

## RECENT LITERATURE

**Principles of Animal Ecology.**—W. C. Allee, A. E. Emerson, O. Park, T. Park, and K. P. Schmidt. (W. B. Saunders Co., Philadelphia), xii + 837 pp., 263 figs., 1949. Price, \$14.00.—This large, ambitious, and important work attempts to define the scope of modern ecology by organizing the subject matter of that field according to general principles. That such a review has been needed is evidenced by the wide variation in the content of books dealing with ecology, in the attention given ecology in elementary texts in biology, and in biologists' attitudes toward ecology. In this book we have not only an enormous amount of ecological information for which there is wide interest, but information compiled and examined by a leading group of ecologists who give us the benefit of their conclusions and views. The work of students of special groups, ornithologists and others, carries promise to the extent that it is guided by an up-to-date knowledge of fundamental biological principles. In the light of all these considerations, this book commands our attention and close study.

Five sections deal, respectively, with the history of ecology, analysis of the environment, populations, communities, and evolution. This material is divided among 35 chapters. The historical section, 60 pages in length, is divided into two parts. In the first part (by Allee), ecological backgrounds and growth are examined from the Greeks up to 1900; the material is organized under topic headings such as environmental physiology, economic biology, limnology, the naturalists, etc. The second part (by T. Park) is a review of progress in ecology since 1900 by decades. The section on environment (by Allee) treats in conventional manner such topics as heat, light, water, gases, dissolved salts, soil, etc. The section on populations (by T. Park), following an introduction on properties of populations, definitions, and methods of study, deals with such topics as mortality, age-distribution, life-tables, growth-form of populations, and population factors. This section promises to be especially useful to field ornithologists interested in population phenomena and should serve as much as any other section of the book to channel research effort along profitable lines. There follow chapters that are among the best written and best organized for the purposes of this book, a not unexpected result since they represent the special research fields of two of the authors. An enormous amount of material on animal aggregations is well condensed (by Allee) into a chapter of only 26 pages; the same is true of a 17-page chapter on insect societies (by Emerson). The section on communities (by O. Park) is concerned with stratification, metabolism, periodism, succession, and biomes (the last written with Schmidt). To varying degree, community concepts are also discussed in the other sections. The section on evolution (by Emerson) examines ecological aspects of such phenomena as isolation, natural selection, competition, adaptation, regressive evolution, and the consequences of ecological association.

For purposes of this review, while some comment on the book as a whole will be ventured, it seems best to discuss only one of the sections, and I choose the one on communities. Even so, the points raised in the following paragraphs are only a few of those deserving attention. There is a continually growing literature on habitat distribution and community relations of birds, on habitat factors in relation to speciation, and on biogeography generally. The need for a clear presentation and critical appraisal of community concepts useful in the description and analysis of distributional relations of birds and other organisms is accordingly serious. Moreover, a

part of community ecology in the past has consisted of tagging a lot of descriptive, naturalistic information with obscurantist terms, not infrequently accompanied by swoons over how very interrelated plants and animals are, how very supraorganismic it all is! Some real curiosity and anticipation is therefore aroused by the appearance of a major review of the community approach in ecology.

The factual basis of community concepts is best presented for forests, particularly temperate deciduous and tropical rain forests. For students without extensive field experience, efforts to visualize some of the situations may be strained and the associated principles therefore somewhat elusive. Nevertheless, the decision to stress forest communities has been wise since these formations are among the most, if not *the* most, extensively described in the literature. The wealth of detail and documentation makes this an indispensable source for students of temperate forests.

The point of view of the community as a supraorganism is evident throughout and, I think, overworked. Relatively frequent phrases such as "self-sustaining," "self-supporting," "highly integrated reality," and others with parallel implications serve as reminders. This is carried slightly too far when we are told (p. 546) that "The community is *more* complex, *stable*, *independent*, and less mobile *than its parts*!" (Italics mine.) Without pausing to dwell on the concept of the supraorganism, which has its instructive, philosophical points, we should note that in this book as elsewhere in the ecological literature, its application to major communities such as forests results in a de-emphasis of the need for critical study of edge phenomena and of the true nature of distribution in the mixed populations that comprise a given community. Interested readers should refer to a recent illuminating discussion of this point by Elton (*Journ. Ecol.*, 37: 1-23, 1949). The idea that integrative phenomena operative in closed, stratified communities such as temperate and tropical forests occur generally and to more or less comparable degree is still a preconception fostered by this book's preoccupation with the idea of the supraorganism. Instead of almost apologizing for the "exceptions to the definiteness of the functional boundary" (p. 440), this book might well have explored community boundaries from a more realistic point of view. Important cross-boundary movements of animals, seasonal and diurnal, *are* described, but these seem to me to be played down in the interest of the supraorganism. In juxtaposed major communities such as sclerophyll woodland and grassland, or scrub desert and grassland, it is not easy to speak so glibly of a "functional boundary" as in the case of temperate deciduous forest and grassland.

Use of terms is, according to the preface, limited to those which serve as "a well-authenticated index of the principle." This objective is largely achieved. Some exceptions occur: On page 486, new terms of doubtful value are coined for categories of soil organisms. There is also some toying with definitions of, for example, diurnal and crepuscular (p. 546). The term "lamiation" (meaning layer or stratum), used on page 481 and elsewhere, can be discarded as unnecessary. The authors warn readers (p. 574) that the terminology associated with the concept of the climax "is not a subject for the unwary or for the impatient," and it should be noted that the definitions of postclimax, preclimax, and proclimax that appear there are inadequate.

The doctrinaire aspects of community ecology have tended to obscure its usable descriptive data and the problems posed by them. The section on communities helps to right this, but not to the extent one might hope. Organisms do occur in recognizable assemblages, and ecologists strive to study and analyze the consequences of this assembling. From this have emerged the concepts of the pyramid of numbers and succession, which, with all their attendant principles and implications, are fundamental. Otherwise, the contribution of community ecology is mainly one of

description of biotic assemblages, something which obviously must be done, but the superstructure of assumption and interpretation has been and still is too heavy. Notwithstanding the authors' own comment on page 68 which agrees with this, I think that parts of the book are vulnerable to the same criticism.

Here are some statements subject to challenge: "Ecotones are naturally intermediate between the communities concerned in their physical environment and biota" (p. 477). (This is an unwarrantedly sweeping, if not misleading statement. Is the interspersion of the components of two communities and the phenomenon we speak of as edge effect indicative merely of a state of intermediacy?) "Volant animals, such as birds, may cover a disproportionately large area in relation to their body size" (p. 524). (Is the suggestion intended that by the rules of community ecology birds have no business trafficking over so much ground? And granting the point, for the moment, is it a supportable generalization, or even a meaningful one now?) "Diel activities [day-night rhythms] may be considered in two major categories: . . . reproduction . . . and feeding. It is interesting to note that . . . sheltering, from the point of view of diel periodicity, is the complement of the period of activity" (pp. 551-552). (Omissions from the quotation, so far as I can see, do no violence to the intended meaning. Is it the writer's purpose to say that shelter relationships are absent in the period of activity? What about predation pressure in relation to variation in cover wherein the individuals of a species may be foraging, or resting, or loafing?)

