

ORNITHOLOGICAL LITERATURE

CURRENT ORNITHOLOGY. Vol. 2. By Richard F. Johnston (ed.). Plenum Press, New York, New York, 1985:364 pp., 43 numbered text figs., 26 tables. \$41.00.—It is refreshing to find that one can pick up a book with a pretentious-sounding title and find the contents to be exactly as advertised. Not only do the chapters deal with some of the hottest (current) topics in ornithology, but these chapters are written by the established authorities in the respective fields. In the selection of some of the subjects for treatment, Johnston has shown elegant insight; in one case his choice of authors reveals subtle genius in his command of issues and the personalities involved, as I will argue below.

The book contains nine chapters. The first, entitled “Data Analysis and the Design of Experiments in Ornithology,” by Frances C. James and Charles E. McCulloch, is worth the price of the book to experimental ornithologists. It is a clearly written, no-nonsense analysis of experimental models and hypothesis testing, and includes an appendix defining and explaining the important statistical techniques and terms used in analysis these days, and offering the pros and cons of each. The good news is that Popperian hypothesis testing (rejection of series of null hypotheses leading inexorably closer to the “truth”) need not be the only valid approach to research. Indeed, the authors maintain strenuously, the art of inference is alive and well. Numerous areas of ornithological and other field investigations are not yet suited (for lack of maturity or precision) to the kinds of simple, unambiguous hypotheses that have been long used in molecular biology. Perhaps, after reading this article, young researchers will not feel so much pressure to pose simple, rejectable hypotheses that have no basis in the real world of nature.

Chapter 2 is an examination of “reversed” sexual size dimorphism in raptors by Helmut C. Mueller and Kenneth Meyer. In exploring the question of why female raptors are larger than males, the authors pose a series of reasonable hypotheses, rejecting most of them on the basis of data available in the literature on Palaearctic raptors. They correctly point out that diet per se can just as easily be an effect as a cause of this dimorphism. Other traits, such as colonial nesting and clutch size, are correlated with dietary habits. Female dominance during the breeding season is the life history trait most consistently correlated with reversed sexual dimorphism, and the authors conclude that it was a main factor in the evolution of RSD by “facilitating and maintaining the pair bond.” As is usual with inferential studies, the reader should examine the assumptions carefully, but this thesis seems to be very carefully thought out.

Chapter 3 is a remarkable treatment of vocal “dialects” in White-crowned Sparrows (*Zonotrichia leucophrys*), remarkable not only because it clarifies most of the confusion in this area of study, but also because its authors include most of those now active in researching dialect phenomena and epiphenomena in this species. Donald Kroodsma originally wrote the article, and invited M. C. Baker, L. F. Baptista, and L. Petrinovich to amend it. These latter three represent different points of view, and it is instructive to read the points on which they agree. In this chapter it is pointed out that much of the confusion about the facts and effects of white-crown dialects results from the very different approaches and assumptions made by the various authors. Indeed, in any two papers on the subject, the parts of the song used as dialect markers will likely be quite different. Kroodsma et al. point out that the research questions and techniques of the main workers differ, that very real differences in basic demographic data can be obtained from different *nutalli* populations, and that it is premature to make cause-and-effect conclusions about the correlations between demographic and vocal data. Given what some of these authors themselves have claimed

over the years, it is a real service to ornithology to have these valid differences openly discussed, and the necessary direction of future research identified. This is "must reading" for everyone interested in vocalizations.

Chapter 4, by G. F. Barrowclough, N. K. Johnson, and R. M. Zink, is about genic variation in birds, and focuses attention on the mutation-drift theory of genic variation. They maintain that electrophoretic variations (genetic variation expressed as protein variations identified through the technique of electrophoresis) should be considered as selectively neutral unless or until the data cause rejection of this model. Genetic data are notably poor for birds, and a great amount of new data must come to light before we can deal effectively with the question of the significance (such as behavioral-ecological and systematic) of genetic variation in birds.

Chapter 5, "Ecomorphology," by Bernd Leisler and Hans Winkler, is an attempt to shed light on the problem of the relationship between body form and ecology using a comparative approach with related species sharing similar lifestyles. For example, in a group of eight turdid chats that feed on arthropods on the grasslands of East Africa, the authors make extensive use of principal component analysis of morphological characters and ecological and behavioral data. The approach then reduces possible noise in the analysis by focusing on related species with somewhat similar lifestyles. The resulting ordinations amount to quantitative reassurance of many points that functional morphologists have made. For example, cursorial chats that dash after prey have longer tarsi and larger feet than those that more commonly pounce from a grass-stem perch. In a different group (six *Acrocephalus* warblers) a combination of discriminant analysis and principal component analysis helps the authors conclude that a rounded wing that confers maneuverability is of little importance in explaining habitat differentiation in the genus, while a combination of characters associated with clinging ability is useful. The authors are careful to point out the limitations of their approach, given the limited data available. They argue that more functional morphological and ecological work is needed, rather than more sophisticated analyses, and that future research in ecomorphology may lead in different directions than the current approach.

