

RECENT LITERATURE

Nature Sanctuaries in the United States and Canada, a Preliminary Inventory. S. Charles Kendeigh *et al.* *Living Wilderness*, 15 (35): 1-45. Winter, 1950-51. \$0.50.—An entire issue of the quarterly magazine published by the Wilderness Society (1840 Mintwood Place, Washington 9, D. C.) is devoted to this list of 691 nature sanctuaries in the United States, Canada, and Alaska. It is the fruit of long labor, spanning 12 years, by the Committee on the Study of Plant and Animal Communities and principally by its chairman, Dr. S. Charles Kendeigh of the University of Illinois. The objective was to compile a working list of sanctuaries, describe them briefly, and evaluate their suitability for scientific study, the measuring stick being one of degrees of disturbance and the principle being that the less disturbed an area is, the better it is for research (at least in the particular line of community research emphasized by the committee). Numerous persons have cooperated in the compiling job, including over 200 contributors beside the committee of 16 ecologists representing the Ecological Society of America and later the Ecologists' Union (now called the Nature Conservancy). This is actually a second listing, the first having appeared in 1926 in the 'Naturalists' Guide to the Americas,' edited by V. E. Shelford.

Included in the listing are national parks, national monuments, many state parks, some county, city, and private parks, and some university-owned study areas. Areas not listed, with some exceptions in each group, are national and state forests, federal wildlife refuges, and protected watersheds. The list is subdivided according to the major biotic regions or biomes, and the sanctuaries are classified according to the type of terrain and climax vegetation which prevail in them. The classification of natural regions used is that in the text 'Plant Ecology' by Weaver and Clements, modified to harmonize with the views of community ecologists at the University of Illinois. Under each biome heading, subordinate headings of associations are used wherever possible, and then sanctuaries are listed by states, subdivided into those protected and those only partially protected.

This system has the obvious advantage of listing sanctuaries with more or less common ecological characteristics under one heading, thus serving as something of an index to conservationists' accomplishments in setting aside samples of each regional community type. One disadvantage is that, at some points, the rigidity and incompleteness of the Clementsian community classification results in some obscuring, if not misleading, features in the placement of sanctuaries. For example, Clements never saw fit to recognize, on the Pacific coast, broad-sclerophyll forest or redwood border associations, and one cannot tell from this listing what sanctuaries contain stands of these communities except if certain species of trees such as madrone or coast live oak are mentioned. Another disadvantage is that the complex distribution of communities in the West leads to such odd tricks of expediency as placing the chaparral region of California under the coniferous forest biome.

Thirteen maps, biome by biome, show the location of sanctuaries, with symbols to distinguish those protected from those only partially protected. These maps are an excellent feature of the listing. Although the entry of the locations could only be approximate on such small maps, the eye catches spots that are placed a little too approximately, as that for the University of California which is shown (page 32) where Stanford University exists!

The brief introduction brings out many interesting points. "The tundra and the communities of the higher Rockies, Cascades, and Sierra Nevada are relatively better

represented than are other types of communities. The deciduous forest and prairie are the poorest represented." "There are no first-class nature sanctuaries [those with virgin vegetation, large enough to support self-maintaining populations of all native animals] in the deciduous forest, prairie, and at the lower elevations of the Rocky Mountains." However, the natural region with the largest number of listed sanctuaries (360) is the deciduous forest and its ecotones. The special slant of this list, clearly indicated in the introduction, is the suitability and desirability of areas for research on undisturbed communities. This was explicit in the working method of the committee, and the results suit its aim. I would think, however, that the message of this list is greater than is indicated by the introduction, and that the committee could have enlarged its service without much additional effort by simply presenting the results from a broader point of view.

There is a large amount of useful information condensed into this list. It will help to promote a continent-wide perspective of the sanctuary problem. As a preliminary list, it is intended to encourage further accumulation of data. It should be used generally as a working guide by conservationists and ecologists. Dr. Kendeigh is to be congratulated for his leadership in this substantial contribution to conservation effort.—FRANK A. PITELKA.

The Birds of Michigan.—Norman A. Wood. Misc. Publ. Mus. Zool. Univ. Michigan No. 75: 1-559, 16 pls., 1 map, August 28, 1951. \$4.00—This volume is devoted exclusively to the subjects of distribution, relative abundance, and migration of the birds of Michigan. There are no accounts of habitats or habits; nor are there descriptions of the birds themselves. Characterizations of habitat would have been useful if they could have been supplied. The other omitted topics are generally covered in other books to which the reader appropriately is referred. The work constitutes an up-to-date check-list for Michigan with migration and local geography, but not ecology, emphasized. A total of 309 species, or 334 species and subspecies, is included, each based on the existence of at least one record specimen; 202 of these forms breed in the state. The total of 334 represents an increase of 24 forms since Barrows' 'Michigan Bird Life' of 1912.

The nomenclature is that of the American Ornithologists' Union Check-list and its published revisions to 1949, and the literature taken into account runs through 1943, the year of Wood's death. The section on literature cited was prepared by Josselyn Van Tyne and much manuscript work and the difficult task of editing a posthumous publication was carried out by him with the assistance of Thomas D. Hinshaw and Arthur E. Staebler. A great deal of credit goes to the editors for the perfection of the work even though it is pointed out by them that it was not possible to revise and unify the style of writing in accord with their highest ideals.

For each kind of bird a brief statement of status and range in the state is given, followed by mention of the first record of occurrence for the state. The value of this latter entry is somewhat dubious for most of the species. The detailed distributional material is grouped according to the four seasons and is further subdivided under each of these for the two main areas of the state, the upper and lower peninsulas. Clearly the stress is on migration and its dates in different parts of the state, as is natural for a northern avifauna in which there are few permanently resident species. Spring records are logically reviewed from south to north and fall records in reverse order. A desirable feature is the distinction made in so far as possible between the normal period of seasonal occurrence and the less significant extreme dates. Citation of actual numbers of individuals reported on specific occasions gives a factual guide to abundance and specific instances of nesting or of the observation

of young document the breeding range. There is not a large amount of taxonomic discussion, although here and there appropriate comments explain the few instances where racial differentiation of species occurs within the state or indicate the impossibility of allocating sight records as to race. In the upper peninsula, especially, certain geographically variable species are represented by western or plains subspecies or are there intergradient toward these forms.

The 16 plates are black and white reproductions of photographs of 18 species and their nests. They are generally good illustrations, some of them very good.

The value of this book lies in its mass of carefully assembled, well documented records. The material has been sifted for dependability, and conclusions from the data are not overdrawn. This aspect of soundness should be fully appreciated. If one is inclined on first handling the book to react unfavorably to the heavy loading with detail and to the lack of synthesis which makes it unattractive for general reading, he would do well to realize that its uses are primarily as a source book. Considering it in this way, the reviewer as a comparative novice in the study of Michigan bird life, recently found the book distinctly helpful in visiting that state. True, it would have been possible for Norman Wood to have effected more selection and generalization within each species account, but no one but an author could properly have carried this out.—ALDEN H. MILLER.

Review of the Alaudidae. R. Meinertzhagen. Proc. Zool. Soc. London, 121 (1): 81-132, 6 text-figs, 1951.—Col. Meinertzhagen's critical revision of the larks is based not only on considerable amounts of material but also on field acquaintance with all the genera, most of the species, and a large proportion of the subspecies of larks covered in the review. It is an important paper and one worth careful study. Throughout, the author has been guided by five personal concepts: (a) adequate samples of population; (b) habits rank equally with morphological characters; (c) type specimens may be misleading; (d) plumage patterns more important than color differences; and (e) all doubtful allopatric populations should be treated as subspecies. It is doubtful whether most ornithologists would agree to all five of the foregoing concepts. Of course "a" is a basic requirement, "c" under certain conditions must be given due weight, "b," "d," and "e" require careful consideration in individual cases and should not be applied in a rule-of-thumb fashion.

Col. Meinertzhagen's field experience enables him to give a generic diagnosis which includes not only the morphological characters, on which such diagnoses are commonly based, but also the less tangible traits such as habits and habitat, nest, eggs, song, territory, gait, roosting, flocking, food, etc. Text-figures 2, 3, and 4 are ingeniously contrived to show bill form in the different members of the genera *Calandrella*, *Certhilauda*, and *Ammomanes*, respectively.

As might be expected from the author's original approach to the problem, there are many departures from the treatment hitherto accorded many genera and species; in some of these he is undoubtedly right; in other cases differences of opinion could exist; in still others he must expect numerous objections.

There will probably be little quarrel with Meinertzhagen's action in merging *Spizocorys* and *Razocorys* with *Calandrella*, or *Spizalauda* and *Heliocorys* with *Galerida*, but uniting *Lullula* with *Alauda* is certain to provoke an outcry, and quite justifiably so. Perhaps the most controversial cases will prove to center about *Certhilauda* with which he has united, among others, *Alaemon*, *Chersomanes*, and *Chersophilus*. Here, it seems to the reviewer, that too free application of concepts "b" and "d" results in species of similar habits being placed in a single genus, although they are probably not very closely related. Another troublesome factor

associated with the Alaudidae is the close association between plumage color and the color and character of the soil on which the bird lives, especially in the genus *Ammomanes*, to some extent in "*Certhilauda*" and *Galerida*, and to a lesser degree in some of the other genera. In *Ammomanes deserti* the correlation "between soil color and plumage appears to be absolute, with the result that we find a confused patchwork distribution of almost every described race which involves birds of identical color being found sometimes a thousand miles apart and separated by several other races of completely different tint" (p. 113). Just how such situations can be adequately handled under our system of trinomial nomenclature is a problem. Meinertzhagen recognizes most of the described races of this species; the distribution assigned in many cases is patchy, but it seems to me that this is all that can be done at present.

There are two cases where it seems that the author has gone too far in his lumping of subspecies, granted that the species was probably oversplit to begin with. *Galerida cristata altirostris* Brehm was described in 1855 from near Dongola in the Nile Valley. Of this race Meinertzhagen lists as synonyms no less than 16 names that have been proposed for Crested Larks from various regions between northwest Africa and southern Mongolia. Similarly, 11 named forms have been synonymized with *Alauda arvensis cantarella* Bonaparte 1841 from central Italy; thus the range of *cantarella* is extended from southern Europe across southwestern Asia to southern Siberia and eastern China. This drastic treatment is explained by statements that "one could not select a single constant sample of population which could not be matched by other samples from other populations" (p. 121) and "no two populations, even micro-populations are identical, especially among ground birds, and among skylarks the breeding birds in a single field show more than minor differences" (p. 129). The author admits color trends and size clines, but feels that either he must recognize all the described forms of both *Galerida cristata* and *Alauda arvensis*, plus naming additional ones, or resort to a policy of lumping.

An enumeration of the specimens of all the forms dealt with throughout the paper would have been of great interest. Unfortunately no idea of the number of specimens handled is given except he states that over 2000 Skylarks were examined. A statistical analysis of such a series should prove illuminating, but such an analysis is clearly beyond the scope of Col. Meinertzhagen's paper.

A concluding addendum describes *Ammomanes deserti faenorum*, a new subspecies (p. 131) from Bahrein Island in the Persian Gulf. [This is antedated by *Ammomanes deserti insularis* Ripley.]

The review of the Alaudidae makes no pretense of being a complete systematic account of the entire family, for the author clearly states in the introduction that the genus *Mirafra* (with which he would include *Pinarocorys* and *Heteromirafra*) has been purposely omitted because he lacks sufficient field experience with that group, and likewise *Eremopterix* and *Eremophila* are not covered because they are "well defined and present no difficulties."—J. L. PETERS.