A procedure dangerously pursued in community ecology in the past is extraction and overplay of scant data from faunal works. An example in this book is provided by a table of "stratal equivalents" in forest communities of different land regions of the world (pp. 492-493). By "stratal equivalents" is meant species occupying essentially the same niche in areas that are widely separated geographically. From the possible list of forest-dwelling owls of North America, only the barred, long-eared, and "North American screech owls" are listed. Are these really ecologically equivalent to the "Stygian owl" and "Crested screech owl" of Brazil as listed? Why are the other North American forest-dwelling owls excluded? Because for them there are no ecological equivalents in other faunal regions? All the owls listed are said to feed "in all strata above [the] subterranean" [a safe statement]. Is *this* the basis for postulation of equivalence? The arrangement of ornithological data here exemplifies a dubious choice of distributional facts to support what is actually an important basic concept, but for which the critical evidence in entire groups such as owls is unavailable. The matter of ecological equivalents is presented in much better perspective in the section on evolution (pages 666 ff.).

Considering all this, one welcomes a few notes of cold realism here and there. On page 542, regarding nature of various migratory movements, "The complete answer includes a knowledge of the life span of the several species." Better yet, on page 6, "The study of populations . . . yields principles that clarify the nature of group interactions, interactions that do not exist at the level of the single organism, and that are too complex at the community level to be analyzed in a quantitative way." This seems to me to be a tacit admission that the ideal of community ecology is not only unreasonable in practical design of effective research, but that in fact the problems it poses must be attacked from another point-of-view.

There is a brief chapter on biomes organized merely to put over the idea of types or kinds of biomes from a world-distribution point-of-view. The map of world vegetation (p. 581) is not only, as labelled, "extremely schematic," but so useless for mountainous regions that the latter might better have been left blank. Only the

tundra, deciduous forest, grassland, desert (then only hot desert), and tropical forests (then only tropical rain forests) are considered. Neither tropical deciduous forest, nor such types as chaparral or sclerophyll woodland are discussed, or even mentioned for that matter. This is not intended as criticism, but as a report on the book's coverage of this topic, inasmuch as the material presented seems adequate for the authors' objective.

Most disappointing in the section on communities is the treatment of marine biota, particularly that of the intertidal. Serious students of the ecology of the littoral will find this treatment sketchy and, at some points, misleading. Intertidal mud flats are disposed of in a 14-line paragraph (p. 458) without any references to important studies in the literature or to an earlier discussion of substrates (p. 159). [Generally, however, there are helpful cross-references between sections.] On page 458 and elsewhere genera of invertebrates typical of a given habitat are enumerated, but one is not told whether the cited assemblages are from the Atlantic coast or elsewhere. The complex Pacific Coast tidal cycle on page 455 is not accompanied by any mention of other, simpler types of tidal cycles, particularly that of the Atlantic. It is implied (p. 457) that abundant algal growth of the rocky intertidal is the food of numerous herbivores, thus indicating a parallelism with terrestrial communities; but if such a parallel really exists, at least in the rocky intertidal of the central California coast, the number of littoral species feeding on the lush algal growth seems, in the light of present knowledge, unexplainably low and plankton feeders preponderate in numbers of species and individuals. There is a revealing lapse in the reference to succession in mussel beds on Monterey Bay (p. 570), which succession is simply said to occur on "any clean area" of the marine littoral! Finally, the idea of the marine realm as one biome is of course logical from the point of view of community metabolism, if analogy is to be drawn between terrestrial and marine environments so far as biomes are concerned (see Hutchinson, *Ecol.*, 21: 267, 1940). But in this book, the idea of the marine realm as a single biome is emphasized to the exclusion of a constructive, practical classification of marine associations such as those of the intertidal. The logical recognition of the entire marine realm as one biome should establish, I think once and for all, the fact that the efforts of community ecologists to set forth close classificatory parallels between land and sea are futile.

The initial impression that this book is comprehensive in its coverage of the field is therefore not borne out by closer examination. Not only are some aspects of ecology treated briefly or even sketchily, but at least one other, one of interest to many ornithologists, is just mentioned. This is the field of behavior. It is stated (p. 7) that "innate behavior patterns . . . have real and far-reaching ecological implications." Reference is made to a recent review paper by Tinbergen, but the subject is not discussed. Such terms as "releaser" and "display" do not appear in the index. No reference is made to, for example, E. A. Armstrong's books of 1942 and 1947 on bird behavior, the latter of which, perhaps appearing too late to be cited, contains the latest comprehensive review of the subject of territoriality.

The wealth of detail plus lapses into a ponderous and academic style of writing do not make this book easy reading. Sometimes the obvious is belabored. For example, on page 437, "physiological recuperation, therefore, is consummated [*sic*] within the environment." And on page 265, "The first question asked by the population student is 'How many?' To have meaning such a numerical statement must enumerate kinds that have likeness. This gives the statement dimensional homogeneity." Sometimes there is unnecessary fussiness over objectivity as, for example, the reference on page 7 to "the matter of so-called habitat selection or, objectively

expressed, of modality." It is observed (p. 8) that many naturalists "give strong avoidance reactions to the carefully objective and perhaps over-corrected point of view of critical modern students." Evidently critical modern students occasionally feel themselves stewing in the juice of their own intellectualist perfectionism!

The illustrations with few exceptions are excellent. The double-column format reduces difficulty of reading and facilitates search for particular points. The subject index of 35 triple-column pages is very good. An author index is provided in a 71-page bibliography, where each item is followed by citations to text pages on which reference is made to a given paper. The titles of papers are given in full. The bibliography is thus an exceedingly useful one.

Some of the books or papers listed in the bibliography and cited in the text only once could well have been omitted considering the adequacy or, what is more important, the greater suitability of other sources also listed. For example, on page 535 and only there, three popular works on winter birds are used to support a point about sparse populations of residents in the northeast when other, more advanced and basically ecological papers on winter birds are also listed in the bibliography. Nice's "Watcher at the Nest," a popular work, is cited only once (p. 412) along with her relevant basic papers. Griscom's "Birds of Guatemala," published in 1932, is the sole reference used on page 582 to support a point on time required for species differentiation in vertebrates when there are many recent and authoritative books and papers dealing with this subject, and some of them are listed in the bibliography. Also, some important works are not cited. I have already mentioned Armstrong's books. Other examples are Ricketts and Calvin's "Between Pacific Tides" and Tansley's "The British Islands and Their Vegetation." The latter book not only provides a fund of factual material useful to land ecologists in temperate regions, but takes a sober position with regard to the theory and terms of the American plant ecologist Clements. Tansley's chapters dealing with general theory can serve as a valuable guide to persons obliged to deal in any way with description and analysis of North American vegetation.

It would be gross error for anyone to minimize the importance of this book. Certain shortcomings are inevitable in an undertaking of such enormity. Notwithstanding some of those mentioned above, this book sets forth the content and guiding principles of animal ecology in a way and on a scale not achieved by any previous work. The historical resume and the section on populations are especially significant summaries. The generally encyclopedic approach of the book makes it unsuitable for use as a text; rather, the crying need for a good text in ecology is aggravated. But as a source book and guide, the great value of this volume is already established; it should emerge as a landmark in the history of ecology.—FRANK A. PITELKA.

**Grønlands / Fugle / The Birds of Greenland. Part I.**—Finn Salomonsen with paintings by Gitz-Johansen. (Einar Munksgaard, Copenhagen), pp. 1–158, 17 col. pls., 1950. Price, \$9.00.—Volume 2 is to appear in the spring of 1951 and volume 3 in the autumn of that year. The price per volume will be \$9.00. The present part contains information on the loons, petrels and shearwaters, anseriformes, and cormorants, in that order.

