

ORNITHOLOGICAL LITERATURE

LAST SURVIVORS: THE NATURAL HISTORY OF ANIMALS IN DANGER OF EXTINCTION. By Noel P. Simon and Paul G erouDET. Illustrated by Helmut Diller and Paul Barruel. The World Publishing Co., New York, 1970: 8½ × 10¼ in., 276 pp., 44 col. pls., 31 text figs., 6 maps. \$19.95.

This is another handsome "Christmas present" nature book, but a particularly attractive and useful one, which will no doubt help the cause of animal preservation and promote interest among a wide range of readers.

It is the well-documented story of 36 species of mammals and 12 of birds, the existence of which is threatened at present. They can, however, still be saved from extinction if adequate measures are promptly taken. Let us hope they will be!

The birds, which have been chosen at random, so it seems, are extensively and carefully studied by the veteran French Swiss ornithologist Paul G erouDET and faithfully depicted by Paul Barruel, the well-known French bird artist, two highly reliable naturalists. The 12 species mentioned are: for America, the Galapagos Penguin, the California Condor, the Whooping Crane, Atwater's Prairie Chicken and Kirtland's Warbler; for Europe, the Imperial Eagle and Audouin's Gull; for Asia, the Brown-eared Pheasant, the Japanese Crested Ibis, and the Philippine Monkey-eating Eagle; for Africa and Madagascar, the Long-tailed Ground Roller; for Oceania, the Kakapo.

One cannot help regretting that no more of the threatened species have been considered. There is certainly no shortage of threatened birds today. It would no doubt be highly beneficial to the cause of bird preservation if other such studies were soon made available to the general public.

The work is prefaced by H. R. H. Prince Bernhardt of the Netherlands, President of the World Wildlife Fund.—JEAN DELACOUR

BIRDS OF GUATEMALA. By Hugh C. Land. Livingston Publishing Co., Wynnewood, Pennsylvania, 1970: 7½ × 5 in., xvi + 381 pp., 5 maps, 44 col. pls. by Land and Wayne Trimm. \$10.00.

The publication of the "Birds of Guatemala" by the late Hugh Land marks the appearance of the first comprehensive, illustrated, field guide book covering an entire Central American republic. But it is much more than a standard field guide, containing a wealth of condensed information on many aspects of Guatemalan ornithology, the result of a (tragically short) lifetime's dedication spanning a decade of field research. Indeed, I am continually surprised at the quantity of material presented in this book while retaining its size along the lines of many modern field guides (meaning it will not *quite* fit in one's pocket). It is comparable in size to Smithe's "Birds of Tikal," the only other field guide presently available for northern Central America, but of course covers a much greater geographical area with a far greater diversity of species.

The introductory section of the book contains discussions of geography, climate, life zones, and ornithological history of the Republic; the life zones (Holdridge system) are treated in some detail, with an accompanying map and zonal breakdown of characteristic species.

The main body of the text is devoted to the species accounts. Each family is introduced by a very brief general paragraph relating distribution of the group overall and number of species occurring in Guatemala, as well as zonal patterns of occurrence in the Republic

and other short comments of pertinence. The species accounts proper treat the 667 species reported from Guatemala (including 13 hypothetical ones); sequence of treatment follows Eisenmann's "The Species of Middle American Birds" modified by Meyer de Schauensee's "The Species of Birds of South America . . ." Both English and Spanish names are provided. Each account contains sections on Range, Subspecies (those that occur in Guatemala), Status (including relative abundance), Elevation, Habitat, Description, and Remarks. Range maps of Guatemalan distribution are provided for all but the accidental or hypothetical species. Forty-four color plates by Land and Wayne Trimm depict 294 species; virtually all tropical forms not found in North American guides are illustrated. Land's plates are typical of many field guides, with emphasis on identification, the birds of each group arranged in rows of identical poses; Trimm's paintings are more esthetically pleasing, with birds in natural and varying poses.

