RECENT LITERATURE

Hellmayr's 'Catalogue of Birds of the Americas'.—The high standard and thoroughness that characterize Dr. Hellmayr's earlier volumes in this series are fully maintained in the present one which deals with the Neotropical Ploceidae (all introduced), Catamblyrhynchidae and Fringillidae; it concludes the American Passeriformes. The most difficult groups are finished and the end of the series, originally initiated by C. B. Cory in 1918, is in sight.

The statement in the introduction that "in a work of this magnitude it is simply impossible to investigate everything independently, and the author has to rely largely on the researches of others" arouses a chord of sympathy in the reviewer, but there is probably no ornithologist who is less dependent on the researches of others than Dr. Hellmayr; true, he has not gone into the species covered by the A. O. U. 'Check-list' as thoroughly as those not included, nor are his synonymies of the species dealt with by Ridgway in part 1 of Bulletin 50 of the U. S. National Museum as extensive, for the simple reason that lengthy duplication would result.

The classification of the Fringillidae is based on the arrangement proposed by the late P. P. Sushkin and recognizes five subfamilies: Richmondeninae, Geospizinae (confined to the Galapagos Archipelago and Cocos Island), Fringillinae (this subfamily has no normal American representative), Carduelinae and Emberizinae.

The only improvement that can be suggested here is that the work should have been brought up to as late a date as practicable before being submitted for publication, and then no further additions made of races newly described after that date. As a case in point, Griscom's review of the crossbills that appeared in 1937 is only mentioned in a footnote, while at least one name published in July 1938 appears in full at its proper place.

Among the nomenclatural changes proposed are the setting up of the genus Periporphyrus Reichenbach for Caryothraustes erythromelas (Gmelin); Acanthis linaria becomes Acanthis flammea on ground of page anteriority and Fringilla pratensis Vieillot replaces Ammodramus australis Maynard as the name of the Eastern Grasshopper Sparrow.—J. L. Peters.

Hyde's 'Life History of Henslow's Sparrow.'—This addition to studies of one particular bird, now rapidly on the increase, is the product of three seasons' field work on breeding grounds in southern Michigan plus whatever could be gleaned from the examination of numerous specimens and the literature. A preliminary section on distribution and migration is naturally a compilation. The chief points of interest brought out are: (1) the possible enlargement of the former breeding range with the clearing of the colonial forests, and (2) a center of relative abundance in southern Michigan, Ontario and Ohio. For the benefit of local students there is a useful compilation of distributional data by States. The section on migration is

1 Catalogue of Birds of the Americas and the Adjacent Islands in Field Museum of Natural History, including all species and subspecies known to occur in North America, Mexico, Central America, South America, the West Indies and islands in the Caribbean Sea, the Galapagos Archipelago, and other islands which may be included in account of the faunal affinities, by Charles E. Hellmayr, Associate Curator of Birds, Part XI, Ploceidae—Catamblyrhynchidae—Fringillidae, vignette, Zoological Series, Field Museum of Natural History, Volume XIII, Part XI, December 31, 1938, Publication 430, pp. i-vi + 662.

pitifully thin. For most of it the author is not to blame—Henslow’s Sparrow is practically unknown on migration—but the author did have an opportunity to determine the arrival of the first birds on the breeding grounds (given for only one year), when the full complement of breeding birds arrived, and to what degree females lagged behind the males. The two last points are not mentioned at all.

The chief contribution to knowledge which the author makes is in the relatively full sections dealing with the nest, eggs, and young. The female alone builds the nest, both sexes feed the nestlings, the incubation period is astonishingly brief, as is also the nest life of the young. It is not clear how the sexes were distinguished with certainty.

