

## ORNITHOLOGICAL LITERATURE

MY WILDERNESS EAST TO KATAHDIN. By William O. Douglas. Doubleday & Company, Garden City, New York, 1961:  $6\frac{1}{4} \times 9\frac{1}{2}$  in., 190 pp., 16 line drawings by Francis Lee Jaques, end-paper maps. \$4.95.

Mr. Justice Douglas of the United States Supreme Court is one of the few persons prominent in official Washington who undertake personally to focus attention on conservation matters. This, his latest book, is an example of his personal effort to make us appreciate the nation's wealth of natural beauty and resources and at the same time to show how flagrantly we are despoiling our priceless heritage.

The chapters, 11 in all, are accounts of his visits to well-known wilderness areas, some preserved and others needing preservation, in the United States from Wyoming, Colorado, and Arizona eastward. His writing is lacking in verve and humor; his comments on natural history, though frequent and informative, are as dry as an encyclopedia's. But no one reading a chapter will fail to sense his sincerity and dedication. Seldom does he miss the opportunity to point out the plight of an animal species or the fate in store for a wilderness area unless stern measures are taken. The many fine drawings by Mr. Jaques are a great asset to the book, providing the eloquence which the text lacks.—  
OLIN SEWALL PETTINGILL, JR.

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BIRD DOCTOR. By Katherine Tottenham. Thomas Nelson and Sons, Ltd. Edinburgh, 1961.  $5\frac{1}{2} \times 8\frac{1}{4}$  in., vi + 162 pp. 19 photos. \$3.00 (from Thomas Nelson and Sons, New York).

Like many of us, the author of this little book acquired more or less accidentally the reputation of being the local "bird doctor" at her home in North Devon, and soon had a procession of injured and orphaned avian guests, from swans to swifts. Unlike many of us, she has made a lengthy and determined effort to develop satisfactory methods of caring for a variety of patients. She has put in writing here, in a thoroughly readable form, her trial-and-error experiences in attempting "to cure sometimes, to relieve often, to comfort always." By no means a complete handbook, "Bird Doctor" still contains a lot of helpful information, particularly about the care of injured and exhausted seabirds. We learn, for instance, that mishandling of waterbirds may interfere with feather buoyancy, that most deaths in captivity, of rescued, injured birds are from pneumonia, kidney degeneration, or heart disease, that feather shafts make the best splints, that gin is better than brandy for sick birds.

Mrs. Tottenham is best known for her dedicated attempt to find ways of caring for victims of oil pollution and the common "wet-feather" problem of waterbirds in captivity. Some of her ideas, especially on bird behavior and its interpretation, may not have wide acceptance and she may, in a few cases, be accused of generalizing from too few examples. But her humor is delightful (the reader will find amusing her description of the problems with mice in the aviary, and her choice of names for pets—for example, Vermintrude for a House Sparrow). Her patience and ingenuity, and her efforts in the field of conservation, are completely admirable.

The book will be useful to all who must occasionally care for birds in captivity. It would be even more useful if the so-called "Index" had page references rather than being just an alphabetical list of the birds in the text, with scientific names.

It is somewhat revealing to read, in bald sentences, the conservation-minded British viewpoint with regard to the American spray program and the future of our wildlife.—  
SALLY F. HOYT.

THE CLOUD FOREST: A Chronicle of the South American Wilderness. By Peter Matthiessen. The Viking Press, New York, 1961:  $5\frac{3}{4} \times 8\frac{1}{2}$  in., viii + 280 pp., 44 photos. by author, 2 maps in text and other maps on end papers. \$6.50.

This is an adventure book of the highest order and certain to interest naturalists with South America in mind for one of their future expeditions. (Parts of the book were published in *The New Yorker*.) Himself a naturalist, Mr. Matthiessen writes with the expected attention to birds, other animals, flora, climate, human inhabitants of the hinterland, living conditions, transportation—matters other naturalists want to know about. But his work is by no means a guide to, or discourse on, South American natural history. It is, rather, a spirited account, frequently with day-to-day impressions and experiences in the present tense, of a 20,000-mile journey that includes a boat excursion up the Amazon, explorations in the high Peruvian Andes, and even a sampling of Patagonia and Tierra del Fuego.