From a negative side, there are two items that drew my attention. First, and perhaps not even a legitimate criticism in view of the book's intent, is that there are very few specific references to records; however, citations are available for most of the rarer species. Second, and most annoying to me, are the range maps. I suppose everyone has his own ideas as to what such a map should show, but I feel that many of these are decidedly misleading. Land admits that areas of occurrence are omitted from the maps where specific records are lacking, but inconsistency causes confusion. For example, on page 82 there are range maps for *Ortalis (vetula and leucogastra)*, *Penelopina nigra*, and *Oreophasis derbianus*. The range of *Ortalis vetula* encompasses the entire eastern lowlands, including all of Petén, which most assuredly is correct; but, as Land mentions in the introduction, many areas of Petén have not been studied, thus the range of *O. vetula* is based on the fact that the species is common everywhere in suitable habitat and its range must thus conform to that of the habitat. But he does not follow through with *Penelopina*, a species common everywhere in cloud forest habitats south to Nicaragua. One gets the impression from the map that its range to the southeast ends in central Guatemala, as (correctly) does that of *Oreophasis* on the adjoining map. While the actual records from eastern Guatemala are lacking, data from adjoining El Salvador and Honduras indicate the species' certain occurrence in suitable habitat throughout Guatemala. Thus a great number of ranges are misleading and incomplete in the sense that evidence other than specific locality records indicates a more extensive or continuous distribution.

One other minor point: some space saving could have been achieved by combination of the Status, Habitat, and Elevation comments into but a single section per species account, and perhaps also the Range and Subspecies into but one other.

Despite a few shortcomings, this book is the first comprehensive guide to birds of a Central American republic. It fulfills all the criteria as an excellent field handbook as well as a reference to Guatemalan ornithology. It is a must for all those interested in Middle American birds, from the serious research student to the general bird watcher.—
BURT L. MONROE, JR.

LAS AVES DE PUERTO RICO. By Virgilio Biaggi. Editorial Universitaria, Universidad de Puerto Rico, 1970: 6¾ × 9¾ in., xii + 371 pp., 6 col. pl., 51 text figs. \$6.50.

Virgilio Biaggi has been interested in the birds of the Antilles ever since he was a small boy when he accompanied the late Stuart Danforth not only on collecting excursions in Puerto Rico and to many other Caribbean islands, but also on visits to museums in the

United States. He thus acquired at an early age considerable knowledge of the Antillean avifauna. He is now Director of the Department of Biology at the University of Puerto Rico in Mayagüez. Danforth, who was likewise a professor of zoology at Mayagüez, was author of an excellent handbook published in 1936, entitled "Los Pájaros de Puerto Rico," and it is fitting that Biaggi has carried on with this work.

"Las Aves de Puerto Rico" is by no means a field guide or handbook but a reasonably priced, comprehensive book of reference. The introduction includes sections on the history of Puerto Rican ornithology, migration, the economic importance of birds, and wildlife conservation. The area covered comprises not only Puerto Rico, but also its satellite islands such as Vieques, Culebra, and Mona. It is essentially a compilation, and little new information is provided. The addition of English names is an improvement over Danforth's book.

Comparison of these two books is of interest. Danforth included 182 species and subspecies plus 12 considered of hypothetical occurrence, Biaggi 239 with 20 others listed as hypothetical. However, six species known only from subfossil material are added in the main text of Aves de Puerto Rico as well as many species and subspecies the identifications of which are questionable, and four species that were escaped cage birds or that have been unsuccessfully introduced. Six species recorded from Puerto Rico during the past twelve years should be added—*Anas penelope*, *Larus fuscus*, *Rynchops nigra*, *Amazona ventralis* (introduced), *Vermivora chrysoptera*, and *Pheucticus ludovicianus*, some of these no doubt reported too recently for inclusion.

There are remarkably few typographical errors or misspellings, and the classification, which differs slightly from my own, cannot be seriously criticized. Some of the remarks on nidification are confusing since the information was evidently derived from localities other than Puerto Rico. The Masked Duck is said to lay 3-4 eggs with a bluish tinge, although clutches from other of the Antilles were decidedly larger and the eggs not bluish. This species is definitely known to breed on the island, for Roger Peterson told me of seeing a brood of young there. Comparatively minor errors are the statements that the type of the Puerto Rican race of the Broad-winged Hawk is the only specimen; that there is no description of the eggs of any of the Antillean parakeets of the genus *Aratinga*; that nothing is known of the nesting of the Whip-poor-will of Puerto Rico.

