

RECENT LITERATURE

The new Audubon's 'Birds of America.'—At various times some of the figures from the great elephant-folio edition of Audubon's 'Birds of America' have been reproduced in smaller form as illustrations, but to bring out the entire series of his bird plates within the compass of a single volume of a size that may be consulted without the use of block and tackle, is an audacious undertaking indeed. Yet here it is and at a cost not prohibitive considering the expense of production, while coming as it does at the opportune moment when a wave of popular interest in Audubon and his work is at its height, this handsome book¹ will undoubtedly receive a warm welcome from the widening circle of his admirers.

The entire series of five hundred plates is here, beginning with the noble Wild Turkey cock and ending with Baird's Sparrow. In order to bring the work to a reasonable size, each of the larger plates of the original edition has been reduced to the size of the page, while the smaller subjects, such as warblers and sparrows of which a single life-size figure appears on the original plate, are here reproduced of nearly or quite the same size. The result is that while in the original set each bird is of natural size, in the present volume the scale varies according to the individual needs of each case. To reduce bulk, both sides of each leaf are utilized, while at the bottom of the page appear the original number of the plate and the title with, in addition, several lines of print giving a condensed statement of the range, distribution, habitat, identification, breeding and food. Following the series of plates the editor has added a useful brief history of the original and the octavo editions, together with a transcript of the legends accompanying each of the original set of plates. An index of the original and the current English names of the birds shown makes it possible to find any one of the species easily, since they are not arranged in the systematic sequence.

Inevitably there will be much comment on the comparative merits of this later-day reproduction of Audubon's work. The varying scale of the figures produces an effect different from that of the folio work, but this was preferable to a uniform reduction. It would have been better to have omitted the printed matter at the bottom of each plate for the work cannot be expected to serve as a manual or take the place of the many convenient handbooks now available, while the added lines of black type detract from the beauty of the plates and from their availability for framing as separate portraits. We notice that the plate of Hutchins's Goose has the Latin title of *Branta canadensis* only, instead of that of the original. Concerning the Townsend's Bunting of Plate 400, of which the text states that its source is not given and that it is "another of his unknown species," Dr. Stone calls the reviewer's attention to the fact that Audubon himself states that it was "discovered in the vicinity of Philadelphia, by Dr. Townsend, of that city" (Ornith. Biography, 2: 183, 1835), actually near New Garden, Chester County, Pennsylvania, on May 11, 1833 (see Michener, Rept. U. S. Dept. Agric. for 1863, p. 303), and that the original specimen is still preserved in the U. S. National Museum. A careful comparison plate by plate with the original folio series shows that while some of them have been admirably reproduced, in many others the method of printing gives unsatisfactory results; the same color values are not attained, and in many cases faulty registry of the different printings causes a minute overlapping with resulting failure to reproduce

¹ Audubon, John James. The birds [of] America.] With an introduction and descriptive text] by William Vogt. 31.5 × 22.5 cm., New York, pp. i-xxvi, pls. 1-500, 1937; The Macmillan Co., 60 Fifth Ave. \$12.50.

the original tones. To the process of reproduction may also be attributed the fact that many of the figures have lost in clearness and brilliancy, or in the outlines of the individual feathers. In spite of many such defects the volume is handsome and substantial, and will help to make the work of Audubon still further available to ornithologists. A reproduction of the Cruickshank portrait serves as a frontispiece while the excellent introduction by Mr. William Vogt supplies helpful suggestions for the general reader.

But the charm of Audubon's birds lies not alone in their beauty of line and color, nor in their spirited poses, but to a degree in their reflection of the artist's own dramatic personality, his ardor, his love of his subject, the difficulties under which he labored, the unflagging zeal with which he strove to accomplish the object he had set his heart upon. The elephant folio is symbolic of all these things; nothing smaller can ever quite measure up to the same standard. Nevertheless, the republication of the plates in the present form is a major event in the ornithological year, and in thus making Audubon's 'Birds' available to hundreds who might never see the originals, the editor and the publishers have conferred a favor upon the public, the difficulties incident to which must indeed have been great.—G. M. A.

Stegmann on the Falconiformes of the U. S. S. R.—This is a careful, detailed, and important contribution¹ to our knowledge of the hawks, eagles, falcons and their allies, occurring in Russia and Siberia. Extensive series of specimens were studied in most cases, and the results are therefore deserving of serious consideration. Stegmann follows current usage in recognizing two families: one for the falcons—Falconidae, and one for the buteonine and accipitrine hawks, the eagles, marsh hawks, ospreys, and vultures. This family he calls Aquilidae, although most authors today prefer the name Accipitridae, on grounds of page priority of the generic name *Accipiter* over *Aquila*.

We may limit ourselves in this notice to those points that bear most directly on North American forms. In the gyrfalcons Stegmann recognizes the race *F. rusticolus grebnitzkii* as the form of the Tschucktsche Peninsula, the Anadyr region, Kamchatka and the Commander Islands—the form that also occurs (although he does not say so) on the Bering Sea coast of Alaska. He restricts *F. r. uralensis* to northeastern Europe and northwestern Siberia. The reviewer has had occasion to study these birds and came to different conclusions, resulting in the "lumping" of *grebnitzkii* with *uralensis*, the former name going into synonymy. It is true that in the Commander Islands, whence *grebnitzkii* was described, a white phase occurs that is not found in western Siberia (*uralensis* of Stegmann). But the other phases of *grebnitzkii* and of *uralensis* are alike. The same sort of geographic variation in the presence or absence or relative abundance of one color phase or another is also true of *obsoletus* and *candicans*, which has led the reviewer to "lump" them also. The northern race of the Bald Eagle, for which Stegmann uses the name *washingtoniensis* Audubon, is considered as a subspecies of the Gray Sea Eagle, *Haliaeetus albicilla*, with no explanation (at least in the German summary). This is a systematic treatment contrary to the evidence afforded by the characters of the two birds, and one with which the reviewer does not agree. The American race of the Golden Eagle, *Aquila chrysaetos canadensis*, is found to occur in the northeastern part of Siberia, the Anadyr region, the Indigirka and Java areas, and breeds in the vicinity of Jakutsk, but not farther south. The

¹ Faune de l'USSR. Sous la direction de S. A. Sernov, de l'Académie rédigé par A. A. Stackelberg. Oiseaux, vol. 1, no. 5. Falconiformes, par B. Stegmann. Moscow, Leningrad. pp. i-viii + 293, 15 pls., 102 text-figs., 1937. In Russian, with a French title page and a summary in German.

bird of the Yenissei and Kamchatka is the subspecies *kamtschatica*. Stegmann considers the Kamchatkan form of the Rough-legged Hawk, *Buteo lagopus kamtschatkensis*, as indistinguishable from the Turkestan, central-Siberian form, *B. l. pallidus*. Inasmuch as this involves the birds of the St. Michael's area in Alaska it is of importance to students of North American birds. It may be said, however, that with admittedly inferior series to study, the reviewer came to the opposite conclusion, and found *kamtschatkensis* a valid form, after he had already published a note on the Alaskan (St. Michael's) birds as *pallidus* (Condor, 36: 246, 1934).—H. FRIEDMANN.

Shaw's 'Birds of Hopei Province.'—The issue from the press in Peiping, China, in December 1936, of the book¹ bearing the above title is noteworthy in the world of ornithology, not only in that it is a model of its kind but also because it is the first scientific monograph on birds to be prepared entirely by a Chinese scientist. In his foreword, Dr. A. W. Grabau disclaims ability to speak with authority on the subject matter of the book and says, "that will be duly evaluated by specialists in the same field." The writer of this present review does not claim to be a specialist in this field in the same sense that the author, Mr. Tsen-Hwang Shaw may properly be said to be, as his study of the birds of Hopei has been an avocation pursued while engaged in another profession. The same may be said, however, of leading writers on the birds of this province: Père David, Consul Robert Swinhoe and J. D. La Touche, all now unfortunately dead. Dr. Hugo Weigold and Mr. Shaw are now the only professional ornithologists who have treated the birds of this province. Since professional students of Hopei birds are so few, it may not be amiss for one who has observed them as opportunity offered for forty-three years to give his evaluation of the book.

The author's scientific connections are given on the title page as "Assistant Professor of Zoology, Fan Memorial Institute of Biology; Lecturer on Vertebrate Zoology, Tsing Hua University; Fellow, California Academy of Sciences; Fellow, Peiping Society of Natural History; etc." The large quarto volume of 974 pages, bound in two sections, with 506 illustrations in the text, 25 plates and a map, is the second volume in the vertebrate series of 'Zoologica Sinica,' the first having been prepared by Tehung-Ling Tchang, on cyprinoid fishes.

The plan of the work is to give for each of the birds described eight classes of information,—as comprehensive as the best works of the kind in other countries. These items are: 1) synonymy, not always complete but adequate; 2) Chinese names, local, classical, translated and newly suggested for the future; 3) English name; 4) description, using the standard terms well defined, Ridgway's 'Color Standards,' 1912, and Maerz and Paul's 'Dictionary of Colors,' but common color terms are used in the main; 5) body weights, taken in the field with distinctions of age and sex, a feature not often attempted by other writers in the past; 6) measurements, according to the accepted customs of American ornithologists among whom Mr. Shaw studied the science; 7) "habits and habitat," covering food, breeding and life history so far as known; and 8) distribution, covering both seasonal, geographical, vertical and horizontal. Dr. Alexander Wetmore's systematic classification, 1934, has been followed. The physiography, geology, climatology and botany of the province have been summed up more fully than one would think possible. The check-list of species recognized totals 416, and the number of forms described is 475. This includes about twenty of hypothetical occurrence. Cases of mistaken identification by other authors are usually indicated.

¹ Tsen-Hwang Shaw, A. M. The Birds of Hopei Province. 4, 974 pp., 506 illustrations in text, 25 plates and a map. December 1936: Fan Memorial Institute of Biology, Peiping, (Peking), China. Price \$20.00, Chinese national currency.