This work is somewhat unusual in that it is set in 2-column format—the left column is in Danish and the right in English. There is no table of contents or index, but these may appear with the last volume. The reproductions of the water-colors by Gitz-Johansen are interesting and perhaps "artistic." However, as illustrations of birds they are not the best; some appear rough, sketchy, and flat.

Salomonsen's text, based upon his own intimate knowledge and pertinent references to literature, constitutes a concisely summarized natural history of the birds, including information on taxonomy, the different plumages, breeding range and season, behavior throughout the year but particularly during the nesting period, migration routes and times, and notes on foods taken. The habitat of each species is outlined in some detail, as is the relative abundance of the various birds; numbers of birds in the colonies are given in many instances.

The information is presented in readable, non-technical fashion and furnishes a good, general background for an understanding of the birds of this relatively unknown, ornithologically at least, part of the world.—H. I. FISHER.

**Distributional Check-List of the Birds of Mexico. Pt. 1.**—Herbert Friedmann, Ludlow Griscom and Robert T. Moore. Cooper Orn. Club, Pacific Coast Avifauna No. 29: 202, 2 pls., June 30,<sup>1</sup> 1950. The first part of the long-awaited "Mexican Check-List" covers the families from the Tinamidae to Trochilidae inclusive, following the sequence of Wetmore's 'Systematic Classification for the Birds of the World.' The "compiling group" under the chairmanship of R. T. Moore has not only consulted all literature on Mexican birds but has also drawn on unpublished material in various museums and private collections in the United States as well as the Museo Nacional de Historia Natural in México City and the British Museum (Natural History). Records included on the basis of unpublished specimens are designated by a letter corresponding to the name of the institution as shown on a table in the introduction. In the Check-List there is a binomial species heading outlining the range of the species as a whole, followed by the subspecific headings which also contain a reference to the original description and a detailed statement of the range in México, including in a general way habitat and altitudinal preferences. In stating Mexican ranges the authors have adopted a sequence of states, as explained in the introduction, dividing the country into four more or less equal bands running from north to south, beginning on the western side and ending with the eastern portion. It is rather a pity that the authors could not have been a little more critical in regard to the recognition of subspecies, but they explain that "it is unwise to settle questions involving the validity of some forms by a simple vote." Consequently they have admitted "all forms except those which they were unanimously against recognizing." However, footnotes such as "this race is only doubtfully distinct," or "status of this subspecies uncertain" appear more or less frequently with an occasional mention of a name in a footnote which is "considered a synonym" or "requires confirmation." Under the scientific name in the specific headings are given the American, Spanish and sometimes Indian vernacular names, while under the subspecific headings are found the Spanish names supplied by Dr. Rafael Martín del Campo.

The 'Distributional Check-List of the Birds of México' promises to be a most useful book to all interested in Mexican ornithology, and it is to be hoped that the preparation of the second part will not be unduly delayed.—J. L. PETERS.

**Birds of Paradise / and / Bower Birds.**—Tom Iredale. (Georgian House, Melbourne), pp. xii + 239, 1 folding map, 33 col. pls. 1950. Price, 5 Guineas net.—Designed as a handbook to these birds, this publication will fulfill a definite desire on the part of many.

The introduction includes a brief description of New Guinea, the area which for all practical purposes embraces the ranges of all these birds, an account of the history

<sup>1</sup>The actual date of publication is probably July 20, on which date copies were received at the M. V. Z. and the printer was preparing packages for delivery to the post office. *vide* F. A. Pitelka, *ibid.*

of discovery of the Birds of Paradise and the Bower Birds, and a general treatment of their taxonomic history.

Each species is considered individually as concerns: general distribution; habitat; history of discovery (along with occasional taxonomic remarks); detailed appearance; behavior; voice; display; nests; and eggs. Although all these aspects are not included for all forms, the author seems to have done a good job within the limitations of space and known facts concerning the natural history of these birds.

Each species is illustrated by one or more colored figures by Lilian Medland (Mrs. Iredale), and the illustrations are superb even though the natural brightness and iridescence could not always be shown. Usually the male and female are shown; in some instances the male is shown in various attitudes of display, and immatures are figured occasionally. Each plate is faced by a black and white outline drawing, with legends, of the species shown in color; this makes for easier identification and prevents cluttering and unbalancing of the plates. One hundred Birds of Paradise and 38 Bower Birds are thus illustrated.

There is no index but the table of contents may be used instead. On pages 227-232 is a check-list of these birds. The only part of the book that disappoints this reviewer is the bibliography, and this is perhaps not too important in a handbook. The bibliography consists of the names of individuals who have contributed to our knowledge of these birds (and their main contributions are noted), but very few actual citations are given. For example, under E. Hartert we find, along with other information, "Sometimes wrote about the Birds of Paradise and their eggs," with no references. It is thus difficult or impossible for one to use.

Some may object to various aspects of the taxonomic discussion and choice of names, but these are relatively minor in a publication of this sort.

The book is easily read, well constructed, and beautifully illustrated. There seems to be little doubt that it will become a classic and a collector's item for amateur and professional ornithologists.—H. I. FISHER.

**Lista de las Aves de Venezuela con su Distribución. Parte 2. Passeriformes.**—William H. Phelps and William H. Phelps, Jr. Bol. Soc. Venez. Ciencias Nat., 12 (75): 1-427, map, March, 1950.—For some years Dr. Phelps and his son have been investigating the avifauna of Venezuela. They have made numerous personal expeditions to unexplored areas with results that have proved valuable in other fields than ornithology and have sent experienced collectors throughout the country. They have thus built up a vast collection of some 48,000 Venezuelan birds that is unequalled by any other museum in the world, if not by all of them combined.

Numerous reports on parts of this splendid material have been made as the collection has grown, and so much of the country has now been covered and so much added to the previous records that it has proved desirable and practicable to prepare a check-list showing the present state of knowledge concerning the status and distribution of the Venezuelan birds. The present publication covers the Passeriformes and forms part 2 of the work, although it is the first to be published. A wealth of information is provided. The accepted scientific name; a local common name; original reference; other synonymy when the type locality is in Venezuela; distribution, including zone and preferred habitat; newly recorded Venezuelan localities (emphasized in bold-faced type); extralimital range; notation if migratory; the number of specimens in the Phelps Collection. These data are supplied for each species or subspecies. A new map of the country is provided, with a gazetteer of all localities mentioned in the text.

There are supplementary lists of extralimital and hypothetical forms and records of Venezuelan significance, and various tabulations of genera, species and subspecies found in the country, described as new from the Phelps Collection or recorded for the first time in Venezuela, and other such information, restricted to the group covered by the present publication, the Passeriformes. The figures are impressive. There are recognized in this Order in Venezuela, 317 genera and 689 species, comprising 1127 species and subspecies of which the Phelps Collection lacks but 24!

Critical analyses are omitted, having been anticipated by the technical discussions in previous papers, although there is occasional brief mention of the factors governing the acceptance or rejection of a form. This has kept the list compact and uniform. Scientific and common names are adequately indexed. Altogether, it is difficult to suggest any improvement in the manner of presentation.

The authors are continuing their investigations and explorations so additions and changes may be expected from time to time, as is true of any check-list when active work is being done. In the meantime we are fortunate in having this comprehensive summary of Venezuelan birds and such active and skilled investigators on the ground to continue the work. The remaining first part is promised for early publication in 1951. It will be awaited with much interest.—JOHN T. ZIMMER.