The author has done a good job in compilation, and what he could in three seasons’ field work. Twenty years ago this monograph would have been wholly praised. Unfortunately, the technique of life-history studies and the criteria of adequacy are now enormously advanced. Perhaps the only point at which the author is really open to criticism is his selection of so supremely difficult a species. There is practically no discussion of territory, very little on courtship and mating, interesting hints only of possible promiscuity in a very loose social organization. It would be unreasonable to expect answers to all these questions in only three seasons’ work in one place, with so secretive a little sparrow, that cannot be trapped and banded. Field experience over many years in every section of the breeding range can alone hope to explain the small total population, the basis for the selection of dry fields in one place, wet meadows in another; why a loose colonial breeding system should prevail in certain parts of the range, and should be unknown in others; where the scattered pairs, erratically enough, almost never return two years in succession to the same meadow. These are questions of outstanding interest about Henslow’s Sparrow, which some day a life-history study will attempt to answer. In the meantime, however, the reviewer feels strongly that the author should be thanked for what he has been able to find out rather than blamed for gaps which at the moment cannot possibly be filled.—Ludlow Griscom.

‘Proceedings’ of the Eighth International Ornithological Congress1 held at Oxford in 1934, forms an imposing volume containing an unusual number of papers of general interest. The introductory matter consists of the usual account of the activities, addresses and list of members. Then follow the papers presented at the congress (arranged in no obvious sequence)—some 67 in all with additional titles of those elsewhere published.

The papers cover a wide variety of subjects. First is a summary by Meise, of the progress in systematic study of birds since 1920, with lists of the new genera and species proposed. Others in systematic ornithology include an account of mutation in Lybius by Salomonsen, on the relation of the Struthiones to dinosaurs and to other birds by Lowe and Tucker, classification of the Anatidae by Delacour, problems in speciation in Junco by Miller, generic limits in the fruit pigeons by Peters, systematics of the Crested Guineafowl by Ghigi, taxonomic problems in the Bean Geese by Berry, and others. Under general biology, the White Stork comes in as usual for a share in three papers by Schüts, Bouet, and Schenk, respectively, European heronries are discussed in England and in Italy, Mrs. Nice expounds territory and mating in the Song Sparrow, and Middleton presents a summary of studies in the fluctuations of British game populations, with indications of well-marked cycles in several species.

Interesting conclusions as to the derivation of lipochromes of birds from plant carotenoids are given, and it is shown by Völker that lutein, a yellow vegetable pigment, is the source of the yellow lipochrome in birds. Professor Julian Huxley reviews the old subject of color and its meaning, with new conclusions and a classification of these, as for concealment, threat or advertisement, for sexual recognition and display, thus combining and sifting the views of Bates, Poulton, Hingston and Thayer. Sundry papers of a geographic nature, on birds of such widely separated areas as Asia Minor, South Africa and the Tres Marias Islands, alternate with others on homing and migration. A longer paper on the evidence offered by present distribution of birds in support of former land connections with Europe or northeastern Asia, by Stegmann, seems to have altogether ignored the now classic paper of Matthew on ‘Climate and Evolution’ (1915) wherein a reasonable explanation is offered. Finally bird protection, oil pollution, aviculture and feeding habits come in for consideration.

Although extending to over seven hundred pages, there is no index beyond a list of titles and no list of plates. The volume is handsomely printed and under the careful editorship of Rev. F. C. R. Jourdain, presents much evidence of painstaking preparation. It is therefore the more to be regretted that with singularly few exceptions, authors have neglected to give a summary paragraph at the end of their papers, setting forth the gist of their investigations. Few persons will have time enough at command to read through the volume with papers in three languages, so that such a help would have added greatly to the utility of the whole.—G. M. ALLEN.

