ORNITHOLOGICAL LITERATURE

TRAVELS AND TRADITIONS OF WATERFOWL. By H. Albert Hochbaum. The University of Minnesota Press, Minneapolis, 1955: 6 4/5 x 10 in., x + 301 pp., 26 figs., 2 tables and numerous sketches. $5.00.

This is the best book on bird migration since Thompson's classic, "Problems of Bird-Migration," published 30 years ago. Although the title suggests that waterfowl are the sole subject of the book, the scope is broader. In fact, the text includes 145 species of birds, which embrace those observed as transients, those studied by other investigators which contribute to the author's thesis, and those studied intimately by the author.

The book is based largely upon observations of waterfowl and other birds in and around the Delta Waterfowl Research Station at the southern end of Lake Manitoba, Canada. In addition to material drawn from years of field observation, the author has used information from 495 papers to provide substance for his interpretation of waterfowl behavior and migration. The contents are presented in three parts: "Travels of Waterfowl," "Migrations of Waterfowl," and "Traditions of Waterfowl."

The background for an understanding of bird migration is developed in Part I. Hochbaum's thesis that birds, particularly waterfowl, orient themselves in flight by means of environmental cues, experience, and memory, is not new, but never before has it been set forth so lucidly and diligently. The author sets the pattern for waterfowl migration over vast distances by discussing the formation of flight trails about the Delta Marsh. There he observed that waterfowl used certain favored routes in flying from one part of the marsh to another. Young ducks, just awing, were believed to have learned these routes from experience in response to the pattern of water, marsh, and field.

Other factors forming a background for bird migration are discussed in chapters dealing with: "The Visual World," "The Function of Memory," "The Aerial Environment," and "Awareness of Time and Space." A most original and interesting series of experiments, made with hooded birds tossed upward into the air, is discussed. These experiments point up the ability of birds to remain aloft in flight even though the ground is invisible. Because the hooded birds failed to orient their flight with wind, unless it blew in strong gusts, it was deduced that migrants without visual contact with the earth could be displaced geographically without being aware of such displacement.

Part II deals with waterfowl in migration as described and evaluated under the following chapter titles: "The Cycle of Migration," "Flight Trails South," "Homeward Migration," "The Classification of Waterfowl Travel," "The Dimensions of Travel," "The Influence of Bad Weather," "Overseas Migration," "Magnetic and Radio Fields," and "Awareness of Direction."

Through these chapters the point is repeatedly made that waterfowl initiate migration under anticyclonic (high pressure) conditions with fair skies and favorable winds. This is not always the case. One of the largest migrations of waterfowl ever recorded in the Mississippi Flyway occurred on October 31-November 2, 1955, with cyclonic (low pressure) conditions which brought a heavy overcast and snow showers to a vast section of the flyway. Moreover, the exodus of large numbers of waterfowl from Illinois has frequently been associated with cyclonic conditions. It is apparent that the effect of anticyclonics and cyclonic conditions upon waterfowl migration need to be studied more fully.

Hochbaum, in summarizing a discussion of waterfowl orientation in migraton, reached this conclusion (p. 212): "The evidence at hand suggests that adult waterfowl travel as experienced birds over a familiar range. By reference to the sun, as to a compass, or to environmental patterns, like those presented by waves, they may hold a direct course for

some distance without visual reference to a familiar landscape. The studies of Matthews and Kramer (yet to be repeated with waterfowl) suggest that the sun may serve as the cue to the direction of home when the bird is displaced from familiar surroundings, but that such awareness hinges on the bird's distance from home."

Part III deals with the meaning of tradition in waterfowl behavior. The chaper titles are: "Biological Traditions," "Building New Traditions," "Traditional and Racial Isolation," and "Broken Traditions."

Both the author and the publisher deserve plaudits for the attractiveness of the book. Hochbaum's writing is colorful and pleasant to read; he is a most literate wildlife writer. In addition, his many excellent drawings portray the living marsh as well as various facets of waterfowl behavior. The paper is of good quality, the printing sharp and clear, and typographical errors negligible.—FRANK C. BELLROSE.

THE ART OF FALCONRY (DE ARTE VENANDI CUM AVIBUS). By Frederick II of Hohenstaufen. Translated and edited by Casey A. Wood and F. Marjorie Fyfe. Reprinted. Charles T. Branford Company, Boston, 1955: 8½ × 11 in., cxii–644 pp. 186 plates (two in color). $20.00.

Often referred to as "the noblest of arts," falconry was born in and emerged from the mists of remote antiquity. It was practiced by and was familiar to the peoples of China, ancient India, Assyria, Sumeria, and the other provinces of Babylonia, Egypt, and Persia thousands of years before Rome, the locale of this book, came into existence.