Unique features which add to the interest of this book may be noted, as follows: 1) a list of Hopei birds occurring in classical literature, some fifty-three all told, but not all absolutely identifiable as to species; 2) a list of thirty-eight forms originally described from this province; 3) a correlation of the migrations of the birds with the twenty-four solar festivals which occur every two weeks throughout the year, by which the farmers are wont to characterize the times for their various agricultural operations; 4) a study of the life zones with the valuable suggestion that the isothermal line of 12 degrees Centigrade divides the northern from the southern life and that the northern mountain region corresponds to Dr. Merriam's transition zone in America, and the sea-level plain with the austral; 5) the ancient avifauna as revealed by the excavations at Chou Kou Tien, or "Chicken Bone Hill," where the government has so splendidly conducted the researches that resulted in the discovery of many remains of Peking man. The popular name of the hill suggests what has proved to be the case, that many of the bones found there are those of birds. Thigh bones of the Ostrich that laid the numerous fossil eggs found in several provinces have at last been discovered here. This résumé of the 'Introductory Part I, General Account,' is sufficient to show that the work has been done according to the best traditions of scientific ornithology of both Europe and America.

In the main portion of the book, 'Part II, Systematic Account,' we find many things of interest to the special student of this province, and some that are welcomed by ornithologists in many parts of the world. One piece of news to many of us is the practically certain rediscovery of David's Swan. This species was discovered by David in the Tientsin game market and named by Swinhoe. The original and only specimen in the South Cathedral, Peiping, having been lost or stolen, it has been an ornithological problem for many years, the solution of which is now announced in this book. While the bird has not been taken again in this province, its existence is proved by two young specimens, taken by an Italian expedition in Siberia, and one by a Russian, Tilippow, near Irkutsk, north of Hopei. Elise's Flycatcher, a valid species discovered by Dr. Weigold in the rapidly disappearing forest of the Eastern Tombs, and heretofore known only from that region, has been doubted as a dimorphism of the Tricolor Flycatcher. The collections of the Institute have given sufficient material to prove the validity of the species and also to extend its range into the forests of the Hsiao Wu T'ai Shan, in the western borders of the province. Until recently the occurrence of the very intriguing Pygmy Goose or Cotton Teal, in the lakes of Peiping, far north of its usual habitat on the Yangtze, had been resting on field-glass discovery by the present writer only. We are now pleased to find that the Institute has two specimens secured there in 1933.

On page 862 the author mentions without describing, David's Beautiful Finch as having been entered in the Chihli list by Wilder and Hubbard. He leaves it out of the described birds with the remark "that it is very unlucky that nothing has been recorded on this bird within the boundaries of this region," meaning the strict Hopei boundaries. Coming from this border forest we think the bird deserved a description.

The author's treatment of the Pied Jackdaw (*Coloeus dauuricus*) and the Black Jackdaw (*C. neglectus*) as two species is probably correct rather than as the dimorphism of one species, and agrees with the advice given us by the late C. W. Richmond and others. However, it still is an open problem among specialists. This book states that the black form is rather abundant as compared with the pied form which is the exact reverse of my own observations causing me to wonder if it can be a slip of the pen.

The collectors of the Institute show their great diligence, and are certainly to be

congratulated upon having found and photographed nest and eggs of the following very rare or very secretive breeding birds in this province: the Ruddy Crake, the Water Cock, Painted Snipe, North China Wren, Song Thrush, White-throated Thrush, Pallas's Blue Robin, Black-faced Bunting.

The Fan Memorial Institute of Biology and Mr. Shaw, may well be congratulated upon the appearance of this monograph. The illustrations, all in black and white, are profuse and well done with the meticulous care we are wont to find taken by Chinese artists.—GEORGE D. WILDER, *Penn Yan, N. Y.*

Hoffmann on German bird names.—This book¹ deals chiefly with folk names, the general history of which is briefly traced. The author then proceeds to discuss the origin and meaning of about 650 names, which he classifies in four groups: those suggested by perceptions of the human sense organs (subdivided into those derived from sounds the birds make, those that refer to appearance, color, and habits, those prompted by taste, smell, or feeling of birds or their products, and a miscellaneous group); bird names that have to do with myths and superstitions; misnomers; and names adopted from foreign languages. The section devoted to sound-names includes numerous musical and verbal notations of songs or calls. This useful work includes also a bibliography of sixty source writings, and a full index.—W. L. M.

Dr. Stone's 'Bird Studies at Old Cape May.'—To the ornithologists as to the gunners of past generations, the Cape May region of the New Jersey coast has been classic ground since the days of Alexander Wilson. Yet what would one not give for a clear picture of its bird life of a century ago! And lest future ranks of bird students deplore the same lack of detailed information in looking back on our own times, Dr. Stone has taken upon himself the task of providing in these two beautiful volumes² an account of the bird life of the New Jersey shores as he has known it, especially in the last two decades. He has endeavored to present here not so much "a mere tabulation of scientific data," as a "readable account of wild bird life" of the region; and in this he has admirably succeeded, drawing not only upon his own intensive observations carried on at all seasons for a score of years, but also upon other available sources, particularly upon the investigations of fellow members of the Delaware Valley Ornithological Club, to each of whom due acknowledgment is made.

The introductory chapters sketch briefly the aspects of bird life at Old Cape May, its onshore waters, its open country, towns and farmland, its salt marshes, coastal islands, and scattered areas of woodland. Of especial interest is the account of the "changing bird life of the Cape," wherein are garnered the scattered bits of information available from 1633 to more modern times in which human activities have continued to affect adversely many species of birds.

The phenomena of migration as witnessed at Cape May, Dr. Stone outlines from the ripe experience of many years' study, with much suggestive and valuable comment. The migrant land birds he regards as of two groups. The first includes those species that winter in our South Atlantic States or the West Indies, or which pass to South America by way of these islands. Such birds on passage normally travel along the Atlantic coast line. The second group comprises those species that winter in South America or southern Central America which they reach by crossing the Gulf of Mexico or skirting its shores. These migrants follow the Alleghany Mountains in

¹ Hoffmann, Bernhard. *Vom Ursprung und Sinn deutscher Vogelnamen.* 106 pp., Bernburg, 1937; Gustav Kunze. RM 4.

² Stone, Witmer. *Bird Studies at Old Cape May* [an ornithology of] coastal New Jersey [Royal 8vo, vol. 1, pp. i-xv, 1-520, pls. 1-46 and frontispiece; vol. 2, pp. 521-941, pls. 47-119 and frontispiece; 270 text-figs., Delaware Valley Ornithological Club, at the Academy of Natural Sciences, Philadelphia. Price \$6.50.

both northward and southward journeys. The migration of the two groups in relation to winds and to temperature is interestingly discussed and contrasted with the movements of shorebirds and other waterbirds which are apparently not governed by the same influences. Succeeding chapters are devoted to an analysis of the bird fauna month by month, with the added unusual feature of a listing of the species in accordance with their summer and winter homes. Of the total of 374 kinds of birds known from New Jersey, only fifty-six are not recorded from Cape May County itself, and these are included with an asterisk for the sake of completeness.

The main part of the work takes up species by species the birds of the State, with a narrative account of the characteristic occurrence and general habits of each as seen in the field, with occasional summary chapters such as those on the ducks, the autumnal hawk flights for which the region is noted, the Cape May shorebirds, and the warblers. Particularly interesting are the notes on the status of certain southern forms, the account of the breeding of the Black Skimmers, the visit of the Wood Ibises, the increase of the American Egret and other herons, the winter habits of Crows, the changes in the gull life, and numerous other points on which there is much of value. A short bibliography is added of works in which the reader, if he desires, may find detailed descriptions of the species here treated as well as the literature on New Jersey birds. A wealth of photographic illustrations, in one hundred and nineteen plates, adds much to the reader's understanding of the haunts and habits of many species while two colored frontispieces beautifully depict the Osprey and the Laughing Gull, respectively, familiar species of the region. These latter as well as many of the line drawings which illustrate in characteristic pose nearly every species, are the work of Earl L. Poole, while other figures are by Conrad Roland; a series of vignettes that serve to show various local features are by Herbert Brown and J. Fletcher Street; in addition the latter has contributed the maps of the region that appear on the inside of the covers. Here is another fine work on local ornithology to be placed on the shelf beside Forbush's 'Birds of Massachusetts' and Eaton's 'Birds of New York,' as a publication in which the author and its sponsor, the Delaware Valley Ornithological Club, may well take pride.—G. M. A.

Batchelder's 'Account of the Nuttall Ornithological Club.'—As the first organization in this country for the serious study of birds, the Nuttall Club has borne its part in the development of ornithology for more than three score years. A retrospect therefore becomes of value, that the later generations may know more intimately something of its earlier days, of the personality of its founders, and of the part they each played; what manner of men they were, and what light shone from their faces, revealing the spirit within. The Club may well count itself fortunate in having as its historian one, who almost from its inception has been a devoted member and an earnest champion of its highest ideals of thought and service. From rich memories of earlier days and associates, from manuscript records and from other sources he has prepared the present illuminating account¹ of its origin and development, and of the contribution of its members to the progress of ornithology, with much pertinent comment on the more intimate characteristics of each. Of especial worth is the series of photographs of its founders and many of its later members, taken so far as possible at about the time of their entrance into its membership. These, scattered as marginal insets through the pages of the memoir, give an intimate and personal touch such as little else could.

The beginnings of most important undertakings center about some great person-

¹ Batchelder, Charles Foster. 'An Account of the Nuttall Ornithological Club | 1873 to 1919 |' Mem. Nuttall Ornith. Club, no. 8, 109 pp., text-figs., frontispiece, Dec. 1937.

ality whose dominant spirit attracts others and creates an impulse that may be handed on. Such was William Brewster whose enthusiastic interest in birds inspired his boyhood friends—Ruthven Deane, Henry Henshaw, Henry Purdie, W. E. D. Scott and others—and drew to them such men as Joel A. Allen, C. J. Maynard, Ernest Ingersoll, H. B. Bailey, J. A. Jeffries. Elected its first President in 1873, Brewster held this office—except for a single year—continuously until his death in 1919, where appropriately the record ends, as marking the close of an era in the Club's history.

With admirable skill the author recounts the circumstances leading to the formation of the Club in 1873, the various doings of some of its early members, the establishment of the Club's 'Bulletin' (the forerunner of 'The Auk'), and the activities of the succeeding years. He takes pains to correct a widespread impression that the American Ornithologists' Union was "in some fashion the offspring" of the Club, pointing out that its inception was a wholly separate and independent affair, although naturally the founders of the Union included some of the Club's more eminent members.

