

RECENT LITERATURE

The California Condor.—CARL B. KOFORD. Natl. Audubon Soc. Research Report No. 4, xiii + 154 pp., 1 col. photo., 31 pls., 15 text-figs., May 20, 1953. \$3.00.—This book represents the fourth in a series of studies, on "threatened" species of birds, sponsored by the National Audubon Society. The work on the condor was completed through the joint efforts of the Society and the Museum of Vertebrate Zoology of the University of California. Such cooperation has produced an excellent fulfillment of the primary objective, which was to obtain all possible data on the natural history of the California Condor and to interpret these for the best procedure in conserving the species.

Carl Koford practically lived with the condor from 1939 to 1941, and he did additional field work after World War II. However, he has not relied solely on personal observations; he made an extensive search of the literature and interviewed many persons whose regular or intermittent interests had brought them into contact with these birds.

The summary of records of occurrence (fossil, historical, and Recent) indicates a more or less continuous constriction of the range. The primary factors seem to have been the food supply and the activities of man. Yearly variations in range are largely the result of the presence or absence of suitable food in the proper location. There is a latitudinal movement correlated with the seasonal distribution of food. In the fall the birds tend to move southward to winter roosting areas; in spring the movement is northward in the mountains on either side of the San Joaquin Valley. The estimated total population is about sixty birds; it is thought to be a fairly stable number, consisting each year of perhaps ten adults at five successful nests, thirty non-nesting adults, and twenty immature birds up to five or six years of age.

Although many factors have been operating to the detriment of the species, two seem especially important—food and the activities of man. Suitable food (*i. e.* suitable kind in proper place at right time) may have been largely responsible in determining distribution and numbers. In Pleistocene times the large carnivores and ungulates provided ample food. As these disappeared the birds were forced to feed on dead sea animals and on smaller terrestrial forms. By 1820 large herds of domestic animals were present in the condor's range. Care of these sheep and cattle was not as meticulous as it is today, and the dead animals on the range constituted a major source of food. As the railroads were built it became more profitable to till the land, and the herds decreased in size. Further, the animals were more valuable and received better care. The food supply was thus reduced, but probably not disastrously.

Koford's detailed observations on feeding habits are of interest. Some of these are: weight and soaring adaptations fit them for long range scouting and feeding on large carcasses in open country; beef cattle, particularly calves, are at present the chief food item; equine carcasses are "comparatively unattractive"; condors are not known to feed on dead birds; each bird may eat two or three pounds per day; but it also has the ability to go without food for several days; and there are no records of condors killing animals for food. The "preference" for calves over adult cattle, and for cattle over horses, may come about because of the toughness of the hide.

There is much detailed information on nesting sites and eggs and on the behavior of the adults at the nest. Condors first mate at about five or six years of age. On the basis of fifteen nest-sites, the author determined some of the primary physical requisites of the site—cavity in cliff (or giant tree, in one instance) large enough for two adults; suitable roosts and perches nearby; easy approach from the air; flat, soft floor for egg and chick; and protection from storms, winds, and direct sunshine.

No territorial defense was noted, although previously it had been reported by Finley. Koford has suggested that several things may be responsible for the lack of this particular behavior pattern in the condor. The nests are usually far apart; the shortest distance between any two nests was one-half mile. The sites tend to be used over a period of years, but not necessarily for successive nestings and rarely in successive years. The birds probably attain a considerable age—some forty to fifty years, at least in captivity. Therefore, the birds over the years may learn to avoid the nest-sites of others. This concept is strengthened by the author's observation that nesting adults may at times chase immature birds. These latter, it might be presumed, were too young to know better.

The nesting adults are keenly aware of human disturbances within five hundred yards of the nest. On page 109 the author notes "One man can keep a pair of condors from the egg all night or prevent the feeding of a chick for an entire day merely by exposing himself within five hundred yards of a nest for a few minutes at one or two critical times of the day. Loud noises can alarm condors at distances of over one mile."

It is not possible here even to mention all the areas of information collected by Koford. However, there are extensive sections on behavior of condors of all ages, on flight and locomotion on the ground, on molts and plumages, on animals associated in any way with condors, and a great deal on conservation. An appendix includes tables of weights and measurements, of attentive periods, and of growth and development of the young.