The excellence of Mr. Matthiessen's pen was readily apparent in his "Wildlife in America" (see review in *The Wilson Bulletin*, vol. 73, p. 111, 1961), but the subject matter of "The Cloud Forest" permits a fuller range to his versatility as a writer. Young naturalists who aspire to publish their own experiences for popular enlightenment will do well to take a few pointers from this book, especially the brisk pace of the narrative, the clever method by which natural-history facts and observations are woven into the story, the easy style of writing, and the generous use of quiet, sometimes wry, humor. Mr. Matthiessen obviously enjoys people—all classes including primitive—and, while never speaking about them condescendingly, he is quick to show the lighter side of their peculiarities and foibles. As for storytelling, he has few peers. His descent made by raft through the gorge (Pongo de Mainique) of Peru's torrential Rio Urubamba is a masterpiece of description, comedy, and suspense.—OLIN SEWALL PETTINGILL, JR.

BIRDS IN MY INDIAN GARDEN. By Malcolm MacDonald. Alfred A. Knopf, New York, 1961:  $9\frac{1}{2} \times 13$  in., 192 pp., 98 photos. (1 col.). \$11.45.

Mr. MacDonald wrote this book in 1959 while serving in India as High Commissioner for the United Kingdom. His "garden" consists of less than three acres of "lawns, flower-beds, vegetable patches, and shrubberies" about his house which was "within a few stone's throws" of the Government buildings in New Delhi, India's capital. In the course of three years he found 30 species nesting in this small plot and saw 106 more. Owing to the demands on his time as a member of the diplomatic corps, he was usually free to watch birds only in mornings between 6:00 and 8:00. His text is based primarily on observations made during these early hours over a three-year period.

Neither the author nor the publisher claims that this work is any more than what it is, namely, the account of man's hobby, bird watching. Mr. MacDonald genuinely enjoys birds and finds observing them a refreshing escape from official routine and responsibilities. He also enjoys writing about them, and does so with light-hearted sophistication and charm. His eye is sharp, he describes actions vividly, and he manages to give distinctive and engaging impressions of various species. The seriously minded ornithologist or ethologist will no doubt object to the generous use of anthropomorphisms, but he will not deny that the anthropomorphisms applied to courtship performances and mating offer a new approach in bird books. Certainly this is the first bird book I have read that could be called "sexy"!

Mrs. Loke's photographs, all reproduced full-page and bled, are close to perfection in clarity and composition, and have been judiciously selected to invite interest in the text. A third were actually taken on Mr. MacDonald's premises; the others were obtained

elsewhere in New Delhi or its immediate vicinity. Through the use of the high-speed flash, many of the birds were caught in flight going to or from their nests. The captions include the name of the species depicted and usually a quotation from the text about the species but not about what the bird is doing. As there is rarely any direct reference in the text to the photographs, the viewer is sometimes left uninformed on the particular action shown, precise location of the nest, and so on. Regrettably, the handsome color photograph (of an Indian Roller) on the jacket is not repeated in the text, which leaves the frontispiece of the Golden Oriole as the only color picture between the covers.

The book is splendid in all its physical aspects and its production from start to finish is a credit to international enterprise, being based on Indian subject matter, authored by a Scotsman, illustrated by a Malaysian, printed in Holland and Great Britain, and (this edition) published in the United States.—OLIN SEWALL PETTINGILL, JR.

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THE CONTINENT WE LIVE ON. By Ivan T. Sanderson. Random House, New York, 1961: 9 $\frac{7}{8}$  × 12 $\frac{3}{8}$  in., 299 pp., 235 photos. (109 col.). \$20.00.