Chapter 6, "Problems in Avian Classification," by Robert J. Raikow, is a stimulating review and discussion of some of the upheaval in systematic biology. In an admittedly partisan statement, Raikow asks, "Why don't we have a satisfactory classification of the birds?" and reviews the strengths and weaknesses of the various techniques. These are the phenetic (numerical taxonomy), cladistic (phylogenetic or geneological), and traditional or eclectic (a combination using both similarities and descent) schools. Only the latter two have been used often in avian classification. If you have found ornithological classifications to be arbitrary and confusing, you will agree with Raikow that only cladistic, or evolutionary classifications make sense now that we have data from a variety of approaches, ranging from bones and behavior to DNA.

Chapter 7, "Syringeal Structure and Avian Phonation," by A. S. and S. L. L. Gaunt, is a remarkable review of the state of the art, and perhaps could be entitled, "All you thought you knew is in doubt, and much is plain wrong or simply unknown." Briefly put, the syrinx is buried deep in the thorax and difficult to work with. It is also variable from group to group. Given the diversity of syringes and models pretending to account for avian sound production, one hardly wonders that we have yet to arrive at the best questions. This article is an excellent statement on what is actually known about sound production and syringeal function (not very much) and what we have to learn before we can ask some relevant questions (a great deal).

Chapter 8, "Assessment of Counting Techniques," by Jared Verner is "must" reading for anyone who needs to count birds. It is a critique of the various techniques, and catalogs many misapplications of them. Verner states that most calculations of species diversity and

community energetics are suspect simply because the counting techniques on which they were based are demonstrably deficient. All is not without hope, however, as Verner thinks that certain goals, such as population trends, do not require the counting rigor that the above require. Overall, thoroughly executed spot counts should suffice for most applications, as long as larger areas than usual are sampled and much more time than usual is spent in the field. But even the accuracy of this method needs to be verified by application of total mapping of populations of marked birds, such that the importance of "floaters" can be determined. This article, and one on which it is based (to be published elsewhere), should have considerable impact on population assessment, though we probably can never circumvent some of the variation and biases in bird counting.

The final chapter, "Circadian Organization of the Avian Annual Cycle," by A. H. Meier and Albert C. Russo, reviews the interactions of external and internal timing factors. The annual cycle includes photoperiodism, photosensitivity, photorefractoriness, migratory restlessness and orientation, premigratory fattening, and egg laying. This article reviews the involvement of daily rhythms at the cellular and organ levels in these annual cycles. Many important details remain unknown, making an understanding of the interactions especially difficult. Evidence of circadian rhythms is found at all levels, and it is clear that the neuroendocrine system organizes and synchronizes them so that the entire animal responds appropriately to external rhythms. This chapter is only a partial list of such happenings, but it should make field ornithologists aware of the complexity of internal events leading to the well-tuned bird that breeds, molts, and migrates at the right times, managing not to get confused by annual and latitudinal variations in external environmental signals.

In summary, "Current Ornithology" contains the most up-to-date information from some of the most important areas of ornithology. It is clearly written by and for professional biologists, and should be in any well-appointed university or office library. Its usefulness to the amateur ornithologist may be limited, depending on the extent of background and motivation of the reader. The production of the volume is very good, with grammatical errors and typos being limited to Chapter 5, and these may be the fault of a translator. As review books go, the value for the price is much greater than some other recent volumes on birds by another publisher. Serious ornithologists should have this book, its predecessor, and probably subsequent volumes.—CURTIS S. ADKISSON.

AVIAN MONOGAMY. By Patricia Adair Gowaty and Douglas W. Mock (eds.). Ornithological Monographs No. 37, American Ornithologists' Union, Washington, D.C., 1985:vi + 121 pp. \$11.00 (\$9.00, members).—This "monograph" is based on papers given in a symposium on avian monogamy at the 1982 A.O.U. meeting at the Field Museum in Chicago. It consists of an introduction and seven chapters by symposium participants. Because neither the title of the volume nor its advertisements provides information about its contents, the major function of this review is to present brief abstracts of the chapters.

I would first, however, like to express a negative reaction to the use of the A.O.U. monograph series to publish what, in my opinion, amounts to an essentially miscellaneous collection of papers. The papers do share the commonality of dealing to some extent with monogamy (as did eight other symposium papers not published here), but I cannot see that the papers are linked to one another in any way that makes their joint publication more desirable than their publication as separate articles. Indeed, there are reasons for believing that their publication as journal articles would have been of greater service to the authors and their potential audience. When published in a major journal a paper receives immediate, worldwide distribution to several thousand individuals and libraries (at a prepaid cost) and, typically, subsequent additional distribution via reprints (for postage costs). As a chapter in

this monograph, a paper may be immediately distributed to only a couple of hundred individuals and libraries, and finally achieve a distribution of perhaps 500 original copies. To be sure, it is likely that all interested persons will eventually learn of these articles and gain access to them (at extra cost), but "eventually" is less than satisfactory. Many persons whose research or writing could benefit from knowledge of one of these articles at the time of its publication may not learn of its existence for more than a year when a review or a listing in a reference service finally appears. In short, publication in the monograph series delays the spread of knowledge of the existence of these papers, and also results in their being more difficult and costly to obtain. I believe authors and audiences alike would be served better by the A.O.U. Monograph series if it were used as intended "for major papers too long for inclusion in the Union's journal, 'The Auk'" (see p. ii, this monograph), and perhaps also when there really is something to be gained by having a collection of papers together in one volume.