Morgan's 'Field Book of Animals in Winter' is the latest addition to the well-known pocket guidebooks on natural history published by G. P. Putnam's Sons, and constitutes the twenty-second volume of the series, five of which have dealt with birds. It is written from the standpoint chiefly of a New England naturalist, in answer to the question, "What becomes of our animal life in winter?" For anyone who annually survives our varying winter season, comes to realize that it requires a degree of specialization and adaptation in habits and structure not found among the species of more equable regions. The opening chapters sketch the devices of northern animals for meeting the physical conditions of the cold months, and the activities of many animals at this period; and further considers the two general means of escape: migration, whether downward from the plants into the earth, from land to water, or to distant regions; and hibernation, whereby many types of both invertebrates and vertebrates pass the inclement period in inactivity. The matter of winter communities and the seasonal changes that go on in fresh water with consequent effect on the animal life are concisely and interestingly set forth. In fourteen chapters, the several main groups of freshwater and land invertebrates are taken up and their winter life briefly told, followed by five on the vertebrates. Birds come in for their proportionate share, with a chapter on winter bird life, ways of meeting winter, winter flocks, roosting aggregations, winter food, the conditions of water and shore. The chapter concludes with a series of short descriptions and characterizations of the winter birds commonly found in the northeastern States, following the same method as in many of the other chapters and there are four colored plates by Peterson illustrating over eighty species of winter birds. Other groups are well illustrated from photographs and drawings (including sundry older classic outlines); there is a helpful bibliography and a good index. Very few errors of type or of fact were noticed (p. 392, Arquatella is misspelled; p. 27, 'English Marmot' should be European Marmot, for this animal is not found in the British Isles). Because of its unique viewpoint, treating of animal life at a time when it is least obvious, this excellent...
little book should serve its purpose well and prove a useful and stimulating companion to the field naturalist in winter.—G. M. Allen.

Clements and Shelford's 'Bio-ecology.'—That animal life is dependent, directly or indirectly, on plant life is almost axiomatic; but that the two may be mutually interdependent to a greater or less degree, the one reacting either favorably or unfavorably on the other, has been less often emphasized. The present volume essays to correlate the fields of plant ecology and animal ecology, and since the term 'ecology' is so often used of either alone, the term 'bio-ecology,' in spite of a seeming redundancy, was coined by Professor Clements to imply this synthetic aspect.

The opening chapter traces the historical development of this concept, particularly with relation to aquatic communities. The plant-animal formation (or 'biome') is the basic community unit and may be thought of as a complex organism. Its components have their several functions, life forms, aggregations, population densities and other features, which combine to give a general character to the whole. The influence of the community on the habitat, such as that exerted by burrowing animals or the roots of plants, the interrelations of the component organisms, their relations to food and shelter, aggregations and competition, are interestingly discussed. There is a valuable review of the subject of cycles which, it is emphasized, occur in plants as well as in animals, and seem likely to be determined by some common basic cause, concerning which the authors remark: "The evidence for a solar cycle in the weather of the globe and in related biological phenomena is now so strong that this must be regarded as by far the most probable primary cause involved."

The chapter on migration may be to the ornithologist one of the most interesting. Its discussion of the causes and methods of such movements is the best summary of the subject that the reviewer has read. That temperature and its physiological effects may be, as Dr. Kendeigh has suggested, one of the primal causes, is well brought out. For while recent investigations have shown that regular small increments of light may cause gonadal development in birds, this does not of necessity induce migration in spring, and the reverse process fails to account for the autumnal migration. That the origin of bird migration is to be sought in the geologically recent ice age, with its advance and retreat of ice caps, is satisfactorily disposed of by the later work of Clements, Chaney, and Berry, who find "the assumption that the climate during middle and late Tertiary was notably warmer and more equable and hence attended with little or no zonation far into the arctic regions is no longer tenable, as the revaluation of the classic fossil floras of North America has shown in particular."

As an illustration of the characteristic features of the 'biome' and the interdependence of its constituents and their relation to climate, there is an interesting chapter on the North American grassland area followed by chapters on freshwater and marine communities and an excellent bibliography of 36 pages. In the modern study of plant and animal relations ecologists seem to find a need for many new terms to express general concepts with greater precision. In the present work, many of these appear, some for the first time. While this may be necessary, it often makes difficult reading, where one must keep a finger in a glossary. Ornithologists seldom find


ambiguity in writing of migration or of a migrant individual, without recourse to
the suggested terms 'ecesis' and 'migrule,' to express these ideas. Sometimes one has
an impression that ecology is in danger of being overburdened with such technical
terms.

This volume is a very welcome survey of the general field of interrelationships of
combined animal and plant communities, which should prove valuable not only as a
manual for the teacher and student of biology in its original sense, but also as a
stimulus to the investigation of a still fertile field.—G. M. ALLEN.