In the preface, Alden H. Miller decries the defeatist attitude of those who think the California Condor is doomed. And it is certainly true, as both Koford and Miller emphasize, that the species will disappear if we do not make efforts to save it. Most of the mortality factors discussed hinge on the activities of man. Wanton shooting still eliminates perhaps a bird a year. Collecting has accounted for about 200; there are perhaps 85 eggs, now in collections, that were removed from the nests between 1896 and 1909. Within recent years permits have been issued for the capture of individuals. Some birds are accidentally caught and injured in traps set for mammals such as coyotes. Accidents such as flying into poles and wires have caused the loss of some, and the activities of sympathetic but over-eager photographers have probably resulted in some losses at nests.

Much has already been done to help the condor. The Sespe Wildlife Preserve includes most of the known nesting grounds and the primary winter roosts which are especially important since nesting starts in February. Public Land Order 695 provides for absolute protection of 16 square miles where the greatest concentration of nesting birds exists; the other 39 square miles are open to development of oil and gas leases, except that no surface activity is permitted within a half-mile of a condor nest ". . . active within three years."

An educational program must accompany conservation measures because the birds rarely remain within the confines of the Preserve. Most feeding, for example, occurs outside the protected area. The main roost areas (those used by ten or more condors, but not necessarily constantly used) are about 45 miles apart. While flocks of thirty to forty birds may yet be observed at times, conservation must start at the level of the individual. As Koford envisions the dynamics of the population, the survival of a single condor or the success of a single nest may mean a significant difference between an increase or a decrease in that year's population. There are annually perhaps only five successful nests (young survives to one year of age and independence of parents for food). However, a loss of one or even two annual

increments may not be completely disastrous; the birds have a long potential life and can thus breed in following years. This fact may be a major factor in the maintenance of the present population, in the face of many adverse conditions.

Close observation of the natural history of the condor has revealed a number of attributes which are pertinent to any conservation program. Only a few sites are used by the birds for drinking and bathing; these must be preserved, for condors are especially wary when performing these activities. Unobstructed spaces are needed for landing and taking-off; air currents, most prominent in mountainous areas, are necessary for successful soaring at which condors are particularly adept. Because a great deal of time is spent on perches and roosts, such should be present. The bird is heavy and requires a solid, steady perch with good footing. The roosting perch must be easily accessible from the air, must be high above ground, and must be protected from strong winds. The birds are easily disturbed when on the roost, which thus must be protected from disturbance. As indicated previously, a good supply of suitable food is imperative, but provision of such food by man seems impractical. The nest-site has already been characterized. In those years in which a bird breeds, it needs protection throughout the year. Courtship and nest selection consume two or three months, and incubation is at least 42 days. Fledging takes up five months, and the juvenile is completely dependent upon the adult during its first two months outside the nest cavity.

At present a "condor patrolman" is furnished jointly by the National Audubon Society and the U. S. Forest Service, but only for eight months of the year. What is most needed is a permanent man qualified to keep track of the condor population and environmental trends and to educate persons with whom condors come in contact. Dynamic education and cooperation of people in the condor range are essential.—HARVEY I. FISHER.

The Birds of West and Equatorial Africa.—DAVID A. BANNERMAN. Edinburgh: Oliver and Boyd. 2 vols., 1526 pp., 54 pls. (30 in color), 433 figs. in text. Price: 6 pounds, 6 shillings, net. This copiously illustrated work in two stout volumes is described on the publisher's dust jacket as a concise guide to the birds of the vast area it covers. It is, however, more than that as it includes condensed but generally complete accounts of the habits—habitat, vocalisms, nests, eggs, and other aspects of the life history where called for—as well as statements of range and keys for ready identification. Furthermore, in all species inhabiting West Africa that are represented in the Belgian Congo, Kenya Colony, Uganda, and the Sudan by other races, these eastern subspecies are mentioned in the text as well, and their distribution given. Of the 1536 species and subspecies of birds found in West Africa, approximately three-fourths range across the continent, so it is apparent that this book includes many birds of interest to students in central and eastern Africa.

