

ORNITHOLOGICAL LITERATURE

THE BIRDS OF CHINA. By Rodolphe Meyer de Schauensee. Smithsonian Institution Press, Washington, D.C., 1984:602 pp., 512 species illustrated in 38 color plates (23 by John Henry Dick, 11 by John A. Gwynne, Jr., and 4 by H. Wayne Trimm); 39 black-and-white wash drawings in habitat by Michel Kleinbaum. \$45.00 (hard cover), \$29.95 (paper).— This book is a descriptive catalogue of 1200 species of birds (the author says 1195) belonging to 88 families known for China, including the islands of Taiwan and Hainan. The book starts with a foreword by S. Dillon Ripley, an explanatory first chapter, the color plates, and then the text with the wash drawings interspersed. The first chapter also contains an introduction to the geography and to the history of ornithology in China. The text is followed by a bibliography, a list of bird names used that differ from those used in Cheng Tso-Hsin's "Distributional List of Chinese Birds" (Science Publ. Co., Peking, China, 1976), a checklist of the birds of China, and indices of English and Latin bird names. The bulk of the text contains a fairly detailed description of the adult male of each species. When different, females, immatures, color phases, and subspecies are also described. Morphological descriptions are followed by the range of each species (and subspecies if different), usually a one-sentence description of habitat, and occasionally a brief comment on habits or voice.

This ambitious work marks a significant contribution to the ornithology of China, as it is the first book in English covering all the birds of that country. The strength of the book lies in the detailed morphological descriptions of the birds, 43% of which are backed by good color illustrations. Each illustration and perhaps many species descriptions are based on only one specimen. The black-and-white wash drawings are a welcome addition in a book providing scarcely any information on habitat, ecology, or behavior as compared with "Les oiseaux de Chine" (Etchecopar and Hue, Les editions du Pacifique, Papeete, Tahiti, 1978).

The range description for each species and subspecies is detailed and generally accurate (although four species of warblers resident in Taiwan are not listed [i.e., *Prinia polychroa*, *Ambroscopus albogularis*, *Cisticola juncidis*, and *C. exilis*]). People who are not intimately familiar with the geography of China, however, will not easily visualize the ranges based on the text alone. Unfortunately, the endpaper maps of China and Asia are printed on very dark paper, making them hard to read and greatly reducing their utility as a supplement to the text. The inclusion of simple, shaded range maps common to many bird books would have greatly enhanced the text. Local endemism is never specifically denoted, although it usually can be inferred from the range description (one unclear exception is the Formosan Barwing [*Actinodura morrisoniana*], which is endemic to Taiwan but not found on the mainland as implied in the text). Nor is status given to indicate whether a species is common or rare.

The color plates are of good quality, although in five of them birds are not drawn to scale, as the author notes. There are some numbering mistakes and irregularities in the plates. The two trogons (*Harpactes* spp.) on Plate 12, and the Ruddy Kingfisher (*Halcyon coromanda*) and Stork-billed Kingfisher (*Pelargopsis capensis*) on Plate 13 are reversed. The numbering system on some of the plates separates normal grouping of birds. On Plate 18, for example, leafbirds (Irenidae) and the Grandala (*Grandala coelicolor*, Turdidae) come in the middle of bulbuls (Pycnonotidae). Elsewhere, the numbering divorces the male and female of the same species as if they were unrelated, although they are drawn side by side (e.g., Plates 18 and 35). Similarly, eight species of laughingthrushes (*Garrulax* spp.) appear with the broadbills (Eurylaimidae) and the pittas (Pittidae) on Plate 16, while seven other laughingthrushes follow 10 families later in their proper taxonomic position (Plate 22).