The concluding pages present a list of past officers and a brief biographical outline of each of the members, together with an index to the names of those mentioned in the text. It is fitting that as the frontispiece there is a portrait of William Brewster in the prime of his later years, an interesting contrast to the smaller text-figure showing him as a young man. Not least in point of interest also, is the cut showing the author himself at an earlier period. His history of the beginnings and later activities of the Club is of far more than local interest, of value to his fellow members; it is a real contribution to the history of ornithology in this country, inspiring us to look back from time to time for a perspective, that we in our day may judge if we are worthily carrying forward the torch handed us by those who went before.—G. M. A.

Bagg and Eliot's 'Birds of the Connecticut Valley.'—Somewhat of a new departure in 'local lists' is this large volume,¹ in which the authors present with great detail a record of the bird life of the Connecticut Valley in Massachusetts as observed in the course of constant field excursions over a period of years or gleaned from other sources. The preface outlines the scope of the work and defines the area covered as comprising mainly the three counties in western Massachusetts through which from north to south flows the Connecticut River for a distance of some fifty miles. The introductory chapter gives much interesting matter concerning local ornithologists from the time of J. A. Allen in the late 'fifties' to the present, with a detailed consideration of their contributions to local ornithology. Follows a chapter on identification and classification intended as a guide for the beginner with an essay on the Connecticut Valley as a highway for migration, and seasonal lists of birds to be found in the region.

The bulk of the book comprises the 'Systematic List' in which each of the three hundred or more species is treated in great detail, with first, the field marks, occurrence and dates, followed by a minute consideration of all available notes on its presence, and for rarer species a discussion of the possibility, probability or certainty of the various instances reported. Frequently the authors draw upon other published accounts for further illustration of the species in neighboring regions. With meticulous care they have searched every available source for information relating to the local occurrences of birds. Two appendices give additional last-moment observa-

¹ Bagg, Aaron Clark, and Eliot, Samuel Atkins, Jr. *Birds of the Connecticut Valley in Massachusetts*. 8vo, lxxiv + (20) + 813 pp., illustr., The Hampshire Bookshop, Northampton, Mass. \$8.50.

tions as well as a list of the birds in the collection made by J. D. Whitney two generations or more ago, and now preserved in the museum of Yale University. In this collection, the most notable bird is a Wild Turkey, apparently the only extant specimen of New England origin. In their book the authors have with some apparent reluctance followed in the main the order of the 'Check-list,' with occasional deviations as where within certain families the species are rearranged "for the purpose of showing relationships other than anatomical" or in the coining of new vernacular names. For these and certain other personal preferences they admit that they may be liable to "censure." In addition to twenty-six half-tone plates from photographs of local interest, there are four black-and-white plates drawn by Roger Peterson and as frontispiece a Duck Hawk from the painting by Fuyertes. The inside cover pages reproduce a map of the region.

In spite of much duplication of matter that has already appeared in print, and notwithstanding a certain exuberance of spirit with which the authors have enthusiastically sought to extend migration dates or to add unusual 'records,' there is much here of real value. They have presented abundant details regarding local distribution and habits that will be of increasing value as time passes and changes take place. One may find fault perhaps with too great a readiness to include many unusual 'sight records' which in spite of much inherent probability are of widely varying value, even though it be argued that much good field work must of necessity be limited to mere observation. For, in a region like western Massachusetts whose usual avifauna may be regarded as fairly well ascertained, the eagerness of the 'ornithoscopist' to add a 'record' or to extend by a few days his date limits of migration tends to overemphasize the abnormal without compensating deductions as to the general significance of such facts, while at the same time the more important phenomena of normal behavior are neglected.—G. M. A.

White's 'Birds at Concord, New Hampshire.'—Lying only some fifty miles north of historic Concord, Massachusetts, is Concord, New Hampshire, a long-settled area in the lower Merrimack valley, the bird life of which is here¹ reviewed. To his own ripe experience, covering some thirty years in the observation of the birds of the region, the author has added material derived from several good local collections as well as from certain other reliable observers, all of which is duly acknowledged. For each of the one hundred and ninety-four species included in the list, its general status about Concord is given, followed usually by a well-presented account of the characteristic local habits, the song and nesting, time and manner of migration, and locally favored haunts. Of unusual value are the notes regarding the comparative abundance of certain species and the changes in their habits and distribution during the past generation or longer, bringing out clearly the fact that the avifauna is not a static unit, but one the component parts of which are subject to gradual change when viewed in long perspective. Thus the Black-crowned Night Heron, though not yet detected as breeding, is now a regular summer visitor where once it was rare. Herring Gulls frequent the open river in increasing numbers, the Black Duck and the Wood Duck show on the whole a distinct improvement in their representation; while on the other hand the Red-tailed Hawk, once a breeding bird within the area, is now a rare transient only. Bob-white, here at the northern limit of its range, occurred in small numbers fifty years ago as a native species, where now it is represented by birds of recent plantings. The introduced Ring-necked Pheasant, for a time fairly abundant, has now greatly fallen off. Again, the Prairie Horned

¹ White, F[rancis] B. Local notes on the birds at Concord, New Hampshire. 8vo, 126 pp., map, The Rumford Press, Concord, N. H.

Lark has in the course of late years established itself as a nesting species, while others as the Wood Thrush, fluctuate in numbers from time to time. Shorebirds are less attracted to the region, but the Upland Plover still continues to breed there, and the Killdeer is now more often seen than formerly and even nests in the area. There are interesting notes on the former presence of the Passenger Pigeon gleaned in conversation with older residents of a past generation, its favorite stations, methods of capture, former abundance, and economic value. Accounts agree in placing the time of its last appearance in 1884 or 1885, when it had already reached a low ebb.

As a 'local list,' this is an exceptionally well-considered and well-written contribution that not only should prove helpful to those interested in the bird life of the region, but also cannot fail to be valuable in future as a contemporary record of present and recent conditions. Of convenient size and handsomely printed, it forms an attractive paper, concluding with an index to the species by serial number and a sketch map on which various important local features are shown.—G. M. A.

Parham's 'Nature Lover in British Columbia.'—A pioneer in the beautiful Okanagan Valley thirty odd years ago, the author here¹ recounts his experiences in establishing a ranch and fruit farm in what was then a sparsely settled region, to which he was drawn by sheer love of the outdoors, with its hardships and satisfactions, the grandeur of its scenery, the sweep of its open spaces, its lakes, rivers and wildlife. With an observant eye he soon learned to know the local flowers, birds and mammals, so that they became to him, and later to the members of his household like familiar friends. The brief winter, the coming of the spring, the busy summer and the waning autumn were yearly filled with seasonable activities through all of which the ever-changing aspects of Nature are here portrayed from a sympathetic viewpoint.

Various chapters are devoted to simply-told accounts of the ranch life—the clever dogs, the beauties of the scenery, the wild flowers, the many creatures. The birds especially come in for a large share of interest and there are chapters devoted to the seasonal changes in British Columbian bird life, with many brief notes of passing interest. The chapter on Canada Geese tells of hatching a brood from eggs incubated under a hen, and the mating two years later of one of the tame birds with a wild gander. The pair subsequently raised a brood in the dog's kennel on the back porch! These geese sometimes utilize old Osprey's nests high in dead trees in which to lay their eggs, but since the young are hatched and off at about the time that the Ospreys arrive, there is little interference, though one instance is mentioned of a goose incubating two Osprey's eggs in addition to its own. Lewis's Woodpecker proved to be an orchard pest, plundering the ripe apples. Formerly a few Trumpeter Swans wintered on Vaseux Lake but with the killing of a flock of seven in 1928-29, no more have been observed there.

In an appendix is given a carefully prepared list of British Columbian birds based on the author's observations and those of Major Brooks and H. S. Swarth, giving notes on occurrence and status, while in a table covering several pages are the Christmas Week censuses for the years 1926 to 1936. In a closing chapter the author makes a strong plea for the establishment of bird sanctuaries in British Columbia, and severely arraigns the Government's game officers for their laxity in enforcing protective measures. The book is embellished by a number of half-tone plates from photographs and from the sketches by Major Allan Brooks illustrating Clarke's Nutcracker and the Catbird. The occasional use of a small instead of a large initial in the generic name of various animals mentioned in the body of the work is an

¹ Parham, H. J. *A Nature Lover in British Columbia*. 8vo, London, 292 pp., illustr., 1937; H. & G. Witherby, Ltd., 326, High Holborn. Price 8 shillings 6 pence.

editorial slip that is corrected in the appendices in which the lists of plants, fishes, birds and mammals appear. Altogether this is an attractive little volume with much of homely interest and local value.—G. M. A.