When the sport reached its climax in the West during the Middle Ages, Frederick II of Hohenstaufen (1194-1250), Holy Roman Emperor, King of Sicily and Jerusalem, became the most brilliant and most versatile exponent of the art of educating birds for the chase. But aside from the fact that he was an expert falconer, he was also an erudite ornithologist, well-informed forester, and an accomplished writer on all natural history subjects. Thus this volume becomes not only a complete manual of instruction on all phases of falconry (it is truly the "falconer's bible") but it takes its place as a scientific monograph of substantial value in ornithology.

Casey Albert Wood, member of the Wilson Ornithological Society from 1924 and elected member of the American Ornithologists' Union from 1921 until his death in 1942, spent his last ten years of work (in collaboration with his niece, F. Marjorie Fyfe) on a reproduction and translation of 'De Arte Venandi cum Avibus', chiefly at Rome and in the Vatican Library. There he made this and other translations from mediaeval Latin, and others from Arabic. That the translators did a magnificent job is evidenced by the prodigious and authoritative book, first appearing in 1943. It is unfortunate that Dr. Wood did not have the rare pleasure of seeing this final product of his monumental undertaking.

The original six books comprising Frederick's treatise on falconry were intended by him to be entirely scientific and general; hence he did not discuss many dramatic details, tell any hunting stories, or make many references to living men or places. They contain no effort to glamorize or romanticize the sport.

The translators adhere precisely to the text as Frederick wrote it, but they do clarify, through the use of copious footnotes, any items which may appear to be unidentifiable, obscure or ambiguous. For example, where the text reads: "In some white species of carrion eaters that have black feathers at the extremities of their wings, the saffron yellow of the mandibles extends to the middle of the head," the footnote explains: "This is the Egyptian carrion vulture (*Neophron percnopterus*)".

Generally there is a remarkable accuracy of the Emperor's descriptions but oversights or inconsistencies, where found, are pointed out. For instance, the text reads: "Certain land birds take their food on the wing, others on the ground. Some (for instance, swallows and siskins) devour their prey in the air." The footnote comments: "Why siskins (*sirone*) are associated (as examples of this habit) with swallows is strange, since the former rarely if ever act in this fashion." And some other intriguing references, which even the translators make no attempt to clarify, present a real challenge to the ornithologists of today.

Book One is an account of the structure and habits of birds with especially strong chapters on plumages, moults, and behaviour (these are invaluable to falconers who might also be serious-minded ornithologists) and migrations. Book Two covers the different kinds of falcons used in hunting, their care, manning, and equipment while Book Three refers to training aspects. Books Four, Five and Six set forth the rudiments of crane hunting with gyrfalcons, heron hawking with the saker falcon, and waterfowl hunting with the peregrine. There are several chapters of appended material, two of which covering the favorite birds of the chase and an annotated roster of birds probably well-known to the Emperor might be styled brief, incomplete, descriptive accounts of northern- and mid-European birds, with a sprinkling of the avifauna of the Near East and Far East.

The book warrants close inspection by all who are interested in any phase of bird study. It is fascinating reading and its excellent printing and illustrations invite an artistic appreciation of its informative contents. Its beauty and richness overcome and outweigh its bulkiness.—BURT L. MONROE, SR.

LOUISIANA BIRDS. By George H. Lowery, Jr. Louisiana State University Press, 1955: 8¾ × 6⅜ in., xxxii + 556 pp., 40 plates (12 in full color) by Robert E. Tucker, 81 photographs, 147 figures in text. $5.00.

The stated purpose of this book is ". . . to introduce the people of Louisiana to the absorbing subject of ornithology." This purpose is reflected in the discussion in the early chapters of such topics as bird habitats in Louisiana; how to identify birds; feathers, plumages and molts; the bird skeleton; migration; the economic value of birds. Each of these chapters develops the topic adequately while being short enough to hold the interest of the non-technical reader. More detail is presented than is found in pocket-size field guides, although the species accounts which follow are brief in comparison to the treatment in conventional state bird books. In keeping with the approach, subspecies are omitted from the discussion.

The text throughout is very readable; while the personal element weights some accounts, it adds to the interest of the book. The account of the author's attempts at removal of English Sparrows should be read by everyone concerned with the control of any vertebrate species. Occasionally the author lapses into more technical language and uses a term the special meaning of which is not defined. One such instance is ". . . selection and defense of territories" on p. 71. At several points Dr. Lowery has taken the opportunity to explain the purposes of the serious student of ornithology; the chapter which discusses the activities of the Louisiana State Museum of Zoology is notable in this respect.

The drawings and paintings by Robert E. Tucker serve adequately as aids to identification, although in every case he has not captured the configurations or attitudes which are helpful in some groups. I feel that he has been most successful with the woodpeckers and finches.

The book has been produced handsomely, a condition which makes the price seem all the more remarkable. In addition to accomplishing his stated purpose, Dr. Lowery has written a book which will be useful to ornithologists beyond the borders of his state.—KEITH L. DIXON

INCUBATION PERIODS THROUGH THE AGES. By Margaret M. Nice. *Centaurus*, 3:311–359, 1954 (International Magazine of the History of Science. Copenhagen. This article printed in English.)

