

## REVIEWS

**Handbook of North American birds. Vol. 1. Loons through flamingos.**—Ralph S. Palmer, editor. 1962. New Haven and London, Yale University Press. 7 × 10 in., viii + 568 pp., 6 color plates + many figures and maps in text. \$15.00 (5 guineas net).—The first volume of Bent's *Life histories of North American birds*, starting with the grebes and loons, appeared in 1919 (the final volume, ending with the sparrows, is in manuscript), and the first volume of Ridgway's *Birds of North and Middle America*, starting with the sparrows, appeared in 1901 (the final volume, ending with the grebes and loons, etc., has not yet been published and may never be done). Thus the present volume fills a very important gap in our literature, summarizing life history data for groups for which the best previous summary is more than 30 years old, and descriptive data which are summarized only in still older volumes. Thus the "Handbook" (hereinafter HONAB for short) will be the standard reference work, the starting point, for much future bird study in North America.

I've put handbook in quotes because the word is not used in the sense of Webster (a reference book to be carried in the hand), but in the German sense, as in Kùken-thal's *Handbuch der Zoologie*. But the size is necessary if the *Handbook of North American birds* is to contain the material necessary to make it a definitive contribution to ornithological literature.

For years the A. O. U. had talked about a North American *Handbook* along the lines of the five-volume *The handbook of British birds* by Witherby *et al.* Finally in 1950 the Council of the A. O. U. asked Dr. Ralph S. Palmer of the New York State Museum at Albany to be Editor-in-Chief of this project with the objective of presenting "... with reasonable completeness, but in telegraphic style, our knowledge of each of the more than 600 species occurring in the A. O. U. Check-list area (omitting Baja California)," in five volumes of not more than 550 pages each (*Auk*, 68: 384-385, 1951).

Dr. Palmer, well known for his books *A behavior study of the Common Tern ...*, *Maine birds*, and *The mammal guide: Mammals of North America ...* (which last he illustrated as well as wrote), then began his struggle to get contributors to agree to do certain sections and to get the promised manuscript from them. Finally, 26 persons are listed as having prepared signed contributions of text or illustration.

In addition to the A. O. U., the New York State Museum and Science Service co-sponsored the project, five friends of the A. O. U. made major financial contributions, and the publication was aided by the Louis Stern Memorial Fund. The volunteer help and the institutional and personal aid has made possible the moderate price, by modern standards, of \$15.00 for this volume.

This first volume covers the first 15 families of the A. O. U. Check-List, loons, grebes, albatrosses, petrels etc., storm petrels, tropic birds, pelicans, gannets etc., cormorants, anhingas, frigate birds, herons etc., storks, ibises etc., and flamingoes. In all, 81 species are treated, leaving out a few A. O. U. Check-list species (those of Baja California only); and far off-shore strays. No one author is responsible for a species write-up. Rather, each contributor did a special section (distribution, food, migration, etc.) for a number of species. The authors wrote fully on their themes and then the manuscripts were tailored by Palmer to allowable length. This volume is the result of cutting and condensing more than 2,000 manuscript pages, and the consistency and continuity attained, considering the different styles and backgrounds of the authors involved, is remarkable. But Palmer did more than edit. Many sec-

tions, throughout, were written by him, and he also drew layouts of all text figures (except maps) and the six color plates, and sent these plus photographs, etc., to the artists as a guide to specifications. The six color plates of birds help to liven up the book; the many black and white text figures add another dimension to the volume, each usually depicting a species in various poses (for instance, the Green Heron figure shows eight poses; that of the Common Loon shows five poses and none the usual one). The maps, on various projections and scales, one per species, in general take the place of text in presenting the range of the species, usually with subspecies' ranges marked, breeding and wintering ranges, post-breeding dispersal and stragglers, and occasionally a question mark which may be referred to in the supplementary text under "Distribution."

The first 17 pages are devoted mostly to definitions and explanations, diagrams of parts of a bird, and a color chart prepared under the supervision of J. Villalobos, originator of the Villalobos system. The body of the text, pp. 20-550, is occupied by species accounts; pp. 551-561 by a list of literature cited in a condensed form which allows an amazing number of references to be presented. The index, pp. 563-567, is to the scientific names, of genera, species, and subspecies, as well as to common names. There are no keys to identification.