PERIODICAL LITERATURE

- AARON, S. F. Speed awing. *Scientific American*, **93**, 283-285, Nov. 1937.—Measured the speed of birds flying over a "test mile": Reddish Egret 20 miles, Mallard 26 miles, Black Duck 30 miles, Blue-winged Teal 31.5 miles and Willet 36 miles per hour. Doubts the high speeds reported for some birds.—E. M.
- ALEXANDER, H. G. Kittiwakes as shore-birds. *British Birds*, **31**: 202-204, Dec. 1, 1937.—A large assemblage seen "settling day after day on a flat shore" at Sellafield, Cumberland.
- ALI, SALIM, AND HUMAYUN, ABDULALI. The birds of Bombay and Salsette. Part II. *Journ. Bombay Nat. Hist. Soc.*, **39**: 520-530, 3 pls., Sept. 25, 1937.—An excellent photograph illustrates the nest of a Tailor Bird in a sewn-up leaf; another shows a Black Drongo perched on the shoulder of a grazing cow, a common habit. The birds pick up the insects disturbed by the cow's feet.
- ALI, SALIM, AND WHISTLER, HUGH. The ornithology of Travancore and Cochin. Part VIII. *Journ. Bombay Nat. Hist. Soc.*, **39**: 569-593, Sept. 25, 1937.—Concluding part, embracing the sand grouse, pheasants and waterbirds, with notes on habits and occurrence.
- BAILLIE, JAMES L., AND HARRINGTON, PAUL. The distribution of breeding birds in Ontario. Part II. *Trans. Roy. Canadian Inst.*, **21**: pt. 2, 199-283, 1937.—Includes records for breeding species from Caprimulgidae through Fringillidae.
- BANKS, E. The distribution of Bornean birds. *Sarawak Mus. Journ.*, **4**: 452-496, July 1937.—Comparison of fauna with neighboring areas, and by altitudes.
- BANKS, E. Birds from the highlands of Sarawak. *Sarawak Mus. Journ.*, **4**: 497-518, map, July 1937.—Altitudinal distribution on mountains from 3000 feet upward.
- BANKS, E. Seasonal variation in the "white" edible birds' nests. *Sarawak Mus. Journ.*, **4**: 519-522, July 1937.
- BANNERMAN, DAVID A. [A new race of the Brown-rumped Swallow.] *Bull. British Ornith. Club*, **58**: 8-9, Nov. 5, 1937.—Describes *Pseudohirundo griseopyga liberiae* from the Kru Coast of Liberia.
- BANNERMAN, DAVID A. [A new race of the South African sand martin.] *Bull. British Ornith. Club*, **58**: 31-32, Dec. 2, 1937.—*Riparia paludicola newtoni*, type from near Bamenda, British Cameroons.
- BATFS, G. L. [A new race of wheatear.] *Bull. British Ornith. Club*, **58**: 32, Dec. 2, 1937.—*Oenanthe lugubris boscauveni* from Tarim in Wadi Hadhramaut, Arabia.
- BENNETT, LOGAN J., AND LA MAR, KATE E. A marsh nesting colony of Black-crowned Night Herons. *Iowa Bird Life*, **7**: 44-46 2 text-figs., Dec. 1937.—Nesting activities of a colony in a marsh near Ruthven, Iowa.
- BETTS, F. N. Bird life on a southern Indian tank. *Bombay Nat. Hist. Soc.*, **39**: 594-602, 2 pls., Sept. 25, 1937.
- BOYD, A. W. American Pectoral Sandpiper in Cheshire. *British Birds*, **31**: 237-238, Dec. 1, 1937.—A Curlew Sandpiper and a Pectoral Sandpiper were feeding together on a small mere near Nantwich on September 13, 1937.
- BROOKS, MAURICE. Evening Grosbeaks in Owen Sound, Ontario. *Canadian Field-Nat.*, **51**: 109, Oct. 1937.—Suggests that birds occurring in southeastern Canada may arrive by way of the Owen Sound region.
- BROUWER, G. A. Waarnemingen van broedvogels en trekvogels in 1936. I. Broed-

- vogels 1936. *Ardea*, **26**: 52-68, May 1937.—Notes on breeding birds in Holland in 1936. Among others, forty-five pairs of the White Spoonbill nested on the Muy, Texel.
- BROWN, GEORGE. Aggressive display of birds before a looking-glass. *British Birds*, **31**: 137-138, Oct. 1, 1938.—Actions of Pied Wagtail, Blackbird and Great Tit, all of which have more or less black in plumage.
- BROCK, GWENDOLEN T. The morphology of the Ostrich chondrocranium. *Proc. Zool. Soc. London*, **107**, ser. B: 225-243, text-fig. 1-18, 1937.—A study of the cartilaginous skull in young embryos of the Ostrich reveals that it is in every respect typically avian, so that no support is lent to the contention of Lowe that the Ostrich is an early prevalent offshoot of the avian stem. Birds, from the chondrocranial evidence, "are easily traceable from reptilian stock, more especially the Crocodilia, as pointed out by de Beer." There are, however, one or two features that may be regarded as primitive, such as the large basitrabecular processes which are a persistent reptilian character, as well as the single-headed articular end of the quadrate. Typical avian characters are the lateral carotid foramen and the absence of any trace of an epipterygoid or ascending process of the quadrate.
- BUSSMANN, J. Biologische Beobachtungen über die Entwicklung der Schleiereule. *Arch. Suisses d'Ornith.*, **1**: 377-390, 4 plates, and other figures, 1937.—An excellent life-history study of the Barn Owl with particular emphasis on the development of the young. The number of feedings per night is usually five to fifteen, depending on other factors in addition to weather. The weight of the young reaches a maximum on about the thirtieth day and decreases during the development of the plumage. A second peak is reached about the fifty-second day followed by another falling off of the weight preceding fledging (sixtieth to sixty-sixth day). Barn Owls are curiously insensitive to changes in their nesting sites. Young birds that had been taken to an artificial nesting site several hundred feet away were not abandoned. Orientation of the bird in completely dark buildings was remarkable. Many details are given about the development and behavior of the young.—E. M.
- CARTWRIGHT, B. W., SHORTT, T. M., AND HARRIS, R. D. Baird's Sparrow. *Trans. Roy. Canadian Inst.*, **21**: pt. 2, 153-197, pl. 16, 1937.—A monographic study of range, breeding, plumages, and habits.
- CHAPIN, JAMES P. A new warbler of the genus *Apalis* from the southern Kasai. *Revue Zool. et Bot. Africaines*, **29**: 393-394, Sept. 15, 1937.—Describes *Apalis schoutedeni*, a small grayish species from Tshikapa, in the southern Kasai district of the Belgian Congo.
- CHAPIN, JAMES P. A new race of *Francolinus albobularis* from Marungu. *Revue Zool. et Bot. Africaines*, **29**: 395-396, Sept. 15, 1937.—This species is typically West African, but now is found in the highlands of the Marungu district, Belgian Congo, the most easterly record. The two specimens, now in the Congo Museum, are named in honor of the collector, *Francolinus albobularis dewittei*.
- CHAPIN, JAMES P. The pipits of the Belgian Congo. *Revue Zool. et Bot. Africaines*, **29**: 336-345, June 15, 1937.—Eight species of *Anthus* are known from the Belgian Congo, and two others may be expected. A key to these is given. They are found in the grasslands or savanna woods, with the exception of *A. trivialis*, a migrant from the Palaearctic region, which may occur also in the open clearings in forests. Five new subspecies of African pipits are described: *A. richardi katangae* of the eastern Lulua district; *A. leucophrys marungensis*, type from Marungu; *A. pallidiventris*, from Eala, near Coquilhatville; *A. similis dewittei* from Kasiki, Marungu district; and *A. similis schoutedeni*, type from Kwamouth, middle Congo River.

COFFEY, BEN B. Swift banding at Memphis—sixth season. *The Migrant*, 8: 70–72, Dec. 1937.—A few birds retaken at Memphis in autumnal migration were banded at localities farther north: Wisconsin, Iowa, Ohio. One other bird recovered had been banded six years before.

KNOWLTON, GEORGE F. Utah birds in the control of certain insect pests. *Utah Acad. Sci., Arts and Letters*, 14: 159–166, 1937.—As a basis for this study, the writer examined 879 stomachs of birds of fifty-three species and concluded that they render a tremendous economic benefit to Utah agriculture, “compensating many times over for the moderate injury caused by a few of the species.” Not only are the birds “decidedly helpful to the farmers” but they “substantially reduce injury upon large areas of range grazing land. . . .” The principal insect pests that are extensively fed upon by the various bird species include the beet leaf-hopper, false chinch bug, grasshoppers, Mormon crickets, stink bugs, alfalfa weevils, leaf bugs, and ants. A recent conspicuous example is given of the suppression, at Benson, Utah, by some 10,000 California Gulls of what would probably have been another serious grasshopper plague. Important and conspicuous as such examples are, it is probable that the greatest benefit derived from the feeding habits of birds is their incessant attack upon destructive insects thus by repressive action keeping them from developing into plague proportions.

The paper has much merit, yet to the reviewer it seems unfortunate that standard methods of stomach analysis were not employed in such an important and extensive study. Only numerical counts of major insect items seem to have been made. It is believed that the paper would have served a much greater purpose if the standard method of obtaining volumetric percentages of items had also been included. The fact that seeds and other plant items were rarely identified seems to indicate an unfortunate degree of superficiality in the laboratory analysis. It would seem that there is a moral obligation on the part of one who collects for economic studies as many as 124 Mountain Bluebirds, 77 American Pipits, 49 Audubon Warblers, 34 Western Meadowlarks, and 140 Chipping Sparrows, to mention only a few of the birds collected, to make as complete and thorough laboratory analyses as is reasonably possible. Indeed, every collected specimen should be used, if possible, to serve every available purpose. Considering the number of birds examined (879 stomachs) the paper seems much too brief and incomplete.—CLARENCE COTTAM.

DEVITT, O. E. The Arkansas Kingbird in southern Ontario. *Canadian Field-Nat.*, 51: 125, Nov. 1937.—A group of four, June 1, 1937, at the tip of Point Pelee, Lake Erie, and two others on June 11, near Hamilton, one of which stayed for over two weeks, mark an interesting invasion in early summer.

DOBZHANSKY, TH. Genetics and the origin of species. *Columbia Biological Series*, no. 11, 364 pp., 22 fig., 22 tables, 1937.—The often-heard criticism of the geneticist that he is only interested in the mechanism of the transmission of hereditary characters from parents to offspring but not in evolutionary problems, is no longer valid. Professor Dobzhansky has given us the much-needed survey of the particular field of genetics which relates to speciation and evolution. The problems revolving around mutations, selection, variability of population and isolating mechanism are discussed in the light of the most recent work. How active this field is, is best illustrated by the fact that more than ninety per cent of the papers quoted in the bibliography were published after 1920 and about half of them in the last five years. Literature on birds is quoted repeatedly, although the emphasis of the book lies on those animals and plants, genetics of which have been in-