Now, about the component chapters, the "Introduction" by Mock is a brief statement of some of the interesting questions about the evolution of monogamy together with some suggested directions for future research.

The second chapter by Gowaty, "Multiple Parentage and Apparent Monogamy in Birds," is based on her studies of kinship in families of Eastern Bluebirds (*Sialia sialis*) in which she discovered examples of broods having multiple paternity and maternity. Although it is still not known how widespread are the behavioral patterns that produce broods of mixed paternity-maternity, the evidence is mounting that they are not uncommon. If that proves to be the case, Gowaty suggests that our concept of mating systems may have to be changed from one based on male-female association patterns to one based on genetically effective matings.

Chapter 3 by Nancy Burley is entitled "The Organization of Behavior and the Evolution of Sexually Selected Traits," and focuses on the problem of how sexual dimorphism can arise within a monogamous system. Burley presents results of several sets of experiments with captive Zebra Finches (*Poephila guttata*) that appear to demonstrate preexisting preferences in both sexes for novel phenotypes of both the same and the opposite sex. To explain such preexisting preferences she postulates the existence of evolved plans for decision making that could account for the rapid evolution of sexually selected traits.

The fourth chapter, "Mate Preferences and Mating Patterns of Canvasbacks (*Aythya valisineria*)," by Cynthia K. Bluhm, reports on the importance of free mate choice for successful reproduction. In this experimental study of captive birds, eggs were laid only by the females of self-formed pairs; females of randomly assigned pairs not only did not lay, but often persisted in behaving aggressively toward their assigned mate.

Chapter 5 by Michael G. Anderson is entitled "Variations on Monogamy in Canvasbacks (*Aythya valisineria*)." Studies of wild, individually marked Canvasbacks revealed that male Canvasbacks are occasionally polygynous and only rarely engage in forced copulation attempts. More common is a secondary male strategy of engaging in extrapair courtship, which sometimes leads to serial monogamy.

Chapter 6, "Primary and Secondary Male Reproductive Strategies of Dabbling Ducks," by Frank McKinney, is an excellent review and synthesis of what is known about the mating patterns of members of the genus *Anas*. Although McKinney says that relatively few studies of either wild or captive members of this well-known genus have focused on variations in mating patterns, it is clear from this review that what studies have been done (many by the author and his associates) have been well employed to develop convincing hypotheses about the ecological and social factors that may favor certain variations (EPC, polygyny) on the basic *Anas* pattern of monogamy.

Chapter 7, "Adaptive Significance of Monogamy in the Trumpet Manucode (*Manucodia*

keraudrenii) (Aves: Paradisaeidae)," is by Bruce Beehler. This paper is an important original contribution to our understanding of how such factors as diet may affect the pattern of parental care and the mating system of a species. Beehler argues convincingly that the manucode's specialization on food (several species of figs) of low nutritive value and of unreliable abundance results in mandatory male parental care, and thus monogamy, in a species belonging to a family in which polygyny is the rule.

The eighth chapter, "The Influence of Demography on the Evolution of Monogamy," is by Bertram G. Murray, Jr. Murray points out that demographic phenomena such as longevity, annual fecundity, and sex ratios are often not given sufficient consideration as factors affecting the evolution of mating systems. Using hypothetical and real examples, he illustrates how expected longevity and fecundity may influence a female's choice of whether to breed with an already mated male or wait until next year for a chance to mate monogamously.

Although there is variability in the significance of the contribution of each chapter, all are of interest and worthy of publication. Unfortunately, this monograph is not a very good vehicle for their publication.—NORMAN L. FORD.

GUIDE DES PASSEREAUX GRANIVORES EMBERIZINÉS. By Gilbert C. Armani. Société Nouvelle des Editions Boubée, 11 Place St.-Michel, Paris 6e, France, 1985:416 pp., 28 color plates, appendices, index, bibliography. 230 francs (about \$33.00).—"The information given in the text is the result of notes and research begun by my grandfather about 1880 and pursued as a family project during more than a century" (p. 11). But who was the author's grandfather, or who, for that matter, is the author himself? According to the inside cover, Gilbert C. Armani is an associate at the National Museum of Natural History in Paris. I confess that I have never heard of him, in spite of my having followed rather closely the developments of ornithology in France in the last 2 decades or so. The book is apparently the second of a projected three-volume set on the granivorous birds of the world. The first volume, published in 1983, dealt with the Fringillinae, Carduelinae, and Cardinalinae, and the third volume will include the Estrildidae, Viduinae, and Ploceidae. The present book, after a very brief introduction to the Emberizinae (pp. 17–20), consists essentially of the description of the 282 species included in the Emberizinae, largely following the order and nomenclature of Paynter and Storer in Peters' Check-List. The format is the same for each species: description, voice, habitat, distribution, behavior, nest, and subspecies and their distribution when applicable. The main part of the text (pp. 21–368) is followed by 28 color plates drawn by the author and illustrating all species; a table showing their distribution by geographical region and by country (pp. 369–390); a list of introduced species (pp. 391–392); an alphabetical list of French names and the corresponding Latin names (pp. 393–399); an alphabetical list of Latin names with their French and English vernacular equivalents (pp. 400–406); an index of Latin and French names (pp. 407–413); and a "brief bibliography" or rather, list of about 75 books, mostly faunal works and field guides, geographically arranged (pp. 414–416).