Here is a grandiose book embodying a sound idea that failed miserably between conception and fulfillment. The book was evidently intended as an authoritative, readable treatise on the origin, structure, scenic aspects, climate, and natural resources of the North American continent. To make it an irresistible "gift" item for the Christmas trade, no cost was to be spared in making it elegant and illustrating it with the most striking photographs available. On first turning the pages of this book one would conclude that its aims have been met. The text looks impressive (140,000 words, according to the jacket) and the illustrations are superbly reproduced and altogether stunning photographs of scenery, habitats, and wildlife. Only one picture (p. 271), of an obviously mounted jackrabbit in a museum habitat group, mars an otherwise eye-catching assemblage of the best in nature photography. The failure of the book becomes quickly apparent with the reading of the captions accompanying photographs and, later, the text.

Very few of the 235 captions are in every sense correct. Most are either plainly wrong, owing to carelessness and/or ignorance, or woefully ambiguous. Examples: P. 81, "Mute swans in the Great Lakes area" (the photograph shows Trumpeter Swans in a lake bordered with western conifers); p. 26, "Great colonies of gannets. . . nest along the Atlantic coast" of Labrador and "around the Gulf of St. Lawrence"; p. 190, the Roseate Spoonbill "appears in great flocks all around the Gulf coast"; p. 87, the "Cackling Goose" is "found and may even breed on the Great Lakes" and the Mandarin Duck is referred to as established in the North American wild and migrating annually.

The author of the text, perhaps for convenience but certainly not following any profound geographical or ecological concept, takes up the continent in terms of 21 "natural provinces" (shown by maps, pp. 9 and 10, in color as garish as their boundaries are absurd). Breathlessly he writes about each province, keeping up a steady flow of adjectives, adverbs, and extravagant phrases. What he says, invariably at great length, often proves on analysis either to be erroneous (as much so as the captions) or overstated. The latter fault is particularly serious when he writes about our natural resources because time and again he gives the impression that their abundance is undiminished. All the provinces would seem to be teeming with wildlife—e.g., in northwestern Canada, Golden Eagles "are common all over" and "there are places. . . where they positively swarm" (p. 44).

Once again we have the example of a respected publisher spending thousands of dollars on a production that winds up being superlative in appearance but inferior in substance.—OLIN SEWALL PETTINGILL, JR.

NEW MEXICO BIRDS AND WHERE TO FIND THEM. By J. Stokley Ligon. University of New Mexico Press, Albuquerque, 1961:  $6\frac{7}{8} \times 10$  in., xxii + 360 pp., 86 photos., maps, drawings, 34 col. pls. by Allan Brooks, Peter Hurd, E. R. Kalmbach, Donald Radovich, Orville Rice, and Walter A. Weber. \$8.50.

For many years an up-to-date work on New Mexican birds has been desired by all persons interested in the state's bird life. This need was realized by J. Stokley Ligon who labored on the present volume for several years. Although he lived to approve the proofs, Mr. Ligon missed seeing his book as a finished product; he died in Carlsbad on 23 April 1961, shortly before its publication.

Stokley Ligon's serious bird study in New Mexico began in 1913 when he investigated breeding waterfowl for the U.S. Biological Survey, although as early as 1905 he had submitted to the Survey notes on bird migration in the state. Probably he covered New Mexico more thoroughly than any other naturalist before or during his lifetime. Many of his early records were published by Florence M. Bailey in her "Birds of New Mexico" (1928), and a year earlier the New Mexico State Game Commission published his "Wild-life of New Mexico." In and out of government service and in all parts of the state, Ligon continued to amass bird records and specimens, often, in his later years, undertaking field excursions considered arduous by much younger men. A large percentage of the material in the present volume reflects the author's personal experience with the many species and the areas in which they are found.

According to the jacket, the book's 20-page introduction "delineates topography, climate and life zones . . .; it explains classification and identification of birds, biological and aesthetic factors and bird conservation." It also includes interesting accounts of ornithological literature and pioneer ornithologists of the Southwest.

