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# *BOOK REVIEWS—RESEÑAS DE LIBROS—RESENHAS DE LIVROS*

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**Fire and Avian Ecology in North America.—**Victoria A. Saab & Hugh D.W. Powell, editors**.** 2005. Studies in Avian Biology No. 30, Cooper Ornithological Society, Ephrata, Pennsylvania. 193 pp. 18.00 US$ (softcover). Price includes shipping and handling.

Birds and fire have long been the stuff of myth, from the Egyptian phoenix to the *erbette* dispatched by the Great Spirit to bring fire to the peoples of the Mississippi Valley. They are often the stuff of rumors, as with those Australia raptors that reputedly grasp and drop brands. And they are the stuff of fact in the form of such fabled relationships as the Red-cockaded Woodpecker and longleaf pine, the Kirtland's Warbler and jack pine, and the Bobwhite quail and the fine-grained, tangled habitats of the rural South. But they are only with difficulty the stuff of field-tested science. By exhaustively enumerating what is known and what isn't, *Fire and Avian Ecology in North America* shows why.

The literature, while vast, is long on rhetoric, advice, speculation, supposition, exhortation, and extrapolations, and short on hard data and anything much resembling controlled experimentation. That said, the need to know is great, and this volume assembles what there is. The chapters derive from presentations made during a half-day symposium held during the Third International Partners in Flight Conference (2002), to which the Joint Fire Sciences Program and the U.S. Forest Service, both keen to support research into "altered fire regimes," contributed funding to assist publication. The resulting text is a veritable encyclopedia of avifauna and fire for the United States and the boreal forest of Canada. Anyone even casually interested in the subject will find it invaluable; the bibliography alone is worth the price of admission.

This, in brief, a model compendium that systematically examines 10 major bioregions, with an introductory chapter that candidly recites the unsettled state of the field. It is hard to avoid the conclusion that the field is feeble, and may remain so. For the most part, in the absence of real experimentation, "we can summarize the ways in which various species, guilds, or communities are known to respond to fire and then hypothesize how changes in fire regimes may be expected to affect them."(5) This is not an unreasonable approach, and until experiments can "document actual changes to bird communities stemming from changes to fire regimes," the strategy can "help make informed guesses about the direction of some changes."(7) With a few exceptions – some spectacular – the methodology is to match birds with habitats, habitats with fire regimes, and altered fire regimes with anticipated changes in bird populations.

The contributors have accordingly classified responses for 203 North American birds to changes in regimes as positive, negative, inconclusive, or mixed. The outcome: "inconclusive responses were prevalent." A few patterns emerged, more or less as common sense would recommend: "Aerial, ground, and bark

insectivores clearly favored burned habitats, whereas foliage gleaners preferred unburned habitats. Species with closed nests responded more favorably to burned habitats than species with open-cup nests, and those nesting in the ground and canopy layers generally favored burned habitats compared to shrub nesters."(5) Each region had its firebirds and its avian pyrophobes.

Throughout, the frustration among contributors is palpable – frustration over the lack of research, frustration over continued deterioration of habitat and decline of populations, frustration over what they see as the persistence of fire suppression as the dominant venue for fire's administration. The implication is that more money directed to science and less to firefighting would yield healthier landscapes. Almost certainly they are correct.

And yet the sense nags that the conundrum lies not merely with how fire is funded and managed but with the matrix of fire's scientific understanding. What is missing here, as in almost all fire ecology studies, is a deep sense of fire's biological character. It is, after all, a creation of the living world: life created oxygen, life created combustibles, and through the agency of humans, life creates the majority of ignitions. It is less a physical process that strikes biotas than a biologically created process that manifests itself through physical means. Unlike wind or water, fire propagates through that biotic medium: it derives its energy from the biota's deconstruction, a chemistry identical to respiration within cells. It might be better modeled as a contagion of combustion. In this sense, fire is not one of many physical phenomena that shape an ecosystem – an exogenous force applied to the living world that thus affects how birds thrive by rearranging their habitat – but shares the identical ecological medium as those species. A physical model suggests that fire's control requires physical countermeasures. A biological model would seek biological controls, a genuine ecological engineering that goes beyond reintroducing flame as a high voltage heat-flux and shuffling blocks of hydrocarbons around the landscape. It would suggest that fire's reintroduction will more resemble the reinstatement of a lost species than the application of an ax. It would integrate fire with grass, trees, insects, and birds.

Until fire ecology recharters itself within biology, studies will likely accumulate but may not sum to more than their parts. Perhaps that is all that we can expect at present. Still, some of those parts are fascinating. This book is chock-full of them.—Stephen J. Pyne, Human Dimensions Faculty, School of Life Sciences, Arizona State University, Tempe, Arizona, USA.

**Handbook of the Birds of the World. Volume 5: Barn-owls to Hummingbirds**.—Joseph del Hoyo, Andrew Elliot, & Jordi Sargatal, editors. 1999. Lynx Edicions, Barcelona. Language: English. 759 pp., 76 color plates, 406 photographs, 758 maps, indexes of scientific and English names. ISBN: 84-87334-25-3. Hardback. Available from Lynx Edicions (http://www.hbw.com). Price 199 ∈ (about 185 US$).

