

ORNITHOLOGICAL LITERATURE

CONSERVATION OF NEW WORLD PARROTS. By Roger F. Pasquier (ed.). Smithsonian Institution Press, 1981:485 pp., text figs. and tables. \$14.00.—The Parrot Working Group of the International Council for Bird Preservation was formed in Canberra, Australia, in 1974. In view of the particular concern for parrots of the Caribbean, their second meeting, in 1980, was held on St. Lucia. The proceedings of this assembly are published in this volume. As such, the book is not only a comprehensive and up-to-date account of the status of many New World parrot species, but includes a fair amount of information on parrot aviculture, natural history, and behavior.

From one paper after another there emerges a rather grim outlook for many New World parrot populations. Most of their problems are those common to wildlife in rainforest ecosystems. Habitat destruction due to human influences has greatly accelerated in recent years. Agricultural and mineral concerns have subjected vast areas to slash and burn techniques, destroying food sources and suitable nesting sites. The latter is particularly a problem for parrots, since many species require a relatively large core area and nest in large, hollow trees. Also, farmers in these areas shoot parrots as indiscriminately as they do any animal that appears to take a toll on their crops.

But parrots have another problem, unique to their order, and possibly as devastating as any of these habitat alterations. They hold an incredible, indeed (in view of current parrot prices) irrational appeal to humans. The occasional pet parrot kept in areas within their normal range has probably never significantly decreased their populations, but the current pet trade is harvesting and exporting them in such numbers that populations are being seriously threatened. Moreover, their methods of collecting and maintaining the birds are so sloppy that a large percentage never make it to market.

It is pointed out in the book that many of these countries have passed laws forbidding collection or export of parrots. Enforcement of these laws, however, is another matter. It is not at all uncommon for a parrot to retail in the United States for over \$2000. While this hardly rivals the profits to be had in drugs, it's not bad, and the penalties for getting caught are proportionately lower. Consider, for example, the profit to be made on a bird such as the Indigo Macaw (*Anodorhynchus leari*), whose home was recently discovered by Helmut Sick. His reluctance to reveal the locality was overcome by his faith in the Brazilian government's ability to enforce laws forbidding the collection of this bird in at least part of its range. Although I hope he is correct, I suspect he may have created a serious problem for this previously undisturbed species.

The very fact that this meeting took place, and that this book was published does provide a positive note for parrot conservation. Obviously some people are concerned, and attempts are being made to correct bad situations, as well as to prevent similar problems in less perturbed areas. Numerous breeding programs are described. These are not aimed at satisfying pet hunters. The general tone of the papers given here deplores the keeping of parrots for reasons other than reestablishment of wild populations. The accounts of natural history and ecology are aimed at providing information to help such breeding programs. Finally, and ironically, I believe that the outbreak of Newcastle disease in the United States during the last decade may ultimately be beneficial to parrots, owing to the resulting import regulations and their enforcement.

From the standpoint of biology libraries the book has two shortcomings. One is its very specialized nature. Even within the realm of ornithology it will probably have limited appeal. In fact, even some parrot specialists might not consider it essential for their libraries. The other problem is its very timely nature. The status of these populations is dynamic, and what

is useful information at this time will require updating a decade from now. Thus, I recommend this book for libraries of large institutions, with ample book-purchasing budgets, and for libraries of individuals interested in this particular problem at this particular time.—
SUSAN L. BERMAN.

ANIMAL MIGRATION. Society for Experimental Biology Seminar Series 13. By D. J. Aidley (ed.). Cambridge University Press, Cambridge, United Kingdom, 1981:264 pp., 92 numbered text figures, 19 tables. \$39.95 (hard cover), \$19.95 (paper cover).—This volume is one of the few that attempts to tie together the wide variety of current studies on animal migration. It contains the proceedings of the 1979 Society for Experimental Biology Seminar Series Symposium on Animal Migration. As an introductory review for the general biologist it is not a highly technical work, and is designed to highlight the wide range of contemporary studies in animal migration without being comprehensive. A research-oriented approach is used to present ideas, empirical evidence, and possible directions for future research. Ecological aspects of migration are stressed rather than the more common behavioral treatments.

There are 12 chapters, each by a different contributor. The first chapter, by D. J. Aidley, discusses some of the questions, problems, and hypotheses in the study of animal migration. The remaining chapters discuss the migratory movements of insects, fishes, birds, whales, and humans. One of the outstanding contributions, and one of his last, is that of the late W. T. Keeton, who provides a superb explanation of the contemporary hypotheses and research techniques of avian orientational and navigational mechanisms. He presents evidence for both the more familiar orientation cues (e.g., celestial), and the unusual sensory capabilities of birds, including detection of barometric pressure, infrasound, polarized light, ultraviolet light, and olfactory cues, and possible detection of magnetic cues and gravity variations. Keeton also discusses conflicts within the field of avian orientation and navigation.