The author warns that this is not a "typical field guide." Nevertheless, it is really the only book on the market that can presently meet this need. Cheng's distribution list is in Chinese and without illustrations. Etchecopar and Hue's two huge volumes are beyond field size. This book is still manageable and the illustrations, therefore, beg for those Peterson-like pointers denoting major field marks, particularly among similar-looking species. Although these field marks are italicized in the text, they take time to locate, read through, and then compare with the illustrations. Of course, one wishes for color illustrations of the remaining 57% of the species in the same volume, instead of having to refer to other "standard references on birds of this avifauna" as suggested by the author. Also, it would have been helpful if those "easily found" standard references had been identified specifically in the bibliography.

Some significant references dealing with China's avifauna appear to have been overlooked or omitted from the bibliography. None of Robert Swinhoe's or Nagamichi Kuroda's publications are listed. Important early publications by La Touche, Takatsukasa, and others are omitted. Examples of more recent relevant publications are Blackshaw, *Quart. J. Taiwan Museum* 31:297-316, 1978; Marshall, *AOU Ornithol. Monogr.* 25, 1978; Mees, *Zoologische Mededelingen* 1970:285-304 and 1977:243-264; and Severinghaus, *Bull. Br. Ornithol. Club* 97:103-104, 1977.

Overall, this book is essential for anyone making an ornithological field trip to China. It is a valuable addition to any ornithological library, and will be of use to people interested in the birds of China.—LUCIA LIU SEVERINGHAUS.

CENSO DE AVES EN EL MEDITERRANEO/BIRD CENSUS AND MEDITERRANEAN LANDSCAPE. By F. J. Purroy (ed.). Proceedings of the VII International Conference on Bird Census, [International] B[ird] C[ensus] C[ommittee], León, Espana, 8-12 IX 1981. Universidad de León, 1983:196 pp., many maps and text figs. \$4.50 (postpaid). Available from: Prof. F. J. Purroy Iraizoz, Catedrático de Zoología (Vertebrados), Universidad de León, León, Spain.—The 35 papers included here were given at the biennial meeting of the IBCC in 1981. The papers are in English or Spanish, with a summary in the other language. The title is somewhat misleading as only a fraction of the papers deal with work in the Mediterranean region. Other papers go as far afield as northern Europe and the United States. While some of the papers present the results of individual studies, most are methodological in nature. Another group of papers reports on the progress of various Atlas projects now dominating the international ornithological scene.

All persons interested in bird censusing will be interested in the papers that present comparisons among the now growing number of methods of counting birds, and American Atlas leaders will be interested in the reports from other countries. Those papers that present the results of actual studies made in the Mediterranean region should be of considerable interest to community ecologists, as they report on a habitat unfamiliar to most North Americans. At an unheard of price by today's standards, the book is a bargain for everyone.—GEORGE A. HALL.

THE BEE-EATERS. By C. H. Fry. Buteo Books, Vermillion, South Dakota, 1984:304 pp., 8 color plates by the author, >100 drawings by John Busby. \$47.50.—This is a well-

produced, pleasing, and informative volume on the 24 species of Meropidae. Bee-eaters are favorites of most who know them and it is surprising that it has taken so long for a modern book devoted solely to them to appear. (Dresser's monograph on the family was published a century ago.)

The preface sets forth the author's goals of summarizing existing knowledge and of describing "how races and species originate and to explain . . . their evolution." As the book is intended for the layman as well as the biologist, Dr. Fry avoids technical jargon whenever possible and attempts—quite successfully—to explain certain biological concepts in everyday terms. Another stated purpose of the book is to "publicize these admirable birds [so] that others may come to enjoy them too." It should do exactly that. The information presented is well documented and is supplemented by straightforward interpretation. I have been fortunate over the years to encounter a majority of the world's bee-eater species and this book has greatly enhanced my understanding of them.

An educational 12-page introduction presents the living bee-eater, discussing such things as the business of bee-eating, a little about tunnel excavation, other aspects of nidification, and migration. Nomenclature, classification, and enumeration of the forms recognized also are included here.

Chapter 2, devoted to the species accounts, occupies some 150 pages. Here the author sets down the "known salient biological characteristics" of each species, with the well-studied European Bee-eater (*Merops apiaster*) discussed most fully and in considerable detail (26 pages). (The little-known *Nyctornis* species and the Celebes Bee-eater [*Meropogon forsteni*] merit only three pages each.)