On the whole the present book is based on Bannerman's earlier 8 volume monograph, "The Birds of Tropical West Africa," from which work the keys have been taken with only such changes as were necessitated by the inclusion of an additional bird where needed. The body of the text, however, has been rewritten completely, although, quite naturally, one finds much similarity throughout. Omitted from the present work are all descriptions of plumages, as these are considered as rendered dispensable by the presence of the keys and by the abundance of illustrations. The illustrations are similarly largely drawn from the earlier and larger work, but six of the colored plates are new. The reduction in size of the plates from the earlier work has been done with remarkably little loss in effect; a few of the new, reduced versions

are slightly darker than their larger predecessors, such as the plate (actually two plates on one page) of the sunbirds, and that of the bare-headed rock-fowl (*Picathartes gymnocephalus*) where the gray of the back comes out almost black, the gray seeming like little other than highlights simulating glossiness. One unfortunate transposition of names occurs on plate 8 where two pictures occur on the same page, and Latham's francolin is labeled scaly francolin, and the scaly francolin is called Latham's. I understand that this error was caught by the author when it was too late to correct it. Purchasers of the book are advised to indicate the proper allocation of the names in their copies.

No important changes in classification are proposed in this work, but in some cases where the treatment in the earlier work has been found to be wrong the correction is made and the resulting difference in treatment explained. This makes the present book easier for the man in Africa to use in connection with the large 8 volumes of its predecessor. To take a specific example, on page 741 in the discussion of the spotted honey-guide (*Indicator maculatus*), Bannerman writes, ". . . In my larger volumes I treated *Indicator maculatus* and *Indicator feae* as two distinct species. In this it seems I was mistaken, for the recent researches of Chapin and Stresemann point to the bird which I described and figured as *I. m. maculatus* being the young of *I. feae*. The former name has precedence. In the same way *Indicator theresae* Alexander becomes a synonym of *Indicator maculatus stictithorax* Reichenow . . ." It does seem strange, however, that *Passer* and its immediate relatives are still placed in the Fringillidae and not in the Ploceidae. Bannerman has been consistent in this regard, but it is one in which the change might have been suggested at least. Similarly *Neolestes torquatus* is retained in the Laniidae as in the earlier work, although the author admits that, ". . . there are strong reasons for removing it to the Pycnonotidae . . ."

Bannerman's larger, earlier work took many years for complete publication, and so much had been discovered in the meantime about West African birds that he felt obliged to add a final volume bringing the earlier ones up to date. In the present work he has inserted material subsequent to the ultimate volume of his earlier work, as, for example, in his account of Cameroon bare-headed rock-fowl (p. 1250) and in the inclusion of the recently discovered Kupé Mountain bush-shrike (p. 1195). The constant stream of accretions to our knowledge of West African birds were to a good extent the result of the impetus given to ornithology in that part of the world by Bannerman's successive volumes. The present work, cheaper to purchase and easier to carry about, should prove a stimulus over a wider area and to a greater audience.

It is probably inevitable that a book, written in a museum by an author most of whose acquaintance with West African birds is derived from museum specimens, should be weakest in such matters as stressing diagnostic field recognition marks. In a handbook dealing with better known and more populous areas this weakness would be a serious defect, but it is still true that the average bird observer in western tropical Africa collects a good per cent of the species he encounters, and the present work does enable him to identify his specimens. In this respect Bannerman's book resembles its counterpart for East Africa, the similarly two-volumed work by Mackworth-Praed and Grant. The two works together span the continent, at least in its equatorial belt.

While the present work is designed as a handbook, and as a synopsis of the earlier 8 volume work, it seems to the reviewer that a brief introductory chapter on the ecology of West Africa and its subdivisions into faunal areas might well have been

included. This would have added but a few pages, and would have been useful to readers unable to consult the larger work. Even more desirable, and less space consuming, would have been a map of West and Equatorial Africa; such an addition could even have been placed on the inside of one of the covers. But it is always easy to wish for more; we should be grateful to the author for what gives every promise of being a very useful and dependable guide to one of the most diversified and interesting avifaunas in the world.—HERBERT FRIEDMANN.

Pheasant Breeding and Care.—Jean Delacour. Fond du Lac, Wisconsin: All-Pets Books. xiv + 98 pp. Price, \$3.00.—Bibliographically, this book is confusing to say the least. On the title page, Jean Delacour is listed as the author; and on page iv, we read "First Edition September 1953." The preface refers to the work as a second edition of Charles F. Denley's "Ornamental Pheasants, Their Breeding and Care." On pages xi and xii, is an introduction to the first edition written by Denley in 1935, and this is followed by an introduction to the second edition by "The Editors" who are not otherwise identified.