Contributions from T. Alerstam, G. P. Arnold, F. R. Harden Jones, and T. R. E. Southwood are particularly noteworthy. Alerstam examines "The course and timing of bird migration," emphasizing avian migratory strategies for dealing with various weather parameters. Though this chapter is technical, Alerstam integrates his topic in a clear and concise manner.

G. P. Arnold and F. R. Harden Jones deal with the movements of fish. Arnold presents a hypothesis for the migratory movements of North Sea plaice that relies on differential drift in tidal currents, termed "selective tidal stream transport." Harden Jones also discusses this concept, as well as pelagic fish migration based on ocean current transport and olfactory navigation.

T. R. E. Southwood's chapter, "Ecological aspects of insect migration," though short, is particularly interesting in that it presents animal migration from the insect's perspective. Southwood compares migratory strategies between phyla, demonstrating major similarities as well as differences. It is perhaps this chapter, more than any other, that unifies the book.

Though the principal emphasis of the work is on basic research, two chapters discuss applied aspects of animal migration. R. J. V. Joyce presents an insect pest control management scheme that takes into account insect mobility, resulting in increased economy of human resources, control of insects, and decreased crop damage. G. V. T. Mathews discusses international policy on migrant bird conservation.

In the final chapter, "Man and other vertebrates: a common perspective to migration and navigation," R. R. Baker presents the new and highly controversial hypotheses that (1) migratory behavior is an extension of exploratory behavior, and (2) humans are able to sense and use the geomagnetic field for orientation.

Of the 12 authors contributing to this volume, 10 were from the United Kingdom; thus, the scope of ideas and supporting references are slightly narrower than if more scientists had been invited from other countries. Overall, however, this book has attained its goal of providing an overview of animal migration for the general biologist. The synthesis of material makes a positive contribution to the scientific literature, and I recommend this volume to any biologist interested in animal migration.—HUGH McISAAC.

OSMOREGULATION IN BIRDS. By Erik Skadhauge. Springer-Verlag, Berlin, West Germany, 1981:x + 203 pp., a few black-and-white photos and drawings, numerous figs. and tables. \$52.50 (cloth).—This is Volume 12 in the series *Zoophysiology* (formerly *Zoophysiology and Ecology*) from Springer-Verlag. Erik Skadhauge has prepared a thoroughly physiological, organ-based treatment of osmoregulatory processes in birds. Each chapter treats a separate organ and its function (although separate chapters are devoted to Uptake from the Gut and Function of the Cloaca); additional chapters are devoted to the interactions of excretory organs, a survey of hormones and osmoregulation, and the special problems of desert life, migration, and egg-laying.

Generally, each chapter (and some major passages) is introduced with a precis of highlights to come, and a short summary statement completes the chapter. Overall treatment is thorough, well-balanced and properly documented by adequate citation. In many areas where controversy or inadequate literature exist, shortcomings are clearly outlined and analyzed, and directions for future research are presented. Many chapters contain large tables which summarize pertinent data; figures reproduced from the original literature are used abundantly. A nice touch appears at the end of the last chapter—notes added in proof are included for each chapter, with citations to papers published up to the end of 1980. The sources of these papers are included at the end of the extensive list of references. The volume also contains a systematic and species index, and a skimpy subject index.

Although the book is expensive, it is well- and attractively-made. However, numerous spelling or typographic errors prove irksome and detract from the otherwise high quality of the book. For no apparent reason, two types of paper have been used for the pages.

Overall, this volume represents a valuable source book for anyone interested in comparative aspects of avian osmoregulation, but requires a reasonable grounding in animal physiology to be fully accessible to the reader. I recommend it to researchers interested in avian physiology, and to graduate students already versed in comparative physiology.—ROGER A. McNABB.

THE WADING BIRDS OF NORTH AMERICA (NORTH OF MEXICO). By Allan W. Eckert. Illus. by Karl Karalus. Doubleday & Co., Inc., Garden City, New York, 1981:252 pp., 32 color plates and species sketches. \$49.95.—As children we are taught, “If you have nothing nice to say, don’t say anything at all.” This maxim was probably not meant for book reviewers, who also have responsibilities to notify or warn potential purchasers. But it portends a short review to come. If you typically read only the first paragraph of reviews, you just saved \$49.95.