The third chapter deals rather superficially, but interestingly, with species and subspecies origins. Based on climatic and vegetational changes in Africa and the degree of differentiation between northern and southern forms of the Carmine Bee-eater (*Merops nubicus*), Fry concludes that bee-eaters can evolve "practically to the species level" in fewer than 12,000 generations. The longer Chapter 7 also deals with evolutionary matters. It is concerned with the development of specific differences, considering various morphological characters plus ecological, social, and behavioral variation.

Other chapters are those covering food and foraging, bee-eaters in relation to apiculture, and social and reproductive life. There are nine appendices including a brief glossary, a listing of scientific names of mammals and birds other than bee-eaters mentioned in the text, dietary details of several species (from pellet examinations), and aberrant plumages. Following the appendices is a list of over 600 references cited in the text.

Dr. Fry's attractive and useful color plates (in Chapter 2) depict 42 species and subspecies. Facing each plate is a detailed map showing the distribution of all forms (including the 10 races not portrayed). The figures vary somewhat in quality, with those of *Nyctornis* the least realistic, but all appear to be accurate. It is good to have at least a few juveniles represented, though I would have preferred more. Some species are shown nicely in small flight figures. Again, I wish all had been.

John Busby's drawings are exceptional and succeed wonderfully in capturing the very essence of bee-eater behavior in a wide variety of rarely-figured activities. We see birds hatching, flycatching, pursuing lizards, catching fish, excavating, shedding heat, water-bathing, rain-bathing, dust-bathing, basking, preening, wing-stretching, head-scratching, greeting, courting, copulating, threatening, fighting, bee-rubbing, regurgitating, "butterflying," roosting, and perching on animals. A series of drawings even illustrates novel types of reported but unconfirmed behavior including tool-using and one bee-eater carrying another.

Although most ornithologists truly enjoy the creatures they study, one would not always guess this to be true from what they write. Such is not the case with Hilary Fry. From the

preface of the book right through to the appendices, genuine affection for the subjects is evident. Bee-eaters truly are, to quote Dr. Fry, "altogether delightful birds." It is fitting that they have been dealt with in an altogether delightful book.—DALE A. ZIMMERMAN.

WOOD WARBLERS' WORLD. By Hal H. Harrison. Technical assistance and range maps by Mada Harrison, foreword by Les Line. Simon and Schuster, New York, New York, 1984: 335 pp., 24 color plates, 218 black-and-white photographs, 53 range maps. \$19.95.—This volume is the fulfillment of Harrison's 30-year dream to photograph as many of the wood warblers that nest in North America as possible, and to publish his work in book form. The author has succeeded, indeed, in photographing all but just a few species himself; the remainder have been supplied by a small group of his friends and fellow photographers. All 53 species of warblers regularly known to nest north of Mexico are pictured in this book; and in all but a single case (Bachman's Warbler [*Vermivora bachmanii*], where a photograph of a perched bird by John H. Dick is shown) either the bird at its nest or the nest and eggs have been included—usually both. There are also useful habitat shots illustrating typical breeding localities for each species. It is hard to imagine the difficulties of logistics and planning involved in depicting so many species of warblers in the few brief weeks available each breeding season, even over a period of 30 years. This is especially true when you consider that during much of this same time period the author was also attempting to photograph a few hundred additional species of birds for his two guides to bird nests for the Peterson series. Part of the answer lies in Harrison's almost uncanny ability to locate nests; from personal experience with him in the field, I can attest that few people today can equal his talent. The photographs, naturally, vary somewhat in quality, but all are at least very good and many are truly exceptional. A pair of Northern Parulas (*Parula americana*) at their nest, and two Bay-breasted Warblers (*Dendroica castanea*) feeding their young are especially fine examples of bird photography; a pair of Cerulean Warblers (*D. cerulea*) at the nest (in this case photographed by Betty Darling Cottrille) is superb.