**Robin Redbreast.**—David Lack. (Oxford Univ. Press, London), pp. xi + 224, 15 figs., 8 pls., October 12, 1950. Price, \$4.00.—As noted in the Preface, "this book is concerned with unnatural, not natural, history and its object is entertainment, not the advancement of learning." Robins, *Erithacus rubicula*, have for centuries held a revered position in English life, and this book attempts to reveal the extensiveness, depth, and quality of its place by noting allusions to the Robins in the general literature of England and Europe. Thus the body of the text is made up of quotations of legends, essays, speeches, and poems which refer, however distantly, to this bird.

Some of the quoted material is of such length and interest that the Robin is lost from view, but this is probably as the author wishes for he notes that the bird is not the main theme but rather the excuse for a rambling, descriptive "journey" through England (and its mores).—H. I. FISHER.

**Ornithologie als Biologische Wissenschaft: 28 Beiträge als Festschrift zum 60. Geburtstag von Erwin Stresemann (22. November 1949).**—Edited by Ernst Mayr and Ernst Schüz. (Carl Winter, Heidelberg), xii + 291 pp. 1949. Price, 18 marks (\$4.50).—The friends of the eminent ornithologist Erwin Stresemann could not have chosen a more fitting way to honor him than the publication of this fine group of scholarly contributions to ornithology in a form calculated to reach biologists generally—as articles in even the best ornithological journals often fail to do. Authors from Germany, Austria, England, France, The Netherlands, Finland, the United States, Mexico, and Brazil have joined to pay this tribute to Dr. Stresemann. Six of the 28 articles are in English (with a seventh summarized in English), one in French, the remainder in German.

The volume opens with a well worded tribute to Dr. Stresemann, enumerating some of his outstanding contributions to ornithology. The articles that follow are classified under the following categories: evolution and systematics (articles by J. Berlioz, J. P. Chapin, J. Delacour, K. Günther, E. Mayr, W. Meise, A. H. Miller, R. C. Murphy, and H. Weigold); embryology (E. Witschi); behavior (O. Koehler, H. Laven, K. Lorenz, M. M. Nice); ecology and functional anatomy (N. Tinbergen, R. Kuhk, R. E. Moreau, P. Palmgren, J. Peitzmeier, L. Schuster, E. Schüz, H. Sick, H.



O. Wagner); parasitology (W. Eichler); migration (R. Drost, G. von Schweppenburg, G. Kramer); and the history of ornithology (F. Goethe).

There is not space to mention here all the contributions, even by title, but a few may be noted briefly if only to indicate the scope and variety of the volume and its importance to ornithologists, however specialized their particular interests.

One of the most startling discoveries reported in this volume is R. C. Murphy's new species of gadfly petrel, *Pterodroma ultima*, described from 94 specimens after 20 years' investigation.

A. H. Miller discusses "some ecologic and morphologic considerations in the evolution of higher taxonomic categories" as exemplified in North American thrashers and mockingbirds.

Margaret M. Nice considerably revises her earlier published stand on the "question of sexual dominance" in birds.

N. Tinbergen describes and interprets some points in the "nesting behavior of the Herring Gull."

H. O. Wagner makes a stimulating "contribution to the anatomy and biology of the tinamous (Tinamidae)."

R. Kuhk treats the "breeding biology of the Rough-legged [Tengmalm's] Owl, *Aegolius funereus* (L.)."

And W. Meise writes "on a generic hybrid and a species pair of tyrant flycatchers, with remarks on migration distance and wing form."

The volume is well edited and printed, but it is not indexed, and unfortunately many of the contributions do not have summaries.—JOSSELYN VAN TYNE.

**The Birds of Tropical West Africa.**—Bannerman, D. A. (Crown Agents for Colonies, 4 Milbank, London, S. W. 1), vol. 7: pp. i-xxv + 1-413, 14 col. pls., 40 figs., January 1, 1949.—The seventh volume of Dr. D. A. Bannerman's 'Birds of Tropical West Africa' concludes the general survey of the species inhabiting this vast region, the publication of which began in 1930. As it always happens, however, with a long and ambitious work issued in several volumes over a period of years, there will be an additional volume of addenda.

All the volumes are full of useful information. The author has very intelligently stimulated the interest of many residents of West Africa who have sent him new and valuable observations on the life habits of the birds to add to what could already be found in literature. This is a special feature of the work, particularly welcome as the author himself had few opportunities to visit Africa. A great advantage is also the large number of illustrations, colored plates and figures in the text, including the excellent and unusual keys, that make it easy for beginners and laymen to use the book. There are 14 colored plates in the present volume, all due to the talent of the veteran bird artist, George Lodge. They are charming pictures, but in many cases the shape and posture of birds familiar to field ornithologists in Africa and to aviculturists the world over are not too accurate.

The lack of sufficient experience with the birds in life has been a handicap to the author and the main criticism to be made of this otherwise excellently conceived work is that it is based almost exclusively on the study of museum series and on literature. Taxonomic arrangements unacceptable to modern workers are no doubt due to too limited a knowledge of habits and behavior. Also an insufficient general comprehension of the avifauna of other parts of the world is noticeable.

The present volume deals with the Weavers, a group of Passerine birds which has received much attention from Sushkin, Chapin and myself in past years. Their systematic treatment is far from satisfactory. The author still places the sparrows

(Passerinae) among the Fringillidae, instead of in the Ploceidae where they belong according to Sushkin's conclusions, almost universally accepted today. The Buffalo-Weavers (*Bubalornis*) are kept as a separate family against Sushkin's better judgment; the latter's opinion has in fact long been adopted by Chapin, although Bannerman believes that he agrees with him in rejecting it. This remark applies to many other similar statements in the course of the volume, particularly to an unfortunate splitting of genera in the *Ploceus* group of Ploceinae. Sclater's sequences and taxonomy in his 'Systema Avium Aethiopicarum' are much more acceptable, with some minor changes.

When it comes to the Bishops and Whydahs, Bannerman seems to have adopted or rejected some of my own conclusions ('Monographie des Veuves,' Oiseau, 1933-1934) without much consistency. He upholds several genera and species which, in my opinion, should be merged. It seems curious that he should accept with me *Euplectes franciscana* as a subspecies of *E. oryx*, two forms which differ rather considerably in the pattern of the breeding dress of the males, and between which there are no known intermediates, while he maintains *E. afra* as a separate species when it is obviously a subspecies of *E. taha*. These closely related forms are linked by intermediate and variable populations.

The Waxbills seem to have been particularly mistreated. Bannerman has rejected most of the conclusions of my own revision (*Zoologica*, 28: 69-86, 1943), but I feel that, with a few exceptions concerning the lumping of two species (*Estrilda mel-poda* and *E. paludicola* are better considered two separate species, and perhaps even *E. bengalus* and *E. angolensis*), my arrangement explains relationships and affinities as well as can be done in our present state of knowledge. Bannerman's indignation at "time honored names" being discarded as the result of my lumping cannot be taken seriously as they affect seven fairly recent subspecific terms only. I would like to point out that, among other inconsistencies, it is going a little far to place in two separate genera (*Lagonosticta* and *Estrilda*) such likely subspecies of the same species as *coerulescens* and *perreini*, differing only in the color of the tail. One may judge by glancing at plate 12 where the two birds are figured side by side. Also the evident conspecificity of *Pytilia afra* and *P. hypogrammica* is ignored.