- vestigated experimentally. No taxonomist will be able in the future to speculate on the origin of species without first having seriously studied this fundamental treatise.—E. M.
- DUMOND, FRANK L. An introduction to the birds of Michigan. 8vo, Michigan Audubon Soc., 35 pp., illustr., 1937.—A brief survey of various types of habitat in Michigan, followed by a table of the species of birds of the State arranged as permanent residents, summer residents, winter residents, summer visitants, migrants, and stragglers. There are blank columns for records and dates of such birds seen and a list of reference books.
- EATES, K. R. A note on the distribution and nidification of the Northern Yellow-fronted Pied Woodpecker [*Leiopicus mahrattensis blanfordi* (Blyth)] in Sind. Journ. Bombay Nat. Hist. Soc., **39**: 628–631, Sept. 25, 1937.
- EATES, K. R. The distribution and nidification of the Rock Horned Owl [*Bubo bubo bengalensis* (Frankl.)] in Sind. Journ. Bombay Nat. Hist. Soc., **39**: 631–633, Sept. 25, 1937.
- EATES, K. R. Behaviour of Jerdon's Little Ringed Plover (*Charadrius dubius jerdoni* Legge) with young. Journ. Bombay Nat. Hist. Soc., **39**: 636–638, Sept. 25, 1937.—Describes 'injury feigning' on the part of both parent birds in an attempt to decoy the intruder away from their young.
- EGGBRECHT, ERICH. Brutbiologie der Wasseramsel (*Cinclus cinclus aquaticus* (Bechst.)). Journ. f. Ornith., **85**: 636–676, Oct. 1937.—In this detailed study of the nesting habits of the Water Ouzel in Thuringen, Germany, it appears that the inner cup of the nest is made almost entirely by the female. Nest construction is done during only the first three or four hours of the daytime. The female works steadily, interrupting her labors an hour or so from time to time for feeding. In the nest observed, the first egg was laid on April 14, a day after the nest was finished; four eggs completed the set. The female alone performed the incubation, and the eggs hatched after fifteen days. Both parents fed the young but the female did about two-thirds of the labor. Both sexes sing, the male more frequently before feeding of the young began, and the female more often after this event. In diving the longest time spent under water was fifteen seconds. The young birds left the nest on the twenty-fourth day after hatching but stayed with the parents and were fed by them for over a month more.
- EMLEN, J. T., JR. Bird damage to almonds in California. Condor, **39**: 192–197, text-fig. 55–57, Sept. 1937.—In central California, crows, jays, and California Woodpeckers may do much harm by knocking off and eating ripening almonds, the two former quickly learning to pick out the better varieties. "Since most California almond orchards are operated at a narrow margin of profit, a 5 per cent to 25 per cent loss, such as that described, . . . would often be sufficient to cancel all profit," but in large commercial orchards it is seldom so great.
- ERRINGTON, PAUL L., AND McDONALD, MALCOLM. Conclusions as to the food habits of the Barred Owl in Iowa. Iowa Bird Life, **7**: 47–49, Dec. 1937.—A vast amount of predation may be of only neutral significance as in reducing excess population.
- FLETCHER, T. BAINBRIGGE. Birds and ants. Journ. Bombay Nat. Hist. Soc., **39**: 640, Sept. 25, 1937.—A Drongo was observed to fly down to the ground and for several minutes picked up ants one at a time, applied them to the root of its tail or beneath the wings, then swallowed them.
- FRANZ, JOST. Beobachtungen über das Brutleben des Weissrückenspechtes. Beitr. z. Fortpflanzungsbiol. d. Vögel, **13**: 165–174, pl. 3, text-fig. 1, Sept. 1937.—The

- male White-backed Woodpecker broods at night but both sexes took about an equal share in feeding the young. Details are given as to nesting activities.
- GARTHWAITE, P. F., AND TICEHURST, C. B. Notes on some birds recorded from Burma. *Journ. Bombay Nat. Hist. Soc.*, **39**: 552-560, map, Sept. 25, 1937.—Record of various rarer species.
- GRANFIELD, WILLIAM M. Nesting of the Saw-whet Owl. *Condor*, **39**: 185-187, text-fig. 54, Sept. 1937.—Describes a nest of this owl found in San Mateo County, California. It was built in an artificial nest-box and contained on April 18, six creamy-white eggs, two of which on a later visit were found to be infertile. The figure, from a photograph, shows the juvenal plumage of the young bird, with the prominent white forehead. The feet clutch the perch with the second and third toes pointing forward, the two others backward.
- GRANGE, WALLACE B. Feeding wildlife in winter. U. S. Dept. Agric., Farmers' Bull., no. 1783, 20 pp., Nov. 1937.
- GRANT, C. H. B., AND MACKWORTH-PRAED, C. W. (1) On the status of *Caprimulgus clarus* Reichenow, and the races of *Scotornis climacurus* (Vieillot), in eastern Africa. (2) On *Caprimulgus nauta* Lönnberg. (3) On the type-locality of *Micropus affinis abyssinicus* (Streubel). *Bull. British Ornith. Club*, **58**: 18-21, Nov. 5, 1937.
- GRANT, C. H. B., AND MACKWORTH-PRAED, C. W. [Three notes on Caprimulgidae of Africa.] *Bull. Brit. Ornith. Club*, **58**: 32-35, Dec. 2, 1937.—Two races of *Caprimulgus europaeus* are admitted in East Africa, the typical form and the Indian *C. e. unwini*; critical notes on systematic status of other East African *Caprimulgus*; a female *Cosmetornis* and its two eggs are recorded from the top of Kahara Mt., Ushingo, western Tanganyika.
- GRIFFEE, W. E. Effect of a late season on size of Prairie Falcon and Raven sets. *The Oologist*, **54**: 93-94, Aug. 1937.—The spring season in 1936 was rather early in eastern Oregon and sets of Prairie Falcon and Raven averaged larger than usual: four sets of the former consisted of five eggs each, and two were of six eggs each; four sets of Raven's eggs were of seven each and one was of eight. The spring of 1937, however, was about two weeks later than usual and completed sets of these birds were not only correspondingly late but contained fewer eggs. Of eleven sets of the falcon, only five were of five eggs each, while six consisted of but four each. Complete sets of Raven's eggs included only one of seven, three of six, two of five, and one of four.
- GRINNELL, JOSEPH. The swallows at the Life Sciences Building. *Condor*, **39**: 206-210, Sept. 1937.—At this building of the University of California, completed in 1929, Cliff Swallows began nesting in 1935, making their nests in the squarish niches of the frieze that extends almost continuously around the four sides. In 1936, the colony numbered some 95 nesting pairs. They selected mainly the southeastern exposure, although structurally the four sides of the building are practically alike. This choice may have been influenced by the warmth in the early part of the day, or by the light factor, or by exposure toward mud and forage areas. The colony of swallows attracted a number of English Sparrows that utilized some of the swallows' nests.
- GRINNELL, JOSEPH, AND BEHLE, W. H. A new race of Brown Towhee, from the Kern basin of California. *Condor*, **39**: 177-178, July 15, 1937.—New: *Pipilo fuscus kernensis* from Kelso Valley, Kern County, California.
- HACHISUKA, MARQUESS. [On Edwards's painting of the Dodo.] *Bull. British Ornith. Club*, **58**: 16-18, Nov. 5, 1937.—In addition to the Dodo, this painting

- shows a long-billed brown bird, which is now identified as the Flightless Land Rail of Mauritius, the third known representation of it, a bird which became extinct about 1759.
- HAGAR, JOSEPH A. More hawks at Mt. Tom. Bull. Massachusetts Audubon Soc., **21**: 5-8, Oct. 1937.—Further notes on the autumnal hawk flights as witnessed from the lookout on Mt. Tom, western Massachusetts, in mid-September of 1937. On the 18th, the main flight passed, when over two thousand birds were counted, nearly all of which were Broad-winged Hawks with a scattering of eight other species.
- HEILFURTH, FRITZ. Bemerkungen zu Griscoms "The distribution of bird life in Guatemala" an Hand meiner Balgsammlung aus Guatemala. Mitteil. a. d. Zool. Mus. Berlin, **22**: 230-238, 1937.—Notes based on further collections.
- HENNESSY, T. S. Long distance flight of a banded Bluebird. Canadian Field-Nat., **51**: 109, Oct. 1937.—A bird banded as a nestling ten miles west of Ottawa was recovered near Lake City, northern Florida, in the following March.
- HIBBERT-WARE, ALICE. Report of the Little Owl food inquiry. 1936-37. (Organized by the British Trust for Ornithology.) British Birds, **31**: 205-229, Dec. 1, 1937.—In the nesting months rodents and small birds predominated over insect food; of the latter, beetles were most commonly taken while moths and moth eggs were also a factor.
- HOOGERWERF, A., AND SICCAMI, G. F. H. W. RENGERS HORA. De avifauna van Batavia en omstreken. Ardea, **26**: 1-51, pl. 1-7, map, May 1937.—The first part of a list of birds with annotations, in the vicinity of Batavia, Java.
- JACOBS, J. WARREN. Forty years ago—and more. A list of nesting dates in southwestern Pennsylvania for 1893 and the six preceding years. Oologist, **54**: 134-138, Nov. 1937.
- JOHNSON, R. A. The food of the Snowy Owl (*Nyctea nyctea*) during a migration to the Gulf of St. Lawrence. Canadian Field-Nat., **51**: 136-137, Dec. 1937.—In the 1933 incursion at Cape Whittle, the major part of pellets contained only mice; a few, remains of Dovekie, Black Guillemot, passerine birds and (in two pellets) rabbits.
- KNOWLTON, GEORGE F. Biological control of the beet leafhopper in Utah. Utah Acad. Sci., Arts and Letters, **14**: 111-139, 1937.—The beet leafhopper, *Eutettix tenellus* (Baker), is a major agricultural pest in Utah. Fortunately there are a number of effective enemies that aid materially in its control. Outstanding among these are parasitic insects, birds, and lizards. Birds render the most conspicuous service during the fall migration when both the leafhoppers and the birds are most abundant. Western Chipping Sparrows, Rock Wrens, Shufeldt's Juncos, Gambel's Sparrows, Audubon's and Pileolated Warblers, American Pipits and Vesper, Brewer's and Lincoln's Sparrows were found to be the principal bird enemies. Of 713 birds collected, 195 had consumed 2,570 beet leafhoppers as a part of their last meal.—CLARENCE COTTAM.
- KOOIMAN, J. G. Waarnemingen bij het nest van den Maleischen Slangenbuizerd (*Spilornis cheela bassa* (Forst.)) in Oost-Java. Ardea, **26**: 77-88, pl. 8-11, May 1937.—An excellent account of the habits of this snake-eating hawk in eastern Java, with photographs at close range of the nest with young at various stages, and the adult bird bringing snakes to feed to the single nestling.
- KURODA, NAGAMICHI. An examination on the individual variations among 1,000 teals. Tori, Bull. Ornith. Soc. Japan, **9**: 273-299, 15 text-figs., June 1937.—This paper, in Japanese, illustrates some extremes of variation in details of the form of