The orders, families, and genera are briefly, or very briefly, diagnosed. Each species account has a heading with the vernacular name of the species in boldface type and below it the species name in italics. Then comes a paragraph or more on some of the diagnostic features of the species, including wing spread and weight.

The rest of the text for each species has side headings to aid in finding material, the main ones being Description (with subheadings including measurements, weight, hybrids, geographical variation), Subspecies, Field Identification, Voice, Habitat, Distribution (to supplement map), Migration, Banding Status (with number banded and recoveries), Reproduction (with many subheadings including territory, pair-formation, pair bond, copulation, hatching success, age at initial flight, as well as more usual ones), Survival, Habits, and Food. This will give an idea of the many points that are discussed and the ease with which desired data may be found.

Naturally the amount of data given under each species and under the same heading for different species varies with the amount that is known. Some of the extralimital species that have only strayed here are presented in synoptic form with a reference. Some types of data are excluded such as natural longevity records.

In addition to the expected type of data, one gets such items as: the Common Loon may dive to 200 feet and dives average 43 seconds in duration; Yellow-billed Loons accompany the souls of dead Eskimos on their journeys; Red-throated Loons perform a "plesiosaur race" as part of their summer behavior pattern; Red-necked Grebes may accomplish some of their southward migration by swimming at the rate of 2 kilometers per hour; Brown Pelicans' wing beats average 2.6 per second; Red-footed Boobies may roost at sea on floating turtles' backs, and there may be 126.7 nests of the boobies per acre; Great Cormorants bring water to the young and pour it in a small stream over the chick, and these cormorants may catch swallows flying low over the water; 74 Green Heron's eggs averaged 17.42 grams in weight; the Black-crowned Night Heron is the only bird elevated to the peerage in Japan (!); some Great Blue Herons' eggs had a bicone of  $-0.085$  and an asymmetry of  $+0.067$ .

The concept of the species as one unit, as expressed by one main species heading (instead of treatment by subspecies) is an admirable one. Ideally, what is true of the species is stated and then variations within this for populations pointed out, and aberrations mentioned. This is the approach in the 1957 A. O. U. Check-list (a

change from the 1931 edition), in which the range of the species is given and then the range of the subspecies within that. However, it is interesting to see how quickly this ideal has broken down in its application in HONAB. In polytypic species, the description (in effect, diagnosis, see *Handbook*, p. 2) is for a subspecies and then other subspecies are compared with it. The departure from the ideal is still greater under some sections on habits; for example, "Reproduction" of the Green Heron is based mainly on observations in one small area in western Long Island in New York state.

There tends to be a lack of synthesis. For example, the average size of eggs of several Great Blue Heron populations is given, but the average and extremes for the species are not given. Despite the very interesting treatment of clutch size and breeding seasons correlated with geography for some species, there may be no statement of the condition in the species as a whole, although the data presumably can be quarried from the text.

Also, there are times when it seems that a preoccupation with detail, especially detail of breeding behavior, has replaced certain basic data such as actual, clear descriptions of nests. For example, a page headed "Territory" is devoted to notes on nest building with such data as ". . . both stood quietly together in the nest for 11 min., then the male gathered 4 more sticks in 9 min., when observations were ended." Further, in some sections, such as "Pair-formation," one sometimes wishes for a synopsis or guide to what is going on. The wealth of detail on particular individual birds or areas, rather than summaries for the species, also makes comparisons from species to species more difficult.