Denley's work has been revised by Delacour, who is well known both as an aviculturist of long experience and as an authority on the pheasants of the world, and he was assisted by Prof. Erwin L. Jungherr, who contributed the chapter on the diseases of pheasants, and by W. F. Gimmer, who helped prepare the sections dealing with game pheasants and their propagation. This book is authoritative and should prove of great value to anyone interested in keeping pheasants.—ROBERT W. STORER.

Care and Breeding of Budgies (Shell Parrakeets).—Cyril H. Rogers. New York: Dover Publications. 93 pp., 25 pls. Price, \$1.75, clothbound; \$0.65, paperbound.—This handbook was written primarily to assist "the many newcomers to the delightful hobby of breeding and keeping Budgerigars," and it contains information of a practical nature on a variety of subjects ranging from cages and food to ailments and the exhibiting of show birds. A particularly interesting chapter presents for the layman the results of the extensive work which has been done on the genetics of this popular cage bird.—ROBERT W. STORER.

ALLIN, A. E. 1952. Winter records of the White-throated Sparrow in western Ontario. *Can. Field-Nat.*, 66 (4): 112.—near Fort William, January–February, 1952.

AUSTEN, W. M. 1953. Palm-nut Vultures (*Gypohierax angolensis*) in Raphia palms at Mtunzini, Zululand. *Ostrich*, 24: 98–102.—Habits.

AVELEDO H., RAMÓN, and RUDO. HNO. GINÉS. 1953. Ave nueva para la Ciencia y comentario sobre *Tiaris fuliginosa zuliae* Aveledo y Ginés. *Novedades Científicas* (Contrib. Ocas. Mus. Hist. Nat. la Salle, Caracas), 10: 3–8.—*Piculus rubiginosus dellanus* (Caño Tipuro, Orinoco Delta) described as new.

AVELEDO H., RAMÓN, and GONZALO MEDINA. 1953. Cuatro aves nuevas para Venezuela. *Novedades Científicas* (Contrib. Ocas. Mus. Hist. Nat. la Salle, Caracas), 10: 9–10.—First Venezuelan records for *Anas acuta*, *Anas bahamensis bahamensis*, *Aythya collaris*, and *Aythya affinis*.

BAHRMANN, UDO. 1952. Ein Beitrag zur Biologie der Elster [*Pica pica pica* (L.)]. *Bonner Zool. Beitr.*, 3: 289–304.—On the biology of the Magpie.

BAILEY, ALFRED M., ROBERT J. NIEDRACH, and A. LANG BAILY. 1953. The Red Crossbills of Colorado. *Mus. Pictorial* (Denver Mus. Nat. Hist.), 9, 64 pp., 27 photos.—Systematics and life history, with unusually fine photographs.

BAILEY, ROBERT E. 1953. Accessory reproductive organs of male fringillid birds: seasonal variations and response to various sex hormones. *Anat. Rec.*, 115: 1–19, 3 pls.