The author did not mention the intended audience of his book, but a flier included in the book states that it "addresses itself to the amateur ornithologist and also to the professional." The text does not contain any references to published works, and it is far from clear where, indeed, the information used for the text came from. Presumably, this book is a compilation of data included in the general texts cited at the end of the volume and of unpublished notes gathered by the author, who, it is stated, traveled widely to study Emberizinae. The lack of citations to the original literature sources or to the original field work will make the work useless for the professional ornithologist. The amateur cannot really use this book as a field guide because the descriptions are not written in field-guide fashion, and because the color

illustrations are not of the standard one is now accustomed to in field guides. Furthermore, not all plumages are depicted. Nor can the amateur rely on this text as a source of references on the emberizines because the factual basis is unknown. Finally, for both professionals and amateurs, I must admit that the absence of credentials of the author does not inspire confidence, even though it is possible that the compilation was done carefully (note here, however, that typos are common, especially in the bibliography). A number of excellent books on birds, both technical and popular, have been published in France recently. This volume is not one of them, and I cannot recommend it.—FRANÇOIS VUILLEUMIER.

CONSERVATION STUDIES ON RAPTORS. By I. Newton and R. Chancellor (eds.). International Council for Bird Protection, Cambridge, England, 1985:xi + 482 pp., numerous tables and figs. About \$38.00.—This volume includes “main papers” presented at the Second World Conference on Birds of Prey held at Thessaloniki, Greece, in April 1982. The contents were “restricted to papers of scientific nature which present new material, together with a section of miscellaneous papers covering different management techniques.” In my opinion, more than a few papers fail to meet these restrictions and would not be acceptable for publication in a refereed scientific journal. On the positive side, the entire volume is in readable English despite the fact that the more than 60 authors include individuals from nine countries where the native language is not English. Overall, the editors deserve praise for making the best of an impossible task. The book is divided into five parts, plus a section of 26 pages containing a summary of several “workshops” on vulture conservation. The latter is a list of participants and their interests, plus very brief summaries of the recent work of some of the participants.

Part I consists of 14 papers and 154 pages on the status and population declines of raptors in the Mediterranean region. Some of the papers offer little quantitative information, but the overall quality is good.

Part II consists of eight papers and 74 pages on tropical forest raptors, and primarily shows how little we know about these species. Populations are being severely reduced by the worldwide destruction of this habitat. The paper by Jones and Wahab Owadally on the Mauritius Kestrel (*Falco punctatus*) is obsolete and controversial in its analysis; the population has increased considerably in the past few years (S. Temple, pers. comm.).

Part III, “Migration of Raptors,” contains 89 pages and 13 papers, which vary from poor to excellent. Most of the papers present counts of migrating raptors from one or more localities and some speculation about the sources, destinations, and routes, often without much basis. Some of the counts are astounding; for example, 764,000 raptors passed Eilat, Israel, in one spring, and 958,000 flew through the Isthmus of Panama in one autumn. The weakest paper is by Vagliano on raptor migration in Greece. It contains no data and speculates that raptors use hypothesized migration routes because of the influences of geomagnetism, paleohistory, and minute differences in the geographic distribution of gravitational forces. Another strange inclusion is the paper by Kirkwood on food requirements for the deposition of energy reserves. Although I have no arguments with the hypotheses and calculations, no data are presented, and I wonder what it tells us about raptor migration or conservation. Readers should note that Evans and Rosenfield “suggest” that female Sharp-shinned Hawks (*Accipiter striatus*) winter farther south than males, but their results are not statistically significant. (I have heard their results quoted as proof.) Shelley and Benz found that 8% of migrating Broad-winged Hawks (*Buteo platypterus*) at Hawk Mountain, Pennsylvania, had distended crops, suggesting that this species frequently feeds during migration. They neglect to note that their sample may be biased. First, they were able to examine only 6% of the individuals observed, only those birds seen in profile, and hence flying low. Feeding individuals are certainly overrepresented in this sample. Second, 1981 was a very

poor year for observing migrants at Hawk Mountain, and it is possible that those migrants flying low enough to be seen were the individuals that had been unable to acquire sufficient energy reserves for migration, or that the unusual weather conditions slowed the southward progress of migrants and increased the incidence of feeding behavior. Smith, in what I believe is the best paper in this part of the book, presents compelling arguments for a lack of feeding by Broad-winged Hawks and Swainson's Hawks (*B. swainsoni*) during migration; the latter probably does not feed for the 2 months it takes to soar from the Great Plains to the Pampas.

Part IV, "The Peregrine Falcon," contains 8 papers and 65 pages and is severely dated. Papers presented at the International Peregrine Conference in November 1985 render most of this section obsolete. Let us hope that we will not have to wait more than three years to see these papers in print.

Part V, "Management and Conservation," contains 9 papers and 61 pages. Topics include monitoring birds with color bands through telemetry, supplemental feeding, and captive breeding and cross-fostering. This part contains some biological information on mortality rates. The best paper is a brief yet thorough review of telemetry techniques by Kenward; the least useful is by Platt on the captive breeding of falcons for falconry in Bahrain.