The systematic list occupies the next 283 pages. Each account begins with a description, followed by a lengthy paragraph on distribution in New Mexico, then by a section entitled "Nesting."

There is a series of appendices, the first dealing with "Rare and Stray Birds"—a bare list of species, locations, observers, and dates. The second is entitled "Flyway Records," and discusses New Mexico's "three rather distinctive migratory bird passways"—the Rio Grande Valley, the Pecos Valley, and the High Plains. This appendix presents detailed lists of birds found in selected localities lying in each of these migration routes. For example, the list of 264 species known to occur on the Bosque del Apache National Wildlife Refuge, compiled by Refuge staff members between 1940 and 1957 appears here, as does a Christmas count list made on the Refuge in 1953. Similar long lists and selected Christmas counts for the Roswell-Bitter Lakes area and the Clayton vicinity represent the other two "sub-flyways." Although this information has been published elsewhere it is convenient to have it in one book.

Next is a 22-page chapter entitled "Bird Watching" which deals primarily with bird-finding areas in New Mexico. The author divides the state into four regions and discusses favored birding areas in each, presenting occasional lists of breeding birds and Christmas counts. This section is particularly valuable for visitors to New Mexico. It is interestingly written and highly informative. Certain errors (see below) are unfortunate.

The short glossary (76 terms) is not very useful. Some definitions are inadequate (e.g., "Species: Related individuals with differences that distinguish them from others"). Following the glossary are 32 of the 34 color plates.

As a "popular" bird book Ligon's volume is already rather successful in New Mexico. Many readers knew the author or at least knew about him. Conservationists will be pleased with the book for its pages reflect knowledge gained from years of painstaking

field work with game and predatory species, and are filled with sound advice and comments on various conservation measures which are sorely needed in New Mexico. Nevertheless, from a strictly ornithological viewpoint, "New Mexico Birds" is disappointing.

In no sense can the book be considered an accurate check-list, even of species. Subspecies are ignored except in a few cases (Masked Bobwhite and the races of Turkey—birds of particular interest to the author) where they are given a separate heading and the detailed treatment accorded full species. There are very few references to the ornithological literature, and no effort was made to seek out New Mexico specimens scattered in various American museums. Specimens, in fact, are rarely mentioned, and the reader often cannot determine if a species' occurrence in New Mexico is based on a casual sight record or on a preserved specimen.

The book lists 399 species "recorded in the state." The 247 species "known to nest" in New Mexico are indicated by a symbol in the text. Of these, the author states, "82 may be regarded as resident, with more-or-less fixed habitat; 77 are semiresident, but may be observed within the state throughout the year; while 91 species known to nest in New Mexico are absent during the severe part of the winter." Unfortunately, the ornithologist cannot accept these figures at face value. A perusal of the species accounts leaves one with the feeling that no strict criteria for inclusion or rejection of a species were used. It is regrettable that even in a "popular" book so little attention was given to critical evaluation of records.

Any review of the present volume invites a comparison with Mrs. Bailey's monumental "Birds of New Mexico": Adjusting for taxonomic changes since 1928, we see that Mrs. Bailey listed 345 full species plus 12 of hypothetical occurrence. Seven of those on her main list (Arctic Loon, Red-shouldered Hawk, Swallow-tailed Kite, Eskimo Curlew, Sulphur-bellied Flycatcher, Varied Thrush, Cerulean Warbler) and three on her hypothetical list (Scarlet Ibis, Eastern Bluebird, Golden-winged Warbler) are not mentioned anywhere by Ligon. Eight of Mrs. Bailey's 12 "hypotheticals," however, are listed in the present volume. These are the Stilt Sandpiper, Coppery-tailed Trogon, Green Kingfisher, Carolina Wren, Olive Warbler, Ovenbird, Bobolink, and Fox Sparrow. Some of these evidently are admitted to the list on the basis of sight records. Others (Olive Warbler, Fox Sparrow) are supported by specimens. Several species collected in the state several years prior to publication are not included. The record of at least one of these (Purple Finch) was known to Mr. Ligon as acknowledged to me in correspondence.

