

REVIEWS

Extinct and Vanishing Birds of the World.—James C. Greenway, Jr. Special Publication No. 13, American Committee for International Wild Life Protection, New York, N. Y.; pp. i-x + 1-518; 1 col. pl. and 84 drawings by David Reid-Henry, one drawing by Alexander Seidel; maps and charts. 1958. \$5.00.—As Jean Delacour points out in his Foreword to this fascinating volume, "We are now witnessing the most tremendous changes in the world, and one of the saddest consequences is the awful threat to the existence of many forms of wildlife. . . . Birds, conspicuous and easily killed as many of them are, become particularly affected. . . . Furthermore, a large proportion of them (species) are narrowly adapted to certain types of habitats, the destruction of which they cannot survive."

James Greenway, Curator of Birds at the Museum of Comparative Zoology at Harvard University, is well qualified to undertake such a work. As Curator of one of the major world ornithological collections, including specimens of many very rare or extinct species, as an authority on birds of Hawaii, Southeast Asia and the Pacific, he has had first-hand experience observing or studying many of the species of which he writes. It may be asked, "Why is such a volume 'fascinating'? What pressing or exciting interest can be derived from such a melancholy recital of death and despair?" The fact of course is that there is an extraordinary interest in the facts of extinction. From a biological point of view every nub or grain of information about an extinct species is of great potential use. Important information in the fields of evolution, genetics, biogeography, and taxonomy lurks in the slim sheaf of data that we possess about long-extinct species. Species that are suspected of being "on the way out" should be minutely studied in order to document everything of value about their life history. It is even conceivable that some key to their salvation may be discovered in such studies. What could be more appropriate than for man, the despoiler of so much of our natural world, to be able to make partial amends by saving a handful of our presently threatened species?

One of the problems of writing an account of this kind is how to define the boundaries of the subject. Greenway has accomplished this well by breaking his fauna into several categories; an example is those extinct species that are well known from specimens and with well documented histories. Of these he lists 44 species and 43 subspecies. In addition he adopts the conservative category of "probably extinct," under which he lists 12 species and 7 subspecies. A third category is that of birds known from osseous remains, which are in addition well documented, as is the dodo for example. This list contains 20 species. A fourth consists of species known only from pictures and travellers' accounts. This numbers 27 species, and is one most difficult of interpretation. Undoubtedly many of these names represent the result of a certain eagerness on the part of certain authors to spring into print. Many of them rest on the flimsiest of evidence.

A fifth list is perhaps of the most interest to conservationists, Mr. Greenway's list of species and subspecies in grave danger now, for reasons primarily due to man's interference. This list of some forty species and thirty-nine subspecies is again a most conservative one. Most people have assumed that the "huia," for example, *Heteralocha acutirostris* of New Zealand, has been extinct since the early years of this century, although it is placed by Greenway both on his extinct list, and on his list of small populations *threatened* with extinction.

Finally there is a list of some 50 species or subspecies of "rare" birds, birds of which very little is currently known. This last is a highly selective list on the

author's part. Each curator of a large museum collection could probably be challenged to produce his own list of this sort, and it is possible that no two lists would be the same. Of the living birds of the world there are many which are still very little known, at least among men who can communicate with each other about them.

Not all this chronicle is taken up with disaster. The "takehe" or *Notornis* of New Zealand, an enormous, rather grotesque-looking blue gallinule, was rediscovered in 1948 in the mountains of the South Island, after having been considered extinct for 50 years. What a joyful rediscovery, one which prompted the New Zealand Government to set aside a 400,000 acre sanctuary in its honor.

One aspect of the biology of these species should perhaps be emphasized more than it has. What positive steps can be taken to assist some of those which are now gravely threatened? If man has been responsible for the extinction of numerous species of animals, can man himself take the initiative to reverse the tide, even partially? Recent experiments and conservation measures have shown how habitat itself can be preserved. Far less has been done to hold the line with small populations. At the moment an exciting development in this field is the preservation of the "nene" or Hawaiian Goose, *Nesochen sandvicensis*, a species which had dwindled to the vanishing point in the wild state. For nearly ten years until 1955, when a wild flock of 22 birds was sighted, there had been no real sightings of nene in the mountains of Hawaii. But meanwhile painstaking efforts by aviculturists have built up a captive population of now about 75 birds. From these, as with our American Buffalo, a group may be used to be reintroduced gradually back into the wild habitat, which, now that the original human hunting pressure is gone, may again be suitable for the species. If someone could only have kept the Dodo going!

One of the most interesting accounts is that of the Great Auk, *Alca impennis*. Mr. Greenway has summarized the records of Great Auk bones and specimens in such a way as to give a most convincing picture of the distribution of this species, including its former occurrence in Scandinavia in prehistoric times.