Overall, this volume is of interest only to those who are curious about the population status of raptors and in management and conservation techniques in various parts of the world. There is little of interest for the "pure" raptor biologist, and even less for an ornithologist with no special interest in the birds of prey. The high price will also help keep the book off of the shelves of private and institutional libraries. —HELMUT C. MUELLER.

OCCUPATION OF URBAN HABITATS BY BIRDS IN PAPUA NEW GUINEA. By Harry L. Bell. Proceedings of the Western Foundation for Vertebrate Zoology, Vol. 3, No. 1, February 1986:48 pp., 1 map, 9 tables, appendix. \$7.00.—Harry Bell, who died before this paper was published, was a dedicated amateur who, given the time and encouragement, not only made a significant contribution to the literature, but also was able to create a fulfilling second career as a full-time student of Australasian ornithology by obtaining his doctorate at a time in life when most people are beginning to think of retirement. This work is another example of Harry's dedication to the ornithology of Papua New Guinea—the independent "eastern New Guinea" that also includes the Bismarck Archipelago and two northernmost Solomon Islands.

This paper on urban bird communities in Papua New Guinea addresses a curious topic about which we have very little information. This is no surprise, as most ecologists who work in the humid tropics are short-term visitors, spending as much time as possible in forest habitats far from urban areas. Thus, in the quest for "pristine" forest study sites and the pursuit of studies related to rain-forest biotas, most researchers overlook the potentially significant events taking place in modern tropical towns and cities.

Ornithologically, what happens when a city is carved out of the forest? Which species become the familiar songbirds of downtown and backyard? Such questions are particularly interesting in the context of the Papuan region, because it is almost entirely free of the well known urban commensals such as House Sparrow (*Passer domesticus*), European Starling (*Sturnus vulgaris*), Rock Dove (*Columba livia*), and Common Myna (*Acridotheres tristis*).

To the average reader, any general patterns that may link the 14 urban study populations examined in this paper are perhaps obscured by the details of an unfamiliar avifauna and many peculiar distributions. Nonetheless, two trends, well-known for other tropical regions, are documented for Papua New Guinea: (1) the dominant urban species tend to be nonforest or forest-edge forms, and (2) widespread lowland species often colonize upland areas sub-

sequent to man-related clearance of the forest. In the instance of the Lemon-bellied Flycatcher (*Microeca flavigaster*), typically a lowland savanna species, one can only wonder how this bird has managed to colonize the isolated and far-flung highland valleys from which it is now known.

Bell found strong regional differences in the composition of Papuan urban avifaunas. Such is immediately obvious to any birder who visits, for example, four of the more important "mainland" communities—Port Moresby, Lae, Mount Hagen, and Madang. Each town supports a set of "common" species that differs considerably from any other. Some of these differences can be explained by habitat or altitude (e.g., Port Moresby is in a belt of coastal savanna, Mount Hagen is 5000 ft higher than Lae), but most seem to relate to history of colonization. Even neighboring towns (Wau and Bulolo) show striking differences. To this, add the point Bell makes concerning the dynamic nature of these relatively "new" bird communities, and the reader can see that a splendid natural experiment is presently in operation. One of the main points is that the data presented in this paper will serve as a well-documented benchmark for comparison one or two decades hence. It is unfortunate that Harry Bell won't be here to ensure that the follow-up work is done with equal thoroughness.—BRUCE M. BEEHLER.

ARIZONA WETLANDS AND WATERFOWL. By David E. Brown. Univ. Arizona Press, Tucson, Arizona, 1985:169 pp. 70 numbered figs., 9 tables, 7 colored plates, and 18 maps in an appendix. \$24.95.—This attractive book summarizes in very readable form the results of over 30 years of research by biologists from the Arizona Game and Fish Department, U.S. Fish and Wildlife Service, and various universities. A Game Branch Supervisor with the Arizona department, Brown presents a thorough description of the state's major wetlands and the more than 30 species of Anatidae recorded in an area most associate with deserts. Basic biology, taxonomy, anatomy, foods, and diseases are covered, as are specific management approaches.

Although the species accounts repeat some facts found in standard works on waterfowl, such as "Ducks, Geese and Swans of North America" by F. C. Bellrose, they include much "local color" and many details on distribution, historical and present, as well as breeding biology and responses to hunting and habitat changes. Distribution and migration are well described in text and maps. The sections on the whistling ducks and the Mexican Duck (*Anas platyrhynchos diazi*) are especially interesting, as many data are included from theses and agency reports that are not readily available.

Bonnie Swarbrick Morehouse, author of a M.S. thesis on the Mexican Duck, illustrated the text with many outstanding black-and-white sketches. The seven full-page color paintings of waterfowl, however, are a bit gaudy and appear flat in the copy I reviewed.

Few errors were noted, but one habitat photo caption mentions "the emergent aquatic waterweed (*Anacharis canadensis*) . . ." when the only obvious emergent seems to be a smartweed (*Polygonum* spp.). The book is well written and carefully edited. I recommend it highly, particularly to anyone interested in this fascinating area and the fascinating waterfowl it harbors.—RONALD A. RYDER.

BLACKBIRDS OF THE AMERICAS. By Gordon H. Orians, illus. by Tony Angell. Univ. Washington Press, Seattle, Washington, 1985:164 pp., 82 pen-and-ink drawings, charts, maps, 2 appendixes, selected references, and index. \$24.95.—For 25 years Gordon Orians has published scientific works on various aspects of blackbird biology. Now Orians has summarized

the results of decades of research on icterids in a beautifully illustrated and extremely readable book that explains his fascination for this family of birds.