The attention to detail varies greatly. That devoted to descriptions of eggs, for example, is usually considerable and presumably original, especially the numerical data. (But these do not always appear, even when specimens were available.) On the other hand, the treatment of some types of data is less than casual, for instance the measurements of the birds themselves. Surely the size of birds is of fundamental importance, yet frequently the measurements of tail or tarsus, sometimes both, are omitted. In some cases, as with the Great White Heron and the Roseate Spoonbill, the standard measurements of wing, tail, bill, and tarsus are omitted. That this was not accidental is shown by the entry under Roseate Spoonbill, "*Measurements* no data." Yet actually measurements on both heron and spoonbill are available in such standard sources as the British Museum *Catalogue of birds* and in "Baird, Brewer, and Ridgway." Of course, these data may have shortcomings, judging by modern standards, but they are better than none, and that HONAB is not above using such data is shown by measurements for the Glossy Ibis, quoted from Ridgway's *Manual* of 1896, which themselves are taken from an earlier publication. Further, there are many specimens in a number of museums, which could have been measured. I know that some contributors carefully checked complicated plumages and measured the birds they examined, but when I read that only two birds were measured for some species while four or five plumages were outlined (as for the Reddish Egret) I wonder!

The emphasis on reproductive behavior at the expense of habits in general seems unfortunate. After all, in the life of the bird, maintaining the individual is as important as maintaining the species. The discrepancy is well illustrated by one species with more than five pages on "Reproduction," and 15 lines on "Habits." For the Green Heron, nearly seven pages are devoted to reproduction and only five (including map) to all the rest of the species write-up.

In some cases interesting questions about speciation seem to be ignored; e.g., what

are the relationships between the two big loons? Are they ever found nesting in the same area? What happens when the breeding ranges of the Double-crested Cormorant and the Olivaceous (Neotropical of HONAB) Cormorant meet?

To those brought up on Bent, Forbush, Chapman, and Roberts, with their leisurely styles and the vivid word pictures they paint of the bird in action against the background of its daily life and its habitat, there may seem to be something missing in HONAB. The information is probably here but the picture of the whole bird has to be built up from several different sections. However, the telegraphic style allows a great deal of information to be compressed into a small compass, and it should facilitate comparisons from species to species in the particular field in which a student is interested. But there are times when this succinctness is abrogated, as when a half-page section headed "Laying season" starts out "A nest with three eggs was found May 15, 1940, on Snipe Key (Fla.) by Green (1946)."

Little did I think I would have to comment on nomenclature when I picked up HONAB. I think that the changes in names from those used in the 1957 A. O. U. Check-list are ill-advised. Mostly these changes are matters of opinion, we must have an arbitrary standard, and this should remain the Check-list. At least six scientific names used in HONAB differ in greater or lesser degree from those in the Check-list, and a further four species of the Check-list have disappeared as species and reappear in HONAB as subspecies of something else. At least one Check-list name, *Bubulcus ibis*, does not appear as such in HONAB's index. This is all right for the professionals, who expect to have to know one bird by several names, but it is an unnecessary burden even to them, and worse for the amateurs.

The amateur may say "What matter? Let's use vernacular names which are more stable," but we find the situation there even worse. At least 15 vernacular names used in HONAB differ from those in the 1957 Check-list, though some of the names, both vernacular and scientific, agree with the 1931 A. O. U. Check-list. Is this progress?

Some owners of the book may want to do as I did, namely type the 1957 A. O. U. Check-list names on slips of paper and paste them in HONAB opposite the appropriate species headings. Fortunately, there is a white space opposite the name, as if left for just this.

There are some discussions on taxonomy, involving name changes, which hardly seems justified in a volume of this sort. The situation in regard to Wilson's Petrel is fairly clear as outlined here and earlier by Murphy. There is a cline with larger (and darker?) and more migratory birds farther south. Birds from the type locality of *Oceanites oceanicus* are almost exactly intermediate in size, i.e., in the middle of the cline. The 1957 Check-list arbitrarily used the name *oceanicus* for the southern birds. Just as arbitrarily HONAB uses it for the northern birds and juggles names. In another case, the reassignment of the sole United States record of a stray petrel from *Fregetta tropica* to *Fregetta grallaria* on the basis of a hundred-year-old description, postulating wing molt to explain away a discrepancy in wing measurements, hardly seems an advance. Indeed this species could well have been omitted along with some others which were left out.

In nomenclature of another kind, it is pleasant to note that habitat is described in standard, dictionary terms rather than according to anyone's pet system. The naming of colors according to the scheme presented, however, will present some difficulties in future volumes. For instance, there is no "blue," and this term certainly is "meaningful to at least most readers." The new nomenclature for plumages and molts, "alternate" for "breeding" plumage, for example, I have not mastered yet,

and it is interesting to note that someone lost his nerve and labeled two loon pictures "adult winter" and "adult summer." Only time will tell if the new terms will catch on.

