challenging. A large-format edition is available for those who usually leave their bird books at home. To "permit greater appreciation" of the artwork, this edition presents the illustrations at two and a half times their size in the original guide. It also feature a larger font size, but the maps have been enlarged only very slightly. Most important for users trying to confirm identifications, neither edition includes immature birds for all species. Most of the omissions don't matter much, but in cases such as the little egret, information on immature plumages can be critical for separation from similar species. Nonetheless, these are minor caveats that detract little from an outstanding guide. I suspect even North American birdwatchers will want to own and treasure it.

Naturalists, birdwatchers, and ornithologists alike will find pleasure and utility in these guides. The three books should do much to further the continuing growth of birdwatching and, thus, provide impetus to the conservation of birds and the environment. The guides offer attractive depictions of their subjects and will greatly facilitate the identification of Northern Hemisphere birds in the field. They should be welcome additions to windowsills overlooking backyard bird feeders and to pockets or backpacks of birdwatchers and biologists bound for the field. Separately and collectively, they raise the standard and provide a challenge for the continuing evolution of field guides. Roger Tory Peterson would be pleased.

References

1. R. T. Peterson, *A Field Guide to the Birds* (Houghton Mifflin, New York, 1934).
2. *Field Guide to the Birds of North America*. Third Edition. (National Geographic Society, Washington, DC, 1999).
3. C. Elphick, J. B. Dunning Jr., D. A. Sibley, Eds., *The Sibley Guide to Birdlife and Behavior* (Knopf, New York, 2001).
4. L. Svensson, K. Mullarney, D. Zetterström, P. J. Grant, *Fågelguiden. Europas och Medelhavsområdets fåglar i fält* (Bonniers, Stockholm, 1999).

BOOKS: ORNITHOLOGY

Dealing with Superabundant Diversity

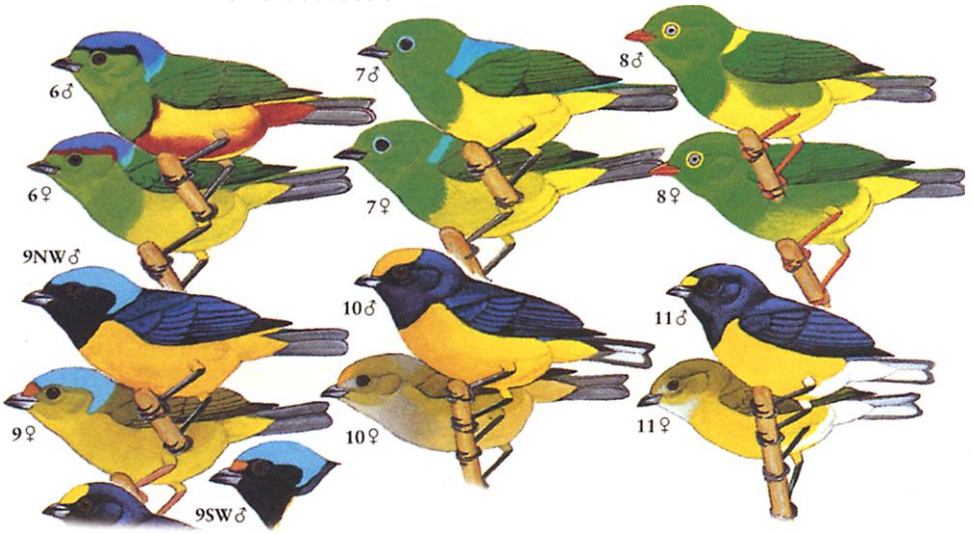
Thomas S. Schulenberg

In 1934, Roger Tory Peterson published the first edition of *A Field Guide to the Birds*, in which he outlined the distinguishing features of 440 species of birds of eastern North America. His patternistic illustrations and clear and simple-but-precise prose sparked a revolution. Field guides now exist for a wide variety of taxa, for all points on the globe. That said, guides to birds of tropical countries with high diversity have been few and far between. The challenges to producing adequate guides for these regions are formidable. Over 500 bird species may be found within a few square kilometers of Amazonian forest, for example, and the total avifauna for countries even as small as Ecuador surpasses 1500 species. New species are regularly added to country lists, and previously undescribed species are also found with surprising frequency. Furthermore, aspects of a bird's biology such as its behavior, voice, habitat, and elevational distribution all play important roles in the conscious and unconscious decision-making processes that lead to an identification. Thus a functional field guide must be something more than a compilation of details of plumage color and pattern, something approaching the status of a mini-handbook to an avifauna's natural history. But, with the risk of producing a book that loses any pretense of portability (of being a guide that can be carried in the field), where does one draw the line at what information to include?