The book’s intended purpose is hard to discern (e.g., no mention of it in the Introduction). Pretentious dust-jacket claims notwithstanding, this is not “a definitive work on the wading birds.” It does not extend our knowledge of the species covered, nor does it unite disparate literature in new and useful ways. On the other hand, it is large, colorful, and expensive, all of which suggest that it was intended as a coffee-table picture book. This impression is not undermined by the Introduction, which is devoted to a tedious disclaimer of responsibility

for why each subspecies was included or not. The Introduction also contains a few line drawings to orient the reader morphologically to such features as "toes," "rump," and "back" of a night-heron. It is obvious that the book is not aimed at professional or sophisticated amateur ornithologists.

The great bulk of the book (96% of the pages) consists of the individual subspecies accounts, which are followed by a pathetic three-page Bibliography and an Index. The taxonomic coverage is curious, including all U.S. and Canadian birds that wade except for those belonging to the Charadriiformes. I have never quite understood how this "American" definition of wading bird came to be so different from the "British" usage (which refers only to sandpipers et al.), but here it is again. This book has all our herons, ibises, cranes, rails, gallinules, and assorted relatives (spoonbill, stork, limpkin). Within families, taxonomic order is not followed: the book starts with *Butorides*, then *Nycticorax*, *Nyctanassa*, *Ardea*, *Florida*, etc.

Each subspecies is treated with some or all of the following separate headings: common name; scientific name; other or colloquial names; shape at rest and in flight; length and wingspan; beak; legs, feet, and claws; crests, plumage, annual molt; voice; sexual differences in size, coloration, and voice; coloration and markings—adult; coloration and markings—juvenile; general habits and characteristics; habitat and roosting; enemies and defenses; food and feeding habits; courtship and mating; nest and nesting habits; eggs and incubation; young; migration; and economic influence. This is a lot of information, but there are so many inaccuracies (contra the dust-jacket promise of "scientifically accurate descriptions") that the novel tidbits, which are extremely scarce anyway, are hard to trust. If many of the facts I know are misrepresented, how can I believe the new material? (Especially when none of it is cross-referenced. . . .)

For example of content and tone, I quote from the description of Eastern Green Heron courtship: "*Butorides striatus virescens* will prance and dance in the most outlandish manner at times Most often it appears to be doing this for its own amusement, but such is not the case A fascinating display, but oddly graceless and appearing rather awkward and ridiculous" This, the only display described, bears no resemblance to any I have seen in the field nor to the many analyzed in detail by Andrew J. Meyerriecks, whose classic ethogram (Nuttall Ornithol. Publ. No. 2, 1960) of Green Heron courtship is a cornerstone of the heron literature. This makes Eckert's next claim, that "other courtship activities are not well documented," even more revealing. The complete neglect of Meyerriecks' many heron papers clearly suggests that the author did not do his homework.

The lack of documentation for facts makes the whole book useless as a reference. The reader is supplied with quantitative nonsense, such as a breakdown of Green Heron diet as 40% fish, 30% insect, 24% crustacean, and 6% miscellaneous. Was this from one bird? Many stomachs? Over the whole range? But the author goes on to assume that Green Herons exert a significant effect on reducing populations of harmful insects (apparently from these diet data alone) in the Economic Influence section.

I think it safe to say that the two-decades-old Handbook of North American Birds, Vol. I (R. S. Palmer, ed., 1960) contains all the reliable information found in this book and is much more usefully documented.

The artwork, by Karl E. Karalus, is unremarkable. The dust-jacket's promise of perfect accuracy in all aspects is violated early and often (e.g., the Reddish Egret (*Egretta rufescens*) on Plate IX seems to have cherry-flavored neck plumage. The postures chosen are not interesting—e.g., virtually all are drawn in profile—and the colors are occasionally garish (e.g., the pink used for the flamingos). In the keenly competitive world of bird illustration, this book offers nothing unique.

In summary, I cannot recommend anyone spending \$50 for this book. It is singularly

unlikely to live up to the dust-jacket's prediction that it "will soon become a treasured volume in the libraries of ornithologists and bird fanciers everywhere."—DOUGLAS W. MOCK.