The illustrations by Lucila Madruga de Piferrer and Christine Boyce are rather crude but sufficiently accurate to enable one to identify most of the species. Those depicting the Plain Pigeon and some of the hummingbirds are particularly poor, and the postures of the Audubon's Shearwater and Wilson's Petrel are incorrect. It would have been preferable if the captions to the colored plates had been printed on the pages facing these.

It is stated on the dust jacket that the birds of Puerto Rico are better known than those of any other of the Antilles, but this is debatable. Perusal of this book clearly shows that there is still much to learn about the indigenous avifauna of the island.—JAMES BOND.

THE BIRDS OF THE DEPARTMENT OF LIMA, PERU. By Maria Koepeke. Translated by Erma J. Fisk. Livingston Publishing Co., Wynnewood, Pennsylvania, 1970: 5¾ × 8¼ in., 144 pp., 331 sketches, 2 maps, 1 photo. \$4.95.

Favorable reviews (*i.e.*, Eisenmann, *Auk* 82: 296, 1965) greeted the original Spanish language version of this little field guide in 1964. The present version, in English, deserves similar praise, not only because the translator has done a good job but because the author, Maria Koepeke, has updated her treatment.

During the interval between editions, an ornithological combing of most parts of Peru occurred, not without noteworthy results for the Department of Lima. Various marine and coastal habitats yielded first records in this area for the Great Grebe, Gull-billed Tern, four shorebird species and the Short-eared Owl, while the western slopes of the Andes contributed three species of hummingbirds, three tyrant flycatchers, an antbird, two honeycreepers and a male specimen of the White-cheeked Cotinga, the first known to science. Furthermore the Canary-winged Parakeet and Yellow-hooded Blackbird established enduring colonies from escaped stock around the city of Lima.

To deal with all this the present guide treats 331 species, 18 more than the previous edition.

All birds are illustrated in very pleasant line and shadow drawings—the work of Maria Koeppke herself. Most of the portraits have been reproduced less sharply this time than before, at least in the two copies I have seen. The artist's talent for economic depiction of field markings thus appears to have been served less flawlessly in this new book, but not at all disastrously, for despite their faded appearance the drawings fulfill the purposes of the book.

Overall the present version surpasses the former on such counts as quality of paper, clarity of type, scientific nomenclature and use and arrangement of headings (family divisions and also English names, omitted in the Spanish edition, are given). The one unsuccessful illustration in the Spanish edition, that of the Hook-billed Kite, has been redrawn.

The new book nevertheless repeats some material of doubtful value. For example, a certain spinetail once seen by the author is again figured and described along with the other furnariids, yet it remains today, as in the past, unidentified. Together with dubious records of the Royal and Gray-headed Albatrosses and Gray-necked Wood-Rail, such an elusive bird might better have been mentioned in a hypothetical list, although to be frank I like the creature presented where and as it is.

Erma Fisk, the translator, is to be doubly congratulated, for she first initiated and then sponsored publication of this valuable work.—WILLIAM G. GEORGE.

ORNITHOLOGY OF THE MARSHALL AND GILBERT ISLANDS. By A. Binion Amerson, Jr. Smithsonian Institution, Atoll Research Bulletin No. 127, 1969: $8\frac{1}{4} \times 10\frac{1}{4}$ in., viii + 348 pp. Price not given.

This useful compendium on the birds on the innumerable bits of barely emergent land that constitute the Marshall and Gilbert islands is based upon approximately 60 days of field work and a thorough review of the literature. Although it includes 20 new avian records and reports on more than 1100 specimens, the study must be considered only a beginning. Field parties landed on but 25 of the 50 atolls that make up these island groups, and some of the atolls have nearly 100 islands, of which only a few were visited.