"Blackbirds of The Americas" is written primarily for the nonprofessional, although it contains a wealth of information on subjects such as geological and climatic influences, anatomy and systematics, and behavior and ecology. Despite the nontechnical focus of the book, I enjoyed reading it, and I appreciated the author's attempt to teach, in a gentle and effective way, the reality of the scientific method. Throughout the book, Orians demonstrates the proper use of hypothetico-deductive scientific inquiry, and in the last chapter he gives the following apt description: "Science . . . requires the ability to hold ideas and images in our heads in the absence of the real thing, an ability to play with these ideas intellectually, and an ability to conceive of tests of those ideas. Scientific methods are nothing more than a set of rules about how to deal with hypotheses. The most important impact of the rules is that they help us devise tests that could falsify a hypothesis that is wrong. We all develop identities with our ideas and would prefer them to be correct rather than incorrect. To counter this bias, which might cause us to seek only favorable evidence, we need the discipline of rules."

In his attempt to summarize research on blackbirds, and to illustrate hypothesis testing, Orians presents the results of selected studies in an informal and engaging way. Although he attempts to demonstrate some of the inconsistencies and differences that seem to be inherent in research, Orians does not provide a complete review of the huge blackbird literature, nor does he provide a complete list of references. A reader whose interest is sparked by Orians's vivid descriptions, however, could easily use the references listed for each chapter to discover the complexity and intrigue produced by blackbirds and their researchers.

Tony Angell's beautiful black-and-white illustrations are remarkably detailed, and they richly supplement Orians's written descriptions. In a few sections such as color differences between the sexes, the role of color in communication, and variation in plumage with age and sex, I would have appreciated the addition of color photographs, but the lack of them is not serious and reduces cost.

I would recommend "Blackbirds of The Americas" to anyone with an interest in birds. This book is also an extremely interesting and readable account of the real world of science and scientists. Gordon Orians holds a special place in my scientific heart, and as I start the 14th field season of my own quixotic quest to understand the Red-winged Blackbird (*Agelaius phoeniceus*), perhaps Orians's favorite icterid, this book helps me understand why so many are fascinated by blackbirds.—KEN YASUKAWA.

THE AUDUBON SOCIETY GUIDE TO ATTRACTING BIRDS. By Stephen W. Kress, illus. by Anne S. Faust. Charles Scribner's Sons, New York, New York, 1985:377 pp. \$24.95.—At a time when there are probably more publications available on attracting birds than at any time past, one wonders why an author would write another book on the topic. However, Stephen Kress's comprehensive effort, "The Audubon Society Guide to Attracting Birds," offers several things hard to find in most books on attracting birds. The guide offers many ideas on attracting birds to large properties, such as farms and ranches, as well as backyards. Ideas suitable for wooded yards in the East are found in many books, but Kress expands on this theme to include improvement of properties in dry, open habitats, such as desert dwellings and prairie ranches. He includes ideas on providing dependable sources of water for wildlife in dry country, nest sites for larger birds, and plantings suitable for all sections of North America. The guide provides an annotated list of native plant species useful for landscaping and attracting birds. More than 200 drawings by Anne S. Faust show the form,

fruit, and leaves of selected plants, and tables provide information on many others. Kress also gives an annotated list of mail-order nurseries, sources for native plants, and bird-attracting products. This list alone might be worth the purchase price of the book for many readers, as many plants recommended by Kress and other authors are hard to find. The catalogues of these suppliers will provide many additional ideas. The chapter on pools and ponds provides designs and plants suitable for various situations and suggestions for management of ponds. There is a good chapter on supplemental feeding, and an annotated list of references including a state-by-state list of publications that should provide ideas for any place in the country. Kress writes for the general reader. Technical terms are defined and many plans and drawings provide adequate illustration for hundreds of interesting bird-attracting devices and landscaping ideas.—ALBERT R. BUCKELEW JR.

CATESBY'S BIRDS OF COLONIAL AMERICA. By Mark Catesby, edited by Alan Feduccia. Univ. North Carolina Press, Chapel Hill, North Carolina, 1985:176 pp., 20 color plates, 110 black-and-white plates, 2 facsimile pages, 1 map. \$24.95.—Mark Catesby's "The Natural History of Carolina, Florida, and the Bahama Islands" was first published in 1731–1743. The pre-Linnean, bilingual work (French and English), which included 220 color plates as well as a lengthy text, established Catesby at once as the preeminent natural historian of colonial North America. It also ensured him his place as the founder of American ornithology. But, although the book was well received in Europe, only three copies were sold in America, and Catesby's work fell into obscurity in the 19th century, when it was eclipsed first by Alexander Wilson's "American Ornithology" and then by John James Audubon's "Birds of America." The current offering, a "lightly edited" text of Catesby's work, accompanied by 20 color plates as well as black-and-white illustrations of all 109 "species" of birds described by Catesby, is a long overdue attempt to acquaint professional and amateur ornithologists with this important historic figure. Although purists may question the value of a lightly edited text, the result is an easy to read account of Catesby's travels in colonial America. Editor Alan Feduccia has arranged the black-and-white plates in the approximate order that the birds appear in the current A.O.U. Check-list (sixth ed.). Each is accompanied by Catesby's text for the plate, as well as by a separate brief "update" on the species by Feduccia. This method of presentation works well, and enables the reader to administer the volume in either large or small doses. One engaging, albeit likely unintentional, result of the arrangement is that it offers the reader an opportunity to guess at what Feduccia is about to point out.