Mrs. Bailey's 'Among the Birds in the Grand Canyon Country' is in effect
a convenient 'satchel guide' depicting the general features of bird life that the usual
tourist may expect to see, besides much more that the casual observer will miss or
may find only on a more extended stay. Only by living in it, camping in it, and
repeatedly visiting it at different times and seasons, as the author has done, may one
form a real acquaintance with this extraordinary region and its animal life. In
twenty brief chapters Mrs. Bailey takes the reader from the top of the South Rim
down by easy stages from zone to zone till he reaches the very bottom of the vast
abyss. Thence after explorations and digressions, he continues across and up to the
Kaibab Plateau on the farther side. The familiar or characteristic birds and mam-
mals along the way are charmingly written of, so the reader easily imagines that he
himself is making the transit. The final chapter is by Vernon Bailey on the remoter
corners of the canyon bottom. The pages are profusely illustrated with half-tone
cuts of the scenery, the many birds, the deer and squirrels, some of them reproduced
from photographs, others from drawings from various sources, many from the
author's 'Handbook of Western Birds.' Finally there is an illustrated field key to
the males of the commoner birds the visitor is likely to meet with, followed by a
nominal list of 188 birds hitherto recorded from the region, and an index.

Written in easy descriptive language with abundant illustration, accurate and
informative, it is the sort of booklet that will appeal to the increasing numbers of
our citizens who are learning the educational and recreational value of the national
parks where wildlife may be enjoyed undisturbed.—G. M. ALLEN.

PERIODICAL LITERATURE

ALLERT, OSCAR P. Notes on certain raptores in Allamakee, Clayton and Dubuque
ALLISON, NORMAN G. Breeding of the Gold-breasted Bunting (Emberiza flaviventris).
ARNDT, W. Abschliessende Versuche zur Frage des "Zahl"-vermögens der Haus-
BAILEY, ALFRED M. Ivory-billed Woodpecker's beak in an Indian grave in Colorado.
Condor, 41: 164, July 15, 1939.—Such bills were bartered by the Indians as
decoration.
BAKER, JOHN R. The breeding season of birds, with special reference to the need for
further data from Australia. Emu, 39: 33–38, July 1, 1939.
BANNERMAN, D. A. A nestling Storm Petrel from the Canary Islands. Bull. British
Orinth. Club, 59: 142–145, July 21, 1939.—Definite proof of the nesting of Hydro-
bates pelagicus.

1 Bailey, Florence Merriam. Among the Birds in the Grand Canyon Country. U. S.
Dept. of the Interior, National Park Service; 8vo, xii + 211 pp., illustr. Price 30 cents.
Superintendent of Documents, Washington, D. C.


BOLANDER, GORDON. A second record for California. The Gull (San Francisco), 21: 70, July 1939.—Akuhina at Potholes, Colorado River, California.


BRAND, A. R., AND KELLOGG, P. P. The range of hearing in Canaries. Science, new ser., 90: 354, Oct. 13, 1939.—Their range of hearing covers slightly over three octaves, that of Starlings, pigeons and English Sparrows about five. They are thus more restricted than human beings who have a range of about ten.


BROOKS, ALLAN. The downy young of some Nearctic limicoline. Ibis, (14) 3: 450–453, pl. 8, July 1939.—Plate shows in color the downy young of Buff-breasted and Pectoral Sandpipers, and Long-billed Dowitcher.


COFFEY, BEN B., JR. Summer birds of Tishomongo State Park, Mississippi. The Migrant, 10: 50-56, Sept. 1939.


COTTON, BERNARD C. The Mallee Fowl’s nest. So. Australian Ornithologist, 15: 46-47, July 1939.—Cites a case of a large mound used for at least 25 years. After rains the mounds are opened by the birds and it is believed that the eggs are turned (but see Lewis, F., postea).


DEMENTIEFF, GEORGES. Remarques sur la variabilité géographique de pic noir Dryocopus martius L., dans la region paléarctique orientale. Alauda, (3) 11: 7-17, 1939.


DENT, G. A case of bigamy in Montagu’s Harrier. British Birds, 33: 50-51, July 1, 1939.—A male with two mates; one female laid and hatched four eggs, the other laid five eggs, and hatched three, two being infertile.