Some species' right to inclusion on the New Mexico list is highly questionable. Among these are the Greater Scaup (for which Ligon cites no specific records other than the old observations of Willett in 1916); Whooping Crane (based on Henry's vague remarks in 1855 which referred only to "cranes," the adults of which were assumed by Mrs. Bailey to have been Whoopers); Common Tern (no specific record cited); Coppery-tailed Trogon (the only New Mexico specimen allegedly taken in Guadalupe Canyon in 1957 seems likely to have been collected in Arizona's Chiricahua Mountains and erroneously labelled); Green Kingfisher and Rose-throated Becard (both included only on the basis of probability; neither has been seen in New Mexico).

Other inclusions make the critical reader wonder. Was the Long-tailed Jaeger, found dead along the Rio Grande, identified as that species by an ornithologist? Was the specimen preserved or photographed? The same can be asked for the White-winged Crossbill found dead near Clayton in 1954. There is no way of telling from the brief statements in the book.

The jaeger mentioned above and 34 other "rare and stray" birds in Appendix I are

species recorded "not in sufficient numbers to justify their inclusion in the general text." Selection of rare species to be relegated to this appendix and of those to occupy positions in the text was evidently arbitrary. Several of the latter (including the White-winged Crossbill) are listed on the basis of a single record, whereas some in Appendix I are supported by three or four records. The Nashville and Hermit Warblers (both in the rare and stray list) occur rather regularly in southwestern New Mexico. This list, like the text, makes no distinction between sight and specimen records, hence a Barrow's Goldeneye reported on a "Christmas Count," and a Frigate-bird seen by "Refuge Personnel" are listed alongside specimen records like those of the Surf Scoter and Heermann's Gull collected, respectively, by William S. Huey and R. T. Kellogg who, like all others in the list, are referred to as "observers."

Too many mistakes mar this volume. A few typographical errors are scattered throughout, and some of these are most annoying (e.g., alula spelled "ulula" in the drawing on page 15; *Colinus* written with a lower case "c" on page 95). One ornithologist's name is misspelled. More serious are the outright errors of fact, some of which should be pointed out here. The title of Roger Peterson's book is not "*Western Bird Guide*" (page 13). The Double-crested Cormorant is not "formerly known as the Mexican Cormorant" (page 28). (Both species occur in New Mexico, and although Mr. Ligon did not have opportunity to examine the recent specimen of *Phalacrocorax olivaceus*, he apparently ignored rather than re-examined the specimen cited by Mrs. Bailey (1928:85), who listed only that species; Ligon listed only *P. auritus*.) The Green Heron is not "the smallest of the Heron family" (page 30), a statement also applied three pages later to the Least Bittern. The "Black Hawk" drawing on page 71 is a copy of the photograph of a Zone-tailed Hawk which originally appeared, misnamed, in *The Condor* (59:143, 1957) to substantiate a northeastern New Mexico nesting record. The original error was later corrected in *The Condor* (60:139, 1958) and the record is properly listed in Ligon's text under Zone-tailed Hawk. Another apparent case of misidentification of Zone-tails as Black Hawks is reflected in the list of Guadalupe Canyon birds on page 322. Only the Zone-tail has been recorded there. (A specimen taken a few years ago was misidentified by the collector and presumably Mr. Ligon did not see the skin.)