The treatment of the Combassous, borrowed from C. H. B. Grant, seems inadmissible. To separate specifically two forms from Senegal (*aenea* from *chalybeata*) for the mere reason of a more or less greenish gloss of the steel-blue breeding plumage is fantastic; they are color phases at the most. The different shades and the intensity of the reflections are poor distinctive characteristics; the color of the remiges and rectrices, and that of the feet and bill, as well as the life habits, have much greater significance. We are today inclined to recognize only three species of these short-tailed *Vidua*: 1) *chalybeata*, with four or five races—*chalybeata*, *neumanni*, *ultramarina*, *orientalis*, and probably *codringtoni*; 2) *amauropteryx*, including *camerunensis* and probably *nigeriae*; 3) *funerea*, including *purpurascens* and *wilsoni*. This is even a simplification of my proposals of 1934. It must be admitted that much more remains to be learned of this puzzling group of parasitic weavers, but Grant's arrangement is unnecessarily loaded with "species." To be "strongly opposed" to my placing the Combassous in the genus *Vidua*, as stated on p. 369, one must disregard the existence of *Vidua hypocherina* which is entirely similar to the Combassous except that it has the elongated tail of the other *Vidua*; it affords a perfect transition between the latter and the short-tailed species. As for *Vidua (Steganura) paradisea*, the author holds fast to the conception of two species, while the majority of students admit the occurrence in some parts of the range

of the species of two phases of breeding plumage in the males. As long as the males in eclipse, the females, and the young remain impossible to tell apart, it is hard to advance any other explanation.

Bannerman's decision to include *Anomalospiza* in the Viduinae is also unacceptable to me; the color pattern in both sexes is against it, particularly the striated plumage of the young and females, and they are certainly closer to such Ploceinae as *Quelea* and *Foudia*. Their parasitism is very different from the very specific one of the *Vidua*. Finally, an exception must be taken to the footnote on p. 229. Line priority, according to the International Rules of Zoological Nomenclature, Art. 28, has no value, and the designation of the first reviser must be accepted. Therefore, *bicolor* is the proper name for this species of *Lonchura* (= *Spermestes*), and not *poensis*, as Bannerman believes, because it has been chosen by Sclater on account of its greater suitability, a perfectly valid action.

I have felt that these remarks on systematics should be made before highly commending this otherwise very substantial and well prepared work, which will long remain the base for all further studies of West African bird life.—JEAN DELACOUR.

**Studies in Bird Migration / being the Collected Papers / of / H. Chr. C. Mortensen / 1856–1921.**—Edited by Poul Jespersen and Å. Vedel Tåning. (Dansk Ornith. Forening, (Einar Munksgaard) Copenhagen), pp. 1–271, maps and photos. 1950. Price, Danish kr. 18.—This volume is a memorial to Mortensen whose pioneer work on Starlings over 50 years ago initiated the banding of birds for scientific study. The introduction includes a brief biography and a list of some 30 publications by Mortensen; 19 of them are reproduced in their entirety in this book.

Most of his papers appeared originally in Danish, and their translation into English by H. M. Kyle will make them more available. The bulk of the material deals with records of recovered birds, although the development of methods of capture, bands, and instructions for banding is clearly shown in the sequence. The later papers show the initial collation of recoveries to demonstrate migration routes, life cycles, etc. One, published in 1910, is on brood-size in Danish birds.

There are several tables of the numbers of birds banded by Mortensen and recovered. Starting in 1900, Starlings were marked for a number of years. Realizing that his results from this were not too productive, he began to band storks, teal, herons, buteos, pintails, gulls, and other birds.

The most complete information is on: the stork, *Ciconia alba*; the teal, *Anas crecca*; the heron, *Ardea cinerea*; the pintail, *Anas acuta*, and various species of gulls.—H. I. FISHER.

**Geographic Variation and the Species Problem in the Shore-bird Genus *Limnodromus*.**—Frank A. Pitelka. Univ. Calif. Publ. Zool., 50: 1–108, 10 pl., 9 text-figs., 1950.—Whether Long-billed and Short-billed Dowitchers are one or two species, whether every dowitcher can be unequivocally identified, and whether the Short-billed Dowitcher varies geographically are questions which many American ornithologists have tried to answer, particularly during the past 20 years. Pitelka gives an admirably thorough survey of these questions which clearly establishes the following facts: Long-billed (*scolopaceus*) and Short-billed (*griseus*) Dowitchers are allopatric. Their ranges are separated by an unsurveyed area in Alaska, but no intermediate specimens have ever been found even among migrants. Pitelka therefore grants *scolopaceus* species rank. The Shortbill changes clinally from Alaska to Ungava and is divided by Pitelka into three subspecies, on the basis of size and color (*caurinus* from Alaska is newly described, p. 43). Among Atlantic coast migrants

187 were identified as *griseus* and 122 as the inland race *hendersoni*. The number of unidentifiable specimens is not clearly stated, but presumably 196 (118) since the total number of examined Atlantic Coast birds of *griseus* is given as 505 (p. 26) (or 427?, p. 33). These figures illustrate the degree of similarity of these races. Less than ten per cent of the Atlantic Coast dowitchers are Long-bills. Many of the specimens in collections identified as Long-bills actually belong to *hendersoni*, the inland race. Even on migration the Long-bill has preference for fresh water, as was, of course, long known to the late Charles Urner and other experienced field workers.

The Long-bill presumably evolved in the Bering Sea-Yukon Pleistocene refuge (and acquired there its preference for fresh water), while the Short-bill was pushed south. Pitelka believes that the racial divergence within *griseus* antedates the maximum of the Pleistocene glaciation, but the reasoning back of this conclusion is not convincing. The difference between Short-bill and Long-bill is very slight and exceeds in no character (including ecological and voice differences) the amount of difference known to occur within many species of birds. Still, the apparent lack of intergradation in the zone of contact indicates that the two forms have reached species level. The exact quantitative analysis of the material (including statistical evaluation) is a particularly valuable section of this work. It may well serve as a model for other similar studies.—E. MAYR.

**Survey of Contemporary Knowledge of Biogeochemistry / 3. The Biogeochemistry of Vertebrate Excretion.**—George E. Hutchinson. Bull. Amer. Mus. Nat. Hist., 96: xviii + 554, 16 pls., 56 tables, 103 figs. June 14, 1950. Price, \$10.00.—Despite the rather formidable title, this study presents in readable and interesting manner a great mass of information on the various factors influencing the the deposition of guano by vertebrate animals, primarily by birds. Included are such things as the geology, biochemistry, archaeology, and oceanography of the regions in which guano is found.

Of major general interest is the light that this paper throws on climatic changes or shifts during the post-Pleistocene period. For each deposit there is a chemical analysis, data on age, weathering, and rate of deposition.

There is an extensive bibliography and a complete index.—H. I. FISHER.

#### RECENT PUBLICATIONS NOTED

**A Game Inventory of Alabama.**—Frederick S. Barkalow, Jr. (Alabama Dept. Cons., Montgomery), x + 140 pp., 63 figs., 1949.—Of interest to ornithologists is the information pertaining to Bob-whites, Wild Turkeys, Mourning Doves, and waterfowl. Data were gained from censuses taken by use of dogs, driving, questionnaires, sound, plane, and simple observation. The results obtained, in instances where two or more methods were applicable, are compared. There are maps and figures to show distribution and changes in status.

**Birds of the Coast.**—C. A. Gibson-Hill. (H. F. & G. Witherby Ltd., London), pp. xxxii + 216, many figs. and photos, November 4, 1949. Price, 10/6 net.—This book for field observers includes all common birds of the coast of the British Isles; it is not limited to water birds. In the introduction is an outline of the principal habitat areas, but specific information on habitat is in the species accounts which include the usual material. These accounts are exceptional, however, in that they include outline maps of ranges and seasonal distribution and black and white cuts to show field characters.