A summary for each atoll contains information on location, size, topography, soil, vegetative features, human demography, previous scientific visits, and the avifauna. A list of birds gives full information on each specimen collected! Species accounts for each atoll provide data on habitat, status, and numbers. Since the specimens for any one atoll are relatively few and, generally speaking, are the basis for the species accounts, there is considerable redundancy. This detraction is further compounded by later general species accounts which largely duplicate the previous lists and data. However, this latter duplication does make for easier use by the person interested in a particular species.

Seventy-nine avian species were encountered, 37 seabirds, and 42 land or fresh-water birds. Nineteen species of seabirds are known to breed in these islands. Of the land and fresh-water species: 9 are regarded as probable breeders; 17 are regular migrants; and 15 are thought to be vagrants. Sixteen of the migrants are breeders in the Northern Hemisphere and one, the cuckoo *Urodynamis taitensis*, breeds in New Zealand. Six of seven introduced species breed on these atolls.

The data relative to the number of species per atoll and the postulation of north-south and west-east clines of decreasing numbers of species must be considered with caution. Clines there may be, but the data to support this hypothesis are yet to be gathered. Too many of the islands, and even whole atolls, are ornithologically unknown. Further, the Marshall Islands, lying to the north and west of the Gilberts, have been much more frequently visited, even by the author's research parties. The southern Gilberts were not investigated. The Marshalls are a larger group, encompassing 12° of latitude and 10° of longitude compared to 5° of latitude and 6° of longitude for the Gilberts, and the atolls in the Marshalls are larger and have more islands. The Marshalls thus provide a longer screen to intercept migrants moving in any direction and more landfalls for them, even though the Gilberts have a greater total land area.

Nonetheless, the author offers several factors that might well produce such clines. The northeast and southeast trade winds may act differentially in bringing migrants and vagrants to the archipelagos, and the Equatorial Counter Current may be vital in providing a major energy source for seabirds in the north. Rainfall is heaviest in the southern Marshalls and northern Gilberts, and there are differences in its season. Vegetation, both in amount and numbers of species, appears to vary directly with rainfall. Man's influence, through predation, reduction of native vegetation, and plantings of coconut trees, may have been significant, although it must be noted that natives on many of the Pacific atolls regularly set aside certain islands as sanctuaries to be "managed" for eggs and birds for food and feathers for ornaments.

As an "old Pacific hand" and ornithologist, I think this publication will be valuable not only for its avian contribution but because of its readable accounts of the atolls. Although much less complete they do supplement the narrative in Bryan (American Polynesia and the Hawaiian Chain, Tongg Publ., Honolulu, 1942). Despite current interest, the Pacific atolls are mostly uninvestigated, unknown scientifically, and they are beautiful in their loneliness and relatively simple terrestrial ecology. They merit more than intermittent, casual, and incidental study. In depth, long-term investigations should be undertaken before further encroachment by "civilization" occurs.

One comment on non-avian affairs deserves attention. The monitor lizard, *Varanus indicus*, is said to occur only at Eniwetok. It is known that the Japanese established them on a number of Islands in the Marshalls, and I collected specimens on Majuro, Aur, and Arno in the Marshalls in December 1945. This variance in observation points up either the rapidity with which species may be eliminated on small land masses or the need for more detailed investigation.—HARVEY I. FISHER.

THE ALBATROSS OF MIDWAY ISLAND. A NATURAL HISTORY OF THE LAYSAN ALBATROSS.
By Mildred L. Fisher. Southern Illinois University Press, Carbondale and Edwardsville,
1970: 5¾ × 8¾ in., x + 161 pp., photos, maps. \$5.95.

This book describes the life story of a Laysan Albatross, beginning with the mating of the parents and continuing until after the adult or breeding phase of life is well underway.

The book is written for "naval personnel, their friends and mainlanders who have not seen the birds" (p. vii). It is thus not necessarily intended as "a must for all ornithologists" as the dust cover states.

The book probably accomplishes the author's objectives to a reasonable degree. The non-ornithologist reader will find Mrs. Fisher's poetic writing of daily episodes in the life of an albatross pleasing and entertaining. "Our" albatross, of course, survives all adventures. The reader will gather much lore about albatrosses. Although the book presents many results of the scientific work of the author and her husband, Dr. Harvey I. Fisher, it should be used with caution as a reference because of the lack of documentation.