A search in the literature for the origin of erroneous incubation periods still being listed in recent publications took the author back 2300 years in recorded history. (Some evidence of the diligence of her search: 188 references cited and translations of several passages from German, French, Italian, Latin and Greek). The detective-like manner in which this quest was pursued provides a stimulating review, in brief, of the history of biology, particularly ornithology. Much of this material was presented in another article, (Nice, M. M. 1954. Problems of incubation periods in North American birds. *Condor*, 56:173–197)—the present paper emphasizing Old World aspects of the problem. A table of contents and numerous sub-headings make for easy reading. Occasional examples of man's weakness for a good story are offered for the same reason (but not with the same intent) and add a bit of salt. For example, a tale quoted in 1610 as "factual" describes a heat-of-friction method of incubation employed by certain gulls or skuas, these enterprising birds repeatedly dropping eggs from heights above the water until hatched by the heat obtained in falling through the air! Many errors in present-day incubation periods were found to be attributable to "copying of assumptions made by important people." Mrs. Nice concludes that there is need for a little skepticism and less blind reliance on authority—in short, more original investigation is in order.—ROBERT W. NERO.

LIFE HISTORIES OF CENTRAL AMERICAN BIRDS. Families Fringillidae, Thraupidae, Icteridae, Parulidae and Coerebidae. By Alexander F. Skutch. Cooper Ornithological Society, Berkeley, California; Pacific Coast Avifauna Number 31, 1954: 7 x 10 1/2 in., 448 pp., 68 figures, 1 color plate. Illustrated by Don Eckelberry. $10.00

With patience and a keen eye and ear an outstanding field biologist has produced with his fluent pen under expert editorship the most important information on the life cycle of any vertebrate group inhabiting Central America. Criticisms of the book would have to be largely in the nature of differences of opinion and sometimes of interpretation.

After a brief introduction to events leading to the production of this book and to a description of its scope and form, there begin the life histories of 41 species divided by families as follows: Fringillids, 9; tanagers, 13; icterids, 11; warblers, 5; honeycreepers, 3. Each account begins with a few paragraphs describing the species' obvious characteristics, often both generic and specific, its geographic and habitat distribution, and introductory glimpses into interesting and important behavior patterns. In some instances the reader must follow the author through descriptions which build to perfection the proper setting for the bird's activities. These descriptions are not out of place. Only a few readers will have been to Central America and would know about weather and status of vegetation on a Christmas Day which ". . . dawned clear and cloudless, with a brisk, chilling breeze driving down the valley . . . from the high summits of the Cordillera . . . The thickets . . . aglow with a profusion of white, yellow and red blossoms . . ."

Information included under each species is divided into various sections: food, anting,

voice, dominance, nest building, eggs, incubation, nestlings, subsequent broods, and others. For some species plumages and molts are described in considerable detail, including the approximate age of the individual at the time of the first molts and the appearance of the birds during the period of molt. One cannot, and I believe would not wish to, read only the material under certain section headings and expect to have a complete picture of that phase of the bird's habits. The information, taken almost entirely from the author's accumulated field notes, is for each species an informative and easily read account but it contains in one paragraph references to events which occurred over many years and fascinating digressions from the specific subject. These bring clarification of meaning and purpose to the point of discussion. Series of observations and synoptic material on nesting activities are presented in tabular form; but these are at a minimum and serve only to leave intact the story form and to permit clear examination of data for easy analysis. At the end of each species section is a summary; and at the end of each family section appears a summary of information on the family as a whole.

Throughout the book the reader is aware that here are included in meticulous detail discussions of avian ecology, behavior (some of it comparative behavior), and descriptions of the author's techniques in the field, the latter being in the reviewer's opinion of nearly equal importance to the data gathered on the subjects.

References to the literature indicate a thorough knowledge of the field on a world-wide basis; these are listed at the end of the book under "Literature Cited". The index is divided into two sections: the first, a list of common names of the birds; the second, a list of scientific names of birds to which reference is made. Each species is not treated in the same detail, and, of course, the knowledge of no species is complete. The gaps are clear, however, and will serve as focal points for future study.

The photographs are of great value and show careful consideration in choice. The color plate of the Golden-masked, Silver-throated, Blue, and Scarlet-rumped Black Tanagers is a highly pleasing frontispiece. Each of the other species included is illustrated admirably well in black and white by the pen and ink drawings of Don Eckelberry. Usually only a single bird is portrayed but three plumages are illustrated of the Variable Seed-eater, and both male and female of several other birds.

No ornithologist working with birds of the Western Hemisphere should be without access to this monumental work or to the other writings of Alexander Skutch.—DWAIN W. WARNER.

NEW LIFE MEMBER

Fenn M. Holden was awarded a degree in engineering by the University of Michigan in 1908, and he worked subsequently in the automobile business in the Detroit area. Following his retirement in the 1930's, he resumed a boyhood interest in bird watching. Mr. Holden, who spends his summers in Michigan and winters in Florida, has developed a keen interest in photographing birds. He is shown here using a 400 mm. lens.