A Study of Asiatic Larks.—Charles Vaurie. Bull. Amer. Mus. Nat. Hist., 97, art. 5: 435-526, 1 pl., 1951. \$1.25.—This is the second important systematic study on the family Alaudidae to appear in 1951. The first, by Col. Meinertzhagen (Proc. Zool. Soc. London, 121: 81-132, 1951) covers the entire family except the genera *Mirafra*, *Eremopterix*, and *Eremophila*, the omission of which was explained. The second, here reviewed, is concerned only with the larks of Asia, and primarily the larks collected by Walter Koelz in Iran, Afghanistan, and India (in the old sense). Dr. Vaurie deals with ten genera in the usually accepted sense, in other words he neither lumps nor splits. He realizes the variability of structural characters and

plumage patterns, but feels that the combination of characters, some of unequal value, distinguish these genera as valid. The ten genera listed in what Dr. Vaurie considers their phylogenetic order are: *Mirafra*, *Eremopterix*, *Ammomanes*, *Alaemon*, *Calandrella*, *Melanocorypha*, *Eremophila*, *Galerida*, *Alauda*, and *Lullula*. It would have been interesting had he stated his reasons for considering *Eremopterix* as "primitive" and why *Lullula* should be placed in the climax position. The species and subspecies accounts are most detailed and painstaking and include lists of material examined, range, specific and subspecific characters, individual variation, measurements, and valuable information on molts. In a number of cases, Dr. Vaurie proves conclusively that two forms hitherto regarded as conspecific actually represent two distinct species: the particular cases in point are *Ammomanes phoenicurus* and *cincturus*, *Calandrella cinerea* and *acutirostris*, and *Alauda arvensis* and *gulgula*.

While for the most part the paper deals with larks in the Koelz collection from Iran, Afghanistan, and India, Dr. Vaurie has revised the skylarks of the genus *Alauda* of all of Asia to show which races belong to *arvensis* and which to *gulgula*. There can be no doubt that the two must be kept specifically distinct since *A. arvensis dulcivox* breeds side by side with *A. gulgula inconspicua* over a large area in Turkestan, although the birds from the Japanese islands (*A. a. japonica*) are somewhat intermediate between the East Siberian races of *arvensis* and the south China races of *gulgula*.

The size of the series of all the forms dealt with is certainly adequate, and in the case of *Alauda* the number of specimens examined was very large, including the series in the American Museum, the British Museum, and some of the examples in Stockholm and Paris.

It is unfortunate that the original references to the first descriptions are not cited; it would seem that in such a paper they should have been. This is particularly true in the revision of *Alauda* where, for instance, one finds "*Alauda arvensis kibortii* Zaleski, 1917 (formerly *intermedia*)" but no reference to the book or journal where the race was first described. A practice which appears to be current among some staff members of the American Museum is the dropping of parentheses about a describer's name when their use is required under the International Rules of Nomenclature, and I regret to see that Dr. Vaurie has followed this practice.

These deficiencies, however, are of a minor nature and in no way detract from the overall usefulness and high standard of painstaking accuracy that characterize 'A study of Asiatic Larks.'—J. L. PETERS.

Die Entwicklung der Ornithologie von Aristoteles bis zur Gegenwart. Erwin Stresemann. (F. W. Peters, Berlin), pp. xv + 431, 14 pl., 1951. Price, 30 D. M.—The development of ornithology is treated in three parts: Part I discusses the foundations of ornithology in the period from Aristotle to the Renaissance, and the beginnings of exotic ornithology; Part II the development of systematics and investigations in evolution; and Part III the development of biology.

The great advance in ornithology is emphasized by the fact that the 140 forms known to Aristotle have been increased to about 28,500. This amplification is largely the result of the improvement in the art of preserving specimens. The beautiful skins in the collections of today were preceded by birds preserved in alcohol, or stuffed with tow mixed with tar after removal of the entrails. Klein (1759) was content with the heads and feet preserved in balsam.

Belon (1517-1564), by the use of anatomy, physiology, and biology, placed ornithology on a fundamental basis. His comparison of the skeletons of man and bird

is a classic. The budding science was stimulated by the importation from America of such novelties as the Turkey, *Meleagris*, and Muscovy Duck, *Cairina moschata*. In France especially there was such a passion for foreign birds that, as a result, as late as 1799 Levaillant was to complain that the French did not possess a complete life history of a single native species.

Ornithology could not become a science until a rational system of classification had been devised. A good start was made in Willughby's treatise (1676) under the editorship of Ray. Even today, however, ornithologists of the various countries are not in agreement on the arrangement of orders.

The development of systematics is a very interesting story. The binomials of Linnaeus having been found inadequate, Schlegel (1844) introduced trinomials to provide for his conspecies, or subspecies. American ornithologists, under the leadership of Ridgway (1881), adopted the trinomial for the "nascent species" bearing the impress of "climatic or local influences." When Coues was in England in 1884, leading British zoologists met with him on July 2 to determine if an agreement could be reached on the use of the trinomial system. The discussion was barren of results. A few Germans at this time began timidly to use trinomials, but it was many years before the subspecies concept received general acceptance in Germany and England. This hurdle had scarcely been surmounted when the question arose whether a species could be defined accurately, and if so, whether on the basis of morphology, sterility, biology, or other criteria. Most species have been shown to be polytypic.

As an example of the aid of behavior in taxonomy, the author cites the case of the two warblers, *Phylloscopus collybita* and *P. trochilus*, which were thought to be identical; however, Gilbert White (1768) noted that their songs were entirely different. This is but part of his disclosure, for, at the same time, he pointed out that there were differences in size and in coloration of the tarsi.

The biographies of the leading ornithologists sustain interest. The personalities of these men are as vivid as are their works. Sharpe impetuously hurls an inkstand at an assistant, slow in delivering a reference book, and is equally quick to make amends. The reader is impressed by the author's devotion to ornithology and his warmth of feeling toward his colleagues. Every major contributor to the science receives impartially his due. Along with the histories of Gurney (1921) and Boubier (1925), this book takes high rank.—A. W. SCHORGER.

Search for the Spiny Babbler: An Adventure in Nepal.—Dillon Ripley (Houghton Mifflin Co., Boston), pp. xiv + 301, 1952. \$4.00.—This is Dr. Ripley's narrative of his expedition to Nepal in the late fall and winter of 1948-49. Members of the expedition, which was sponsored by the National Geographic Society, Yale University, and the Smithsonian Institution, comprised, besides Dr. Ripley, Edward Migdalski, two recent Yale graduates who served as mammal collectors, and a staff photographer of the National Geographic Society and his assistant.

The little kingdom of Nepal, bordering India on the northeast, embraces part of the Himalaya Mountains including Mt. Everest and other lofty massifs. A beautiful country with some of the most spectacular scenery in the world, it is also one of the most remote. Its geography has served to make it inaccessible and so have its many people who have consistently resisted the intrusion of Americans and Europeans. Nepal has long been a source of fascination for ornithologists. From the researches of a few permitted to enter the country, it has been apparent that a wide variety of birds existed from snow-clad peaks to lowland plain, but information on their exact localities and habitat preferences has been all too fragmentary, making Nepal a sort

of question mark in studies of avian distribution and speciation in Asia. It was Dr. Ripley's principal objective in undertaking the expedition "to range into the back country, in western and eastern Nepal where no collectors had ever been, and try to make a thorough sampling of the avifauna."

The collection brought home from Nepal amounted to some 1,600 specimens of birds and 200 of mammals. Represented in the collection were 331 bird species and subspecies; of these, eight were new to science, having since been described by Dr. Ripley. Among the exciting finds of the expedition were the rediscovery of the Spiny Babbler, *Acanthoptila nepalensis*, and the collecting of about 10 species of Himalayan birds heretofore unrecorded in Nepal.

Here and there in the pages of the book Dr. Ripley indicates some of the ornithological questions that he managed to answer, but the book is primarily a running account of the expedition from beginning to end. The difficulties of gaining access to the country, travelling within, and collecting specimens, the endless details concerned with moving equipment and managing native help, and the countless personal problems involved in just living in the country, let alone getting along with its people, are part of the story. Ornithologists who contemplate their first expeditions will find the book highly instructive.

Dr. Ripley writes most entertainingly, with a light touch and a deft sense of humor. The narrative moves along in a sprightly fashion; though replete with numerous incidents, it is never bogged down by them. Because of the failure of the author to give dates, the reader sometimes loses track of the passage of time and is unable to determine the exact times of year (*i. e.* days of months) when certain points were reached, but this is a small matter. The author's impressions of scenery, wildlife haunts, and certain birds which interested him are vividly described without recourse to wordiness. Some of the most enjoyable parts of the book are those dealing with the official functions in Katmandu, Nepal's capital city. Invariably lavish spectacles wherein the sixteenth-century splendor of both India and China seemed to be combined, they were at the same time incongruously, often amusingly, tainted by twentieth-century "improvements." An unforgettable example was a reception for the American Envoy by the Maharajah and his aides, amid unbelievable pomp, while the band rendered lively strains from Victor Herbert!

Nepal is fast changing, as Dr. Ripley points out. Forests and other wild areas are rapidly disappearing and with them many species of native bird life. Not once during the expedition did members find "a really good collecting place." While a few spots remain relatively untouched by the twentieth century (*e. g.* the charming, well-scrubbed, mountain village of Dhamkuta which has never seen a wheeled vehicle), air travel will soon make Nepal as accessible as other countries of the world.

The book is illustrated by end-paper maps and 18 photographs. A list of recent books published on Nepal and its birds, a general index, and an index of birds conclude the work.—OLIN SEWALL PETTINGILL, JR.

Mexican Birds. First Impressions. George M. Sutton. (Univ. Oklahoma Press, Norman), i-xv + 1-282, 16 col. pls., 65 pen and ink drawings. 1951. Price \$10.00.—This book, subtitled "First Impressions" is based upon the author's trip to parts of Nuevo Leon, Coahuila, and Tamaulipas, lasting from the latter part of January until early in March, about six weeks in all. Inasmuch as the bird fauna of Mexico is a very rich one, and one containing many species unfamiliar to the author prior to his short sojourn, it is obvious that the subtitle of his book is very appropriate. This is said, not in criticism of the book, but to explain why it is not more informative than it is. Sutton obviously has the capacity to absorb new experiences

quickly and to enjoy them hugely, and the ability to convey to his reader something of this receptivity, but it seems to the reviewer that much of what he writes is of the stuff of which good conversation is made rather than material calling for preservation on a printed page. After going through the main part of the book (pages 1-186) the reviewer felt that he had gotten not so much a series of impressions of Mexican birds as of the author's enjoyment of his experiences with a new region and a new avifauna.

The appendix, pages 187-257, is described by the publishers on the dust jacket of the book, as a compendium in which, ". . . all Mexican birds are briefly and concisely described—an indispensable guide for both amateur bird lovers and professional ornithologists." In refuting this claim no criticism is levelled at the author, who makes no such sweeping assertion, but at the unfortunate habit publishers have of claiming too much for their wares. The appendix is by no means complete, and the descriptions in many cases do not promise to be of much real help to anyone travelling in Mexico with this book as a guide. To illustrate—the first page of the list, page 189, covers the tinamous through the pelicans. It mentions, in many cases without descriptions, 17 forms in all. The recent "Check-List of the Birds of Mexico" gives 31 forms of these groups as definitely found in Mexico. In fairness to the author it should be stated that he writes that the, ". . . book does not pretend to be a complete field guide to, or handbook of, Mexican birds. It would hardly be fair to bird students visiting Mexico for the first time, however, not to mention certain common species which we did not happen to see on this trip; and describing these additional northeastern Mexican forms leads easily and naturally to a consideration of the birds of the rest of the republic." It remains, however, that the appendix is not complete enough in included forms or in adequacy of descriptions to be of much assistance. The reviewer cannot help but feel it is out of place alongside of the first part of the book. The material in the first part would have been better as a small book; putting two quite divergent manuscripts together does not make a better book.