I know of no basis for the statement, on page 87, that the seasonal plumage change in White-tailed Ptarmigan "presumably is achieved through a process known as 'feather-wear.'" The air sacs of the Lesser Prairie Chicken are reddish, decidedly not orange as stated on page 89. The caption of the owl plate (page 145) refers to the Screech Owl as a Great Horned and the Flammulated as a Screech. Blue-throated Hummingbirds do not occur in Cherry Creek Canyon or elsewhere near Silver City as stated on page 323. Vester Montgomery's observation of a Carolina Wren at Roswell was on 8 May 1951 (*Condor*, 54:204-205, 1952), not on 6 June 1951 as stated on page 220. The Black-and-white Warbler is not a resident or "summer-dwelling" bird of southwestern New Mexico (page 322). In the Bronzed Cowbird account, on page 267, is the quotation, "Breeds in southwestern New Mexico (Guadalupe Canyon)" (A.O.U. *Check-list*)." The Check-list merely states that the species occurs in "southwestern New Mexico"; it does not indicate that the bird breeds in Guadalupe Canyon or anywhere else in the state. The rosy finches reported east of Albuquerque by James Findley on 26 November 1955, are attributed to the Gray-crowned by Ligon (page 277), this record placing "the species a hundred miles farther south than indicated by any previous record." These birds were not specifically identified by the observer who reported them merely as "rosy finches." Of my July specimen of Lawrence's Goldfinch at Silver City the author states, "This is approaching a breeding record. . . ." Data furnished the author specifically stated that there was

absolutely no evidence of breeding; the bird's gonads were very small. Too frequently the author assumed that the mere presence of birds in an area indicated nesting. Although Lawrence's Goldfinch is not so marked, numerous other species are listed as "known to nest" in New Mexico when there is no evidence that they do.

The bird called "Mexican Junco" in the plate on page 295 is hard to place in any described species, but it certainly is not the yellow-eyed *Junco phaeonotus*. Likewise, the one termed Slate-colored Junco is clearly a White-winged (*J. aikeni*). The yellow iris is not mentioned in the description of *J. phaeonotus*. That this species is listed among the species occurring at the Bosque del Apache Refuge in the Rio Grande Valley (page 312) is an example of the uncritical copying of published bird lists. The Fish and Wildlife Service's list of Refuge birds includes this species (not even in the casual and accidental column), but certainly in error.

The book's illustrations have received occasional mention in the preceding paragraphs but a few words must be said of the color plates. The first one, a pleasing field-guide type painting by Walter Weber, appears as a frontispiece. It allegedly depicts "representative breeding birds of New Mexico's life zones," and has opposite it a brief definition of each zone in terms of elevation, temperature, precipitation, characteristic trees, and birds. It is indeed strange to see the Bridled Titmouse and Blue-gray Gnatcatcher shown as characteristic birds of the Lower Sonoran Zone (as stated by Ligon, from 2,850 to 4,200 feet elevation). The text correctly states that the titmouse occurs from 5,500 feet to 6,500 feet elevation (page 209) and that the gnatcatcher is "most common in the wooded foothills. . . around 5,000 to 6,500 feet." Both of these species are typical Upper Sonoran Zone birds. One wonders why they were selected in view of so many species restricted to low elevations from which to choose. Certain other choices are likewise peculiar and misleading, especially the Horned Lark (here considered representative of the Upper Sonoran Zone) which occurs from lowland desert to alpine tundra.

The quality of the plates varies considerably. Some are quite good—the egrets and Robin by Weber; those of the orioles by Orville Rice, and the familiar Blue Grouse, Pyrrhuloxia, and Lazuli Bunting paintings by Allan Brooks, which first appeared in Mrs. Bailey's "Birds of New Mexico," and which are inferiorly reproduced here. One wonders why the Roadrunner picture (opposite title page) was accepted for publication. The duck plates and those of the woodpeckers and Painted Bunting, by E. R. Kalmbach, are satisfactory, but those of the hawks, corvids, and sparrows are extremely poor, many of the figures badly out of proportion and important plumage characters obscure. The pictures of female Cassin's and House Finches are worthless for identification purposes. The sparrow plate fails to show important differences between genera and species; several birds are far too short-tailed. The Lincoln's Sparrow is barely recognizable, and the Chipping Sparrow is not only shown with a brown rump but with a white loreal spot instead of a superciliary line. Some of the other plates are better but nonetheless disturbing. Too many are amateurish and not of the quality which should grace a state bird book. I find displeasing not only the poor individual plates but the great lack of uniformity in style to be expected in a miscellaneous collection of paintings by a half-dozen different artists. I think the black-and-white shorebird painting by Rice (page 111) is very good. Kalmbach's plate (page 58) of hawks in flight is pleasing except for the misleading figures of the Zone-tailed and Gray Hawks.