Everyone will have ideas as to things to add, and things to change. There are a few errors as there are bound to be in a work of this size. But it must be remembered that if someone else had done the work, there probably would be as many questionable items, but they would be in different places. The fact remains that here we have the life stories of the birds of about the first 15 per cent of the species in the A. O. U. Check-list in unprecedented detail. This is the first volume of what will be a monumental set, and one essential to anyone studying North American birds. We look forward to the early appearance of the following volumes.—A. L. RAND.

**A study of the rare birds of Africa.**—B. P. Hall and R. E. Moreau. 1962. Bulletin of the British Museum (Natural History). Zoology. Vol. 8, No. 7. Pp. 316–378.—Rarity is rigorously defined in this study so that even the Congo Peacock does not qualify. Nevertheless 96 species on mainland Africa are regarded as "rare" and individually discussed. Many of them inhabit patchy mountaintop forest, with estimated total populations of only a few thousand, or in several instances a few hundred, individuals, and even these few in many cases are threatened by destruction of habitat. The authors have analyzed their data very fully. Africa seems to have more rare species than the northern continents: this is attributed to the fact that while tropical habitats have sometimes been greatly modified by geological climatic cycles they are less apt to be wiped out entirely. Several other factors are discussed, for example the frequent difficulty of telling whether rare species are relicts or newly emergent. The authors have set up superspecies with a bold hand and conclude that two of the rare species are of hybrid origin. Their paper is thus of considerable interest to evolutionists as well as ornithologists.—DEAN AMADON.

**Alabama birds.**—Thomas A. Imhof. 1962. University of Alabama Press, University, Alabama. 623 pp., 43 colored pls., 61 photos. \$7.50.—Nine-tenths of this book consists of accounts of the 352 species of birds recorded in Alabama. Each account follows a definite pattern: names, diagnostic marks for identification, a general statement of status in Alabama, habits, range, and finally, detailed notes on occurrence in Alabama. These latter include data on relative abundance and migration dates for each of six physiographic regions of the State. For some species there are maps showing the locations of records. For breeding birds, dates of nesting are presented. Much work was certainly necessary to compile all this information, and it is in these detailed notes that bird students will find the most useful information in the book. Unfortunately the notes on occurrence and breeding have been printed in smaller type than the more general, and less original, parts of the species accounts.

For some species there are notes and maps summarizing the recovery records of banded birds that were either banded or recovered in Alabama. This is a unique feature of a state bird book and a meaningful one, for it forcefully shows that the State is not an isolated cosmos for most birds. Cedar Waxwings, for example, banded in Massachusetts, North Dakota, and California have been recovered in Alabama.

Preceding the species accounts are a general introduction to bird study, and brief discussions of the history of ornithology in Alabama and the physiographic areas of the State.

All of the species of birds recorded in Alabama are portrayed in the 43 plates,

each of which usually includes from 5 to 12 species. Three artists did these, the most attractive of which, by far, is the frontispiece, of a Turkey, by Walter A. Weber. Most are by Richard A. Parks; the remainder, largely waterfowl, are by David C. Hulse. The drawings as a whole do not come up to the standard set by Louis Agassiz Fuertes many years ago. In addition to the plates, there are many photographs, of varying quality, mostly of nests.

The printing of the book is excellent, the binding is good, and there is a detailed index.

What is the function of a state bird book? When the *Birds of New York* and *Birds of Massachusetts* appeared (1910–1929) there were few general works on birds and fewer illustrations, and these thorough and well-illustrated works served a definite purpose. Today there is a wealth, almost a superfluity, of books about birds: field guides, popularizations full of excellent photographs, books on bird biology, etc. Should a state bird book be written and illustrated, after the pattern set by those mentioned, as if it were the only book on birds available to its readers? Several recent state bird books have followed this pattern, including this one. To me, this pattern seems out-dated. The principal value of a state bird book lies in that material which is unique to the state concerned and its bird-life. This does not necessarily mean solely a dry-as-dust listing of species, distributions within the state, dates, and such material. Alabama, for example, has its Dauphin Island with its unusual migrants, and its Black Belt prairie region with its interesting influence on bird distribution. Nor does it mean a book without illustrations; see how much was added to *Florida bird life* by Jaques' painting of White Ibises circling over the Everglades. As for the present book, *Alabama birds* provides a great amount of information on the birds of this State, not always in the best style, but nonetheless made available. The author deserves credit for assembling it. Much of the other material could well have been omitted, being easily found in other books.—  
JAMES T. TANNER.

