Handbook of the Birds of the World, vol. 16: Tanagers to New World Blackbirds

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Source: The Auk, 130(3) : 555-556

Published By: American Ornithological Society

URL: https://doi.org/10.1525/auk.2013.130.3.555

Book Reviews

The Auk 130(3):555–556, 2013

Handbook of the Birds of the World, vol. 16: Tanagers to New World Blackbirds.—Josep del Hoyo, Andrew Elliott, and David Christie, Eds. 2011. Lynx Edicions, Barcelona, Spain. 894 pp. 81 color plates, >500 photographs, and 766 distribution maps. ISBN 9788496553781. Hardcover, $275.—It was with both sadness and joy that I received volume 16 of the *Handbook of the Birds of the World*. Sadness because I have so enjoyed reading every volume of the series, and with this one it is coming to an end—or not! (see below); joy because this volume details some of the most exquisitely, beautifully plumaged of all passerine bird families: the tanagers, cardinals, blackbirds, buntings, and New World sparrows. The vast impact that the 16 volumes of the *Handbook of the Birds of the World* have had on ornithology dawned on me recently when I read a scientific paper and noticed that the acronym "HBW" was used without a definition. These books have become so ingrained in our daily lives, as professional or amateur birders, that defining HBW simply was not needed. We should all commend and express our gratitude to the editors, who have striven for exceptional artistic quality and scientific rigor, and yet maintained a timely publication schedule.

Volume 16 follows the classic layout of HBW by starting with a highly informative and timely essay, which in this volume reviews the important subject of climate change and birds (written by Anders Pape Møller; 27 pp.). The main body of the book covers an astonishing 762 species, in part due to the inclusion of the species-rich families Thraupidae (tanagers: 283 species, 64 genera) and Emberizidae (buntings and New World sparrows: 326 species, 76 genera), as well as the Cardinalidae (cardinals and grosbeaks: 42 species, 11 genera) and Icteridae (New World blackbirds: 111 species, 31 genera).

The use of DNA sequences of diverse genetic loci has revolutionized our understanding of the systematic relationships among many different organisms, not least among members of these four families of birds. Given our growing knowledge of the systematics of these passerines, it was a little disappointing that the four families are presented in very traditional groupings of genera, when, for instance, it has been demonstrated that some 19 genera placed here in the Emberizidae are instead more closely related to the tanagers, including the Galápagos "finches" (*Geospiza*, *Certhidea*, *Platyspiza*, and *Camarhynchus*). Similarly, some genera that are placed with the tanagers in this volume have closer affinities to members of the Emberizidae (e.g., *Chlorospingus*) or the Cardinalidae (e.g., *Piranga*). As the consistently excellent introductory systematic sections of the volume highlight, the higher-level classification of this collectively diverse and species-rich assemblage of birds is likely to remain in flux, so we should perhaps not pay too much attention to the absolute numbers of species or genera presently assigned to each of these four families. Indeed, Barker et al. (2013) recently published a comprehensive higher-level phylogeny centered on the same four families, together with the Parulidae, and argue for the recognition of some 16 families!

The systematic treatment of species assemblages within each of the four recognized families in the present volume is impressively comprehensive, with the authors readily adopting newly proposed generic names. I expect that close inspection of the species accounts within each family will engender some rigorous debate, both within checklist committees and among those of us interested in maintaining and expanding our life lists. For instance, J. D. Rising splits the Sage Sparrow into two species (*Artemisiospiza belli* and *A. nevadensis*; this split has now been accepted by the AOU Checklist Committee; see the 54th Supplement in this issue of *The Auk*), and the Fox Sparrow (*Passerella iliaca*) into four species (*P. iliaca*, *P. schistacea*, *P. megarhyncha*, and *P. unalaschcensis*; at present not under consideration by the AOU Checklist Committee).

The state of taxonomic flux apparent in this volume is indicative of our expanding knowledge of bird systematics and of biogeography as a whole. It is thus both fitting and exciting that Lynx Edicions has decided to publish a 17th volume in 2013 that will include a detailed summary of the major taxonomic changes in birds since the publication of the first volume in 1992. This volume will also include a global index and detailed account of some 80–85 new species described in the intervening 20 years, including the description of several new species in the volume itself.

Aside from the introductory systematic accounts for each of the four families covered in volume 16, the remaining text follows the highly successful layout adopted in previous volumes. This includes detailed summary information about morphology, ecology, behavior, and the conservation status of the members of each family, which makes for fascinating reading. The initial introductory overview of each family is then followed by detailed species accounts of each member of the family, together with an excellent color distribution range map that is easy to interpret. The accompanying 81 color plates are beautifully illustrated, with many of the more distinct subspecies depicted. As in the other volumes, a very useful reference section is provided containing the citations of all the original descriptions of the taxa covered, along with a comprehensive bibliography. Finally, accompanying

The Auk, Vol. 130, Number 3, pages 555–556. ISSN 0004-8038, electronic ISSN 1938-4254. DOI: 10.1525/auk.2013.130.3.555

the book is a laminated plastic reference card that functions as a superbly useful index to all the passerine bird families covered in the last nine volumes of the HBW series.