In any book by Sutton one looks first, and, again, last, at the illustrations. The 16 colored plates, representing as many different species, form an attractive and notable series of bird paintings. Of the 16, 12 are sketches presumably made in the field, while 4 are more finished, complete birds. The preponderance of incomplete field studies over finished paintings is in keeping with the tone of the "first impressions" the book is intended to convey. The 65 pen and ink drawings greatly enliven and enhance the text they decorate and illustrate.

It remains to add that the book is handsomely printed, forms an attractive volume, pleasing to the eye, and is adequately indexed.—HERBERT FRIEDMANN.

The Avifauna of Micronesia, Its Origin, Evolution, and Distribution. Rollin H. Baker. (Univ. Kansas Publ., Mus. Nat. Hist.), vol. 3 (1): 1-359, 16 text figs. June 12, 1951.—The administration of the Micronesian islands (Carolines, Marianas, Palau, etc.) is now a responsibility of the United States, and the area has thus become of special interest to American ornithologists. Rollin H. Baker's comprehensive account of the avifauna of this part of the Pacific is therefore most welcome. The bulk of the volume (pp. 63-340) is devoted to accounts of the 206 kinds of birds that are known from the islands, based on a careful evaluation of the literature and on the author's own studies in the field and the museum. New taxonomic arrangements of various non-passerine species, particularly terns, are presented.

The first part of the volume (pp. 5-60) is devoted to general questions, such as the geography of the islands (with maps), the history of ornithological exploration,

faunal origins, routes of migration, speciation, and conservation. The detailed analysis of the migration of shorebirds through Micronesia is particularly valuable. A summary and bibliography of more than 300 titles conclude the volume. Taxonomically, the birds of Micronesia are now well-known, but, as Baker says correctly, "the field of avian ecology in Micronesia has barely been scratched." This volume is a sound foundation for further work in this area.—ERNST MAYR.

A Fish and Wildlife Survey of Guatemala. George B. Saunders, Ancil D. Holloway, and Charles O. Handley, Jr. Spec. Sci. Rept., Wildl. No. 5 (U. S. Dept. Int., Fish and Wildl. Serv., Wash., D. C.), 1950: 1-162, 3 maps and tables.—This report is based on a mission of the U. S. Government during 1946 and 1947. Actually the report is divided into three sections: 1) game birds and shorebirds of Guatemala (pp. 3-98); 2) recommendations for the development of the fisheries resources of Guatemala (pp. 99-140); and 3) game mammals of Guatemala (pp. 141-162), with extensive bibliographies in each section. The authors regard the stream and lake survey and the fisheries report as of "the most immediate interest" to Guatemala.

The work on birds was prepared chiefly by Dr. Saunders. For his purposes the republic was divided into five wildlife regions: 1) the Pacific Coastal Plain, the finest general area for hunting as long as the forest remains; 2) the Pacific Cordillera with many game birds in what montane forest survives; 3) the Interior Highlands, now badly damaged by a heavy population, agriculture, burning, and soil erosion; 4) Peten Lowlands, still good because of low population and extensive forests; and 5) Caribbean Lowlands, exclusive of Peten, but similar. The game species discussed are primarily tinamous, guans (all genera), quail, and doves.

Particular effort was directed to an inventory of migrating waterfowl present in Guatemala; the only really common species being Pintail, Blue-winged Teal, Lesser Scaup, and Black-bellied Tree Duck. The Pacific Coast showed more birds than did the Caribbean Lowlands. The authors believe that "several million ducks" either winter in or pass through annually on migration, but they were unable to reach the Republic sufficiently early in winter and fall. For their itinerary see pages 17-18. An interesting list of banded birds recovered in Guatemala can be found on pages 14-15.

The report concludes with notes on the game birds and shorebirds of Guatemala (pp. 19-98), giving Guatemalan names, brief descriptions, distribution or status in Guatemala, measurements, and weights. As is well-known, waterfowl and shorebirds are badly "neglected" by collectors, and this report teems with new information about these birds. The Herring Gull and Green-winged Teal are relatively "new" to Guatemala.—LUDLOW GRISCOM.

Wildlife in Color. Text by Roger Tory Peterson. (Houghton Mifflin Co., Boston), vi + 191 pp., 453 col. ills., 12 line cuts, 1951. Price, \$3.00.—Each year since 1938 the American Wildlife Federation has published 36 new wildlife paintings as poster stamps. Brought together in this attractive volume, which is sponsored by the Federation, are 453 of the paintings—nearly all that have appeared on the stamps between the years 1939 and 1951. The paintings are reproduced in miniature with approximately the same dimensions as on the stamps. Trees, flowers, insects and other invertebrates, fish, amphibians, reptiles, birds, and mammals inhabiting North America comprise the variety of subjects depicted. Mr. Peterson, confronted with the task of grouping the pictures in a logical manner and preparing a suitable text has chosen the ecological approach.

The text is divided into 12 sections. One is introductory; the others take up different wildlife communities or continental divisions under such titles as "The Deciduous Woodlands," "The Coast and the Sea," "The Desert," and "The West." Each section is headed by one of Mr. Peterson's splendid line drawings showing a representative habitat. Within the sections, groups of trees, flowers, and animals are separately considered under subtitles. Although the subject matter of the text is brief and obviously selected to accompany the pictures, which are usually arranged as marginal illustrations, the author has succeeded admirably in giving the text an overall unity by emphasizing environment and pointing out at every opportunity the urgency of protecting wildlife through realistic conservation practices. Interesting information about each plant or animal is given, the purpose being to provide the reader with facts or ideas that will be easy to remember. One minor error is to be noted; on page 13 the Heath Hen is said to have survived on Martha's Vineyard until 1931, whereas one lone bird was actually seen on the island as late as 1932 (see 'The Auk,' 49:524, 1932).

Despite the excellence of the text, it is secondary in importance to the full-color illustrations which embellish most of the pages from cover to cover. Represented are the works of 18 artists; most of the bird illustrations are by Mr. Peterson, Walter Weber, and Francis Lee Jaques. In general, the colors are as intense as those on the stamps. While brilliant blues, greens, and yellows seemed appropriate on the stamps, which are intended to be showy, in the illustrations they seem unnecessarily exaggerated, thus giving many of the subjects a quality of unreality. All of the colored illustrations are indexed by common names of the species shown. Accompanying the common names in this index are the technical names together with the initials of the artists who executed the illustrations.

Wildlife in Color, with its abundance of eye-catching pictures, its readable text, and its moderate price, will appeal to a much larger audience than is reached by most books on natural history. As a consequence, a still greater number of people will be introduced to the rich variety of North American plants and animals and will be made to realize the need of safeguarding all wildlife resources through a countrywide conservation program.—OLIN SEWALL PETTINGILL, JR.

- ADAMETZ, E. 1951. Eine neue Wildtaubenart für die österreichische Vogelwelt. Carinthia II, Mitt. d. naturwiss. Vereines für Kärnten, 141 (61) Jg. Klagenfurt, 1951: 105-110.—Localities in Austria where *Streptopelia decaocto* was recently recorded.
- ALCORN, GORDON D. 1949. Nesting of the Glaucous-winged Gull at Tacoma, Washington. Murrelet, 30 (3): 57.—First authentic nesting in Puget Sound.
- ALDRICH, JOHN W. 1951. A review of the races of the Traill's Flycatcher. Wilson Bull., 63 (3): 192-197.—Five subspecies including *Empidonax traillii campestris* new subspecies (Oakes, North Dakota).
- AMADON, DEAN 1951. Notes on Chinese Egret, *Egretta eulophotes* (Swinhoe). Philippine Journ. Sci., 80 (1): 53-54.—Four specimens from the Philippines.
- ARMSTRONG, E. A., AND W. H. THORPE. 1952. "Casting" by Shetland Wren nestlings. Brit. Birds, 45 (3): 98-101.—When young *Troglodytes t. zelandicus* fledged, bits of a brown paste were found under the nest entrance; these were found to consist of chitinous part of insects.
- ARVEY, M. DALE. 1951. Phylogeny of the waxwings and allied birds. Univ. Kans. Publ., Mus. Nat. Hist., 3 (3): 473-530, 49 figs., 13 tables.—A North American origin of the Bombycillidae is postulated, and the family is set up with

three subfamilies: 1) Bombycillinae, the waxwings; 2) Dulinae, the palm-chats; and 3) Ptilogonatinae, the silky flycatchers. The subfamilies are remarkably similar osteologically, myologically, and in the grosser structures of the digestive tract. Color patterns are unlike, and the Dulinae are thought to have the most nearly ancestral pattern which is recapitulated in the juvenal plumage of the Bombycillinae. The diverse color patterns of the subfamilies are regarded as responses to ecological needs.

While the paucity of skeletons and of birds for dissection probably made impossible significant use of statistics to indicate the probability of some statements in the text, inclusion of at least the ranges of the measurements and the number of specimens measured would have made the paper much more useful. This is particularly true where raw data (the actual measurements) are used to set up additional comparative data (ratios, for example).—H. I. FISHER.

- AUMÜLLER, St. 1951. Ergebnisse der Storchbestandaufnahme 1950 im Burgenland. Arb. aus Biol. Station Neusiedlersee, No. 3: 74–87, 2 maps.—Results of investigations in the distribution of *Ciconia alba* in Eastern Austria.
- BARNES, J. A. G. 1952. The status of the Lesser Black-backed Gull. Brit. Birds, 45 (1): 3–17.—An enquiry on *Larus fuscus* by the British Trust for Ornithology; a map gives the mid-winter distribution.
- BARTH, EDVARD. 1951. Kropptemperatur hos måkeunger. Body temperature of the young of gulls (*Larus*). Nytt Magasin for Naturvidenskapene, 88: 213–245.—English summary and subtitles to figures and tables. Temperature measurements and experiments show that young gulls are “nonaltricial,” but full homiothermy, comparable to that of the adults, is not attained until they can fly. *Larus canus* start flying at 29–33 days, *L. fuscus* at 35–40 days, *L. argentatus* at 37–41 days, and *L. marinus* at 45–50 days. Young birds have greater tolerance to low than to high air temperatures.
- BARTHOLOMEW, GEORGE A., AND WILLIAM R. DAWSON. 1952. Body temperatures in nestling Western Gulls. Condor, 54 (1): 58–60.—Cloacal temperature readings taken on more than 60 nestlings of *Larus occidentalis wymani* on Santa Barbara Island, California. The data indicate that some capacity to regulate temperature is present before hatching. Shortly after hatching, in air temperatures between 19 and 28° C., there is little difference in body temperature between newly-hatched and fully-feathered individuals. Between 14 and 18° C., the smaller birds, despite their huddling, have more labile body temperatures than do larger birds.
- BAUER, K., AND G. ROKITANSKY. 1951. Die Vögel Österreichs. Teil I. Arb. aus Biol. Station Neusiedlersee, No. 4 (1): 5–45.—A checklist of birds recorded for Austria.
- BEARD, ELIZABETH R. 1951. The trachea of the Hooded Merganser. Wilson Bull., 63 (4): 296–301, 1 fig., 2 tables.—Structure of the trachea of *Lophodytes cucullatus* and comparison with the tracheae of related species.
- BECK, J. W. 1951. *Megacirrus megapodii* n. g. n. sp., a cestode from the Malayan Brush Turkey, *Megapodius laperouse senex* (Cestoda: Dilepididae). Journ. Parasit., 37 (4): 405–407.—From Palau Islands.
- BEECHER, WILLIAM J. 1951. Convergence in the Coerebidae. Wilson Bull., 63 (4): 274–287, 5 figs.—Largely on the basis of jaw muscle-pattern and horny palate relief, the family Coerebidae is considered to be composed of warblers and tanagers convergently adapted for feeding on nectar. The author concludes that the genera now contained in this family should be distributed between the Parulidae and the Thraupidae.—J. T. Tanner.