I am sorry that the manuscript was finished in 1954 and the book not published until 1958. There is a gap here and there in our up-to-date information about some of the now very rare species which could have been filled. Recently, for example, in 1957, there has been a more encouraging report on the status of the Short-tailed Albatross, *Diomedea albatrus*, from the Japanese Section of the International Committee for Bird Preservation, showing that between six and eight young were reared by their parents on Torishima in 1956. Two Whooping Cranes, *Grus americana*, were reared in captivity in 1957, a possible augury for the future of that species. Experiments are under way with the Laysan Teal, *Anas laysanensis*, which similarly may serve to cushion that little relict population against extinction.

One of the very interesting sections of the Greenway book is that on the geography of extinction, which shows very clearly what a biological trap a small island may be for the populations which have evolved upon them. Selection in small island populations seems to push ruthlessly towards the abandonment or loss of those attributes which might have protected the population under continental conditions of competition and predation. Let the environment change, let predators from the outside world be introduced and the island is no more a refugium, an elysium. The West Indies, many of the Pacific Islands, contain numerous examples of species which, having settled on insulated islands, away from the main stream of

competition and the pressure of predators, succumbed rapidly to the changes brought by the arrival of man, his ships and his domestic and feral animals.

James Greenway is to be congratulated for the painstaking and careful research which has gone into this volume on extinct and vanishing bird species. It is a highly necessary volume for the library of every serious student of ornithology, as well as a reference for every animal conservationist.—S. DILLON RIPLEY.

The Ornithogeography of the Yucatan Peninsula.—Raymond A. Paynter, Jr. Bull. 9, Peabody Museum of Natural History. 347 pp., pls. 1-4, 1 text-map, 1 folding map. 1955. Price \$9.50. The last two decades have seen a tremendous acceleration in interest in Mexican ornithology. The impetus has been provided in large measure by the building of numerous highways and other tributary roads opening up areas of the Republic that previously were almost inaccessible. The present contribution to Mexican ornithology comes, however, not as a result of these modern improvements that expedite travel and exploration but instead as a consequence Paynter's enthusiasm, physical stamina, and willingness to undergo privation and hardships in a country parched by intense tropical heat, lacking in adequate water, and provided in many sections with only the most primitive transportation facilities.

When Paynter selected the Yucatán Peninsula for intensive ornithological study, he chose one of the most critical areas in all Mexico. Not only has there been need for a definitive report on the indigenous birds of the Peninsula, but ornithologists in general, and particularly those in the eastern half of the United States and Canada, have long needed to know more about the status in the Yucatán area of the temperate zone birds that winter there or pass through in migration. The lack of published records from Yucatán of certain presumed trans-Gulf migrants must hinge, in part at least, on the general lack of attention given to North American migrants by early workers, who were more concerned with securing the novel in the avifauna of the Peninsula. Paynter's study does not by any means supply us with all the answers that we seek but it does provide us with specific records from the Yucatán area of no less than 115 winter visitors and twenty-six migrants whose place of birth was in the eastern half of the United States or Canada.

The main text treats each of the 429 species of birds for which Paynter has what he considers thoroughly substantiated records of occurrence on the Peninsula. The author gives the general range and the range on the Peninsula for each species and subspecies, as well as a list of his own specimens followed by sections entitled "Remarks" and "Habitat." The former section includes such items as taxonomic comments, notes on behavior, and discussions dealing with the validity of old records and with anomalies of distribution. When data are available the author includes a section on weights. Of special interest are various introductory chapters that discuss the physiography, geology, climate, and phytogeography of the Peninsula. Paynter divides the Peninsula into three vegetational zones: (1) a narrow belt of "Scrub" on the extreme northern coast, (2) an extensive "Deciduous Forest" occupying the greater part of the Peninsula, and (3) a "Rain Forest" area covering the base and the extreme northeastern corner of the Peninsula. As Paynter himself states, there is no sharp line of demarcation between deciduous forest and what he calls rain forest, but the transition is clinal. Not many students of plants and animals of the American tropics, however, will be willing to go along with Paynter in treating even the wettest part of this cline as anything approaching true rain

forest. The book concludes with an illuminating analysis of the composition, distribution, and origin of the avifauna of the area, with special attention being given to the birds of the islands lying offshore.

Unfortunately one large body of field notes and a fine collection of birds from the Peninsula were not available to Paynter for study in the preparation of this report. Consequently, it is to be hoped that the unpublished material will soon be worked up and any new information that it contains made available for students of Middle American birds.—GEORGE H. LOWERY, JR.