Volume 16 maintains the exceptionally high standards set by the preceding volumes in every way. The book is simply a must-have, and I expect that for many bird enthusiasts this volume will complete their collection of the most comprehensive and beautifully illustrated series of bird reference books ever published. I have no doubt that this volume and the HBW series as a whole will prove a fundamentally important reference for many years to come, always providing a fascinating read, together with a great sense of pleasure when you come back to it time and time again.—Rauri C. K. Bowie, *Museum of Vertebrate Zoology & Department of Integrative Biology, 3101 Valley Life Science Building, University of California, Berkeley, California 94720, USA. E-mail: bowie@berkeley.edu*

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Gifts of the Crow: How Perception, Emotion, and Thought Allow Smart Birds to Behave Like Humans.—John Marzluff and Tony Angell. 2012. Simon and Schuster, New York. 287 pp. ISBN 9781439198735. Cloth, $25.—I found this book to be an excellent reading in the field of modern zoology, covering many details of recent findings in behavior, ecology, physiology, and neurobiology of corvids. I liked *Gifts of the Crow* because it tells us not only how amazing and intelligent these birds are, and how complicated bird brains can be, but also how similar their behavioral patterns and underlying mechanisms are to those of humans. My impression is that *Gifts of the Crow* may have more serious and far-reaching effects by attracting the attention of the general reader and biology students to bird research. While readers might find it easy to follow the numerous anecdotes on crows, ravens, jays, and magpies, understanding of modern science often requires a far better education than most nonbiologists may have. I see this as an important problem of society: that science and technology get out of reach of ordinary people. In this respect, Marzluff and Angell make an excellent attempt to build a bridge between scientific discovery and the need of society to understand living organisms, to make the world a better place to live. However, this appears to be a difficult task, and this is why *Gifts of the Crow* may seem to be not one book, but two.

One contains fascinating reports on the ability of crows to recognize individual people and remember the faces of their "enemies" for years, and other examples demonstrating intelligence, family ties that last for life, their ability to dream as a part of their learning process, and their emotional, communicative, and tool-designing capabilities. I am sure this part will interest bird lovers of any education or age and, thus, perhaps encourage younger ones to get in closer contact with these "feathered apes" and join universities to become researchers. However, *Gifts of the Crow* also deals with the bird brain and explains neurobiology and biochemistry of the brain and how these mechanisms lead to behavioral responses. This part might seem to be a different book for many readers, especially when, in many places, the text suddenly switches to a technical description related to the internal works of the brain and the biochemical machinery involved. These sections of the book read as if the authors were unable to decide whether they were writing a textbook or a work for a general audience. Perhaps the book would have been more accessible to more readers if this biochemistry and neurobiology material had been removed from the main text. However, I am quite sure this is not the case, for it is more useful to show the complexity of the field than to avoid giving readers the most recent knowledge on the subject. The authors use a mix of their own and other peoples' laboratory and field research results, anecdotal observations, and some basic science to convince us that research on corvid intelligence may have even greater potential for scientific research in the very near future.

The most striking feature that makes this book different from others is a citizen-science approach. Citizen science is scientific research conducted, in whole or in part, by amateur or nonprofessional scientists, and it has proved a highly effective tool, for example by the Cornell Lab of Ornithology. Although many scientists are dismissive of anecdotal evidence provided by citizen observers, the authors make a serious attempt to systematically sort the anecdotes and understand them. The readers will find a number of citizen reports of birds that drink alcohol, leave gifts to human benefactors, ring doorbells to obtain food, call dogs by imitating human voices, and many others. Citizen science may merit a skeptical attitude when each report is taken alone. However, I see great potential in this approach, because when many similar reports are taken together, they may stimulate production of novel ideas and encourage new research.

I am quite impressed by the authors' positive attitude and openness to new information. For example, they write that a Japanese observer watched jungle crows pick up deer feces and deftly wedge them in the deer's ears. The authors claim that the crows did this in the spirit of fun. Let's leave the right to accept this claim or reject it to the reader. However, another claim deserves a more serious analysis. The authors suggest that researchers would not be particularly surprised if language were discovered in cognitively complex birds and mammals. I do not agree that human language can be equated to language-like communication in animals. However, I fully agree that recent studies in some birds and mammals (and also such claims made by the authors themselves) may stimulate more research in the field of animal communication.

Finally, I really enjoyed the drawings in this book. Those of human beings are sometimes not quite to scale or amateurish, but overall the illustrations enhance the stories. I am sure that for readers who are interested in animal intelligence or bird behavior, this is a "must read" for exploring the fascinating world of crows, ravens, jays, and magpies. This is a book that will increase positive attitudes and love of nature and birds.—Indrikis Krams, *Institute of Ecology and Earth Sciences, University of Tartu, Estonia. E-mail: indrikis.krams@ut.ee*