BEHAVIOR OF MARINE ANIMALS, CURRENT PERSPECTIVES IN RESEARCH, VOLUME 4: MARINE BIRDS. By J. Burger, B. L. Olla, and H. E. Winn (eds.). Plenum Press, New York, New York, 1980:xvii + 515 pp., 78 figs., 47 tables, 2 appendices. \$45.00.—This informative, loosely-knit flock of papers on the behavior and ecology of marine birds offers a multicolored view of these often dull-plumaged creatures. R. G. B. Brown begins with a chapter on the marine, non-breeding lives of these primarily terrestrial-nesting, colonial species. Sometimes effortlessly, sometimes laboriously, we then work our way through 10 additional chapters, which range widely in tone and substance from J. P. Ryder's terse, factual review of the influence of age on breeding biology to G. L. Hunt, Jr.'s, easy-reading and thought-provoking, theoretical discussion of mate selection and mating systems. B. M. Wenzel provides a valiant, yet frequently repetitive, effort to put our scanty knowledge of seabird chemoreception into a behavior-ecology perspective. F. G. Buckley and P. A. Buckley present a thorough review of habitat selection replete with something often needed in colonial bird research: rigorous definitions of terms. Definitions also highlight M. Gochfeld's comprehensive, occasionally redundant, mix of rigorous methodology, weak data (his own) and interesting theory on reproductive synchrony.

You can almost see a twinkle in the author's eye when you read C. G. Beer's articulate discourse on communication behavior and realize that his suggestion regarding animal cognition may be heretical to many humans. The twinkle may not be there, but R. M. Evans' comprehensive review of behavior development from an ecological viewpoint is nicely organized and to the point. Next, W. A. Montevocchi and J. M. Porter give an original account of parental feeding behavior by Northern Gannets (*Sula bassanus*) but unfortunately they fail to relate these data to theoretical questions as implied by the words "parental investments" in their title. A vast amount of information and erection of a conceptual framework stand out in J. Burger's very interesting, yet exceedingly long, treatment of fledgling independence and parental care. The book is capped by W. E. Southern's somewhat defensive, albeit knowledgeable, review of the distribution and orientation behavior of North American gulls.

Generally, this volume is a useful reference which provides valuable overviews of some major topics in seabird research. On the other hand, the different writing styles of the authors, the broad spectrum of approaches (e.g., review, theory, original data) and the endlessness of some chapters make the book seem unorganized and very tortuous reading as a whole. This appears to reflect a lack of constraints on authors which is further emphasized by the apparent absence of specific formats for the presentation of scientific names and citations as well as the lack of citations for statements that would normally require them. Typographical errors, including apparently missing chunks of text and inclusion of unnecessary and poor photographs, also suggest uncritical or limited editing. Although I would not call this book "invaluable" as the overleaf advertizes, I would recommend it to those who investigate the fascinating lives of marine birds.—PETER M. FETTEROLF.

SAOS CHECKLIST OF SOUTHERN AFRICAN BIRDS. By P. A. Clancey, (ed.). South African Ornithological Society, Pretoria, South Africa, 1980:xiii + 325 pp., 26 maps. R15.—This checklist is the second edition of the South African Ornithological Society's official list of the birds of southern Africa, and appears only 11 years after the first edition. The reasons

for publishing this revised work so soon include: a need "to make available in a readily accessible form the large volume of recent systematic research, and, secondly, the amount of revisionary work which would have been required to update and correct the first edition was such that . . . an entirely new S.A.O.S. Checklist would in the end be simpler and more satisfactory."

The text covers Namibia, Botswana, Zimbabwe, Mozambique south of the Zambezi River, the Republic of South Africa, Lesotho, Swaziland, and their territorial waters. The nomenclature adheres to the principles of that laid down by the International Code of Nomenclature, 1961, and the systematic order follows Wetmore (1961), with some minor alterations "calculated to accommodate more recent thinking on the familial status of some taxa." This is basically a conservative checklist with few, if any, novel ideas set forth that would "disturb the overriding requirements of stability." However, the editor has not necessarily followed Peters' Checklist of the Birds of the World, e.g., *Andropadus* (Pycnonotidae) is retained.

The checklist includes all species and subspecies in southern Africa and gives the distribution of each. Frequently for subspecies no indication is given as to whether breeding, wintering or year-round range is being considered. This lack of specification of kind of range may simply be a reflection of our ignorance of specific natural history. Several distribution maps have been included to exemplify the range of the polytypic species. However, there is no explanation as to why maps are used for some species and not for others. A few of the maps are of sub-standard quality as portions look faded, with a concomitant loss of detail. The original reference is supplied for each family, genus, and subspecies.

A "Hypothetical List" has been included comprizing "species claimed for the southern African list solely on the basis of a sight record, unsupported by any unequivocal corroborative evidence, such as a clear photograph taken at the time, feathers, etc." A catalogue of "Fossil Records" at the end of the book tabulates all species now extinct in the region but known from fossil material found there.