**Galapagos—The Noah's Ark of the Pacific.**—Irenäus Eibl-Eibesfeldt. 1961. Doubleday and Company, Inc., Garden City, New York. 192 pp., 4 col. (on endpapers) and 28 black and white photos. \$3.95.—Popular scientific writings about the Galápagos are not new, the most famous being Charles Darwin's *Journal of researches* (1845) and William Beebe's *Galapagos: World's end* (1924). This latest little book (translated from the German edition by A. H. Broderick) is a light-hearted travelog, written in an easy-reading conversational style, with some first-hand impressions of sea-lions, fur-seals, tortoises, lava lizards, marine iguanas, flightless cormorants, boobies, frigate-birds, albatross, and finches, plus some descriptions of skin-diving for sharks and a trek into the crater of a dormant volcano. Eibl visited the Galápagos in 1954 with Dr. Hans Hass and in 1957 with the UNESCO-Life reconnaissance.

Because of the author's professional background (ethologist with the Max Planck Institute for Behavioral Physiology), it is not surprising that the most original and entertaining chapters are those dealing with social behavior of iguanas, sea-lions, and fishes.

This book was not written for the serious student of ornithology. One soon discovers, for example, that the discussion of Darwin's finches mirrors in surprising detail David Lack's famous book, and this is even more evident in the German edition with its different illustrations. The one original observation on the finches seems to be that of a "small *Geospiza*" pecking at the nostrils and corners of the

mouth of a tortoise (p. 45). Eibl comments that the tortoise "seemed to like the treatment" for "she was obviously accustomed to being cleaned by finches." This kind of remark reappears throughout the book. The author describes "pleasurable hours" watching *Geospiza difficilis* on Indefatigable Island. Clearly, this is in error since the species has been extinct on this island for at least 20 years! Further, Eibl mistakenly attributes to Lack the statement that the Galápagos finches "pair permanently."

That the author is not at home with the literature of the Galápagos is evidenced by the following remarks about the penguin: the smallest members of its tribe (pp. 85, 145); the Magellan penguin is the most closely related species (p. 81; cf. Murphy, *Oceanic birds of South America*, 1936: 467); R. Freund discovered and photographed the first young of the Galápagos penguin (p. 83; cf. Couffer, *Condor*, 1957: 399). The notion (p. 152) that the Black-necked Stilt is not a year-'round resident or that it does not breed on Galápagos is completely false. Concerning avian vocalization, Eibl states (p. 34) that "the song of a male bird is nothing else but a steadily repeated warning, 'Here I am, this is my property, no one else has any business here.'" To be sure, even for the Oscines, this is a rather restricted definition of the function of primary song. Concerning the tameness of the finches in the presence of man, Eibl concludes that Galápagos are "isles without fear, and a retreat where animals forgot their shyness." However, it should be noted that many of the birds show a strong fear reaction to their natural predators, including the hawk (*Buteo*), the Short-eared Owl (*Asio*), and the snake (*Dromicus*). Charles Darwin was careful to point out that the reaction of wild birds to man is a particular behavior not dependent on any general degree of caution arising from other sources of danger.

The author often describes animal behavior in rather sensuous terms. For example, he concludes his account of the mutual grooming of two penguins by saying, "only a pair of lovers could be so tender to each other." He describes a young sea-lion thus: "Only an especially greedy little fellow attempted to suck the nipples of someone else's mother for she held them out so temptingly." He observed a female sea-lion which "yawned lustily."