- the base of the bill, and in the amount of dark coloring of the chin, the details of spotting on the breast, flanks, tail coverts and under wing. There is a wide range in the amount of white in the greater wing coverts and in the half-collar on the neck. Unfortunately no résumé in English is given.
- LACK, DAVID. The psychological factor in bird distribution. *British Birds*, **31**: 130-136, Oct. 1, 1937.—Birds keep to specific nesting sites, feeding habits and song perches and will rarely modify them.
- LASKEY, AMELIA A. Notes on the song of immature birds. *The Migrant*, **8**: 67-68, Dec. 1937.—Describes early performances of Cardinal and Bronzed Grackle.
- LEWIS, HARRISON F. Notes on birds of the Labrador peninsula in 1934 and 1935. *Canadian Field-Nat.*, **51**: 99-105, Oct.; 119-123, Nov. 1937.—Further notes on the breeding Kittiwakes at Betchouane Bird Sanctuary; occurrence of Dowitcher near Seven Islands; first record of Blue-headed Vireo and of Cape May Warbler for the peninsula, both near Seven Islands; and of two Lark Sparrows, likewise the first for Labrador, at Aguanish.
- LIVESEY, T. R. The egg-laying of the Khasia Hills Cuckoo (*Cuculus canorus bakeri* Hartert). *Journ. Bombay Nat. Hist. Soc.*, **39**: 623-626, Sept. 25, 1937.—Describes the actions of the cuckoo in an unsuccessful attempt to lay an egg in a nest of the Burmese Stone Chat. The nest was too small to enter, but the cuckoo standing before it with wings and tail spread, assumed an upright posture and in a few seconds "jumped backwards with a sudden movement," and flew off, leaving her egg about three inches outside.
- LIVESEY, T. R. Cuckoo incidents. *Journ. Bombay Nat. Hist. Soc.*, **39**: 626-628, Sept. 25, 1937.—Comments on the preceding note.
- LOYD, HOYES. Twenty year old Ferruginous Rough-legged Hawk. *Canadian Field-Nat.*, **51**: 137, Dec. 1937.—A bird provided with a collar, bell, and name plate at Clayton, New Mexico, in January 1917, was found dead in the spring of 1937 at Strongfield, Saskatchewan, where it was known to have nested for the last four or five years.
- LOWTHER, E. H. N. Notes on some Indian birds. II.—Nightjars. *Journ. Bombay Nat. Hist. Soc.*, **39**: 543-551, 5 pls., Sep. 25, 1937.—Nesting habits illustrated by several excellent photographs.
- MACREYNOLDS, GEORGE. The birds of Bucks County, Pennsylvania, with annotations. *Bucks County Hist. Soc. Papers*, **7**: 1-63, 11 text-figs., 1937.—The first catalogue of the birds of Bucks County since that of Dr. Joseph Thomas in 1876. In addition to many brief notes of value, are comments on recent changes. The Ring-necked Pheasant was successfully established in 1915; Starlings first appeared in 1909. The Turkey Vulture has since 1915 become a regular breeding bird in the State. Barn Owls are increasing; Ruffed Grouse are decreasing in numbers. The effect of artificial lakes in increasing the numbers of waterfowl is well brought out.
- MAILLIARD, JOSEPH. Hybridism between Myrtle and Audubon Warblers. *Condor*, **39**: 223-225, Sept. 1937.—Several supposed hybrids between these two birds are described. The criterion used is the occurrence of white edging or white patches on the fourth pair of rectrices in those referred to *D. coronata*, in which the white is usually confined to three pairs only. Since, however, this condition is occasionally indicated even in specimens from New York or Wisconsin, it seems doubtful if it necessarily is evidence of hybridism for white markings are especially likely to show wide variation in extent.
- MANUEL, CANUTO G. Beneficial swiftlet and edible birds' nest industry in Bacuit,

- Palawan. Philippine Journ. Sci., **62**: 379-390, 3 pls., March 1937.—The bird regarded as the true edible-nest builder of the region is *Collocalia francica germari*. It breeds in caves when the nests formed of salivary secretions are gathered by collectors who have, from time to time, operated under both written and unwritten laws. The nests vary in quality according to color, the fresh ones being white and the older ones darker. About 500 kilograms, comprising approximately 100,000 nests, are gathered in the Bacuit neighborhood annually. The collectors receive from 2 to 3.5 centavos per gram while the market price in Manila is from 7 to 9 centavos a gram. The industry is exploitive and attempts at regulation have not proved successful. The birds are holding up well, however, apparently due to inaccessibility of many of their breeding places. The illustrations include a map of the area concerned, photographs of the cliffs where the nesting caves are, and of the nests as collected and prepared for shipment. There is a bibliography of thirteen titles.—W. L. M.
- MARCHLEWSKI, J. Guinea-fowl and common fowl hybrids obtained by means of artificial insemination. Bull. Int. Acad. Pol. Sci. Lettr., B2: 127-130, 1 pl., 1937.—Ten embryos (= 11%) developed in 89 eggs laid by guinea hens fertilized with white-leghorn sperma. None of the embryos, which had a mixture of the characters of both parents, survived hatching.—E. M.
- MATHEWS, GREGORY M. [Notes on the genus *Fregetta*.] Bull. British Ornith. Club, **58**: 11-12, Nov. 5, 1937.—Claims that *Fregetta* Bonaparte is a misspelling of *Fregata*, and hence is preoccupied, a conclusion open to doubt. He advocates *Cymodroma* in its stead.
- MATHEWS, GREGORY M. [Some overlooked generic names.] Bull. British Ornith. Club, **58**: 13, Nov. 5, 1937.—In 1834, S. D. Wood introduced the genus *Densirostra* for the Bullfinch. Two years later, C. T. Wood in the 'Ornithological Guide' proposed several other genera, and in the 'Analyst' of that year used *Sterna elegans*, preoccupying the same combination by Gambel, in 1848. The author proposes the name *Thalasseus ichla* for the bird described in volume 25, p. 84, 1896, of Sharpe's 'Catalogue.'
- MCATEE, W. L. Local bird refuges. U. S. Dept. Agric., Farmers' Bull., no. 1644, 14 pp., 4 text-figs., Aug. 1937.
- MCGILP, J. NEIL. Southern movements of northern birds. South Australian Ornithologist, **14**: 83-86, Oct. 1, 1937.—The appearance in the region of Adelaide, South Australia, of birds living usually more to the northward is believed to be a result of drought in the interior, as well as of the increase of artificial ponds in that region.
- MEINERTZHAGEN, R. [A new snow-finch and a new *Sylvia*.] Bull. British Ornith. Club, **58**: 10, 1937.—Describes as new: *Montifringilla theresae* from Shibar Pass, Afghanistan, and *Sylvia nana theresae* from Sind.
- MILLER, LOYE. Feather studies on the California Condor. Condor, **39**: 160-162, July 15, 1937.—Molting order of the primaries and secondaries.
- MILLER, LOYE. Skeletal studies of the tropical hawk *Harpagus*. Condor, **39**: 219-221, Sept. 1937.—In its tarsometatarsus this hawk is close to *Accipiter* and far from *Falco*; the tibiotarsus is accipitrine except that its outer condyle is deeply cut away on the "proximo-anterior sector of its arc"; the coracoid is somewhat intermediate between those of *Falco* and *Accipiter*. The two corneous denticles on each side of the bill are better developed than is the single one of *Falco*. The author concurs with Peters in placing the genus close to *Accipiter*, which in its forest-living habits it likewise resembles.

- MITCHELL, MARGARET H. Revision of birds of Miners Bay and vicinity, Haliburton County, Ontario. *Canadian Field-Nat.*, **51**: 115-117, Nov. 1937.—Additions to previous list.
- MOFFITT, JAMES. The White-cheeked Goose in California. *Condor*, **39**: 149-159, text-fig. 45-47, July 15, 1937.—A regular winter visitant to the northwest coast of California from late October to early April.
- MOFFITT, JAMES. Waterfowl shooting losses indicated by banding returns. *Trans. 21st Amer. Game Conference*, New York, pp. 305-308, 1937.—In 1931 and 1932, a total of 119 Canada Geese were banded in California. Of these there were twenty-four returns, or 20 per cent after the 1933 shooting season. Of the 119 banded birds, twenty-three were adult and ninety-six were young of the year. Of these, only two adults were recovered (less than 9 per cent) against 23 per cent of young birds. Hence the adults have a greater chance for survival than the young. Since Lincoln has pointed out that the expected return from banded waterfowl in the following shooting season is approximately 12 per cent, and may aggregate 25 per cent within six years, the percentages for California geese are regarded as too large and should perhaps not exceed an average of 10 per cent.
- MOORE, ROBERT T. New races of *Myadestes*, *Spizella* and *Turdus* from northwestern Mexico. *Proc. Biol. Soc. Washington*, **50**: 201-206, Nov. 30, 1937.—The new races are: *Myadestes townsendi calophonus*, *Spizella passerina atremaeus* and *Turdus assimilis calliphthonus*.
- MUNRO, J. A. Studies of waterfowl in the Cariboo region, British Columbia. *Condor*, **39**: 163-173, text-fig. 48-49, July 15, 1937.—Loons sometimes kill the young of other waterfowl.
- MURIE, OLAUS J. The birds of St. Lawrence Island, Alaska. *Misc. Publ. Univ. of Alaska*, U. S. Dept. Interior, **2**: 359-376, May 19, 1936.—Sixty-three species of birds are listed from this island in the northern part of Bering Sea. Of these birds, fifteen species had not previously been recorded from the island, while others already known, bring its total avifauna up to ninety forms. Among those added are the Sharp-tailed Sandpiper, Ivory Gull, Barn Swallow, European Wheatear.
- OSBERHOLSER, HARRY C. A revision of the Clapper Rails (*Rallus longirostris* Boddaert). *Proc. U. S. Nat. Mus.*, **84**: 313-354, 1937.—From a study of Clapper Rails from all parts of their range, it appears that *Rallus longirostris* and other South American forms intergrade completely with *R. crepitans* of the eastern United States, so that the latter should stand as a subspecies of the former. In a review of the plumages, it was found that the bird in juvenal plumage retains its tail and wing feathers but renews the body feathers for the first winter plumage. Adults molt but once a year so that worn birds often look very dark when the pale edges of the feathers are gone. Individual variation in color is so great that five different phases are recognized: a light-gray phase, a dark-gray phase, a light-brown and a dark-brown, and a gray-breasted phase. In all, twenty-five geographic races of *R. longirostris* are recognized, ranging from northern Brazil and northwestern Peru to California and New England. Of these races the following are here first described: *R. l. pelodramus* of Trinidad, type from Caroni Swamp; *R. l. limnetis* of Puerto Rico, type from Punta Picua; *R. l. belizensis*, type from Yacocs, British Honduras.
- PARMENTER, L. Notes on the courtship and mating of Smew and Goosander. *British Birds*, **31**: 151-153, Oct. 1, 1937.
- PIERCE, WRIGHT M. A pet Sparrow Hawk. *Condor*, **39**: 137-143, text-fig. 40-43, July 15, 1937.

