume work, intended for upper-division undergraduates, graduate students and researchers, Wiens presents an up-to-date review of bird community ecology. Volume 1 is concerned with the history, methodology and patterns in community ecology; while Volume 2 discusses the processes causing the patterns. He also discusses the current and future directions of community ecology.

In Volume 1, Wiens traces the historical roots of bird community research with emphasis on the works of Robert MacArthur, who has been credited with

transforming community ecology in the 1950s. MacArthur viewed communities as organized, integrated assemblages in which interactions and interdependencies among species produced structured community patterns. These were visualized by neat and simple theories usually accompanied by mathematical formulations. He viewed communities as being in equilibrium, and community patterns to result from deterministic processes, especially interspecific competition.

Chapters 2 and 3 deal with methodology. Wiens stresses the importance of separating community patterns from the processes creating them. Also he emphasizes the importance of experimental design, censusing techniques, hypothesis formulation and testing, and analysis of results. Many of the studies he reviewed were, in his opinion, flawed because of a lack of attention to methodology.

The rest of Volume 1 is a critical evaluation of community patterns, many of which are based on MacArthur's theories. Among the patterns discussed are: species-area relationships, species abundance, species diversity, niche theory, foraging guilds, ecomorphological patterns, distributional patterns, territoriality, resource use, character displacement and community bio-energetics.

Much of Volume 2 deals with the processes of bird communities. Wiens evaluates the importance of interspecific competition in producing patterns and finds little unequivocal evidence for such competition. He suggests that other factors such as predation, community history, and stochastic (i.e. chance) events may be as important as competition for determining community structure. He also evaluates community temporal variations and finds such a wide spectrum of patterns, that he feels the traditional view of communities in dynamic equilibrium to be unwarranted. Instead he believes temporal patterns should be studied using a variety of theories and hypothesis including: traditional equilibrium, dynamic resources tracking, ecological "crunch" scenarios and stochastic processes. Next Wiens demonstrates the need for recognizing and evaluating spatial patchiness and scaling in bird community studies.

Wiens concludes that although the MacArthur approach to community ecology contains numerous weaknesses, it was not a waste of time as it stimulated research on bird communities. But he argues for a new and more rigorous approach to community ecology. He gives seventeen points to consider in this new approach including: a more precise definition of community, de-emphasis on community macroparameters, use of resource-defined guilds, and conducting long-term observations and experimental studies.

These volumes are an important contribution to bird community ecology. They are well written with clear figures, understandable mathematics, and few typographical errors. I recommend these to serious undergraduates, graduate students and researchers. However, I am not convinced of their value to the average birder especially at the price.—Dennis M. Forsythe