There is a glossary of terms used and a table of data on breeding of the various species. In the table are summarized the seasonal status, egg-laying period, clutch size, and duration of incubation, care of young, and the fledging period.

The very excellent photographs are primarily of water birds.

**Songs and Other Sounds of Birds.**—Alexander V. Arlton. (A. V. Arlton, Parkland, Wash.), xii + 194 pp. (lithographed) 1949.—This is a compilation of the sounds as interpreted by various workers. All are set down in syllables, and many are also reproduced as musical scores. It is often impossible to correlate the syllables quoted with the recorded notes, and the different scores (pp. 23 and 27) for the drumming of the "Ruffled" (*sic.*) Grouse are confused. It would seem that the publication would have had considerably more value if the observations from the literature had been analyzed and restudied in the light of the excellent recordings (Cornell) to which the author had access.

**Birds of the Cleveland Regions.**—Edited by Arthur B. Williams. Sci. Publ. Cleveland Mus. Nat. Hist., 10: 1–215, June, 1950. Price, \$2.00.—This is a checklist of 330 forms and was compiled by members of the Kirtland Bird Club. All published and personal records, extending back to 1755, have been included. In addition to the usual list information, dates of occurrence, habitat preference, and, for locally breeding species, nesting habits, eggs, and incubation periods are noted. Some data on numbers are included. The area is described and a glossary of place names included. A short section deals with the history of ornithology in this region. There is an index of common and scientific names.

**Les Echassiers / de Belgique.**—R. Verheyen (Mus. Roy. d'Hist. Nat. Belgique, Brussels), pp. 1–339, 118 figs., 1948.—The birds considered here are members of the Ciconiiformes, Charadriiformes, and Gruiformes.

In the introduction is general material on the adaptations of this "group"—including structure of foot, bill, plumage—and information on locomotion, behavior, nest, eggs, and young. A key to the forms is on pages 56–72 and includes sketches of important identifying features.

In the accounts are described the various plumages, the status, seasonal occurrence of each species, and general biology, sometimes in considerable detail. For certain forms a great deal of natural history information is presented, as in the case of the heron, *Ardea c. cinerea*, pp. 83–102, *Vanellus vanellus*, pp. 155–168, *Tringa t. totanus*, pp. 197–205, *Limosa l. grutto*, pp. 241–249. Of unusual interest is the description of display in many forms. Body weights are frequently given.

A short section on these birds "in folklore and language" is present. There is no index, but the table of contents is complete to species.

**List of Danish Vertebrates.—Birds** by Bernt Løppenthin. (Danish Sci. Press, Copenhagen), pp. 1–180, folding map. 1950. Price, \$1.50.—Pages 68–132 are devoted to a list of birds by subspecies; these accounts include data on abundance and status. Danish common names are given. There is a bibliography of about a page and a complete index. In the Introduction, pages 13 to 17, it may be noted that 343 species (389 forms) are included; 188 species breed in Denmark and 170 to 180 forms migrate through Denmark.

**The Breeding-Birds of the Netherlands.**—A. L. J. Van Ijzendoorn. (E. J. Brill, Leiden), pp. 1–73, 8 pls., 1 folding map. 1950. Price, 6.25 Guilders.—A brief description of some of the best "birding spots" in Holland precedes the systematic list of the breeding birds. In the list one may find information on relative abundance,

general distribution, and habitat. There is no data on nests, eggs, or dates of occurrence. Changes in status are noted where information is available. One finds that 184 species and four subspecies are included, but that only about 150 forms of 16 orders and 43 families breed regularly. The families represented by 10 or more breeding species include: Anatidae, Sylviidae, Fringillidae, Laridae, Turdidae, and the Scolopacidae.

There is a very brief bibliography; indices are to scientific names and to English and Dutch common names.

**A Bibliography of Kentucky Ornithology.**—Harvey B. Lovell and Mabel Slack. (Ky. Orn. Soc., Occ. Publ. No. 1, Bowling Green, Ky.), pp. 1–50, 1 map. 1949. Price, \$1.00.—This is an annotated list (alphabetical by authors) of all publications relating to the birds of Kentucky through the year 1948. Pages 5 to 15 are devoted to a brief history of Kentucky ornithology which notes the early activities of Michaux, Audubon, Wilson, Beckham, and Pindar, as well as reviewing present day ornithology in the state.

**Trapping Methods for Bird Ringers.**—P. A. D. Hollom. Brit. Trust Ornith. Field Guide No. 1: 1–40, 24 figs., 1950. Price 2s. 6d.—This interesting booklet consists of diagrams of various bird traps, with brief discussions of methods of use and species that may be obtained with each type. With few minor exceptions, only traps in use in England are included. Thus there is no mention of the efficient Japanese and Italian nets, or of the various successful devices now being operated in America. Bird banders in the United States can perhaps get ideas for traps suitable for their use from this publication which is the first in a series proposed by the British Trust for Ornithology.

**Ducks are Different.**—Francis J. S. Holmes and Angus H. Shortt. (Holmes, 666 Riverwood Ave., Ft. Garry, Winnipeg), 38 pp., 18 col. pls., 1949. Price, \$1.00.—This little booklet gives thumbnail sketches of the more common ducks of the Mississippi Flyway. The colored plates consist of caricatures of ducks, designed to emphasize their distinguishing marks.

**Birds Observed and Collected During the Whaling Expeditions of the "Willem Barendz" in the Antarctic, 1946–1947 and 1947–1948.**—W. H. Biermann and K. H. Voous. *Ardea*, 37 (extra no.): 1–123, 1 pl., 15 figs., 1 folding chart, 1950. In English.—This is far more than the usual list of species observed or collected. There is detailed information on seasonal distribution, structure, weights, reproduction, molt, food habits, and field characteristics. The data obtained on these two voyages are correlated with the findings of previous workers, and much new material is presented.

ADAMETZ, EMILIE. 1950. Die Einwanderung und Ausbreitung der Türkentaube [*Streptopelia d. decaocto*] in Österreich von 1943–1949. *Orn. Ber.*, 2 (2): 85–97.

ALLAN, RONALD M. 1950. Fleas (*Siphonaptera*) from birds in North-east Scotland. *Scot. Nat.*, 62 (1): 33–41, 1 fig., 1 table.

BAL, C. 1950. De nestbouw van Sperwers, *Accipiter n. nisus* (L.), in Nederland. (Nest-building behavior). *Ardea*, 38 (1–2): 19–34, 10 figs. English summary.

BEHLE, WILLIAM H. 1950. Clines in the Yellow-throats [*Geothlypis trichas*] of western North America. *Condor*, 52 (5): 193–219, 2 figs., 7 tables.—Critical review and study of variation.

BETTS, A. H. 1950. Rooks [*Corvus monedula*] "hawking" insects. *Brit. Birds*, 43 (7): 221.