In the text, which is written in a popular, nontechnical style, each species is given chapter status within which Harrison usually discusses migration, habitat, nesting sites, the nest and eggs, song, and behavior, along with an English translation of the scientific names. Emphasis throughout is on the breeding season, and little detail is provided on the winter habits or habitats of most species. The text is not simply a rehash of previously published accounts gleaned from the literature, but includes a great deal of original information based on the author's extensive field experience. This information is presented in a highly readable and entertaining style that is liberally laced with personal anecdotes. Budding bird photographers should pick up a wealth of helpful hints, as should field workers who need to know how and where to look for the nests of wood warblers. A glossary, a 12-page bibliography, and a well-prepared index add to the usefulness of the book. The introduction, however, is weak, trying as it does to pack too much information into too little space (half of the 19 pages allotted to this section are devoted to illustrations). The parulines are just too diverse a group to be summarized adequately so briefly.

Harrison's work supplements, rather than eclipses, earlier works on warblers such as Chapman's *Warblers of America*, Bent's *Life Histories*, or Griscom and Sprunt's *The Warblers of America*, and deserves space on the book shelf of any student of wood warblers.—ROBERT C. LEBERMAN.

CRANES OF THE WORLD. By Paul A. Johnsgard. Indiana University Press, Bloomington, Indiana, 1983:258 pp., 23 color plates, 24 black-and-white plates, numerous maps, drawings, and tables. \$37.50.—Cranes have been revered by man for centuries, but, in spite of this, most species are either endangered or declining. The author, who has studied the North American species and carefully researched the rest of the world's cranes, is well qualified to write this much-needed work. The Whooping Crane (*Grus americana*) has become a symbol of conservation here in the United States, and nearly all species of cranes hold a prominent place in the minds of people in their homelands. This concern has not prevented the continued decline in the numbers of most species of cranes over the last 50 years. Much of this is the result of a gross misunderstanding of the basic biology and habitat requirements of these birds.

In recent years a great deal of research has been conducted on cranes. In this book the author has put together the material needed to give us some insight into the biology of cranes. From this insight we have a better chance of helping to save members of this group of birds from extinction.

"Cranes of the World" is laid out in a very useful fashion with general comparative biology preceding the species accounts. The book contains a wealth of material on cranes in general as well as on each species. The color photographs are quite good, as are the sketches showing behavior and anatomy. The reference section seems complete and accurate. The tables are easy to read and are very helpful, providing quantities of data.

The author is to be commended for presenting the sections on aviculture and conservation as such prominent parts of the book. These topics are of prime importance today because of the endangered status of most species of cranes.

The only drawback of the book may be the low quality of paper. The cost of the book seems high, but considering the wealth of material it contains, the book is well worth the price. Certainly this is a must addition to all ornithological and avicultural libraries.—
DONALD F. BRUNING.

VULTURE BIOLOGY AND MANAGEMENT. By Sanford R. Wilbur and Jerome A. Jackson (eds.). University of California Press, Berkeley, California. 1983:xxi + 550 pp., 82 line drawings, 58 half-tones, 61 tables. \$35.00.—The idea for this comprehensive volume, which covers almost all aspects of vulture biology, was conceived at the First International Symposium on the Vultures, held in 1979, and much of the material contained in the book is based on talks given at that conference. The 38 contributors include authorities on vulture biology from around the world, thus the book unites much research that was previously scattered widely throughout the ornithological literature.

The first of 8 parts gives a brief, but unusually clear review of the paleontology and systematics of vultures. Part 2 surveys the worldwide status of vulture populations; regional reports are provided for southern Africa, Europe, France, Israel, Mongolia, the Indian subcontinent, the Western Hemisphere, and the Americas. Parts 3 and 4 contain chapters on various aspects of the biology of Old and New World vultures, respectively. Topics covered include growth and development, breeding behavior, adaptive radiation, migration, competition, and roosting behavior. Part 5 contains a number of useful papers on current research and management techniques for vultures. Part 6 reviews the problems vultures currently face as a result of environmental contaminants, and Part 7 describes the past and

present interactions between vultures and man. The final segment of the book is a 28-page bibliography of vultures that supplements the literature cited sections of each chapter.