Eibl perpetuates the erroneous claim of Beebe that his group was first to discover "Darwin Bay" and the "Crater Lake" on Tower Island in 1923. Slevin (*Occas. Papers California Acad. Sci.*, no. 17, p. 146) has already noted that these two locations were visited by the renowned Galápagos explorer, Rollo Beck, in 1902 and 1906. Several false claims of "firsts" for Galápagos are made. For example, on page 65 the author states that no one "had ever explored these slopes" of Narborough Island previous to his 1954 visit, despite published reports of early collectors like Snodgrass and Heller and the California Academy group, in 1899 and 1906, respectively.

To judge solely from the information given by Eibl in the often repeated first person singular, and from misleading statements provided by the publisher in the preface and on the dust jacket, one might get the mistaken impression that our debt of gratitude for the recent establishment of a research station on Galápagos and for legal protection of the biota by the Ecuadorian Government, is largely due to him. The historical facts of the case, overlooked by the author, will show that the first and most crucial protective codes were legislated in 1934 (six years after the birth of the author) and championed in the United States by the late Robert T. Moore and Harry S. Swarth; that in 1946 Harold J. Coolidge recommended to the National Research Council the establishment of a permanent research station in Galá-

pagos, and that in 1958 the 15th International Congress of Zoology unanimously endorsed a similar resolution, which, in 1959, was implemented by the Charles Darwin Foundation for the Galápagos Isles and UNESCO.

Although this book may have popular appeal to the layman, it should not be relied upon as a scientific publication without due caution, in view of its numerous factual errors and its misrepresentation of the author's role in the development of conservation in Galápagos.—ROBERT I. BOWMAN.

**Prairie spring.**—12" LP recording. \$5.95. Vol. 7 of the *Sounds of Nature* series, produced in association with the Laboratory of Ornithology at Cornell University, by William W. H. Gunn for the Federation of Ontario Naturalists, Edwards Gardens, Don Mills, Ontario, Canada (U. S. address: Curtiss and Weir, 54 Priscilla Place, Trumbull, Conn.).—This latest release in the present series is intended as an addition to that group of records characterized as "sound paintings" or "tone poems" and is sure to appeal to the aesthetically inclined naturalist. Sixty-four avian and four mammalian species are presented primarily in sound "habitat groups," such as *Ducks of the Sloughs and Potholes*, *Sage Country*, and *Parklands and Bluffs*. Additional sequences include *Swans in Migration*, Sharp-tailed Grouse on *A Dancing Ground*, Western Meadowlark songs from three localities in *Symbol of the Prairies*, and the vanishing [?] coyote in *Voices from the Past*. A feeling of the vastness of the open prairie is well conveyed throughout, by the sounds from a distance and in the *Prairie Bells* sequence, particularly, in which the bird songs possess a peculiar tinkling quality as also described in an accompanying booklet. The narration, which is casual and held to a minimum, is supplemented by the enclosed booklet which describes each sequence in greater detail. The scientifically oriented audience will find these descriptions of behavioral sequences useful, and will also be pleased with the high technical standard of the production. A handy alphabetical index on the record jacket aids in the speedy location of each species.—JOYCE L. WILDENTHAL.

**How to know the birds. An introduction to bird recognition.** Second edition.—Roger Tory Peterson. Boston, Houghton Mifflin, 1962. Pp. 1-168, 4 col. pls., 72 col. text-figs., many black and white text-figs. (scratch-board).  $7\frac{1}{4} \times 4\frac{1}{2}$  in. \$3.50.—This skillfully organized little book, which first appeared in 1949 (see *Auk*, 67: 114, 1950), provides a sound basis of elementary knowledge for the beginning bird student who, before mastering its contents, might well be somewhat confused by the wealth of detail in the author's more advanced and well known *Field guide* series. This, Houghton Mifflin's second "edition" in hard covers, differs from the first in possessing 72 reprints from the author's contributions to the National Wildlife Federation's familiar stamp series, the work having also appeared in 1957 (without the 4 full-page plates) as a Signet paperback at the minimal cost of 50 cents. Although many birds dealt with have continent-wide distributions, coverage of the more restricted kinds makes this enlightened primer especially pertinent to eastern North America.—ROBERT M. MENGEL.