DU BOIS, A. DAWES. Birth comes to the Bittern nest. Natural History (New York), 44: 4 pp., photographs and text, June 1939.—Close-up pictures of Bitterns.


FALLA, R. A. Wild life in New Zealand. Bull. British Ornith. Club, 59: 149-151, July 21, 1939.—Destruction of forest and introduction of predatory mammals are the two main factors, as well as introduction of exotic birds, in reducing native species. “In the last 25 years some equilibrium has been apparent.”

FJERDINGSTAD, CHRISTIAN. Note sur les causes de la raréfaction de la huppe. Alauda, (3) 11: 50-54, 1939.


GRINNELL, J., AND TEST, FREDERICK H. Geographic variation in the Fork-tailed Petrel. Condor, 41: 170-172, July 15, 1939.—Peale's name is resuscitated for the Southern Fork-tailed Petrel, Oceanodroma furcata plumbea, which breeds on islands off the west coast of North America from Humboldt County, California, to southern Alaska.


GROTE, H. Die Grösse des Geleges beim Polartauscher (Colymbus arcticus). Ornith. Monatsb., 47: 123-124, Aug. 29, 1939.—In Europe this loon never lays more than two eggs, but as soon as one hatches the adult swims off with the young, leaving the second egg to perish. In Siberia the species often lays three eggs, of which apparently the third is abandoned when two of the young are hatched.


Hindwood, K. A. Nectar-feeding birds near Sydney. Emu, 39: 40–44, pl. 9, July 1, 1939.


Kelsö, Leon. Additional races of American owls. Biological Leaflet, no. 11, 2 pp., July 10, 1939.—New races are: Speotyto cucullaria boliviana from Warnes, Sta. Cruz, Bolivia; and Pulsatrix perspicillata pintoi, type locality Rio Janeiro.


Lewis, F. The breeding habits of the Lowan in Victoria. Emu, 39: 56–62, July 1, 1939.—Mound temperature about 92 degrees F. Eggs stand erect on their small end in the mound and are not turned.


LUMLEY, ELLSWORTH D. The two eagles of North America. New York Emergency
Conserv. Comm., publ. no. 78, 22 pp., illustr., 1939; Introduction by Francis H.
Herrick.—A popular account of the Bald and Golden Eagles intended for use in
schools and otherwise to arouse popular interest in the protection and value of
these majestic national birds.

1939.

MAYAUD, NOEL. Les editions originales de l’Histoire Naturelle des Oiseaux de

MAYAUD, NOEL. La Gorge-bleue à miroir en France. Addendum. Alauda, (3)


MAYAUD, NOEL. Commentaires sur l’ornithologie française (suite). Alauda, (3)

British Birds, 33: 105–107, Sept. 1, 1939.—Possible beginning of a new colony.

MEYLAN, OLIVIER. Note sur le Goéland argenté Larus fuscus (argentatus) michahellis

MILLER, ALDEN H. Analysis of some hybrid populations of Juneos. Condor, 41:
211–214, Sept. 15, 1939.

MILLER, ALDEN H., AND COMPTON, LAWRENCE V. Two fossil birds from the Lower
Miocene of South Dakota. Condor, 41: 153–156, text-fig. 34, July 15, 1939.—A
new genus and species of large goose-like bird is Paranyroca magna; another new
vulture of the Old World type is Palaeoborus rosatus.

MOFFITT, JAMES. Notes on the distribution of the Lesser Canada Goose and Cack-

MORRIS, BURT L. Bird life at the falls of the Ohio. Year Book Indiana Audubon

MOORE, LOUISE C., AND BATES, CLARA. Unprecedented Robin migration. Florida
Nat., 12: 91–93, July 1939.—Robins wintered in unprecedented numbers in
southern Florida in 1938–39.

Washington, 52: 105–112, June 24, 1939.—New races are: C. m. solitudinis, type
from Fallon, Nevada; and C. m. grinnelli, type from Scott River, California.

MOORE, ROBERT T. New races of the genera Sialia and Carpodacus from Mexico.
cana amable from Durango; Carpodacus mexicanus cocineus from Colima.