- BENSON, C. W. 1951. The Lesser Cuckoo *Cuculus poliocephalus poliocephalus* Latham in Nyasaland. *Ibis*, **93** (4): 627-628.—New to Nyasaland.
- BERGER, ANDREW J. 1951. Ten consecutive nests of a Song Sparrow. *Wilson Bull.*, **63** (3): 186-188, 1 table.—Of a female *Melospiza melodia* in three consecutive years, with notes on Cowbird parasitization and nesting success.
- BISWAS, B. 1951. On some larger Spine-tailed Swifts, with the description of a new subspecies from Nepal. *Ardea*, **39** (4): 318-321, pl. 9.—*Chaetura cochinchinensis rupchandi*, Hitaura.
- BISWAS, BISWAMOY. 1951. Notes on the taxonomic status of the Indian Plaintive Cuckoo *Cuculus passerinus* Vahl. *Ibis*, **93** (4): 596-598.—Concludes that *Cuculus passerinus* is a species distinct from *Cuculus merulinus*, although the two have hitherto been considered conspecific; *Cuculus querulus* is considered to be a race of *merulinus*. No mention is made of the allocation of other forms hitherto ranked, as races of *merulinus*. These cuckoos are by some authors placed in the genus *Cacomantis*.—J. L. Peters.
- BLACKWELL, J. A., AND W. H. DOWDESWELL. 1951. Local movement in the Blue Tit. *Brit. Birds*, **44** (12): 397-403.—Color banding of *Parus caeruleus* from 1947-1950; an expanse of school playing fields less than 200 yards wide served as a complete barrier between two populations.
- BOGENAL, T. B. 1951. A note on the papers of Elton and Williams on the generic relations of species in small ecological communities. *Journ. Animal Ecol.*, **20**: 242-245.—Related species are more likely to be found in similar, though not identical, habitats than are unrelated ones.
- BOURKE, P. A. 1951. Nesting notes on the Red-backed Parrot. *Emu*, **51** (1): 31-32.—A pair of *Psephotus haematonotus* nested in bird box; four eggs were laid between Sept. 29 and Oct. 7; incubation period was approximately 18-19 days, and the nestling period about 30 days.
- BOYD, ELIZABETH M. 1951. The external parasites of birds: a review. *Wilson Bull.*, **63** (4): 363-369.
- BRACKBILL, HERVEY. 1951. Wing-flashing by male Mockingbirds. *Wilson Bull.*, **63** (3): 204-206.—Observations of male and female *Mimus polyglottos* doing "wing-flashing."
- BRACKBILL, HERVEY. 1952. Three-brooded American Robins [*Turdus migratorius*]. *Bird-Banding*, **23** (1): 29.
- BRENNAN, J. M. 1951. Two new species of *Neoschongastia* with a key to the species of the world (Acarina: Trombiculidae). *Journ. Parasit.*, **37** (6): 577-582.—New species from *Momotus lessonii* in Guatemala and *Petrochelidon p. pyrrhonota* in Montana. Larvae of all species of the genus are usually found on birds.
- BRUNS, HERBERT. 1951. Verbreitung, Biotop, Bestandsschwankungen und Brutbiologisches nom Oortolan (*Emberiza hortulana* L.) in nordwestdeutschen Tiefland. *Ornith. Abhd.*, **12**: 1-22.
- BRYANT, C. E. 1951. A query on Landrail behaviour. *Emu*, **51** (1): 73-75, 1 pl.—The author considers it quite likely that a female *Rallus philippensis*, after the discovery of her nest and eight fresh eggs near Melbourne, Victoria, constructed a new nest ten feet away and moved the entire clutch to the new location.
- BRYANT, C. E. 1951. What are "natural conditions" for Gouldian Finches? *Emu*, **51** (1): 77-78.
- BYERS, ESTHER. 1951. Feeding behavior of young American Bitterns. *Wilson Bull.*, **63** (4): 334-336, 1 table.

- CABLE, R. M., AND M. L. KUNS. 1951. The trematode family Microphallidae with the description of *Carneophallus trilobatus* gen. et sp. nov. from Mexico. *Journ. Parasit.*, **37** (5, Sect. 1): 507-514.—The new form is from *Buteo magnirostris griseocauda*.
- CADE, TOM. 1952. Notes on the birds of Sledge Island, Bering Sea, Alaska. *Condor*, **54** (1): 51-54.—Field work carried on from June 7 to 15, 1950, resulted in 35 species being found. Notes on ecology and life histories presented in annotated list.
- CALABY, J. H. 1951. Notes on the Little Eagle: with particular reference to rabbit predation. *Emu*, **51** (1): 33-56, 1 fig.—During the course of rabbit, *Oryctolagus cuniculus*, control experiments conducted in the Murray Valley region of northern Victoria, observations were made on the effect of Little Eagle, *Hieraaëtus morphnoides*, predation on the rabbit population. The appearance of the Little Eagle in the field and flight characters distinguishing it from the Whistling Eagle, *Haliastur sphenurus*, are described. There are sections dealing with notes, display and posturing, hunting habits, and relations with other birds frequenting the study area. From six to nine Little Eagles frequented the 450-acre study tract which contained an estimated population of 4500 adult rabbits and 6400 "kittens." During the 71-day observation period during May, June, and July, 1950, an average of six Little Eagles is believed to have killed 260 of the kittens, mostly three to six weeks old, resulting in an overall decrease of 2.5 per cent in the total rabbit population.—J. L. Peters.
- CAMMAM, S. V. R. 1950. The story of Hornbill ivory. *Bull. Univ. Mus. (Univ. Penna.)*, **15** (4): 19-46, 17 figs.—Decorative carvings by Chinese and East Indian artists on the hard casque of the Helmeted Hornbill, *Rhinoplax vigil*.
- CARR, MARJORIE H., AND J. C. DICKINSON, JR. 1951. The San Geronimo Swift in Honduras. *Wilson Bull.*, **63** (4): 271-273.—Notes on and a nesting record for *Panyptila sancti-hieronymi*.
- CHISHOLM, A. H. 1951. More about vocal mimicry. *Emu*, **51** (1): 75-76.
- CLANCEY, P. A., AND C. S. HOLLIDAY. 1951. A systematic revision of the races of *Lamprocolius nitens* (Linnaeus) endemic to the South African subcontinent. *Ostrich*, **22**: 111-116.—*Lamprocolius nitens culminator* new subspecies from the Addo Bush near Port Elizabeth, Cape Province.
- CLAUDON, ANDRÉ, C. J. 1951. Notes sur le Coucou gris, *Cuculus c. canorus* en Alsace. *L'Oiseau*, **21** (3): 200-215.—The study of about 100 parasitized nests of small passerines, the most common species to be victimized by far being *Acrocephalus scirpaceus* (80 times out of a 100).
- CLAY, THERESA. 1951. The mallophaga and relationships within the Falconiformes. *Ibis*, **93** (4): 628.
- DE CHAVIGNY, J. 1951. Pontes nombreuses provoquées. *Alauda*, **19** (2): 113.—One egg was taken each day for 16 consecutive days from a nest of *Sturnus vulgaris* containing three eggs, the female replacing it every day. The author states that he "got tired of this experiment!" on the 16th day!—C. Vaurie.
- DEIGNAN, H. G. 1951. A new Frogmouth from Groote Eylandt, Gulf of Carpentaria. *Emu*, **51** (1): 71-73.—*Podargus strigoides lilae* (Ambukwamba, Groote Eylandt, Gulf of Carpentaria), new subspecies.
- DE RUITER, L. COOMANS. 1951. Vogels van het dal van de Bodjo-rivier (Zuid-Celebes). *Ardea*, **39** (4): 261-318, pls. 4-8.—In Dutch, apparently containing many field observations; 92 species reported.
- DICKINSON, J. C., JR. 1951. A nest of *Chaetura vauxi richmondi* in central Honduras. *Wilson Bull.*, **63** (3): 201-202, 1 photo.

- DIERSCHKE, FRITZ. 1951. Die Vogelbestände einiger Erlenbruchwälder Ostpreussens und Niedersachsens. Ornith. Abhd., 10: 1-32, 3 figs., 3 tables.
- D'OMBRAIN, A. F. 1951. Water birds and others in flooded areas along the Hunter River Valley, N. S. W. Emu, 51 (2): 145-147.—The valley has become practically one vast swamp due to a succession of floods during 18 months previous to the preparation of this paper. There is a briefly annotated list of the birds, chiefly waders, gallinules, ibises, herons, and waterfowl that may be observed from the train from Maitland to Newcastle.
- DOUAUD, J. 1951. Les oies sauvages dans l'estuaire de la Loire, hiver 1950-1951. Alauda, 19 (3): 172-177.
- DOUGHERTY, E. C. 1951. Evolution of zooparasitic groups in the phylum Nematoda, with special reference to host-distribution. Journ. Parasit., 37 (4): 353-378.—Traces probable evolution of several groups of parasitic nematodes. The sub-order Strongylina (= Strongylata), including several groups of bird parasites, is treated in detail, and correlated with vertebrate evolutionary history.
- DROST, RUDOLPH. 1951. Kennzeichen für Alter und Geschlecht bei Sperlingsvögeln. Ornith. Merkblätter (Vogelwarte Helgoland, Wilhelmshaven), No. 1: 1-26.—Age, seasonal, and sex criteria are given for a number of fringillids, parids, and turdids.
- EISENMANN, EUGENE. 1951. Northern birds summering in Panama. Wilson Bull., 63 (3): 181-185.—Notes on 18 northern species observed summering in Panama and evidence that at least many of these individuals are immature.
- EISENMANN, EUGENE. 1952. Annotated list of birds of Barro Colorado Island, Panama Canal Zone. Smithsonian Misc. Coll., 117 (5): 1-62.
- EVENDEN, FRED G., JR. 1949. Nesting of the Long-billed Marsh Wren in western Oregon. Murrelet, 30 (3): 58.—Nests with eggs found in Willamette Valley, April 24 to May 22; only one previous published nest record from western Oregon.
- FERRY, C. AND F. 1951. Le Courlis cendré [*Numenius arquata*] nicheur en Côte-d'Or. Alauda, 19 (2): 113-116.—Nesting of this species in eastern France.
- FISCHER, RICHARD B. 1951. Data on the food habits of local owls. Proc. Linn. Soc. New York, Nos. 58-62: 46-48, 1 table.—In vicinity of New York; seven species of owls.
- FLEAY, DAVID. 1951. The Little Eagle in the Healesville District, Victoria. Emu, 51 (1): 57-65, 4 pls.—This paper is intended as an adjunct to the more comprehensive account of this species by J. H. Calaby, published in the same number of the 'Emu.'
- GEHR, AGNES R. 1952. Jared Potter Kirtland. The Explorer [Cleveland Mus. Nat. Hist.], 2 (7): 1-33.—An interesting biography of Dr. Kirtland, whose range of interests almost rivaled that of Dr. Franklin.
- GEROUDET, PAUL. 1951. A propos de la Perdrix Rouge [*Alectoris rufa*] en Haute Savoie. Alauda, 19 (2): 84-87.—This species does not occur now in Switzerland. Commentaries on old records.
- GIBSON, J. A. 1951. The breeding distribution, population and history of the birds of Ailsa Craig [cont.]. Scot. Nat., 63 (3): 159-177.
- GODDARD, M. T., AND K. A. HINDWOOD. 1951. Sea-birds and cyclones: some interesting New South Wales records. Emu, 51 (2): 169-171.—During an easterly gale which lasted from June 22 to 26, 1950, two *Sterna fuscata*, one *Pterodroma lessonii*, and one *Pterodroma macroptera* were picked up in the Dorrigo Tablelands district, 25 miles from the coast of New South Wales, and at an elevation of more than 2000 feet above sea level.