With *The Birds of Ecuador*, Robert Ridgely, an ornithologist at the Academy of Natural Sciences in Philadelphia, and Paul Greenfield, a resident of Ecuador who has studied and painted its avifauna for nearly three decades, address this problem by providing a two-volume set. The *Field Guide* volume, "intended primarily for field use," contains plates, distribution maps, and text geared toward the identification of all the birds of Ecuador (excluding the Galápagos Islands). Its companion, *Status, Distribution, and Taxonomy*, suggested "for your library (or hotel room or even car)," covers the occurrence and systematics of these same species. Undoubtedly, the field guide will be the volume most often consulted; an excellent aid for field identification of Ecuadorian birds, it will also be useful in much of Colombia, northern Peru, and western Brazil.

Illustrations make or break a field guide. The 96 color plates, all by Greenfield, are vibrant, clear, and very effective. They depict nearly the entire avifauna, including migrants and species known in Ecuador only from a single record. They also show many rarely illustrated plumages (such as in the highly polymorphic hawks and eagles). Every illustrator must interpret the living, active bird two-dimensionally, and each artist, no matter how skilled, approaches this task differently. Having all paintings prepared by a single person offers the significant advantage of a consistent style that greatly facilitates comparisons among plates.

The maps in *Field Guide* are a great improvement over previous efforts. Most indicate a species' distribution with light stippling, which is easier on the eye than solid blotches of color; patchy or poorly known distributions are depicted with dots for each locality. The authors present numerous details on voices (songs and calls) and on "habits," such as sociality and foraging behavior. Most of this information, as well as many aspects of species' occur-



CREDIT: PAUL J. GREENFIELD/COURTESY CORNELL UNIVERSITY PRESS

Teeming with tanagers. The 137 species of tanagers from Ecuador fill seven crowded plates in the field guide. This portion of one plate includes the country's three *Chlorophonia* species (6, 7, and 8) and three of its ten *Euphonia* (9, 10, and 11).

The Birds of Ecuador Volume I: Status, Distribution, and Taxonomy. Volume II: Field Guide
by Robert S. Ridgely and Paul J. Greenfield
Cornell University Press, Ithaca, NY, 2001. Vol. I, 868 pp. Paper, $70. ISBN 0-8014-8720-X. Vol. II, 956 pp. Paper, $50. ISBN 0-8014-8721-8. Slipcased set. Paper, $110. ISBN 0-8014-8722-6.

The author is at the Environmental and Conservation Programs, Field Museum of Natural History, 1400 South Lake Shore Drive, Chicago, IL 60605, USA. E-mail: tschulenberg@fieldmuseum.org

rences, has been learned only in the past 30 to 40 years. *Field Guide* is also, within the strict limitations of the genre, a good read in the spirit of Peterson, and it is refreshingly free of the abbreviations that impede understanding in some other identification guides.

Each species is also discussed in the companion volume, but without illustrations or distribution maps. For some species, there are more details—all extremely welcome—on distribution and relative abundance. However, in numerous accounts, *Status, Distribution, and Taxonomy* basically restates the distributional data presented in *Field Guide*. And inconveniently, the more detailed descriptions of distribution there are not accompanied by maps. (This handicap may be an insoluble problem, because *Field Guide* clearly requires maps, but one regrets having to crack open both books to follow a discussion of an interesting distribution pattern.) In addition, some of the fresh information (such as the seasonality of abundance for the migratory *Pandion haliaetus* and a distinctive subadult plumage in *Accipiter poliogaster*) might be more useful for field identification. Nonetheless, *Status, Distribution, and Taxonomy* offers students of avian biogeography a wealth of welcome details. For polytypic species, the authors list all subspecies recorded from Ecuador, note their in-country distribution, and often include brief descriptions of their diagnostic features. Such essential information is difficult to compile directly from the primary literature.

The taxonomic discussions in the first volume sometimes fall short of their potential. The species concept, endlessly debated, is undergoing a recurrent shift, one that assigns more importance to geographic isolates. Plumage patterns and morphometrics were the focus of an earlier generation of researchers, one more strongly tied to the museum and less experienced in the field. The emergence of fresh evidence on geographic variation in voice and habitat preferences has led to a widespread suspicion that the "standard" taxonomy is wrong on many counts. Ridgely and Greenfield frequently use this volume to "set things straight," although almost invariably in a cursory fashion. Unfortunately, only rarely is their approach in this regard fully convincing, even when I am inclined to agree with them. I was left wishing that they had either taken the opportunity to justify their revisions with more substantive discussions of geographic variation or had the patience to simply point out anomalous situations that surely would bear investigation.