Catesby's text is, of course, hopelessly out-of-date; but although many of his "errors" seem rather comical in light of 20th-century ornithological knowledge, others are strikingly cautionary. For example, after having described the White and Brown curlews (the adult and juvenile White Ibis [*Eudocimus albus*], respectively) as separate species, he notes that the "near resemblance in them made me suspect they differed only in sex, but by opening them, I found testicles in both kinds." Thus an inappropriate assumption nullified the scientific method in the 18th century just as forcefully as it does now. On the other hand, Catesby's text provides numerous examples of "lost" knowledge. He correctly describes, for example, the hover-hunting behavior of Ospreys (*Pandion haliaetus*), right down to their success rates (it "... seldom rises without a fish...") and vulnerability to piracy ("... the bald eagle (which is generally on the watch) no sooner spies [the Osprey] but at him furiously he flies ... soars above him, and compels the hawk to let it (the prey) fall..."). He also debunks the then widely held notion that many birds spend the winter in torpor in caves or hollow trees: "If the immenseness of the globe be considered, and the vast tracts of land remaining unknown but to its barbarous natives, it is no wonder we are yet unacquainted

with the retreats of these itinerant birds." While speculating on how "European" birds found their way to America following their release from Noah's Ark, Catesby at first hesitatingly evokes dispersion as an explanation for current avian distribution before begging the reader to consider a vicariance explanation based on continental drift!

Prophetically, his descriptions of "the pigeon of passage" (Passenger Pigeon [*Ectopistes migratorius*]) and "the largest white-bill wood-pecker" (Ivory-billed Woodpecker [*Campyphilus principalis*]) include references to fatal contact with man.

Catesby also covers a number of non-ornithological topics, including how to pickle sturgeon and make caviar, how to derive pitch and tar from pine, and why not to hunt deer Indian-style.

While I disagree with several of the editorial comments—but after all, an editor's comments seem destined to evoke at least some grumbling—I congratulate Alan Feduccia for his yeoman effort. American ornithologists can no longer claim unavailability as an excuse for not having read Catesby. The first "profusely" illustrated tome on America's birds should be on every ornithologist's night stand.—K.L.B.

BIRDS, MEN AND BOOKS. A LITERARY HISTORY OF ORNITHOLOGY. By Peter Tate. Henry Sothoran Ltd., London, England, 1986:193 pp. 20 black-and-white photos. £13.95.—After having consulted "The Handbook of British Birds" have you ever wondered just who that imposing set of authors, Witherby, Jourdain, Ticehurst, and Tucker, was? This book might help you find out, and the information you get might be accurate. But then again it might not. The author proposed to write a history of bird books, which for many years also was a history of ornithology. Of course, only English language books and Anglographic authors are discussed. Although most of these are British, a fair assortment of Americans, as well as two Australians and one New Zealander, are mentioned. The coverage of the present-day writers is almost exclusively British, the only Americans being Nice, Sutton, and Peterson.

The history essentially starts with William Turner, although there is some mention of earlier work, and proceeds through Willughby and Ray, White, Audubon, Gould, Sharp, Baird, and ends up with such people as Peterson, Lack, Fisher, and Sutton. There are accounts, variable in length, of the life and contributions of these people, and subjective evaluations of their work. One of the little gems that will amuse and startle young academics striving for tenure is the comment that in the 18th century the Oxford professor of botany held his chair for 36 years during which time he published no scientific work and gave only one lecture. A number of photographs of some of the more important people grace the book.

The biographical sketches, mostly anecdotal and highly superficial, were obviously gleaned from more thorough sources. A very limited bibliography of only 27 entries is included, and no references are cited for any statement.

I am unable to comment on the accuracy of statements made about the British authors, but inaccuracies or distortions abound in the accounts of the Americans. For example, Audubon's travels are not accurately described, and the discredited idea that Audubon studied under the French artist David is again brought forth. The charges of libel and blackmail made against the young Alexander Wilson were not made—"—on some trumped up and unreliable evidence—" (though members of this Society might wish that to be true). The Arthur A. Allen Medal is not given by the A.O.U. None of these errors is especially important, but their number casts doubt on the whole work.

Besides these distortions and outright errors, there are many examples of sloppy editing or plain carelessness on the part of the author. For example, on p. 119 the name of Margaret Morse Nice's husband is given as "Leonard B. Morse." A number of names are misspelled:

Tavener (p. 168 = Taverner), Sewell (p. 169, 189 = Sewall). The author seems unable to cope with the passage of years in a mathematical sense. On p. 169 we are told that G. M. Sutton went to The University of Michigan in 1947 and spent 14 years there. Later in the same paragraph we are told that he left Michigan for Oklahoma in 1952. On page 153 we are told that Reg Moreau published his treatise on Palaearctic-African migrations in 1972, two years before his death, which according to p. 154, occurred in 1970.