- GOODGE, WILLIAM. 1950. Some notes on the birds of the San Juan Islands [Wash.]. Murrelet, **31** (2): 27-28.—Annotated list of 29 species which are either new to the area, collected as specimens for the first time, or which have shown a change in status between 1935 and 1948 or 1949.
- GRANT, C. H. B., AND C. W. MACKWORTH-PRAED. 1951. On the type locality of *Struthio camelus* Linnaeus, and description of a new race. Bull. Brit. Orn. Club, **71** (7): 45-46.—The type locality of *S. camelus* Linn. is considered to be Syria. Consequently *S. c. syriacus* Roths. is placed in the synonymy of the typical race, and the bird of northern Africa is named *Struthio camelus rothschildi* new subspecies.
- GRANT, C. H. B., AND C. W. MACKWORTH-PRAED. 1951. On the status of *Ereopterix signata* cavei Grant and Praed. Bull. Brit. Orn. Club, **71** (7): 46.—Is synonymous with *E. signata harrisoni* O. Grant.
- GRANT, C. H. B., AND C. W. MACKWORTH-PRAED. 1951. On the type of *Tchitrea perspicillata suahelica* (Reichenow) and the status of *Tchitrea perspicillata ungujaensis* Grant and Praed. Bull. Brit. Orn. Club, **71** (7): 47.—*T. p. ungujaensis* is a synonym of *suahelica*.
- GRANT, C. H. B., AND C. W. MACKWORTH-PRAED. 1951. Two new races of Great Grey Shrike. Bull. Brit. Orn. Club, **71** (8): 54-55.—*Lanius excubitor batesi* (between Sfax and Agquareb, eastern Tunisia), *Lanius excubitor dubarensis* (Dubar, about seven miles south of Berbera, British Somaliland), new subspecies.
- GRAUSTEIN, JEANNETTE E. 1952. Audubon and Nuttall. Sci. Monthly, **74**: 84-90.
- GUIGUET, C. J. 1950. Notes on Common Murres nesting in British Columbia. Murrelet, **31** (1): 12-13.—3000 adults estimated on Triangle Island; egg laying had just begun when the island was visited, June 25 to July 1, 1949.
- GULLION, GORDON W. 1951. The frontal shield of the American Coot. Wilson Bull., **63** (3): 157-166, 2 figs.—Structure, changes with the season and with hormone treatments, and function of the frontal shield of *Fulica americana*. It enlarges prior to the nesting season and its size is positively correlated with aggressive territorial behavior.—J. T. Tanner.
- HAGENSTEIN, WALTER. 1950. European Starling (*Sturnus vulgaris*) at Medina, King County, Washington. Murrelet, **31** (1): 11.
- HALE, JAMES B., AND ROBERT F. WENDT. 1951. Amphibians and snakes as Ruffed Grouse [*Bonasa umbellus*] food. Wilson Bull., **63** (3): 200-201, 1 photo.
- HANSON, H. C., AND R. E. GRIFFITH. 1952. Notes on the South Atlantic Canada Goose population. Bird-Banding, **23** (1): 1-22.—Report based on the banding and recovery records of the Jack Miner Sanctuary near Kingsville, Ontario; five maps and five tables summarize the results. Breeding and wintering grounds and migration routes are discussed. A chart shows the winter populations of *Branta canadensis* on four National Refuges; they increased from 50,000 in 1941-42 to 150,000 in 1950-51.
- HARRISON, HAL H. 1951. Notes and observations on the Wilson's Warbler. Wilson Bull., **63** (3): 143-148, 3 photos.—Summary of the literature and observations in Maine on the nesting of *Wilsonia pusilla*.
- HARRISON, J. M. 1951. A series of abnormal eggs. Bull. Brit. Orn. Club, **71** (7): 43-45.
- HARRISON, J. M. 1951. Exhibition of, and remarks upon dimorphism in the female of the Rock-Bunting, *Emberiza cia* Linnaeus, and a male-feathered female Common Redstart, *Phoenicurus phoenicurus* (Linnaeus). Bull. Brit. Orn. Club, **71** (8): 56-57.—The Rock-Bunting exhibits well marked sexual dimorphism;

- further the females are dimorphic in having a male-like phase and a brown phase. The author believes that the two types are genetically determined. A Redstart in male plumage, upon dissection, proved to be a female with an egg in the oviduct. In this case the author believes that the specimen must be regarded as a genetically-determined cock-feathered hen.
- HAWKINS, LAURENCE F. 1951. Seven years of bird-watching in Chelsea (Manhattan). Proc. Linn. Soc. New York, Nos. 58-62: 55-62.—Records of birds occurring in the backyards of 10 city houses, which are enclosed by four- and five-story houses.
- HECHT, WILLIAM ROBERT. 1951. Nesting of the Marsh Hawk at Delta, Manitoba. Wilson Bull., 63 (3): 167-176, 1 fig., 1 table.—Nesting, food habits, and relationships with waterfowl of *Circus cyaneus*.
- HEIM DE BALSAC, H. AND T. 1951. Les migrations des oiseaux dans l'ouest du continent africain. Alauda, 19 (2): 97-112, and 19 (3): 157-171.
- HEIM DE BALSAC, H., AND N. MAYAUD. 1951. Sur la morphologie, la biologie et la systématique de *Cercotrichas podobe*. Alauda, 19 (3): 137-151, 1 fig.—The authors describe in detail the plumages of the adult and the young and the habits, breeding, and eggs of this species and conclude that the genus *Cercotrichas* cannot be maintained and should be merged with, or at least reduced to a subgenus of *Erythropterygia*.—C. Vaurie.
- HERMAN, C. M. 1951. Blood parasites from California ducks and geese. Journ. Parasit., 37 (3): 280-282.—A survey of 1,011 anatids for blood parasites is summarized.
- HERTZOG, LOUIS. 1951. L'espèce *Sylvia atricapilla* s'apprête-t-elle à troquer le beau "forte" de son chant contre une banale rengaine à redites? Alauda, 19 (3): 185-186.—Possible changes in the song of this species in Wurtemberg.
- HINDE, R. E., AND J. FISHER. 1951. Further observations on the opening of milk bottles by birds. Brit. Birds, 44 (12): 393-396.—Records from Denmark, Sweden, Holland; Great and Blue tits, *Parus major* and *caeruleus*, and Great Spotted Woodpeckers, *Dendrocopos major*, are involved. There is discussion of the probable learning factors in this behavior.
- HINDWOOD, K. A. Moth larvae in birds' nests. Emu, 51 (2): 121-133, 2 figs.—Larvae of the genus *Neossiosynoecca* are recorded in nesting holes of parrots, where they feed on the excreta of the young; a species of the genus *Coesyra* is known from the nests of four species of Ploceidae where its larvae feed on faeces and feathers. One species of *Monopsis* occurs in the larval stage in hawk and owl pellets.
- HOFFMANN, L., AND H. WACKERNAGEL. 1951. Le Martinet pâle (*Apus pallidus*) niche à Banyuls. L'Oiseau, 21 (3): 216-217.—An account of the first authentic nesting record in France. This record has already been published by Dr. and Mrs. D. Lack (Alauda, 19 (1): 49, 1951) but, according to the editor of 'L'Oiseau,' credit for this discovery is due to Hoffmann who "indicated the colony to Mr. and Mrs. Lack," the note of Hoffmann being in press when the note in 'Alauda' appeared.
- HORSTMANN, E. 1950. Schwarm und Phalanx als überindividuelle Lebensformen. Forschungsstätte Spiederog., No. 1: 1-24, 13 figs.—Observations on Starlings, with comments on other species.
- HOSKING, ERIC, AND STUART SMITH. 1952. High speed photography as an aid to the identification of prey.—II. Brit. Birds, 45 (3): 101-103.—Photographs of *Phoenicurus ochrurus* and *Acrocephalus palustris* with moths in their bills. These are identified as to species, as are many other insects.

- HÜE, FRANCOIS. 1951. Le Martinet pâle [*Apus pallidus*] nidificateur en France continentale. *L'Oiseau*, **21** (3): 217-221.—The author, who gives due credit to Hoffmann (see mention of the note by Hoffmann and Wackernagel in this issue of 'The Auk') for his discovery, gives an interesting account of the nesting of this species illustrated by two figures on the position of the nest.
- JEFFERY, R. G., AND R. LIVERSIDGE. 1951. Notes on the Chestnut-banded Sandplover, *Charadrius pallidus pallidus*. *Ostrich*, **22**: 68-76.—Life history, photographs.
- JOUANIN, CHRISTIAN. 1951. Étude d'une collection d'oiseaux des Iles Kerguelen. *Bull. Mus. Nat'l. Hist. Nat.* [Paris], 2nd ser., **23** (4): 347-356.
- KAGAN, I. G. 1951. Aspects in the life history of *Neoleucochloridium problematicum* (Magath, 1920) new comb. and *Leucochloridium cyanocittae* McIntosh, 1932 (Trematoda: Brachylaemidae). *Trans. Amer. Micro. Soc.*, **70** (4): 281-318.—The life cycle of *N. problematicum* in nature takes one year. Gallinules and other rallids become infested in the spring by eating snails whose tentacles contain the pulsating, red-brown broodsacs (containing metacercariae). Young snails become infested by eating the eggs in bird feces in the summer. The life cycle of *L. cyanocittae* is similar; the broodsac is green; the natural final host is the Red-winged Blackbird.
- KIERAN, JOHN. 1951. Dr. Clyde Fisher. *Proc. Linn. Soc. New York*, Nos. **58-62**: 76-78.—A memorial.
- KINGSCOTE, A. A. 1951. A note on *Ribeiroia ondatrae* Price, 1931 (Trematoda). *Journ. Parasit.*, **37** (3): 324.—Parasitic in domestic goose.
- KURTH, DUDLEY. 1951. The Mewstone rookery of the White-capped Albatross. *Emu*, **51** (1): 76-77.—*Diomedea cauta* is believed to nest on the Mewstone, a small islet about half a mile in circumference, situated in lat. 43° 44' S. and long 146° 23' E.
- LABITTE, ANDRÉ. 1951. Notes sur le Busard cendré, *Circus pygargus*. *L'Oiseau*, **21** (3): 188-193.—Nesting.
- LACK, DAVID. 1951. Geographical variation in *Erithacus rubecula*. *Ibis*, **93** (4): 629-630.—Believes that in the case of this species at least the use of trinomials gives a misleading picture of the natural variation, and that it would be "simpler and more precise to describe the trends of variation in terms of geographical areas, omitting subspecific names altogether."
- LACK, DAVID, AND ELIZABETH LACK. 1951. Further changes in bird-life caused by afforestation. *Journ. Animal Ecol.*, **20**: 173-179.—In areas planted to pine, three groups of birds are found at different times: until the pines are 8 yrs. old; 8 through 15 years; and in tall older trees. Bird populations are lowest in the first and highest in the second stages.
- LACK, DAVID, AND ELIZABETH LACK. 1951. The breeding biology of the Swift *Apus apus*. *Ibis*, **93** (4): 501-546.—A painstaking study based on five seasons of study in the vicinity of Oxford, England. Data are presented on weights of adults and nestlings, clutch-size, weight of eggs, incubation, duration of the incubation and nesting periods, growth, and feeding frequency. Of special interest are the correlations between weather and nestling survival; during the month of June in 1946, 1947, and 1948, the total hours of sunshine during the second half of the month were below average and the survival rate of the June-hatched birds was only 39 per cent, while in June, 1949, with large amounts of sunshine, the rate jumped to 91 per cent. Also, nestling mortality is higher in large broods (*i. e.* 3 young) than in smaller broods (*i. e.* 1 or 2 young) during bad weather. The