- BLOESCH, MAX. 1950. Die Storche in der Schweiz. Orn. Beob., **47** (3): 126-129, 3 tables.—Numbers and movement of White Stork.
- BOASE, HENRY. 1950. Notes on the behaviour of some ducks. Scot. Nat., **62** (1): 1-16, 4 figs.
- BRACKBILL, HERVEY. 1949. Age and migration records of Maryland Brown Thrashers. Md. Birdlife, **5** (1): 3-4 (mimeo.).
- BRACKBILL, HERVEY. 1950. White-breasted Nuthatch (*Sitta carolinensis*) and Tufted Titmouse hawking for insects. Wilson Bull., **62** (3): 135-136.
- BUSSMANN, JOSEF. 1950. Zur Brutbiologie des Wiedehopfes (*Upupu epops*). Orn. Beob., **47** (4): 141-151, 4 figs., 2 pls.—Notes on various aspects of breeding, including growth of young.
- BYERS, GEORGE W. 1950. A Black and White Warbler's [*Mniotilta varia*] nest with eight Cowbird eggs. Wilson Bull., **62** (3): 137-138, 2 photos.
- CASAL, PEDRO S. 1950. La avutarda de Mar: *Chloëphaga hibrida hibrida* (Molina). Hornero, **9** (2): 167-174, 1 fig., 3 photos.
- CHAPLIN, M. 1950. Distraction display of Stonechat [*Saxicola torquata*]. Brit. Birds, **43** (7): 223-224.
- COHEN, EDWIN. 1950. Nesting-site used six times in one season. Brit. Birds, **43** (9): 292.—By Tawny Owls, *Strix aluco*, and by Stork-Doves, *Columba oenas*.
- [COLE, LEON J.] 1949. Leon Jacob Cole. Pass. Pigeon, **11** (2): 73-74.
- COLLIAS, N. E. 1950. Some variations in grouping and dominance patterns among birds and mammals. Zoologica, **35** (6-11): 97-119, 1 fig., 9 tables.—Intra- and interspecific dominance.
- CONOVER, BOARDMAN. 1950. A study of the Spotted Tinamous. Field. Zool., **31** (37): 339-362.—*Nothura maculosa submontana* (Chos-Malal, Rio Neuquen, Neuquen, Argentina), *N. m. annectens* (Cambaceres, Prov. Buenos Aires, Argentina), *N. m. paludivaga* (Laguna General Diaz, Paraguayan chaco), new subspecies.
- CONOVER, BOARDMAN. 1950. A study of the Elegant Tinamous. Field. Zool., **31** (38): 363-374.—*Eudromia elegans patagonica* (Estacion Pampa Alta, Ferrocarril Patagonica, Terr. Santa Cruz, Argentina), *E. e. multiguttata* (Cambaceres, Prov. Buenos Aires, Argentina), *E. e. devia* (Chos-Malal, Rio Neuquen, Neuquen, Argentina), new subspecies.
- COOKE, MAY THACHER. 1950. Returns from banded birds. Bird-Banding, **21** (4): 145-148.
- CRAMP, STANLEY. 1950. Chick survival in the Kittiwake. Scot. Nat., **62** (1): 63-64.
- CRANDALL, LEE S. 1950. Feathered treasures from Ecuador. Animal Kingdom, **53** (5): 144-151, 161-163, 17 photos.—Excellent photographs, particularly of hummingbirds.
- CROSS, FRANK C. 1950. Winter copulation of Mallards [*Anas platyrhynchos*]. Wilson Bull., **62** (3): 133.
- DAANJE, A. 1950. Waarnemingen over de slaaphouding en de daaraan voorafgaande bewegingen bij pasgeboren eendenkuikens. (Observations on the sleeping position of ducks). Ardea, **38** (1-2): 69-76, 4 figs. German summary.
- DARLING, BETTY. 1950. Death of a Horned Lark [*Eremophila alpestris praticola*] in territorial combat. Wilson Bull., **62** (3): 134-135.
- DAVIS, T. A. W. 1950. Notes on birds seen in winter between the English Channel and the West Indies. Brit. Birds, **43** (7): 218-221.
- DE BEAUFORT, L. F. 1950. In memoriam A. A. van Pelt Lechner. Ardea, **38** (1-2): 84-85, 1 pl.

- DEIGNAN, H. G. 1950. Five new races of birds from Southeastern Asia. *Zoologica*, **35** (6-11): 127-128.—*Gecinulus grantia poilanei* (Prov. of Bien Hoa, Cochinchina); *Conostoma oemoditum graminicola* (Ndamucho, Yunnan Prov., China); *Malacopteron affine phoeniceum* (Segah River, eastern Borneo); *Geokichla citrina gibson-hilli* (Merqui Dist., Tenasserim Div., Burma); *Anthreptes singalensis stellae* (Khao Saming, Trat Prov., se Siam).
- DE RUITER, L. COOMANS. 1950. Vogels van het Quarles-Gebergte (ZW. Centraal Celebes). *Ardea*, **38** (1-2): 40-64.—Species accounts of birds in Celebes.
- DOBRINDT, EMIL. 1950. Zur Brutbiologie des Zaunkönigs (*Troglodytes troglodytes*). *Vogelwelt*, **71** (4): 128-129.
- DUMAS, PHILIP C. 1950. Habitat distribution of breeding birds in southeastern Washington. *Condor*, **52** (5): 232-237, 1 table.—Density indices of birds in various habitats.
- DUPOND, CH. 1949. Deux propositions taxidermiques pour les collections ornithologiques. *Gerfaut*, No. 4: 238-244.
- EVENDEN, FRED G. JR., DAVID B. MARSHALL AND THOMAS H. McALLISTER, JR. 1950. Waterfowl populations of a swamp in Western Oregon. *Condor*, **52** (4): 159-163.
- FAVARGER, J. 1950. Les Milans royaux [*Milvus milvus*] du Jura. *Nos Oiseaux*, **20** (210): 193-198, 1 fig.
- FLANIGHAN, M. 1950. Under-water movements of Moorhen (*Gallinula chloropus*). *Brit. Birds*, **43** (7): 228.
- FRIEDMANN, HERBERT. 1950. The birds of North and Middle America. Part XI. *U. S. Nat. Mus. Bull.* **50**, 793 pp., 51 figs.—Includes the Cathartidae, Accipitridae, Pandionidae, and Falconidae. Format and content as in previous parts.
- GEBHARDT, LUDWIG. 1950. 20 Jahre Kontrolle eines hessischen Schwarzspechtreviers [*Dryocopus martius*]. *Vogelwelt*, **71** (4): 105-110.
- GEROUDET, PAUL. 1950. Quels sont les hotes du Coucou (*Cuculus canorus*)? *Nos Oiseaux*, **20** (210): 201-205, 1 fig., 1 table, 3 photos.
- GIAL, ANDRES G. 1950. Notas de Viajes. *Hornero*, **9** (2): 121-164, 6 figs., 8 photos.
- GIBSON-HILL, C. A. 1950. Notes on the birds of the Cocos-Keeling Islands. *Bull. Raffles Mus.*, No. **22**: 212-270, 1 fig., 1 map.—Distribution, status, plumage, natural history.
- GODFREY, W. EARL. 1950. Description of a new northwestern *Geothlypis*. *Can. Field-Nat.*, **64** (3): 104.—*G. trichas yukonicola* (Jarvis River at Alaska Highway, Yukon Terr.), new subspecies.
- GOODBODY, IVAN M. 1950. Sky-Lark [*Alauda arvensis*] migration in S. E. Ireland. *Brit. Birds*, **43** (9): 265-271, 1 fig.
- GOODPASTURE, KATHERINE A. 1949. Blue-winged Warbler's nest with six eggs. *Migrant*, **20** (3): 54-55.
- GROSKIN, HORACE. 1950. Banding 4,469 Purple Finches at Ardmore, Pa. *Bird-Banding*, **21** (3): 93-99.
- GUICHARD, KENNETH M. 1950. A summary of the birds of the Addis Abeba Region, Ethiopia. *Journ. East Africa Nat. Hist. Soc.* (1947-48), **19** (5): 154-178, 1 map, 1 pl.—Brief summary of habitats and annotated list based on collected specimens.
- HALLER, KARL W. 1950. Gannet, Wood Ibis, and Gull-billed Tern along the coast of Mississippi. *Wilson Bull.*, **62** (3): 133.