Today, seven years after its publication, it is possible to do a review on the reviews of Volume 5 of the Handbook of the Birds of the World - HBW (at least 13 so far). This volume covers the Strigiforms (Tytonidae and Strigidae), Caprimulgiforms (Caprimulgidae, Steatornithidae, Podargidae, Nyctibiidae), and Apodiforms (Apodidae, Hemiprocnidae, Trochilidae), including three of the most ditinctive neotropically-restricted groups of birds: the oilbirds, the pootos, and the hummingbirds. Despite the inclusion of many Neotropical species, the number of Neotropical (Central and South American) authors is disappointing (3 out of 37).

As in the rest of the series, Volume 5 con-

tains a foreword followed by the family accounts. The foreword, "Risk Indicators and Status Assessment in Birds" by Nigel Collar, summarises the global situation faced by many avian species and the challenges to preserve them. This section reviews the criteria used by the IUCN to measure extinction risks and define the conservation status of each species. It also touches on the subject of consistency among judgements made by different teams, and why projects such as the HBW, containing much of the information required for status assessments, are so useful in global conservation planning. This is a good summary of risk indicators and the problems involved in defining the conservation status of a species. It should be a useful, thought-provoking reading for any person interested in understanding the process behind the assignment of conservation status.

The family accounts start with a short summary box containing a map of the general distribution of the family and short statements about the morphology, distribution, habitat, number of genera and species, and number of threatened species. The summary box is sometimes accompanied by a classification diagram depicting a simple cartoon of the phylogenetic relationships among lineages within the family. Despite its simplicity, this represents a major thrust to comparative thinking. This is followed by a general introduction describing the systematics, morphological aspects, habitat, general habits, food and feeding, voice, relationship with humans, and status and conservation of the members of the family. Although this is intended to be a summary of the general aspects of the family, it sometimes falls into details of particular species, making the reading dense and slow. This occurs particularly in families where there is a lot of information on some species such as the owls and barn-owls. In between all this information, there is an amazing series of photographs emphasizing not only the species but also their habitats and aspects of their natural history. The photographs are well-accompanied by their texts, including authorship and scientific names. This aspect sets this series apart from other books and opens it to another major section of the public mostly interested in the sheer pleasure of admiring beautiful pictures.

The family introduction ends with a general bibliography followed by the species plates and accounts. The plates are, for the most part, excellent. They include drawings of each gender when sexually dimorphic, and the most distinctive subspecies (it is hard to tell if this is applied systematically throughout species or only when good material, i.e., specimens, was available). There are no drawings of immature or non-breeding stages. Many artists are involved and despite the changes in style (especially marked in the hummingbird plates), the quality of the drawings is remarkably good. An index with the corresponding author for each plate is provided in the beginning of the book. Each species account presents common names in English, German, French, and Spanish, the scientific name, and short facts about taxonomy, subspecies and their distribution, descriptive notes (without emphasizing key traits), habitat, movements, food and feeding, breeding, status and conservation, and a general bibliography. Each species account comes with a distribution map, sometimes colored to indicate breeding and wintering grounds if applicable, although this is not explained in the text. The book ends with a long bibliography containing all the references concerning species descriptions followed by the remaining references used to compile the vast amount of information on all the species.

Overall, there has been no discussion about the quality and usefulness of this series. As Nigel Collar mentions in his foreword of the volume, this will become an extremely useful tool as the hardcopy database for all

the world's birds. Nevertheless, some general criticisms remain present. As Nigel Collar also states in his foreword when describing the advantages of Red Databooks versus Red Lists: "... the background information used in an evaluation needs to be stated, otherwise, the entire process remains opaque." The list of references in any volume of the HBW is impressive but remains of little use when the sources of particular pieces of information are needed. There is a list of references at the end of each family account and each species account which is a big help, but still leaves a lot of effort to be done in order to find the right source for the right fact. Another general criticism is about the level of detail in the range maps, especially for those species whose ranges are restricted within continental areas or islands. In summary, range maps are mostly informative at large spatial scales (countries, continents and islands). My final criticism concerns the information about the early evolution of the families given at the beginning of each family account in the Systematics section, mostly based on fossil distribution and carbon dating. This information, although of interest to many readers, remains hard to digest without a diagram of geologic timescales and major orographic events.

Volume 5 of the HBW contains some of the most distinctive representatives of the Neotropical avifauna and should be of high interest to the Neotropical community. It would be a great aid if the series could be translated and available in Spanish, although I am not aware of any efforts in this direction. This Volume and the whole series should be available at major university and public libraries. The book and series remains an expensive collection to have in a personal library but the volumes can also be obtained individually if there is a special group of interest. This volume, and maybe several other in the series, is not intended for those interested in highly detailed systematic or distributional treatments. The systematics and distribution of many groups are still being investigated. There is a lot to learn from Volume 5 of the HBW.—Juan Luis Parra, Department of Integrative Biology and Museum of Vertebrate Zoology, University of California, Berkeley, Calfironia, USA.