- PUTZIG, P. Ueber den Zug nach Altersklassen bei der Saatkrähe (*Corvus frugilegus* L.) auf der Kurischen Nehrung. *Der Vogelzug*, **8**: 170-175, Oct. 1937.—The Rook does not usually breed until its second year. The earlier birds of the spring migration are adults.
- RITTER, WILLIAM E. Mutually interpretive relation between human and avian natural history. *Scientific Monthly*, **45**: 524-531, Dec. 1937.—Discusses various parallelisms in activities.
- ROBINSON, H. W. Nesting of Fulmar Petrel on the Bass Rock and incubation period. *British Birds*, **31**: 154, Oct. 1, 1937.—In 1936, the first nesting of Fulmars at Bass Rock was noted. In 1937, two pairs laid, but in one case the egg disappeared. In the other the chick hatched in forty-four days.
- RODGERS, THOMAS L. Behavior of the Pine Siskin. *Condor*, **39**: 143-149, text-fig. 44, July 15, 1937.—Nesting and wintering habits at Berkeley, California.
- RIX, C. E. In the fast dwindling mallee. *South Australian Ornithologist*, **14**: 86-91, Oct. 1, 1937.—An annotated list of birds seen in the scrub between Murray Bridge and Karoonda, South Australia.
- SALOMONSEN, FINN. [Notes on the Philippine Paradise Flycatchers.] *Bull. British Ornith. Club*, **58**: 13-16, Nov. 5, 1937.—Regards them as generically inseparable from the eastern Asiatic mainland bird. The bird described by Gray in 1843 as *Tchitrea rufa* is renamed *Terpsiphone unirufa*, since the name is preoccupied by *T. rufa* Swainson, 1837.
- SAUNDERS, W. E. City grouse. *Canadian Field-Nat.*, **51**: 107-108, Oct. 1937.—Ruffed Grouse at Hamilton, Ontario.
- SCHILDMACHER, H. Histologische Untersuchungen an Vogelhypophysen. 1. Die Zelltypen der Amsel, *Turdus merula* L. *Journ. f. Ornith.*, **85**: 586-592, Oct. 1937.—In this preliminary paper are given the results of study of the structure of the hypophysis in the European Blackbird, from specimens taken between March and May, and from September to November. Three types of cells were made out, differing in their affinities for stains: 1) eosinophile cells, taking up eosin; 2) basophiles, forming the chief mass of the hypophysis and having a granular appearance, taking up anilin blue and azocarmine; and 3) chromophobic cells, especially numerous on the fore and hind ends of the gland, in which only the nucleus can usually be made out, and often a slight amount of colorless or faintly bluish plasma. Transitional stages between these types of cells occur. While the hypophysis of the female in both spring and autumn contains eosinophile cells, that of the male (with a single exception in the birds examined) contains this type in spring only. Alveoles are present in varying numbers containing basophile colloids.
- SCHNEIDER, WOLFGANG. Beringungs-Ergebnisse an der mitteleuropäischen Schleiereule (*Tyto alba guttata* Brehm). *Der Vogelzug*, **8**: 159-170, Oct. 1937.—The tendency of the immature birds to emigrate sometimes in numbers, is brought out. Banded birds are recorded up to at least nine years of age.
- SCHORGER, A. W. The great Wisconsin Passenger Pigeon nesting of 1871. *Proc. Linn. Soc. New York*, no. 48, p. 1-26, Oct. 1937.—From contemporary record in newspapers an account is given of a great nesting of these birds in central Wisconsin in 1871. The nesting area covered 850 square miles and an estimate is made of one hundred and thirty-six million nesting birds. Much valuable material is brought forward on movements.
- SCHÜZ, E. Vom Heimzug des Weissen Storchs 1937. *Der Vogelzug*, **8**: 175-183, Oct. 1937.—In 1937, the White Storks appeared late and in diminished numbers

- on their return to Europe from southern Africa. The author supposes that some disaster overtook the wintering birds, the nature of which remains to be explained.
- SETH-SMITH, DAVID. [Albino Willow Warblers.] Bull. British Ornith. Club, **58**: 7-8, Nov. 5, 1937.—Two or three young from the same brood were white with a yellowish tinge, with deep-pink eyes and yellow legs. The one parent bird seen feeding them was, one infers, normal in coloration.
- SHERRIFF, A. The Grey Sibia (*Sibia simillima*). Avicult. Mag., (5) **2**: 333-334, col. pl., Dec. 1937.—Imported from Sumatra.
- SHILLINGER, J. E., AND MORLEY, L. C. Diseases of upland game birds. U. S. Dept. Agric., Farmers' Bull., no. 1781, 32 pp., 8 text-figs., Aug. 1937.
- SHORTT, T. M., AND WALLER, SAM. The birds of the Lake St. Martin region, Manitoba. Contr. Roy. Ontario Mus. Zool., no. 10, 51 pp., 1 pl., 1937.—Lists 215 species with brief annotation.
- SMITH, C. F., AND HOPKINS, C. L. Notes on the Barn Owls of the San Francisco Bay region. Condor, **39**: 189-191, Sept. 1937.—Where no buildings were available, these owls were found nesting in cavities formed by the weathering of earth banks. Nest-boxes placed in barns or trees near the haunts of these birds were in every case promptly occupied. In one hundred pellets analyzed, the California meadow mouse formed the predominant element, with the pocket gopher next, and other rodents in smaller numbers, while the Jerusalem cricket was a regular article of diet. Remains of birds were relatively few.
- SNYDER, L. L., AND SPEIRS, J. M. On the status of the Starling (*Sturnus vulgaris*) at Toronto. Canadian Field-Nat., **51**: 124, Nov. 1937.—In March, the numbers increase due to return of migrants, as established by banding records. In May, the numbers decline but during summer rise to enormous proportions as flocking continues. They are least numerous in November. In 1929, a saturation point was reached, resulting in the occupation of all available nesting sites. Some evidence is seen of a three-year period in population fluctuation.
- STECHOW, JAN. Notizen zur Brutbiologie des Grossen Buntspechtes. Beitr. z. Fortpflanzungsbiol. d. Vögel, **13**: 189-191, Sept. 1937.—Notes and drumming of the Greater Spotted Woodpecker.
- STEINBACHER, JOACHIM. Anatomische Untersuchungen über die systematische Stellung der Galbulidae und Bucconidae. Arch. f. Naturgesch., sect. B, new ser., **6**: 417-515, 31 text-figs., 1937.—The anatomical considerations set forth bring the author to the conclusion that these two American families are more closely related to each other than are the barbets to the woodpeckers.
- STEINFATT, OTTO. Beobachtungen über das Brutleben des Waldlaubsängers in der Rominter Heide. Beitr. z. Fortpflanzungsbiol. d. Vögel, **13**: 182-189, Sept. 1937.—Nesting habits and behavior of young of *Phylloscopus sibilatrix* in Germany.
- STEINFATT, OTTO. Das Brutleben des Karmingimpels. Beitr. z. Fortpflanzungsbiol. d. Vögel, **13**: 210-223, Nov. 1937.—A detailed study of the nesting of *Capodacus erythrinus* in eastern Germany. The incubation period is twelve days.
- STONER, EMERSON A. Sleeping posture of a Virginia Rail. Condor, **39**: 227, text-fig. 62, Sept. 1937.—A Virginia Rail caught alive near Benicia, California, was allowed its liberty in the writer's home, where it seemed active and well. At evening it perched on a log by the fireplace and went to sleep with its feathers fluffed out into a round ball, and its head tucked under its right wing instead of among the scapular feathers. This position was verified several times and appears in the accompanying photograph. When disturbed the bird withdrew its head but presently resumed its position with head under the right wing. It was found dead the next day.

- STRESEMANN, ERWIN. Kritische Studien über die Gattung *Batrachostomus*. *Mitteil. a. d. Zool. Mus. Berlin*, **22**: 304-329, 1937.—Ten species recognized. New forms are: *Batrachostomus hodgsoni indochinae*, *B. javensis chaseni*, *B. j. continentalis*.
- STUPKA, ARTHUR. Pine Siskins in the Great Smokies. *The Migrant*, **8**: 69-70, Dec. 1937.—Abundance in 1937 possibly correlated with an unusually heavy seed crop of conifers.
- SWENK, MYRON H. A study of the distribution and migration of the Great Horned Owls in the Missouri Valley region. *Nebraska Bird Review*, **5**: 79-105, Oct. 1937.—Five races of this bird occur in the region covered and a key to these is given, and their nomenclatorial history is briefly reviewed. The Eastern Great Horned Owl is the race breeding from Minnesota (except the northwest corner), and eastern South Dakota, across Iowa and Missouri to eastern Nebraska and eastern Kansas. The Western Great Horned Owl is the breeding bird over most of North Dakota (except the Red River Valley), western South Dakota and western Nebraska to northern Kansas. There is a slight easterly shift in population of this race after the breeding season. The Arctic Horned Owl occurs regularly in winter in North Dakota and Minnesota, between the last of October and February or March, while the Northwestern Horned Owl is a less regular winter visitor for which there are some eight records for Nebraska, while for the Pallid Horned Owl there are two Nebraska records, both in early December.
- TAVISTOCK, LORD. Breeding results for 1937. *Avicult. Mag.*, (5) **2**: 334-350, Dec. 1937.—Notes on raising pheasants and parrots of less common varieties.
- THOMAS, J. F. Food of nestling swallows. *British Birds*, **31**: 234-235, Dec. 1, 1937.—The Common Swallow (*Hirundo rustica*) was found to feed its young largely on Diptera, especially *Dilophus*, and other genera in smaller numbers.
- TODD, W. E. CLYDE. New South American birds. *Annals Carnegie Mus.*, **25**: 243-255, Nov. 16, 1937.—New forms are: *Hydropsalis climacocerca pallidior*, and *H. c. intercedens*, *Electron platyrhynchum orientale*, *Phaethornis superciliosus insignis*, *Monasa nigrifrons canescens*, *Nonnula rubecula simplex*, *Piculus chrysochloros guianensis*, *P. c. laemostictus*, and *P. c. hypochryseus*, *Tripsurus rubrifrons*, *T. cruentatus extensus*, *Celeus grammicus subcervinus*, *C. g. undulatus*, *Satrapa icterophrys septentrionalis*, *Todirostrum latirostre difficile*, *Polioptila paraënsis*.
- VAN DOBBEN, W. H. Waarnemingen van broedvogels an trekvogels in 1936. II. *Trekvogels 1936*. *Ardea*, **26**: 68-76, May 1937.—Brief notes on the migrations of 1936 in Holland.
- VAN ROSSEM, A. J., AND MARQUESS HACHISUKA. A new Bat Falcon from Sonora. *Proc. Biol. Soc. Washington*, **50**: 107-108, Aug. 7, 1937.—A pair of these falcons was found breeding in an inaccessible site in the cliffs overlooking the valley of Guirocoba, Sonora. The birds prove to represent a pale northwestern race, which is named *Falco albigularis petrophilus*.
- VAN ROSSEM, A. J., AND MARQUESS HACHISUKA. The Blue-gray Gnatcatcher of southern Sonora. *Proc. Biol. Soc. Washington*, **50**: 109-110, Aug. 7, 1937.—The Blue-gray Gnatcatcher of the Sierra Madre in extreme southeastern Sonora is a well-marked race, having a paler and more ashy-blue coloration than the race *amoenissima*, its nearest neighbor, and with the black on the forehead reduced in summer males to a mere trace. It is named *Polioptila caerulea gracilis*, type from Rancho Santa Barbara, twenty miles northeast of Guirocoba, Sonora.
- VAN ROSSEM, A. J., AND MARQUESS HACHISUKA. A northwestern race of the Mexican Black Hawk. *Trans. San Diego Soc. Nat. Hist.*, **8**: 361-362, June 15, 1937.—The new race is *Buteogallus anthracinus micronyx*, type from Arivaipa Creek, Graham County, Arizona.