- HANDLEY, CHARLES O. JR. 1950. The brant of Prince Patrick Island, Northwest Territories. *Wilson Bull.*, **62** (3): 128-132, 1 photo.
- HAVERSCHMIDT, FR. 1950. Bemerkungen über den Weissen Storch (*Ciconia ciconia* (L.)) im nördlichen Zugscheidegebiet. *Orn. Beob.*, **47** (3): 73-79, 5 tables.—Populations.
- HICKEY, PEGGY. 1949. Junco subspecies [*cismontanus* and hybrid with *J. oregonus montanus*] collected in Madison. *Pass. Pigeon*, **11** (3): 131.
- HOBBS, JOHN T. 1950. Display of House-Martin [*Delichon urbica*]. *Brit. Birds*, **43** (8): 256-257, 2 figs.
- HODGES, JAMES. 1950. Unusual display of Mourning Doves. *Bird-Banding*, **21** (3): 115.
- HOFFMANN, ALFRED. 1950. Zur Brutbiologie des polyandrischen Wasserfasans *Hydrophasianus chirurgus* Scop. *Orn. Ber.*, **2** (2): 119-126.
- HOLLISTER, J. MURRAY. 1950. Purple Gallinule—Fish-eater. *Feathers*, **12** (3): 17-19, 2 photos.
- HOOGERWERF, A. 1950. De Witvleugeleend, *Cairina scutulata*, van de Grote Soenda eilanden. *Ardea*, **38** (1-2): 64-69, 1 fig., English summary.—Evidence is presented that these birds on the Sunda Islands are distinct from the continental forms.
- HORNBERGER, F. 1950. Über die Storche in Baden und Württemberg und das Störungsjahr 1949. *Orn. Beob.*, **47** (3): 98-108, 2 figs., 4 tables, 1 map.—Breeding numbers and disturbances of the White Stork.
- HORNBERGER, FRIEDRICH. 1950. Über Storchzahlungen in Deutschland und Österreich. *Orn. Beob.*, **47** (3): 108-126, 6 figs., 4 tables.—Populations and changes in status of the Stork.
- HULME, DEREK C. 1950. Chaffinch [*Fringilla coelebs*] mimicking Hedge-Sparrow's [*Prunella modularis*] song. *Brit. Birds*, **43** (7): 222.
- JONES, J. KNOX, JR. 1949. Notes on the small mammal contents of pellets of the Barn Owl (*Tyto alba pratincola*) in Nebraska. *Nebr. Bird Rev.*, **17** (1-2): 4-5, 1 table.
- KESSEL, BRINA. 1950. Observations on the polygamy and territorial behavior of a male Starling (*Sturnus vulgaris*). *Bird-Banding*, **21** (3): 112-114.
- KLAAS, CARL. 1950. Zur Ernährung der Schleiereule (*Tyto alba guttata*). *Vogelwelt*, **71** (4): 132-133.
- KOSSACK, CHARLES W. 1950. Breeding habits of Canada Geese under refuge conditions. *Amer. Midl. Nat.*, **43** (3): 627-649.
- KRAMER, GUSTAV. 1950. Beobachtungen über Erwerb und Behandlung von Beute beim Rotrückengewürger (*Lanius collurio collurio* L.). *Orn. Ber.*, **2** (2): 109-117.
- KUCH, ILSE K. 1949. Winter roosting of a pair of Carolina Wrens. *Md. Birdlife*, **5** (3): 34-35 (mimeo.).
- KUHK, R. AND E. SCHUZ. 1950. 1949 Störungsjahr im Bestand des Weiss-Storchs, *Ciconia ciconia*. *Orn. Beob.*, **47** (3): 93-97.—Disturbances to stability of population in 1949.
- KUMLIEN, L., AND N. HOLLISTER (with revisions by A. W. Schorger). 1949. The birds of Wisconsin (cont.). *Pass. Pigeon*, **11** (3): 114-124; **11** (4): 157-166.
- LANSINGER, ALMA C. 1949. Screech Owls fishing. *Cleveland Bird Calendar*, **45** (2): 14 (mimeo.).
- LANZ, HANS. 1950. Vom Dreizehenspecht (*Picoides tridactylus alpinus* Brehm) und seinem Brutleben. *Orn. Beob.*, **47** (4): 137-141, 2 pls.

- LARKIN, MRS. F. L. 1949. Norway rat killed by Blue Jays. *Pass. Pigeon*, **11** (4): 182.
- LASKEY, AMELIA R. 1949. A Blue Jay "anting." *Migrant*, **20** (2): 37-38.
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### OBITUARIES

EDWARD AVERY McILHENNY, Honorary Life Associate Member of the American Ornithologists' Union, died at his home at Avery Island, Louisiana, on August 8, 1949. He was born there on March 29, 1872, the son of Edmund McIlhenny and Mary Avery McIlhenny, both of whom were members of distinguished Louisiana families. Young "Ned" spent much of his early life acquiring an intimate knowledge of the denizens of the vast marshes surrounding his home, and from that knowledge sprang an insatiable love of nature that was to lead, in later life, to his recognition as one of America's leading conservationists and most enthusiastic naturalists.

The explorer instinct early manifested itself in the young naturalist, for at the age of 21 he withdrew from Lehigh University to accompany Dr. Frederick A. Cook to the Arctic, and he was with Cook on the "Miranda" when that ship was wrecked off the coast of Greenland. Three years later, in August, 1897, he went north on his own expedition to Point Barrow, Alaska, for the purpose of collecting birds and their nests, mammals, and ethnological materials. This was the fateful winter during which over 100 sailors from several ice-bound whaling ships were forced to spend the winter at this northernmost North American outpost. The cotton which McIlhenny had taken with him for use in preparing specimens was utilized in the making of bed-covers, the fabrication of which by the idle sailors provided both busy-work and sleeping warmth.

Back at the Avery Island estate, McIlhenny soon set in operation certain wildlife management practices of his own device that resulted in a veritable paradise for ducks, geese, herons, and other waterbirds. Indeed, his work in creating an artificial pond with nesting platforms and racks of suitable nesting materials led to the establishment of one of the largest heron rookeries on record, and one that was to be known throughout the world as "Bird City." McIlhenny not only conducted original researches into the life history and habits of certain birds and published articles in ornithological journals setting forth the results of these studies, but also he patronized extensively the works of a number of his ornithologist friends. He contributed generously to the operational expenses of the A. O. U., as well as to certain museums. Aside from his studies of the Snowy and American Egrets, the Boat-tailed Grackle, and the Sandhill Crane, he was the author of numerous books, short articles, and notes that contributed materially to Gulf Coast ornithology. Possibly one of his greatest contributions to ornithology was, however, his laborious and long-continuing bird-banding operations that culminated in the banding during his lifetime of the phenomenal number of 189,298 birds.—GEORGE H. LOWERY, JR.

MAX MINOR PEET, elected an Associate of the American Ornithologists' Union in 1933 and a Member in 1948, died suddenly in Ann Arbor, Michigan, on March 25, 1949. Dr. Peet was born in Iosco, Michigan, on October 20, 1885. He very early showed an interest in ornithology and even before he began his college training accompanied a University of Michigan zoological expedition to northern Michigan. After receiving the Doctor's Degree in Medicine from the University of Michigan (1910), he served successively at Rhode Island Hospital, the University of Pennsyl-