"Vulture Biology and Management" provides a good introduction to the basics of vulture biology. It is also sufficiently detailed and up to date to be useful to those doing ongoing research in the area. The book is well-designed and handsomely printed and is thus not overpriced in terms of the current book market. Clearly, this comprehensive volume will prove invaluable for those interested in any aspect of vulture biology.—NANCY J. FLOOD.

PRINCIPLES OF WILDLIFE MANAGEMENT. By James A. Bailey. John Wiley and Sons, New York, New York, 1984:373 pp. \$26.95.—Over the years there have been few textbooks covering the basic principles of wildlife management. Recently, however, there have been at least three such books of which this is the latest. There are 19 chapters presented within 5 parts: Wildlife Conservation, Wildlife Biology, Wildlife Ecology, Population Dynamics, and Wildlife Management. The book is well indexed, and 388 references are cited in a useful section at the end of the book. Illustrations are useful for the most part, and most chapters have specific examples or case histories which are well done. At the end of each chapter, the main "Principles" discussed are reviewed. The book is nicely bound, with a pleasant, glossy cover.

Chapters cover most of the standard material seen in such books; i.e., food, cover, reproduction, mortality, behavior, movements, and population dynamics. Several chapters go beyond what is normally found and provide interesting material on ecological succession, carrying capacity, data-base systems, and the art of wildlife management.

As I read Chapter 1, I could picture Dr. Bailey lecturing to undergraduate wildlife majors. Many good points were made, including the need for compromise in order to maintain the opportunity to play a role in decision making. There is also a discussion of the terms "wise use" and "harmony."

One problem I had with this text was the writing style. Certain terminology was used extensively, but it seemed very awkward to me. For example, on page 116 we find the term "species functions," on page 118 we find "cover resources," and on pages 206–207 we find "welfare factors" as well as "cover welfare factors." I found myself asking what these words meant. Other terms were used to the point where they became very distracting. For example, we find "welfare factor" 8 times on page 207.

Other minor problems included the definition of "trophy hunting" as the mere acquisition of something physical from the outdoors (p. 47), and the overall lack of a discussion of the growing problem of wildlife damage. There were few typographical errors, but one major error on the contents page stands out: the double listing of "Part III: Wildlife Ecology" and the omission of "Part II: Wildlife Biology."

These problems aside, I found the book useful and believe it will be used in many classrooms. Dr. Bailey is an imaginative wildlife biologist and professor who brings interesting and new philosophies into his classrooms and his writings. This book is no exception and should find considerable use by wildlifers and nonwildlifers alike.—DAVID E. SAMUEL.

BIRDING WITH A PURPOSE. By Frances Hamerstrom, illus. by Jack Oar, with a Foreword by Joseph J. Hickey. Iowa State Univ. Press, Ames, Iowa, 1984:130 pp., 39 drawings, 16 black-and-white photographs, 1 map. \$13.95.—Fran Hamerstrom writes as she thinks: in

short, crisp sentences, moving from thought to thought economically, pulling no punches. In an earlier collection of biographical sketches (Strictly for the Chickens, Iowa State Univ. Press, Ames, Iowa, 1980), Hamerstrom traced her and her husband Fred's exploits as "Prairie Chicken Biologists." In her latest volume, she uses her more than half-century of field experience both to teach and entertain readers. The lessons are short—chapters average about four pages—but informative and wry. Fran's "purpose" in birding is to study bird behavior, especially that of raptors, and her methods include banding and color marking. Her experiences provide a *précis* of what should and should not be attempted. Luckily for us, Fran is not afraid to describe her failures—and those of others—as well as her successes, and there is at least as much to learn from the former as from the latter. As Joe Hickey correctly notes in his Foreword, "This is not a stuffy book." After reading Fran's accounts of losing several Volkswagen minibuses through the ice while she searched for Snowy Owls (*Nyctea scandiaca*) on frozen Wisconsin lakes, I for one am not about to attempt to do the same! But then again, few but Fran would even conceive of such an adventure, especially in their spouse's vehicle.