MOORE, ROBERT T. A review of the House Finches of the subgenus Burrica. Condor,
41: 177–205, text figs. 35–37, Sept. 15, 1939.—New races are Carpodacus mexicanus
altitudinis from Chihuahua and C. m. griscomi from Guerrero, Mexico.


MOREAU, R. E., AND MOREAU, W. M. Observations on Sand-martins at the nest.

MORLEY, AVERIL. The Black-tailed Godwit in the British Isles, 1890–1937. British
Birds, 33: 98–104, Sept. 1, 1939.—Increasingly occurring in the British Isles in
flocks.

MORRISON, ALASTAIR. The birds of the Department of Huancavelica, Peru. Ibis,


MUNRO, J. A. Food of ducks and coots at Swan Lake, British Columbia. Canadian Journ. Research, 17: sect. D, 178-186, 1939.—Branches of Chara form the chief food of Coots; the oospores and to a less extent the branches are eaten by ducks, which chiefly rely on seeds of Scirpus and pondweeds.


MURPHY, ROBERT CUSHMAN. Man-o'-war. Natural History, 44: 133-143, illus., Oct. 1939.—An important popular contribution to a knowledge of the distribution, genetics, and habits of the Frigate-birds.


OBERLANDER, GEORGE. The history of a family of Black Phoebes. Condor, 41: 133-151, text-fig. 31-33, July 15, 1939.


OLDHAM, CHARLES. Association of drake Mallard with the duck and young brood. British Birds, 33: 53-54, July 1, 1939.

ORB, ROBERT T. Fall wanderings of Clapper Rails. Condor, 41: 151-152, July 1939.


RADIGUE, MME. X. DE. L'âge d'une Alouette des champs en cage. Le Gerfaut, 29:
A captive Skylark reared from the nest is just over ten years old, and though blind still sings in spring and summer.


REIMANN, EDWARD J. Banding adult Roseate Spoonbills. Oologist, 56: 88–90, Aug. 1939.—In Florida.


SCHIFFERI, THEO. H. The present outlook for our waterfowl. Murrelet, 20: 40–41, Aug. 10, 1939.—"Will hold their own if given a fair chance."


SPURR, ALEXANDER, JR. Great White Heron count. Florida Nat., 12: 107–108, July 1939.—The count shows a total population of about 159 birds in the area from Key West to Marquesas Keys.

STILLWELL, JERRY E. Check list of birds of Dallas County, Texas. Dallas, Texas,
vii + 83 pp., ed. 3, Aug. 1939.—An annotated list giving general range, local occurrence and migration data, with keys to the more difficult forms.


TEST, L. A. The Amos W. Butler Collection of birds. Year Book Indiana Audubon Soc., 17: 54–57, 1939.—This collection of some 3300 skins is now the property of Purdue University.


VAIDEN, M. GORDON. Additional notes on the Mississippi Kite. Oologist, 56: 64, June 1939.—Concentrations in June at Rosedale, Mississippi.


VOSBURG, GEORGE W. Some rare birds I have seen in Wisconsin. Oologist, 56: 77, July 1939.—Last Passenger Pigeon seen in the ’90’s.

WALKER, G. R. Notes on the birds of Sierra Leone. Ibis, (14) 3: 401–450, pl. 7, July 1939.


swallows and bluebirds. Note by Taverner on effect of replacing horses with automobiles, and reduction in numbers through lessened food.


WETMORE, ALEXANDER. Birds from Clipperton Island collected on the presidential cruise of 1938. Smithsonian Misc. Coll., 98: no. 22, pp. 1-6, Aug. 11, 1939.—A booby and four species of terns taken; notes on the races of Sula leucogaster.

WHITLOCK, F. LAWSON. Birds of the Bunbury district, Western Australia. Emu, 39: 47-56, July 1, 1939.


WYNNE-EDWARDS, V. C. Intermittent breeding of the Fulmar (Fulmarus glacialis (L.)), with some general observations on non-breeding in sea-birds. Proc. Zool. Soc. London, ser. A, 109: 127-132, pl. 1, July 28, 1939.—The large non-breeding population of Fulmars suggests that individuals may not breed every year. This is corroborated by examination of ovary sections; when breeding is inhibited the post-nuptial moult occurs prematurely.