The author notes her awareness of anthropomorphism in the Foreword. From among the many anthropomorphic and teleological expressions I will quote a few that may cause ethologists and ornithologists to squirm. Of birds whose mates failed to return, Mrs. Fisher writes (p. 12): ". . . the bereaved birds moved back to the sea . . ."; of the female with her new egg (p. 14): ". . . she rose to show her egg to those who neared her"; of an encounter between two incubating birds (p. 27): "The victorious bird . . . was exhilarated from the battle . . ."; of the mother's feeling for her young, that she (p. 32): "was intent only on keeping the new baby warm . . ."; that a nesting albatross had a special feeling for the human child (p. 40): "No albatross pecked at or cut a child with its sharp-edged bill"; that the education of a young albatross (p. 44): ". . . depended upon aping his elders . . ."; and further (p. 63): ". . . he gazed skyward for hours at a time at the stars . . . fixing forever in his mind his position in . . . the North Pacific Ocean. . . . His learning took time. . . . Nature demanded that he . . . spend at least five months on the land. . . ."

Some statements are misleading. For example, I discovered that the eyes of the Laysan Albatross are (p. 12): ". . . protected by long black and white eyelashes . . ." structures that, as far as I know, have not been observed before. Further, the author says of the incubation or brood patch (p. 14): ". . . the egg slid out of her pouch"; here the "pouch" sounds like a kangaroo pouch. Of nest building (p. 19): "He dragged in mouthful after mouthful of sand . . .", whereas sand is raked in by the bill tip, not by "mouthfuls." Of the female's first period at sea after laying, she returned (p. 25): ". . . at the end of her allotted twenty-four days." This sounds like a fixed period but in observing 110 nesting pairs we found that this period ranged from 1.5 to 32.0 days (Rice and Kenyon, *Auk*, 79: 543, 1962). It is a little difficult to accept that an albatross avoided being captured by a shark because he was (p. 29): "Warned by a shock wave that a tremendous fish was approaching. . . ."

Although marine mammals are not the subject of this book, it seems unfortunate that when they are mentioned the information is not always correct. It is said of the Hawaiian monk seal (p. 129): ". . . the mother seal was molting; her fur was falling out in great patches." Many observations indicate that the monk seal mother does not molt until *after* her pup is weaned.

Dr. Fisher's 67 photographs, which were chosen to illustrate specific stages of albatross development and characteristic attitudes, accomplish their objective ably. They are not listed in the contents and the book is not indexed.

My general reaction to this book is that it may safely be read by those who "like birds," want to be entertained, and will be cautious about what they accept as fact. I feel, though, that to captivate readers by ascribing human characteristics to birds may cause sentimental complications that are not necessarily advantageous either to birds or to people.—KARL W. KENYON.

FEATHERS FROM SAND DUNE CAVE: A BASKETMAKER CAVE NEAR NAVAJO MOUNTAIN, UTAH. By Lyndon L. Hargrave. Tech. Ser. No. 9, Museum of Northern Arizona, Northern Arizona Society of Science and Art, Inc., Flagstaff, Ariz., 1970: 7 × 9½ in., paper covered, 52 pp., 45 pen drawings. Price not given.

Bird bones and feathers are found at some Southwestern archaeological sites and are clues to the ecological factors affecting the people who lived there. This booklet is a report on bird remains from an important site. Identification of bone fragments and an estimated 350 feathers revealed 18 species ranging from Mallard to Red-winged Blackbird. Five more species (Canada Goose to Rufous-sided Towhee) are also discussed, based on feather remains from Western Basketmaker II horizons at other sites. The remains of Common Turkeys were more numerous than those of other birds, and provide the basis for describing a new fossil subspecies, *Meleagris gallopavo coltoni*. Although this report is written for archaeologists and ethnobiologists it should be of interest to ornithologists also, if only for showing how many birds can be identified from individual feathers. Ornithology furthermore can be seen assisting other disciplines because the habits of the birds as they are known today, together with the nature and location of the specimens indicate which birds were actually used by Basketmaker II people.—PETER STETTENHEIM.