An important feature of this work is the index to genera and to the English names used.

For the most part, this checklist has been very well compiled, and is a must for anyone interested in the most recent distributional and taxonomic account of the birds of southern Africa.—WILLIE HIM.

ANNOTATED CHECKLIST OF THE BIRDS OF ARIZONA, 2nd edition. By Gale Monson and Allan R. Phillips. University of Arizona Press, Tucson, Arizona, 1981:xxxi + 240 pp., 6 maps, paper cover. \$5.95.—The status and distribution of 475 species of birds in Arizona are summarized in detail, enabling observers to more accurately identify birds seen in the field. This book, which is of a convenient size to carry in the field, is meant to be used in conjunction with a standard field guide. It does not contain illustrations of birds, but once they have been tentatively identified the detailed distributional and ecological information in this book will help to confirm identification, and should aid in compiling new information about each species' range and status. Every state should have a book like this.—R.J.R.

BIRDS OF OAK HAMMOCK MARSH WILDLIFE MANAGEMENT AREA. By Kenneth A. Gardner. Manitoba Dept. Natural Resources, Winnipeg, Manitoba, 1981:172 pp., 14 pp. of color plates, numerous black-and-white photos, 3 maps, paper cover. \$10.50 (Canadian).—This attractively printed book presents accounts of the distribution, status, and breeding of the birds of the area. Order from the Manitoba Museum of Man and Nature, Gift Shop, 190 Rupert Ave., Winnipeg, Manitoba R3B 0N2, Canada.—R.J.R.

BIRDS OF CATTARAUGUS COUNTY NEW YORK. By Stephen W. Eaton. Bulletin of the Buffalo Society of Natural Sciences, Vol. 29, 1981:iv + 91 pp., 1 color plate, 4 maps, paper cover. \$3.95.—The status and distribution of 262 species are reviewed for this county in western New York state. Most of the text is devoted to species accounts, but there are also sections on the geological and ecological conditions of the area. This book will be of primary interest to field observers in the region. Order from Gift Shop, Buffalo Museum of Science, Humboldt Parkway, Buffalo, New York 14211. Add \$1.00 postage and handling. New York state residents add 7% sales tax.—R.J.R.

ALBERTA NATURALIST, SPECIAL ISSUE NO. 1. By Martin K. McNicholl (ed.). Federation of Alberta Naturalists, 1981:iv + 152 pp., numerous black-and-white photos, paper cover. \$7.00 (Canadian). **ALBERTA NATURALIST, SPECIAL ISSUE NO. 2.** By Martin K. McNicholl (ed.). Federation of Alberta Naturalists, 1981:73 pp., numerous black-and-white photos, drawings, and maps; paper cover. \$3.50 (Canadian).—The first of these publications contains a number of articles by different authors on the general topic of "The History of the Federation of Alberta Naturalists and its Corporate Member Clubs." The second is similarly organized around the subject of "Bird Banding in Alberta." They may be ordered from the Federation of Alberta Naturalists, Box 1472, Edmonton, Alberta T5J 2N5, Canada.—R.J.R.

PHEASANTS, THEIR BREEDING AND MANAGEMENT. By K. C. R. Howman. K & R Books Ltd., Edlington, Lincolnshire, United Kingdom, 1979:117 pp., numerous color plates and black-and-white figs. £4.75. **QUAIL, THEIR BREEDING AND MANAGEMENT.** By G. E. S. Robbins. World Pheasant Association, 1 Harraton Square, Church Lane, Exning, Suffolk CB8 7HA, United Kingdom, 1981:108 pp., numerous color and black-and-white figs. £6.95.—These attractively printed books aim to provide basic information on avicultural practices. They are similarly organized, including sections on aviaries, management, and husbandry; feeding, choice of species, breeding seasons, and importation. Each also includes a section reviewing the characteristics of the various species, including a collection of attractive color photographs or paintings of these often spectacular birds. There is also a brief discussion of the World Pheasant Association, which promotes the study and breeding of these forms.—R.J.R.

AN ANNOTATED BIBLIOGRAPHY OF THE RED-COCKADED WOODPECKER. By Jerome A. Jackson. Savannah River Ecology Laboratory, P.O. Drawer E, Aiken, South Carolina, 1981:290 pp. Price not given.—One-thousand-seven-hundred-ninety references are listed alphabetically by author and cross-referenced by subject and locality.—R.J.R.