Despite the two-volume format, *Field Guide* itself remains bulky. And even with the extra space provided by the companion volume, the set has few accounts of nest structure or seasonality of breeding. Although these topics are not directly related to field identification, the curious naturalist is bound to wonder about such things.

Status, Distribution, and Taxonomy does incorporate a great deal of information, much of it previously unpublished, but it is not all it could be. Its format could have been improved had the authors broken free of the rigid parallelism to the other volume and included only necessary and additional details. The shortcomings, however, are more than compensated for by *Field Guide*, which will be indispensable to all field biologists and birdwatchers visiting Ecuador and northwestern South America.

BOOKS: ENTOMOLOGY

Old Insects, New Treatment

Dennis R. Paulson

Dragonflies have been around for over 250 million years, and it's about time they got the recognition they deserve. Like birds and butterflies, they are large and colorful, diurnal and diverse. They reign supreme as aerial predators of the insect world, and they are of great biological interest. But only for a few regions have there been field guides that allow those intrigued by them to take the first step in dragonfly watching, the identification of species. Now that shortcoming has been rectified for the 307 North American species in *Dragonflies Through Binoculars*, a compact book full of information. Sidney W. Dunkle, a biologist at Collin County Community College in Texas, is an active researcher who has long been interested in making these insects more accessible to the general naturalist. He has succeeded admirably with this volume, which is sure to delight the ever-increasing ranks of dragonfly enthusiasts.

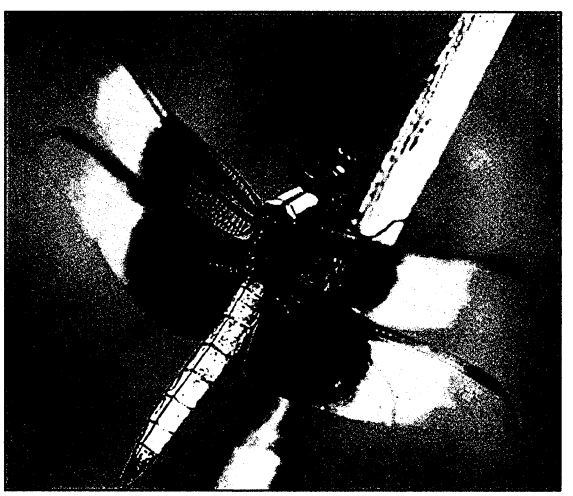
Although in much of the world "dragonfly" refers to any member of the order Odonata, in North America the term is applied to those odonates that hold their wings out to the side when perched and, usually, have huge eyes that come into contact across the top of the head. Damselflies are smaller and more slender, have separated eyes, and usually hold their wings folded together over the back.

The author is at the Slater Museum of Natural History, University of Puget Sound, Tacoma, WA 98416, USA. E-mail: dpaulson@ups.edu

Except for those fortunate enough to live in the few areas covered by local field guides, enthusiasts have previously had to key out specimens. The usual approach has been to start with wing venation and work through family and generic keys to arrive at an identification. The process is rather discouraging for most field naturalists, who usually lack experience with odonates. Now with Dunkle's guidance, anywhere north of the U.S.-Mexican border, one can see a dragonfly in the field, look at it through a pair of close-focusing binoculars, and have a chance to put the correct name on it.

Dragonflies Through Binoculars
A Field Guide to Dragonflies of North America
by Sidney W. Dunkle
Oxford University Press, New York, 2000. 274 pp. Paper, $29.95, £18.99. ISBN 0-19-511268-7.

The core of the book consists of a collection of color photos, which illustrate males of virtually all species and females of about one-third of them. These are accompanied by range maps and brief descriptions. Readers will find an aesthetic delight in paging through these plates and encountering the many shapes and colors and patterns of these beautiful insects. The book immediately prompts one to wonder why there are so many variations on the dragonfly theme. What is the significance of those fancy wing markings? Why are so many species colored red or blue? Why are there so many clubtails?



CREDIT: SIDNEY W. DUNKLE

A quintessential dragonfly. Members of the genus *Libellula*, such as this widow skimmer (*L. luctosa*), are strong fliers and the dominant odonates at most ponds across North America.

The range maps alone are worth the price of the book, as there have been no such maps available for North America. Although small, they are easy to read and as accurate as possible, given our sketchy knowledge of dragonfly distribution in some