- young are fed meals of the same size regardless of weather, but during fine periods the feedings are more frequent.—J. L. Peters.
- LACK, DAVID, AND ELIZABETH LACK. 1952. Visible migration at Land's End. Brit. Birds, **45** (3): 81–96.—Observations in October, 1951, of Skylarks (*Alauda arvensis*), Chaffinches (*Fringilla coelebs*), and Starlings (*Sturnus vulgaris*) migrating towards Spain and Ireland; five maps show the movements of the birds.
- LAMPPIO, TEPPPO. 1951. On the significance of predators in the control and dispersal of the diseases of game. Papers on Game Res. (Finn. Found. Game Preserv.), No. 6: 1–20, many graphs and tables.
- LAURENT, GASTON. 1951. La Tourterelle turque en France. Alauda, **19** (2): 116.—First record of *Streptopelia decaocto* for France.
- LEA, ROBERT B., AND E. P. EDWARDS. 1951. A nest of the Rufous-breasted Spinetail [*Synallaxis erythrothorax*] in Mexico. Wilson Bull., **63** (4): 337–338, 1 photo.
- LEARMONTH, NOEL F. 1951. Further notes on *Neositta pileata* and *N. chrysoptera*. Emu, **51** (1): 15–16.—Cites instances of two forms overlapping in the Portland district of Victoria, Australia.
- LEARMONTH, NOEL F. 1951. More observations on swifts. Emu, **51** (2): 151–152.—Observations on wintering flocks of *Hirundapus caudacutus* and *Apus pacificus* in the Portland, Victoria, region; appearances are usually noted during times of falling barometric pressure.
- LEHMANN, ERNST VON. 1951. Zur Brutbiologie des Baumpiepers (*Anthus tr. trivialis* L.). Bonner Zool. Beitr., **2** (3–4): 225–227.
- LEPORATI, LAMBERTO. 1951. Condizioni faunistico-venatorie dell'Estuario Veneto. Ricerche di Zool. Applicata alla Caccia. XXI. (Lab. Zool. Appl., Univ. Bologna), pp. 1–63, tables and figs.—This is an interesting study and analysis of waterfowl numbers over a period of 20 years in the Laguna di Venezia on the Adriatic Sea. Various factors in this locality have been investigated as part of an attempt to correlate local conditions with numbers of waterfowl. The "hydrobiological environment" locally has changed little, and it is concluded that the decrease in waterfowl is primarily the result of the multifarious activities of man in distant areas. Comparisons are made between the periods 1930–1950 and 1903–1911. Some cyclical variation has been noted in the Mallard, Teal, and Garganey.
- Of special interest is the fact that summaries are given in Italian, French, English, and German.—H. I. Fisher.
- LEVY, SKYMOUR H. 1950. Summer birds in southern Idaho. Murrelet, **31** (1): 2–8.—Notes on distribution and status of 134 species observed or collected in June, July, and August, 1949.
- LIGON, J. STOKLEY. 1952. The vanishing Masked Bobwhite. Condor, **54** (1): 48–50.—*Colinus virginianus ridgwayi* is virtually extinct in the wild. Several trips have been made into Mexico to obtain birds for restocking in Arizona and New Mexico.
- LOWERY, G. H., JR., AND R. J. NEWMAN. 1951. Notes on the ornithology of southeastern San Luis Potosi. Wilson Bull., **63** (4): 315–322.—A brief history of the ornithology of this Mexican region and an annotated list of 32 species.
- LUDLOW, FRANK. 1951. The birds of Kongbo and Pome, south-east Tibet. Ibis, **93** (4): 547–578, 2 pls. (1 map).—A vivid but brief account of the itinerary of the author's party in penetrating a practically unexplored portion of Tibet, with interesting comments on the physiography and climate of the region. The trip,

- which occupied 14 months between October, 1946, and December, 1947, was primarily for botanical collecting. Nevertheless the annotated list of 191 forms of birds observed, most of them represented by one or more specimens, proves that the ornithological aspects were by no means neglected.—J. L. Peters.
- MADSEN, H. 1951. Notes on the species of *Capillaria* Zeder, 1800, known from gallinaceous birds. *Journ. Parasit.*, **37** (3): 257–265.—Taxonomic notes, with a host and locality list for each species.
- MANUEL, CANUTO G., AND E. THOMAS GILLIARD. 1952. Undescribed and newly recorded Philippine birds. *Amer. Mus. Novit.*, No. 1545: 1–9.—*Dicaeum rubricapilla*—new species from Mt. Kampalili, Davao, Mindanao. *Accipiter trivirgatus castroi* from Anibawan, Polillo, and *Otus bakkamoena batanensis* from Basco, Batan, new subspecies. New records for other species.
- MANWELL, R. D. 1951. Leucocytozoa and other blood parasites of the Purple Grackle, *Quiscalus quiscula quiscula* [sic]. *Journ. Parasit.*, **37** (3): 301–306.—A survey of 75 grackles is summarized.
- MANWELL, R. D. 1951. Ecoerythrocytic stages in *Plasmodium hexamerium*. *Journ. Parasit.*, **37** (3): 319–320.—In *Vermivora celata*.
- MANWELL, R. D. 1951. Acute malaria in a Canada Jay of the high Rockies. *Journ. Parasit.*, **37** (3): 322.
- MARSHALL, A. J. 1951. The refractory period of testis rhythm in birds and its possible bearing on breeding and migration. *Wilson Bull.*, **63** (4): 238–262, 8 figs.—Following the breeding season the testes of birds undergo a metamorphosis of the tubules and interstitial cells, and during this refractory period sexual activity is greatly reduced and cannot be produced by stimuli such as increased light. After testis regeneration, sexual activity returns in such forms as autumnal singing, and some species can now be stimulated to develop into the breeding condition. The testicular rhythm is thought to be the most important single factor in the approximate timing of the breeding cycle, and when the bird is capable of reproduction, certain environmental factors finally stimulate breeding activity. As a result, breeding activity is synchronized with suitable seasons. Several environmental factors affecting the breeding time of different species are discussed. An appendix describes a histological technique for determining the condition of the testes.—J. T. Tanner.
- MATVEYEFF (MATVEJEV), S. D. 1951. [Avifauna of the Tara Mountains, western Serbia, 1950]. *Trav. de L'Inst. d'Ecol. et Biogeographie*, **11** (2): 71–113, 11 figs., 2 tables.—Analysis of composition and densities, as well as species accounts.
- MAYAUD, NOËL. 1951. Le plumage pré-nuptial d'*Oenanthe oe. seebohmi*. *Alauda*, **19** (2): 88–96, 4 figs.—Detailed study of plumages of the juvenile and adult. The "dimorphism" of the author seems to be a function of the degree of the sexual maturity of the individual. The figures are good.—C. Vaurie.
- MAYAUD, NOËL. 1951. Observations sur la migration en pays basque. *Alauda*, **19** (2): 116–119.
- MAYR, ERNST. 1951. Notes on some pigeons and parrots from Western Australia. *Emu*, **51** (2): 137–145.—This paper is the first of a series based on a recent collection of 1037 specimens from some of the type localities in mid-western Australia whence G. M. Mathews described many of his proposed new subspecies, often on inadequate material. The author concludes that *Geopelia striata clelandi* Math., and *G. humeralis headlandi* Math. are valid forms; *Lophophaps plumifera* Gould and *L. ferruginea* Gould are shown to be conspecific with four recognizable races—*L. p. plumifera*, *L. p. ferruginea*, *L. p. mungi* Math., and *L. p. proxima* new subsp.

- (Hall's Creek Road). *Ocyphaps lophotes whillocki* is considered valid, as is *Kakatoe roseicapilla kuhli*.—J. L. Peters.
- MAYER, ERNST [= MAYR, ERNST], AND R. MEINERTZHAGEN. 1951. What is *Sylvia ticehursti* Meinertzhagen. Bull. Brit. Orn. Club, **71** (7): 47-48.—This species, known only from the unique type, is believed to be the southwestern Morocco race of either *S. conspicillata* or *S. deserticola* but determination of the actual status requires additional collecting and field studies.
- MCGILL, ARNOLD R. 1951. Further notes on the Sittellas. Emu, **51** (1): 11-14, 1 pl. (photo).—Believes that "the true status of these interesting birds [*i. e.* the Australian forms of *Neositta*] will only be made clear by future collecting in the comparatively small zones of apparent overlap, or by careful and comprehensive field work."
- McMANNAMA, ZELLA. 1950. Additional notes on the birds of the San Juan Islands [Wash.]. Murrelet, **31** (2): 29-30.—Annotated list of 18 species, 10 of which are new to the area.
- MEINERTZHAGEN, R. 1951. On *Struthio camelus syriacus* Rothschild. Bull. Brit. Orn. Club, **71** (7): 46.—Objects (and quite rightly) to the action of Grant and Mackworth-Praed (t. c. p. 45-46) in rejecting *S. c. syriacus*.—J. L. Peters.
- MEINERTZHAGEN, R. 1951. Migration in West Ireland. Bull. Brit. Orn. Club, **71** (8): 58.—Observation on the speed of flight of four species of birds, using a stop-watch and a measured base.
- MEISE, WILHELM. 1951. Notes on the ornithological collections of Preiss in the Swan River Colony, 1838-1841. Emu, **51** (2): 148-151.—A German physician, Ludwig Preiss, collected birds in the Swan River Colony in Western Australia beginning in 1839 and continuing for about two years. His collection amounting to at least 162 species and 600 specimens was disposed of to German museums. A survey conducted by Dr. Meise shows 22 mounted specimens, representing 21 species, were in Hamburg before the war, and there are also nine species in the Berlin Museum, but the bulk of the collection went to the Museum Heineanum in Halberstadt. Dr. Meise believes that 100 species and 165 specimens were sold to Heine by Preiss in 1848. The disposition of 70 species and at least 400 skins is unaccounted for and, if not lost, the specimens must be stored in other European collections. There are other notes on individual specimens from this source in the Heine collection.—J. L. Peters.
- MIDDLETON, RAYMOND J. 1952. Thirty years of banding at Norristown, Pennsylvania. Bird-Banding, **23** (1): 22-28.—35,005 birds have been banded; 1229 have returned, and 267 were recovered at a distance. Birds at least seven years old were Tufted Titmouse, Red-eyed Vireo, Wood Thrush, and six Tree Sparrows; eight years old, Crested Flycatcher, Junco, two Tree Sparrows, three Purple Grackles; nine years, Robin.
- MILES, J. A. R., AND J. B. SHRIVASTAV. 1951. Ornithosis in certain sea-birds. Journ. Animal Ecol., **20**: 195-200.—Infections of "psittacosis" virus are old-established in the Laridae but probably arose for the first time in the Fulmar, *Fulmarus glacialis*, around 1930.
- MILLER, R. R., AND H. E. WINN. 1951. Observations on fish-eating by the Great-tailed Grackle [*Cassidix mexicanus*] in southeastern Arizona. Wilson Bull., **63** (3): 207-208.
- MILON, PH. 1951. Notes d'observation a Madagascar, 4. Alauda, **19** (3): 152-156.—Description and possible significance of the vibratory movements of the legs in *Charadrius tricollaris bifrontatus*.