- VOGT, WILLIAM. Thirst on the land; a plea for water conservation for the benefit of man and wild life. Circ. National Assn. of Audubon Soes., no. 32, 32 pp., 1937.—A timely plea for greater forethought in undertakings involving the drainage of swamps and marshlands. These areas are important in the maintenance of water levels and water tables. They help to prevent shrinking and subsidence of soil and act as effective reservoirs in retaining water and letting it seep away slowly. In critical areas, even a slight lessening of the available water may render the country uninhabitable, and this condition may proceed to even total absence of life. Much valuable material is here assembled of a definite sort, as in the comparison of the invertebrate fauna of an unditched marsh with one thus drained. Drainage resulted in the great reduction or even total destruction of bivalves, snails, crustaceans and insects, thus reducing the available supply of food for various species of important animals. A drained salt marsh, ditched for mosquito control, in six months contained only one-seventh of the animal life it supported when untouched. Much unnecessary drainage under the pretense of malaria control results not only in the loss of much money but in actual increase of the trouble. The report concludes with a series of useful recommendations urging that no drainage project be undertaken without a due consideration of the conditions and probable results.
- VON HAGEN, V. WOLFGANG. The first royal birds of the Aztecs raised in captivity. Illustr. London News, 101: 990-993, 1026, 1028, text-figs., Dec. 4, 1937.—Three pages of photographs illustrate the haunts, nest hole, and several young of the Quetzal taken in Spanish Honduras. The young were carefully reared from the time when they were ready to fly, and were safely brought to London. The author notes that during the season of heavy rains, from October to February, the birds move down from the upper levels where they breed, to the lower altitudes where there is less precipitation.
- WAHBY, ALY. Recherches sur les poids du coeur, de l'encéphale et du gésier par rapport à celui du corps, chez quelques oiseaux. *Alauda*, (3) 9: 143-150, 1937.—For fifty-four species of European birds, the comparative weights of the heart, the brain and the gizzard are given, each in fractional form in relation to the weight of the body plucked of its feathers. Among these, the heart in *Carduelis cannabina* is about one forty-first and in *C. spinus* about one forty-eighth of the body weight, whereas in *Phylloscopus collybita*, a bird of approximately the same size, it is only about half as large. The heart in the Common Swallow and the Swift, *Apus melba*, is again relatively smaller than in the two finches mentioned, perhaps indicating a less laborious method of flight. In the turkey and in the partridge, *Alectoris graeca*, the heart is relatively four or five times as small. The encephalon is much greater in proportion to body weight in many small birds than in such large species as duck, Herring Gull, cormorant, or heron. Variations in relative weights of gizzard compared to that of the body are not analyzed. In the list of species studied, brief notes on stomach contents are given.
- WEEL, P. B. VON. Zur Histophysiologie des Pankreas vom Reiher (*Ardea cinerea*). Zeitschr. f. Zellforschung, 27: 65-80, 7 figs., 1937.—The change in the cell element of the pancreas of the Gray Heron is described. The histophysiological processes during digestion resemble closely those of the mouse which have been studied previously by other authors.—E. M.
- WENDLAND, VICTOR. Beobachtungen über den Seeadler. Beitr. z. Fortpflanzungsbiol. d. Vögel, 13: 175-182, Sept. 1937.—Notes on pairing, nesting and hunting area of the Sea Eagle. Though preying largely on the Coot, their attacks are not always successful.

- WENDLAND, VICTOR. Beobachtungen über den Seeadler. Beitr. z. Fortpflanzungsbiol. d. Vögel, **13**: 224-227, Nov. 1937.—Conclusion of paper on the Sea Eagle, its flight, distribution in Germany, and dangers to which it is exposed.
- WETMORE, ALEXANDER. Bird remains from cave deposits on Great Exuma Island in the Bahamas. Bull. Mus. Comp. Zool., **80**: 425-441, 16 text-figs., 1 pl., Oct. 1937.—Of thirteen species represented, the following are new: *Calohierax quadratus* and *Titanohierax gloveralleni*, both new extinct genera and species of hawks, the latter a very large form related to the Urubitinga; *Tyto pollens*, a new species of large Barn Owl, now extinct, and represented by a related form from Haitian caves.
- WETMORE, ALEXANDER. Observations on the birds of West Virginia. Proc. U. S. Nat. Mus., **84**: 401-441, 1937.—A review of specimens collected in the State indicates that a considerable northern tinge is present in the avifauna of the higher parts. The Canadian Ruffed Grouse (*Bonasa unbellus togata*) is found to extend southward through the mountains as far as Georgia; the Flicker is represented by the northern race; the recently described race, *caurinus*, of the Red-headed Woodpecker is upheld, and an average difference of five per cent in the wing length is found; the Barn Swallow is regarded as a race of *Hirundo rustica*; the Blue Jay is the northern form; the Southern Crow ranges from the central part of the State southward; the Black-capped Chickadee though slightly smaller and with a slightly darker back than northern birds is not as yet certainly made out a separable race; the resident Brown Creeper represents the race *nigrescens*; of the Robin, the birds of the eastern part of the State are in general typical *migratorius* while those of the lower country in the central and western parts are *achrusterus*; unexpected was the capture on May 11, of a typical male Giant Redwing (*Agelaius p. arctolegus*), evidently a migrant.
- WHARTON-TIGAR, N. London Zoo notes. Avicultural Mag., (5) **2**: 358-360, Dec. 1937.—Notes on breeding of pheasants.
- WHISTLER, HUGH. [*Perdicula argoondah meinertzhageni* subsp. nov.] Bull. British Ornith. Club, **58**: 9, Nov. 5, 1937.—Type from Nasirabad, Rajputana.
- WHISTLER, HUGH. The Vernay Scientific Survey of the Eastern Ghats. (Ornithological Section.) Journ. Bombay Nat. Hist. Soc., **39**: 447-463, Sept. 25, 1937.—Conclusion of the notes on birds.
- WHITE, C. M. N. Notes on Outer Hebridean birds. British Birds, **31**: 230-232, Dec. 1, 1937.
- WILSON, I. D. An early report of lead poisoning in waterfowl. Science, new ser., **86**: 421, Nov. 5, 1937.—The discovery that ducks, geese and swan wintering in Back Bay, Virginia, and Currituck Sound, North Carolina, were being poisoned by ingesting lead shot, was reported to the U. S. Biological Survey by Harold H. Bailey while he was district inspector of migratory birds during the period from 1913 to 1917. Many of the preserved gizzards contained over one hundred no. 4 lead shot, which, being ground away by the action of the gizzard, produced symptoms typical of lead poisoning, and resulted in the ultimate death of the birds.
- WIMAN, CARL. On supernumerary metapodials in *Aepyornis*, the Moas, and some other birds. Proc. Zool. Soc. London, **107**: ser. B, 245-256, 5 pls., July 1937.—The manus of *Aepyornis* is figured and discussed. The author interprets the structure as a fusion of digits 3 to 5 into a single solid mass; accepting Holmgren's conclusion that the three fingers of the bird's hand are digits 2 to 4, this implies the persistence of the fifth digit in this group of extinct birds. Similarly in the tarsus of some Moas, the presence of a fifth metatarsal is suggested to explain the small projection at the proximal end of the shaft. In the tarsus of other birds of

this group, the author regards as the remnant of a fifth metatarsal a low ridge on the postero-external side of the bone, with sometimes small foramina between it and the rest of the shank.

WITHERBY, H. F. [Habits of the Corsican Nuthatch.] Bull. British Ornith. Club, 58: 4-6, Nov. 5, 1937.

ZIMMER, JOHN T. Studies of Peruvian birds. No. XXVII. Notes on the genera *Muscivora*, *Tyrannus*, *Empidonomus*, and *Sirystes*, with further notes on *Knipolegus*. Amer. Mus. Novitates, no. 962, 28 pp., Nov. 18, 1937.—New forms are: *Muscivora tyrannus sanctaemartae*, *M. t. circumdatus*, *Tyrannus melancholicus obscurus*; critical notes.

ZIMMER, JOHN T. Studies of Peruvian birds. No. XXVIII. Notes on the genera *Myiodynastes*, *Conopias*, *Myiozetetes*, and *Pitangus*. Amer. Mus. Novitates, no. 963, 28 pp., Nov. 18, 1937.—New are: *Myiodynastes maculatus tobagensis*, *M. m. difficilis*, *M. m. chapmani*, *Myiozetetes granadensis occidentalis*.