The book opens with an informal but informative description of Hamerstrom's early attempts at color marking Black-capped Chickadees (*Parus atricapillus*), long before color marking became the standard operating procedure for behavioral studies. The formal results of these efforts are reported in "Dominance of winter flocks of chickadees" (Hamerstrom, Wilson Bull. 54:32–42, 1942), one of the first North American studies involving color-marked individuals. Similar essays describe the care and feeding of "gaboons"; the recent North American "evolution" of the bal-chatri, a device used in ancient India to catch accipiters; why "electric mice" do not work well in the field; why bananas are not to be fed to bait mice (*Mus musculus*); how burned-out light bulbs can be used to catch Bald Eagles (*Haliaeetus leucocephalus*); and how nylon stockings and road-killed woodchucks (*Marmota monax*) can be used to transmit messages to co-workers. Because it is written as a series of essays, the book can be savored in small bites as well as in one large meal. The work is well-edited and remarkably free of errors, save for the consistent and inexplicable misspelling of chickadee in the first chapter. It is spelled correctly thereafter. The sketches by Jack Oar complement the often humorous text in much the same way the illustrations in my dog-eared copy of Konrad Lorenz's "King Solomon's Ring" (Thomas Y. Crowell Co., 1952) complement that work.

For those who have not had the pleasure of dining and conversing with Fran at her home and research station in Plainfield, Wisconsin, the book will be an eye-opener. For those lucky souls who have made that trek, the book should rekindle numerous outrageous memories. Hamerstrom's book is "must" reading for graduate students about to begin their field work, as well as for anyone who views field research as a strictly sterile scientific undertaking.—K.L.B.

THE SCIENCE ALMANAC, 1985–86 Edition. By Bryan Bunch (ed.). Anchor Press/Doubleday, Garden City, New York, New York, 1984:xiv + 562 pp. \$19.95 (hard cover), \$12.95 (paper).—In the style and format of other almanacs, this new publication attempts to interpret the recent developments in science for the interested layman. The topics covered are Archaeology and Anthropology, Biology, Chemistry, Earth Science, Environment, Mathematics, Medicine, and Physics. Short essays outline developments in these fields, 1980–84, and sprinkled here and there are intriguing bits of "trivia." This appears to be a handy thing to have around.—G.A.H.

HANDBOOK OF THE BIRDS OF INDIA AND PAKISTAN. Vol. 4. Frogmouths to Pittas. Second Edition. By Salim Ali and S. Dillon Ripley. Oxford University Press, London, 1983:xvi + 267 pp., 11 color plates, numerous text figures and maps. \$33.—A revision of a volume of this useful series originally published in 1970. Two new species are included and two others have been combined. There are three new color plates.—G.A.H.

PHYSIOLOGY AND BIOCHEMISTRY OF THE DOMESTIC FOWL. Vol. 5. By B. M. Freeman (ed.). Academic Press, London, England, 1984:436 pp., numerous black-and-white drawings and photographs. No price given.—This is the final volume of a work begun more than 10 years ago, of which Volume 4 was published in 1983 (see Review, *Wilson Bull.* 96:346, 1984). The 12 chapters cover topics dealing with metabolism, hormones, the cardiovascular system and blood groups, the lymphatic system, and reproduction.—G.A.H.

NORTH AMERICAN GAME BIRDS AND MAMMALS. By A. Starker Leopold, Ralph J. Gutiérrez, and Michael T. Bronson. Illus. by Gene M. Christman. Charles Scribner's Sons, New York, New York, 1984:ix + 198 pp., many line drawings and range maps. \$12.95.—An unrevised paperback edition of a book originally published in 1981 and reviewed in *Wilson Bull.* 94: 607–608, 1982.—G.A.H.