- MITCHELL, GEORGE J. 1949. Trumpeter Swans at Tahsis, Vancouver Island. *Murrelet*, **30** (3): 59.—Up to 23 wintered in 1948-49. They were noted there the two previous winters.
- MOORE, A. D. 1951. Adaptations of animals to climatic extremes: a review. *Wilson Bull.*, **63** (4): 358-362.—Critical comments on three papers about cold adaptation of mammals and birds.
- MOUILLARD, BERNARD. 1951. Comportement hivernal de la Lavandière jaune *Motacilla cinerea*. *Alauda*, **19** (2): 121.—A winter roost in a large city.
- NEILAND, K. A. 1951. A new genus of trematode (Lecithodendriidae: Pleurogenetinae) from the Varied Thrush. *Journ. Parasit.*, **37** (6): 563-568.—From Washington state.
- PARKES, KENNETH C. 1952. The races of the Bald Starling of the Philippines. *Condor*, **54** (1): 55-57.—The recommendation is made that four races of the species *Sarcops calvus* be recognized, namely *S. c. calvus*, *mindorensis*, *lowii*, and *melanotus*.
- PARQUIN, ABBÉ P. 1951. Observations faites dans l'océan indien (1-7 octobre 1948). *Alauda*, **19** (3): 183-185.—Petrels observed between Socotra and Ceylon.
- PEARSE, THEOD. 1950. Parasitic birds. *Murrelet*, **31** (1): 14.—Horned Grebes took food from a Surf Scoter, and Glaucous-winged Gulls took food from Pacific Loons.
- PEITZMEIER, JOSEF. 1951. Zum ökologischen Verhalten der Misteldrossel (*Turdus v. viscivorus* L.) in Nordwesteuropa. *Bonner Zool. Beitr.*, **2** (3-4): 217-224.
- PETERLE, TONY J. 1951. Intergeneric galliform hybrids: a review. *Wilson Bull.*, **63** (3): 219-224, 1 fig.—A summary of the records in the literature, plus an additional one, and notes on habitat and breeding behavior in relation to hybridization.
- PHILLIPS, ALLAN R. 1951. The molts of the Rufous-winged Sparrow. *Wilson Bull.*, **63** (4): 323-326.—Postnuptial and prenuptial molts, both complete or nearly so, of *Aimophila carpalis*.
- PHILLIPS, RICHARD S. 1951. Nest location, Cowbird parasitism, and nesting success of the Indigo Bunting. *Wilson Bull.*, **63** (3): 206-207, 1 table.—Fourteen nests of *Passerina cyanea* during three summers.
- PRESTON, F. W. 1951. Flight speed of Common Loon (*Gavia immer*). *Wilson Bull.*, **63** (3): 198, 1 fig.
- RACEY, KENNETH. 1950. Status of the European Starling in British Columbia. *Murrelet*, **31** (2): 30-31.—First collected in January, 1947; new locality records almost all made in late fall and winter; one breeding record.
- RAND, A. L. 1951. Birds from Liberia. *Fieldiana: Zool.*, **32** (9): 561-653, 1 map.—This is a report on nearly 700 specimens from two localities in Liberia. At present 310 species and subspecies are known from there. The discussion of barriers between Upper and Lower Guinea subspecies brings out that the Mount Cameroon—Cameroon Highlands constituted an important barrier in the past, and it still may have some effect. A later and still-existing barrier is a gap in the forest in the Lagos-Accra area. Races formed by the first barrier may be about 22,000 years old, and those by the later, less than 12,000 years of age.—H. I. Fisher.
- RAND, R. W. 1951. Birds breeding on Seal Island (False Bay, Cape Province) [Africa]. *Ostrich*, **22**: 94-103.—Life history notes on guano birds; photographs.
- RANGER, GORDON. 1951. Life of the Crowned Hornbill (Part IV), *Lophoceros suahelicus australis*. *Ostrich*, **22**: 77-93.—Photos.
- RIPLEY, S. DILLON. 1951. Remarks on the Philippine Mallard. *Wilson Bull.*, **63** (3): 189-191, 1 fig.—Largely on a pair of captive *Anas luzonica*, their eggs, and downy young.

- ROBINS, D. R., AND W. B. HEED. 1951. Bird notes from La Joya de Salas, Tamau-lipas. *Wilson Bull.*, **63** (4): 263-270, 2 photos.—On 18 species of Mexican birds.
- ROUGEOT, PIERRE CLAUDE. 1951. Notes biologiques sur les oiseaux du Woleu-N'tem (Gabon). *L'Oiseau*, **21** (3): 162-187.—Numerous observations on the avifauna of this region in the equatorial rain forest.
- ROWLEY, IAN. 1951. Courtship feeding of Dusky Wood-swallows. *Emu*, **51** (1): 80.
- RUSLING, WILLIAM J. 1951. Food habits of New Jersey owls. *Proc. Linn. Soc. New York*, Nos. 58-62: 38-45, 2 tables.
- RUTHEKE, PAUL. 1951. Die Brutvögel des Mönnegebietes im pommerschen Oderdelta. *Ornith. Abhd.*, **11**: 1-40.
- SAPIN-JALOUSTRE, J., AND F. BOURLIERE. 1951. Incubation et développement du poussin chez le Manchot Adélie, *Pygoscelis adeliae*. *Alauda*, **19** (2): 65-87, pls. 1-2.—A detailed account of the life history of this well investigated species of penguin on Adélie Land, covering the period from laying of first egg to final stay of the young in communal crèches. In 1950 the first egg was apparently laid on November 10 and the last on December 10. The usual clutch is two eggs and the maximum three. The period of incubation varies between 33 and 37 days. The period of growth of the young is about seven weeks. Many valuable observations on the behavior of the parents, their fasting, growth and thermoregulation of the young and their behavior in the crèches. In the rookeries studied the mortality of eggs and young due to the depredations caused by skuas and other factors amounted to 70 per cent. Four excellent photographs in two plates.—C. Vaurie.
- SAUNDERS, DOROTHY CHAPMAN. 1951. Territorial songs of the White-winged Dove. *Wilson Bull.*, **63** (4): 330-332, 1 fig.—Description of several songs of *Zenaida asiatica* with musical notation.
- SAVAGE, A., AND W. B. McTAVISH. 1951. *Plasmodium circumflexum* in a Manitoba duck. *Journ. Parasit.*, **37** (6): 533-534.—From *Arctonetta fischeri* captured alive in Alaska but examined in Manitoba.
- SCHILLER, E. L. 1951. Studies on the helminth fauna of Alaska. VIII. Some cestode parasites of the Pacific Kittiwake (*Rissa tridactyla* Ridgway) with the description of *Haploparaxis rissae* n. sp. *Proc. Helm. Soc. Wash.*, **18** (2): 122-125.
- SCHWARTZ, C. W., AND ELIZABETH R. SCHWARTZ. 1951. Food habits of the Barred Dove in Hawaii. *Wilson Bull.*, **63** (3): 149-156, 1 fig., 1 photo, 1 table.—Kinds of food, almost wholly vegetable, and feeding behavior of the introduced *Geopelia striata*.
- SEDWITZ, WALTER. 1951. A numerical study of shorebirds on Long Island in 1947. *Proc. Linn. Soc. New York*, Nos. 58-62: 49-54, 6 tables.
- SERLE, WILLIAM. 1951. A new species of shrike and a new race of *Apalis* from West Africa. *Bull. Brit. Orn. Club*, **71** (7): 41-43.—*Chlorophoneus kupeensis* (Kupé Mountain, lat. 4° 45' N., long. 9° 40' E., Kumba Division, British Cameroons) new species; *Apalis rufogularis sanderi* (River Ogun, near Lagos, southwestern Nigeria) new subspecies.
- SERVENTY, D. L. 1951. The evolution of the Chestnut-shouldered Wrens (*Malurus*). *Emu*, **51** (2): 113-120, 2 text-figs. (maps).—An interesting discussion and elaborate speculation on the origin and relationships of four species of the genus *Malurus*—*lamberti*, *pulcherrimus*, *elegans*, and *amabilis*.
- SHAUB, B. M. 1951. Photographic records of captured birds. *Wilson Bull.*, **63** (4): 327-329, 1 fig.—Describing a method of photographing small, live birds.
- SHEWELL, E. L. 1951. Notes on the nesting of the White-fronted Sandplover, *Charadrius marginatus*. *Ostrich*, **22**: 117-119.—Believes eggs are half-buried in sand on hot sunny days to keep them from over-heating.

- SICK, HELMUT. 1951. An egg of the Umbrella Bird [*Cephalopterus ornatus*]. Wilson Bull., **63** (4): 338-339.
- SKELTON, KATHLEEN GREEN. 1951. Present size of the Everglade Kite [*Rosthamus sociabilis*] population at Lake Okeechobee, Florida. Wilson Bull., **63** (3): 198-199, 1 fig.
- SLIJPER, H. J. 1951. Een 17e Eeuwse Hollandse tekening van de Steltkluit, *Himantopus himantopus*. Ardea, **39** (4): 259-261, pl. 3.
- SMITH, K. D. 1951. A new race of lark from Eritrea. Bull. Brit. Orn. Club, **71** (8): 55-56.—*Calandrella cinerea asmaraensis* (near Asmara, Eritrea).
- STABLER, R. M. 1951. A survey of Colorado Band-tailed Pigeons, Mourning Doves, and Wild Common Pigeons for *Trichomonas gallinae*. Journ. Parasit., **37** (5, Sect. 1): 471-472.—High rates of infection were found in all species, evidences of pathogenicity in the latter two.
- STABLER, R. M. 1951. Effect of *Trichomonas gallinae* from diseased Mourning Doves on clean Domestic Pigeons. Journ. Parasit., **37** (5, Sect. 1): 473-478.—Strains of trichomonads from severe epidemic canker from the southeastern states were severely pathogenic in Domestic Pigeons. Infection with mild strains protected against virulent strains.
- STRESEMANN, ERWIN. 1951. Aus C. J. Temmincks Briefen an H. Lichtenstein. Ardea, **39** (4): 253-259.—Three letters in French from Temminck, mostly of personal interest, dated 1818, 1833, and 1856.
- STRESEMANN, ERWIN. 1951. Type localities of Australian birds collected by the 'Expedition Baudin' (1801-1803). Emu, **51** (1): 65-70.—Dr. Stresemann gives an interesting but brief account of the points in Australian and Tasmanian waters where the ships of the "Expédition Baudin"—'Le Géographe' and 'Le Naturaliste'—touched and where the scientific staff—Péron, Maugé, Lesueur, Leschenault, and Levillain collected, and shows that the labelling of the specimens was inaccurate in many cases. Poor labelling resulted in errors on the part of recent ornithologists who "restricted" type localities of some of the new species collected by the "Expédition Baudin" to localities in Australia where the Expedition never touched and whence the type could not possibly have been collected.—J. L. Peters.
- SUTTON, GEORGE MIKSCHE. 1951. Dispersal of mistletoe by birds. Wilson Bull., **63** (4): 235-237, 1 pl.—Incomplete digestion of mistletoe fruits by birds results in the dispersal of the seeds. Observations are recorded of the feeding habits of Mexican euphonias (*Tanagra*) which feed to a large extent on mistletoe berries.
- SWANBERG, P. O. 1952. Studies of some species rarely photographed. XXXVII. The Shore-Lark. Brit. Birds, **45** (3): 97.—Excellent photographs of *Eremophila alpestris* at the nest in Swedish Lapland.
- THOMAS, HAL. 1951. Notes on the Pied Butcher-bird. Emu, **51** (2): 165-168.—A nest of *Cracticus nigrogularis* in the Mildura district of northwestern Victoria apparently contained young being brooded by an adult in the black and white plumage. Food was brought by a second adult and by an immature bird in the brown and white plumage. There were thus three birds in attendance at the nest.
- TINBERGEN, N., AND M. MOYNHAM. 1952. Head flagging in the Black-headed Gull; its function and origin. Brit. Birds, **45** (1): 19-22.—Five plates show threat and head flagging display in *Larus ridibundus*. Head flagging seems "to have the effect of nullifying the effect of threatening gestures and structures."
- TUZET, ODETTE, AND CLEMENT BESSIERE. 1951. La spermatogenèse d'*Anas platyrhynchos*. Alauda, **19** (3): 129-136, 3 figs.
- VAN CLEAVE, H. J., AND R. L. RAUSCH. 1951. The acanthocephalan parasites of Eider Ducks. Proc. Helm. Soc. Wash., **18** (1): 81-84.—Summary of occurrences.