In summary, one can enjoy the stories told here, but one cannot rely on their accuracy. A publisher's ad for the book, which I have seen, expresses the opinion that "This book will become the standard work." I would hope that it does not.—GEORGE A. HALL.

JOHN XANTUS: THE FORT TEJON LETTERS. By Ann Zwinger. University of Arizona Press, Tucson, Arizona, 1986:xxvi + 255 pp., 2 black-and-white photos. \$23.50.—John Xantus has always been an enigmatic figure in American ornithology, a compulsive liar who joined the army under an assumed name and a contentious charlatan who apparently could get along with no one, but for all of that a superb field collector and observer. From April 1857 to January 1859 he was a hospital steward in the army post of Fort Tejon, California, a position apparently obtained for him by S. F. Baird of the Smithsonian Institution. During that period he sent back to the Smithsonian some 2000 bird specimens of 144 species as well as quantities of other zoological and botanical material. He was a prolific letter writer and we have at hand a transcription of 49 of his letters to Baird written during his stay at Fort Tejon.

Ms. Zwinger has transcribed and annotated these letters, which present an informative picture of the southern California area in the 1850s. The annotations often quote from Baird's letters to Xantus and also give us an insight into other people and conditions of that time. She also attempts to translate the nomenclature of the period to that of today. In this last effort Ms. Zwinger has been generally successful, although I noted an occasional mistake. Her possible lack of biological knowledge shows occasionally as, for example, when she (mistakenly) explains that Xantus' references to "grizzlys" refers to the common Black Bear (*Ursus americana*).

A lengthy introduction gives a brief biography of Xantus both before and after his California sojourn. An appendix gives a list of the bird species found by Xantus using both his names and the present-day ones.

This is a useful addition to any collection of works on ornithological history.—GEORGE A. HALL.

BIRD CONSERVATION. 2. By Stanley A. Temple (ed.). Univ. Wisconsin Press, Madison, 1985:180 pp. \$12.95.—The second annual number of this publication of the United States Section of the International Council of Bird Preservation is devoted to island biology. The principal articles are: "Why endemic island birds are so vulnerable to extinction" by Stanley A. Temple; "Historical and current factors affecting Hawaiian native birds" by C. John Ralph and Charles Van Riper III; "Distribution and abundance of Hawaiian native birds" by J. Michael Scott and Cameron B. Kepler; "Endangered birds in Micronesia: Their history, status, and future prospects" by John Engbring and H. Douglas Pratt; and "Bird conservation in the United States Caribbean" by James W. Wiley. There are short papers on Peregrine Falcon (*Falco peregrinus*) restorations and California Condor (*Gymnogyps californianus*) recovery efforts as well as a review of Bird Conservation Literature.—GEORGE A. HALL.

THE NATURALIST'S FIELD JOURNAL. By Steven G. Herman. Buteo Books, Vermillion, S.D., 1986:vii + 200 pp. 1 photo. \$14.00 (paper).—The author has prepared a "Manual of Instruction based on a system established by Joseph Grinnell." A list of equipment, as well as detailed instructions (down to how to fill the technical pen) and a number of sample pages from the author's own journals are given. I expect that every experienced field worker has long since adopted his own system of keeping notes, but I recommend that all professors keep a copy of this book on hand for beginning graduate students to read.—G.A.H.

Wilson Bull., 99(1), 1987, pp. 150–152

ANNOUNCEMENTS

SYMPOSIUM ON FOOD EXPLOITATION BY TERRESTRIAL BIRDS

A symposium on food exploitation by terrestrial birds will be held at the Asilomar Conference Center, Pacific Grove (Monterey), California, on 19 March 1988. The symposium will be held in conjunction with the 58th Annual Meeting of the Cooper Ornithological Society. The intent of this symposium and subsequent published proceedings is to bring together for presentation and discussion scientists involved with the design and analysis of studies exploring how birds exploit food resources. Topics must be limited to nonraptorial, terrestrial birds. *Abstracts, due 1 March 1987*, are solicited that review the particular subject area as well as presenting new data. The symposium is being organized by Michael L. Morrison, C. John Ralph, Jared Verner, and William M. Block, with sponsorship from several private, state, and federal organizations. For instructions on submission of abstracts, and other information on the symposium, write: Michael L. Morrison, Dept. Forestry and Resource Management, Univ. California, Berkeley, California 94720. Phone: 415/642-5344.

1987 ANNUAL MEETING OF COLONIAL WATERBIRD SOCIETY

The 11th Annual Meeting of the Colonial Waterbird Society will be held at the Red Oak Inn in Thunder Bay, Ontario, 10–13 September 1987. Lynn Hauta and John P. Ryder are in charge of local arrangements. Announcements of the schedule and call for papers will be mailed to members at a later date.

AVIAN FAMILY-GROUP NAMES

The Standing Committee on Ornithological Nomenclature of the International Ornithological Committee has prepared a list of established names of avian family-group taxa (subtribes to superfamilies) and their synonyms as the first step in the process of writing an application to the International Commission on Zoological Nomenclature to stabilize use of these names. The SCON wishes to obtain input from all interested ornithologists and zoologists on this list of avian family-group names and its proposed application to the ICZN. The list is available to all interested ornithologists and zoologists who are willing to examine