The generally inferior illustrations, the numerous errors and misleading statements, and the uncritical acceptance of records materially reduce the usefulness of this volume. A thorough, careful account of New Mexican birds is as desirable now as it was before publication of this book. Until such is available, Mrs. Bailey's "Birds of New Mexico,"

although 34 years out of date, will continue to be the best source of information on the state's avifauna.—DALE A. ZIMMERMAN.

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THE MURRES: THEIR DISTRIBUTION, POPULATIONS AND BIOLOGY. A STUDY OF THE GENUS *URIA*. By Leslie M. Tuck. Canadian Wildlife Series 1, Canadian Wildlife Service, Department of Northern Affairs and National Resources, Ottawa, 1960 (1961): 6 × 9 in., 260 pp., 14 pls. (1 col.), 34 figs., incl. 14 maps. \$2.50.

This attractive volume will claim the attention of ornithologists for two reasons: First, it is an excellent, broad treatise on the two species of murre, *U. lomvia* and *U. aalge*, throughout their range in the northern hemisphere; second, it is the first in a new "Canadian Wildlife Series" of monographs resulting from the vigorous research program of the Canadian Wildlife Service.

Leslie M. Tuck has been observing murres and other seabirds in the splendid nesting colonies and on the offshore waters of his native Newfoundland for more than 20 years. Almost immediately on joining the Canadian Wildlife Service, he was given the opportunity to concentrate on a study of the biology and ecology of murres, which are "of substantial economic importance" in Newfoundland and in the Canadian arctic. He has visited all known nesting colonies in Newfoundland and Labrador, and several large colonies in the arctic. His studies of populations and of behavior were encouraged by a period of time spent at Oxford. Mr. Tuck's monograph is pleasingly written, attractively laid out, and well illustrated.

The treatise comprises five parts, among which emphasis is by no means equally distributed. Parts II and III, covering distribution and populations, and breeding biology, respectively, are strong and well-documented. They make up one-half of the text. Part I entitled "Evolution and Adaptation" only sketches the subject by mentioning habits and physical adaptations of which many are treated more fully elsewhere. In Part IV, on factors affecting populations, the discussion of food habits is excellent, but disease receives two short paragraphs, and parasitism only one. The murre tick, *Ixodes uriae*, may be of little importance as a pathogen, but I was disappointed not to find it even mentioned. Part V, on economics, presents an interesting discussion on the importance of murres to mankind in the past, at present, and in the future. Regulation of fowling and eggging, refuge establishment, and improvement of rocky islands for new colonies may serve to perpetuate the murre as a source of rich food and as a contributor to arctic economy.

One finds some statements repeated several times through the book. For example, Mr. Tuck seems to be convinced by Upenski's suggestion that the rolling radius of a murre egg is reduced during incubation and has important survival value. This is discussed on p. 25, and again on p. 128. A few desktop experiments with weighted murre eggs cause me to doubt the validity and importance of Upenski's conclusions.

The book is profusely illustrated. The half-tones are rather coarse-grained but the maps are a reader's delight. The printer has handled pagination like a modern artist—leaving the subject more or less to the reader's interpretation! For example, Page 1 of the text is numbered 13; eight pages of half-tones at the beginning are not counted at all, while 16 pages of half-tones in the middle of the book are counted but not numbered.

These minor points do not detract from the value of an excellent contribution, of which the author and the Canadian Wildlife Service should be proud.—OLIVER H. HEWITT.