- VAN TYNE, JOSSELYN, AND HAROLD MAYFIELD. 1952. Bird records from New Providence and Eleuthera islands, Bahamas. *Occ. Papers Mus. Zool. Univ. Mich.*, No. 538: 1-4.
- VLEUGEL, D. A. 1951. Ultrahoge trek van Vinken, *Fringilla coelebs*, over de Noordzee in verband met de windrichting. *Ardea*, 39 (4): 341-353.—English summary. The view of L. Tinbergen that ultra-high seaward migration in autumn is closely connected with tail winds is stated to be false. In the opinion of the author "it is not the direction of the wind but the weather condition that comes first." An answer by L. Tinbergen is unfortunately not summarized in English.—C. Vaurie.
- VON BOETTICHER, H. 1951. La systématique des guépriers. *L'Oiseau*, 21 (3): 194-199.—Granting that the number of genera of Bee-eaters may be too numerous, this treatment of a question meriting detailed analysis is much too perfunctory. The author recognizes but three genera: *Nyctiornis*, *Meropiscus*, and *Merops*.
- VOOUS, K. H. 1951. Geographical variation of the Greenfinch, *Chloris chloris*. *Limosa*, 24 (3-4): 81-91.—Clinal and other geographic changes in color and size. Nine races recognized. Routes of dispersal from Mediterranean region.
- VOOUS, K. H. 1951. A new race of bullfinch from the Iberian Peninsula. *Limosa*, 24 (3-4): 131-133.—*Pyrrhula pyrrhula iberiae* (Linares de Riofrio, Salamanca, western Spain).
- VRYDAGH, J. M. 1951. Comportement des Hirondelles de Cheminee (*Hirundo rustica* L.) dans leur Quartier d'Hiver, au Nord du Congo Belge. *Gerfaut*, 41 (3): 177-195.—Dutch summary.
- WARNER, D. W., AND R. M. MENGEL. 1951. Notes on birds of the Veracruz coastal plain. *Wilson Bull.*, 63 (4): 288-295, 1 photo.—An annotated list of 92 species of Mexican birds, with a brief description of the area.
- WEBSTER, J. DAN. 1950. Altitudinal zonation of birds in southeastern Alaska. *Murrelet*, 31 (2): 23-26.—Lists characteristic vegetation and common summer birds in the principal plant communities of the Canadian, Hudsonian, and Arctic-Alpine zones.
- WEBSTER, J. D. 1951. Additional notes on the helminth parasites of the Bobwhite in Texas. *Journ. Parasit.*, 37 (3): 322-323.
- WELCH, ARTHUR. 1951. Birds becoming "caught" in flocks of other species. *Brit. Birds*, 44 (12): 405.—A nest of Linnets, *Carduelis cannabina*, with three young about three days old was found August 29, 1946. September 2, the parents were feeding irregularly; at 5:45 p. m. they flew off with a flock of migrating Meadow Pipits, *Anthus pratensis*, that alighted near by for a few minutes. The next day the young were lethargic and on September 4 they were dead.—M. M. Nice.
- WHEELER, ROY. 1951. Notes on "anting." *Emu*, 51 (1): 81-82.
- WHITE, C. M. N. 1951. *Anthus pallidiventris* in Angola. *Ibis*, 93 (4): 627.—Near Luanda, and summary of previous records.
- WHITTELL, H. M. 1951. A review of the work of John Gilbert in Western Australia. *Emu*, 51 (1): 17-29, pt. IV.—The first three parts were published in the *Emu*, 41, 1941-42. Major Whittell describes two note books by John Gilbert, one on Australian marsupials and one on Australian birds, contained in the Queensland Museum in Brisbane. Of special interest are Gilbert's accounts of *Atrichornis clamosus* and *Psophodes nigrogularis*.
- WHITTELL, H. M. 1951. *Circus fuliginosus* Diggles, 1875. *Emu*, 51 (1): 29-31.—A brief account is given of the ornithological activities of Sylvester Diggles during

- the 1860's and 70's, and calls attention to the name *Circus fuliginosus* Diggles, published simultaneously in two Queensland newspapers on May 8, 1875.
- WILLIAMS, C. B. 1951. Intra-generic competition as illustrated by Moreau's records of East African bird communities. *Journ. Animal Ecol.*, **20**: 246-253.—Biological competition between closely related species is probably greater than between species not closely related. Closely related species, however, are probably more suited to similar physical habitats and to similar extra-generic competition. Since statistical analysis shows an excess of congeneric groups with two or more species occurring in the same habitat, above what would be expected by selection without reference to generic relations, it appears that the advantages from close relationships are greater than the drawbacks.
- WILLIAMS, J. G. 1951. Notes on *Anthreptes reichenowi yokanae*. *Bull. Brit. Orn. Club*, **71** (7): 48-50.—A recognizable race inhabiting the coastal forests of Kenya and northeastern Tanganyika; there is an account of plumages and habits.
- WILLIAMS, JOHN G. 1951. *Nectarinia johnstoni*: a revision of the species, together with data on plumages, moults and habits. *Ibis*, **93** (4): 579-595, 1 pl.—*Nectarinia johnstoni* is a species of sunbird confined to the high mountains of eastern Africa from Mt. Kenya to the highlands of Nyasaland; three races are recognized. *N. j. johnstoni* (of which *N. j. idius* Mearns is considered a synonym), *N. j. salvadorii* and *N. j. dartmouthi*; characters and distribution of the races are given. There are descriptions of the juvenal, immature, and adult male eclipse plumages of the typical race; no material representing these plumages is available for *salvadorii*, but it is believed probable that this race has eclipse plumage; after examination of a considerable series of *dartmouthi* it is assumed that this race does not acquire an eclipse plumage. Food is entirely of insects, chiefly Diptera. Data are given on breeding season, nesting sites, and description of nest and eggs.—J. L. Peters.
- WILLIAMS, LAIDLAW. 1952. Breeding behavior of the Brewer Blackbird. *Condor*, **54** (1): 3-47.—Observations made on a nesting colony at the mouth of the Carmel River, Monterey County, California, for six breeding seasons (1942-47). Color bands were used extensively. Behavior is discussed for the phases of pair formation; nest-building, copulation, and egg-laying; incubation; nestling care; and fledgling care. Thirteen call notes were distinguished and seven distinct displays were manifest. Pair formation started while birds were still in flocks. Polygyny was common. Aggressive action of male was only partially associated with a limited area. Incubation was performed by female alone.—W. H. Behle.
- WILLIAMSON, KENNETH. 1951. The wrens of Fair Isle. *Ibis*, **93** (4): 599-602.—*Troglodytes troglodytes fridariensis* (Fair Isle, North Britain) new subspecies.
- WINTERBOTTOM, I. M. 1951. Common birds of the bush. (Longmans Green & Co., Capetown), vii + 40 pp. Price, 5s.—A guide to the identification of 30 common birds of the bush from Northern Transvaal and Natal to Central Tanganyika. There are brief notes on the natural history of each species. Four colored plates show 20 forms and text-figures depict others.
- YAPP, W. B. 1951. The population of Rooks (*Corvus frugilegus*) in West Gloucestershire. II. *Journ. Animal Ecol.*, **20**: 169-172.—Fluctuations in numbers between 1934-39 and 1944 correlate with the area of arable land and with the temperature in March of the preceding year. A rookery is not a stable unit.
- YOCOM, CHARLES F. 1949. A survey of waterfowl in eastern Washington in 1947. *Murrelet*, **30** (3): 46-52, 1 map, 3 tables.—Comparative abundance of each species is tabulated, based on a 2,500-mile survey of 6,726 ducks (plus 2,644 unidentified), 340 Canada Geese and 2,484 Coots. Data are segregated under five regions, and

brood sizes (667 broods) for three areas (plus 1946 figures for one of them) are also tabulated by species. Mallards constituted 51.7% of the duck population, and 94.7% of this species [from unstated number examined] contained internal parasites. Tapeworms (*Cestoda*) were present in 62.9% of the 62 waterfowl examined.—C. S. Robbins.

YOCOM, CHARLES F. 1950. Red-breasted Merganser in eastern Washington. *Murrelet*, 31 (1): 13.—Three males seen; only recent Washington record east of the Cascades.

YOUNG, HOWARD. 1951. Territorial behavior in the Eastern Robin [*Turdus migratorius*]. *Proc. Linn. Soc. New York*, Nos. 58-62: 1-37, 14 figs.—A detailed analytical study shows that territoriality in this species is a variable thing—the pattern, when present, varies from the concise, too-definite criteria of Howard, and no line can be drawn between territorial and non-territorial birds. Territoriality is so much a part of the entire complex of behavior that it should not be studied by itself.

ZIMMERMAN, D. A., AND G. B. HARRY. 1951. Summer birds of Autlan, Jalisco. *Wilson Bull.*, 63 (4): 302-314, 3 photos.—An annotated list of 121 species of Mexican birds, with a brief description of the area.

OBITUARIES

WILLIAM PROCTER, a Life Associate of the American Ornithologists' Union, elected in 1928, died at West Palm Beach, Florida, April 19, 1951. He was born in Cincinnati, Ohio, September 8, 1872. After graduating from Phillips Exeter Academy (1891) and Yale University (1894) he traveled extensively in the Far East. He was a graduate student at the Sorbonne, Paris, in 1896-97. His academic training was for business, and he was active in this field for 20 years, first in railroad securities, then with the Procter and Gamble Company which his grandfather founded in 1837.

Doctor Procter is a good example of a man with business acumen who eventually found an absorbing interest in science. In 1916 he went to Columbia University and took work in zoology until 1920. Most of his summers had been spent on Mount Desert Island, Maine, and in 1921, with others, he established a research station to investigate the marine fauna. Due to differences of opinion, Procter subsequently founded an independent laboratory at Frenchman's Bay, of which he was president and director up to the time of his death. He concentrated on a study of the insects of the island, the results being published as the 'Biological Survey of the Mount Desert Region,' in seven volumes and parts, covering both the marine fauna and insects. It is doubtful if any area has ever been worked more intensively. He recorded 5,465 forms of Hexapoda and Arachnida and 6,578 insects. Impressed by his work, the University of Montreal in 1936 granted him the degree of Doctor of Science after the customary examinations.

Procter served on the advisory board of the Zoology Department of Columbia University, the managerial board of the Wistar Institute, and as a trustee of the American Museum of Natural History. As editor of the "Annals" of the Entomological Society of America he made substantial contributions of money and of time.

It was not until 1910 that he married the talented Miss Emily Bodenstein, the union being broken by her death in 1949.

No special interest in birds was shown by Procter, but he attained an eminent position in the allied field of entomology.—A. W. SCHORGER.