The Travels of William Bartram. Naturalist's Edition.—Edited by Francis Harper. 1958. lxi + 727 pp., 43 ills., maps. Yale Univ. Press, New Haven, Conn. \$8.50. William Bartram (1739–1823), a native of Philadelphia, was one of the first naturalists born in North America. His "Travels" through the Carolinas, Georgia and Florida paint a vivid, if perhaps romantic, picture, and were many times reprinted after the original publication in 1791. This new edition includes the original version (with some spelling corrections) and supplies, in addition to a biographical introduction, an informative page by page commentary, an elaborate annotated index identifying localities, plants and animals, a bibliography, and a general index. The original illustrations are reproduced, and as a bonus we are given several other drawings by Bartram and a fine series of landscape photographs showing the country he traversed. Bartram, like his father, was more of a botanist than an ornithologist, but his comments on the behavior and status of various birds and his distributional list of birds from Pennsylvania to Florida demonstrate his observational keenness. The remarkably detailed description (even to iris color) of "*Vultur sacra*" in northern Florida leaves no room for doubt that he had in hand a live bird or freshly killed specimen of the King Vulture (*Sarcoramphus papa*). Bartram's account of the Indians in Florida is especially interesting. For the aborigines (as well as for rattlesnakes) he evinces an admiration and fondness that must have been unusual in a white American of his period.—E. EISENMANN.

A Bird Watcher in Kenya.—Vernon D. van Someren.—1958. 270 pp., 38 photos. Oliver and Boyd, Edinburgh 1, Scotland. 30 shillings.—The name van Someren is a prominent one in the ornithology of East Africa. The present book is the second on the habits of Kenya birds to be published by a member of this family within the last few years. (The other is "Days with Birds," by V. G. L. van Someren, published by the Chicago Museum in 1956.) The present book emphasizes bird photography, is more popular and nostalgic in tone, and was written by Dr. van Someren after he had returned to Scotland. To anyone who has succumbed to the lure of East Africa and its birds, such chapters as those on Mount Kenya or Lake Magadi will bring back fond memories. The text incorporates valuable observations on African birds and general remarks on the African situation and ecology.—DEAN AMADON.

Vertebrates of the United States.—W. Frank Blair, Albert P. Blair, Pierce Brodtkorb, Fred R. Cagle and George A. Moore. 1957 ix + 819 pp., many text figs. McGraw-Hill Book Company, New York. \$12. Getting into one octave volume keys and diagnoses of all vertebrate species (except marine turtles and fishes) that inhabit the United States is certainly an accomplishment. The book is primarily intended as a text and reference for university courses in classification and natural history. Identification must be made through keys, aided by brief diagnoses of each family, genus, and species. Subspecies are not treated. Illustrations are too

few to do more than assist in understanding the keys, which are, of course, designed to work only for the United States species. As to the diagnoses, the preface states that "each taxon is characterized as it exists on a world-wide basis." This certainly does not hold for many of the passerine families treated. Whatever their practical convenience, some currently recognized bird families blend so smoothly into others (when all included species are considered) that sharp diagnostic lines cannot be drawn—or if they can, their definition is yet to be worked out.

The section on birds was written by Pierce Brodkorb. This is the only work since Ridgway's multi-volume and incomplete "Birds of North and Middle America" that attempts to give the characters on which each North American bird genus is based—a feature giving usefulness to the book even to professional ornithologists. In the main, Brodkorb follows the classification and nomenclature of the A.O.U. Checklist, but he adopts an arrangement much like Tordoff's for the nine-primaried Passeres, sinks a number of currently recognized genera, revives the genus *Baeolophus*, and lumps in one specific unit several allied forms usually treated as species. Some of the changes from current usage have probable merit and all deserve careful consideration. Yet one may question whether it was suitable to adopt them in a book, essentially for non-ornithologists, where the reason for the deviation from the A.O.U. standard could not be discussed adequately and in some instances is not even mentioned.

The bird section is the longest in the book, but has very few illustrations. This might be justified were students referred to some other books on United States birds. By an unfortunate oversight no bibliography of any kind is appended to the ornithological section—although all the other sections include useful lists of references. The lack of diagrammatic illustrations for the characters used in the keys impairs their usefulness. Not even the usual figure depicting the topography of a bird is included. To run down the passerine families, the non-ornithologist must determine the relation of gonys length to width across the mandibular rami, and discriminate between perforate and imperforate nostrils, booted and scutellate tarsi, tenuirostral and conirostral bills. While most of these terms are defined in the glossary, can inexpert students be expected to visualize them without drawings?

Nevertheless the ornithologist will find this book a handy single-volume compendium of the vertebrate groups, and may have occasion to refer to the bird part for brief and well-prepared characterizations of our families, genera and species—even though in the more difficult groups these will not invariably suffice for identification.—E. EISENMANN.

Audubon's Elephant Folio

Our member, W. H. Fries, 86 Cushing Street, Providence 6, Rhode Island, would appreciate information as to the whereabouts of copies of the Elephant Folio of Audubon's "The Birds of America".

Migration

Our Honorary Fellow, Dr. David Lack, Edward Grey Institute of Field Ornithology, Botanic Garden, Oxford, England, is desirous, in connection with a projected work on this subject, to obtain reprints of papers published in the field of migration.