- BAIRD, D. A. 1951. Some common birds of Hargeisa. Foreword by Sir Gerald Reece. p. 1-13.—A brief account of 66 species found about Hargeisa, British Somaliland. Privately issued (mimeographed) and sold for the benefit of the Hargeisa Church.
- BAKER, ROLLIN H., and ALBERT A. ALCORN. 1953. Shrews from Michoacan, Mexico, found in Barn Owl pellets. *Journ. Mammalogy*, 34: 116.
- BALL, K. E. 1952. Nesting of the ring-necked pheasant on Pelee Island, Ontario. *Can. Field-Nat.*, 66 (3): 71-81, 3 tables, 2 figs.—Nesting studies made in 1947 and 1948 in area of high pheasant density.
- BARTH, EDVARD K. 1952. Incubation period and loss of weight of eggs of the Common Gull, *Larus canus canus*, and of the Lesser Black-backed Gull, *Larus fuscus intermedius*. *Riistatieteellisiä Julkaisuja—Papers on Game Research*, 8 (1952): 111-121.
- BARTH, EDVARD K. 1952. Litt forplantningsbiologi hos fjellvåken, *Buteo lagopus*, og svingninger i bestanden 1938-1952. *Riistatieteellisiä Julkaisuja—Papers on Game Research*, 8 (1952): 127-138, 10 figs.—Breeding biology of the Rough-legged Hawk and variations in the population in north-central Norway between 1938 and 1952. English summary.
- BARTHOLOMEW, GEORGE A. JR., WILLIAM R. DAWSON, and EDWARD J. O'NEILL. A field study of temperature regulation in young white pelicans, *Pelecanus erythrorhynchos*. *Ecology*, 34 (3), 1953: 554-560.—The temperatures of naked young vary from 36.4° to 41.0° C. between night and day; that of older downy young, from 37.9° to 41.9° C. Both young and adults flutter their large vascular gular pouches almost continuously during the day and evaporation of water from these pouches is important in heat regulation.
- BECKETT, MRS. EVA. 1953. Starling nesting at Churchill, Manitoba. *Can. Field-Nat.*, 67 (1): 44.
- BRECHER, WILLIAM J. 1952. The Unexplained Direction Sense of Vertebrates. *Scientific Monthly*, 75 (1): 19-25, 5 figs.—“Available evidence suggests that the direction sense is most highly perfected in animals of the fluid media—air and water—animals in which the outer ear is either lacking or may be closed against pressure incidental to movement through the media. A certain amount of circumstantial evidence thus supports the theory that the inner ear may detect Coriolis force and employ it as a compass.”
- BENDER, MATTHEW F. 1952. Zebra Finch Mutations. *Journ. Heredity*, 43 (5): 220.
- BENSON, C. W. 1953. The status of *Erythrocygia zambesiana* Sharpe. *Ostrich*, 24: 121-122.—Apparently a race of *E. leucophrys*.
- BERGER, ANDREW J. 1953. Bibliography of Michigan warblers with special reference to the period 1943-1952. *Jack-Pine Warbler*, 31: 55-60.
- BERLIOZ, J. 1953. Quelques observations ornithologiques au cours d'un voyage en pays caraïbes. *L'Oiseau*, 23: 125-141.
- BLACKFORD, JOHN L. 1953. Bird records from northwestern Montana. *Condor*, 55: 277-278.—*Aythya collaris* (breeding) and *Dendroica striata* (present in the breeding season).
- BLACKFORD, JOHN L. 1953. Breeding haunts of the Stephens Whip-poor-will. *Condor*, 55: 281-286.—Habitat, nest sites, and breeding records.
- BLEAKNEY, SHERMAN. 1953. Starlings in the Ungava District, Quebec Province. *Can. Field-Nat.*, 67 (1): 44-45.—Most northern breeding record in eastern Canada.

- BOUDOINT, YVES, A. BROSSET, L. BUREAU, G. GUICHARD, and N. MAYAUD. 1953. Biologie de *Circaetus gallicus*. *Alauda*, **21**: 86-127, figs. 1-3.—A symposium on the life history of the species in France with a summary by Mayaud. The species arrives by the middle of March and laying starts by the first of April. The clutch consists of a single egg, incubation lasts 47 days and is carried out by both parents but the female does most of it. The young stays in the nest for 70 to 75 days. The food carried to the nest consists almost exclusively of snakes; there are also many observations on behavior.—C. Vaurie.
- BOUTINOT, S. 1953. Le Pétrel-tempête à Ouessant. *L'Oiseau*, **23**: 145-148, figs. 1-3.—Observations on the nesting and rearing of the young in *Hydrobates pelagicus*.
- BOWMAN, R. I. 1952. Chimney Swift banding at Kingston, Ontario from 1928 to 1947. *Can. Field-Nat.*, **66** (6): 151-164, 7 tables, 4 figures.—A paper of major importance in its field, since it deals with results obtained from the banding of nearly 22,000 swifts over a nineteen-year period. Recoveries from 15 states, 2 provinces, and Peru. Tentative life expectancy table and isochronal map included.—W. W. H. Gunn.
- BRODKORB, PIERCE. 1953. A Pliocene Flamingo from Florida. *Nat. Hist. Misc. Chicago Acad. Sci.*, 124, 4 pp., 2 figs.—*Phoenicopterus floridanus* described as new from the Bone Valley Formation (Middle Pliocene) of Polk County, Florida.
- BÜTTIKER, W. 1953. Ein Ansiedlungsversuch von Höhlenbrütern in Central-Afrika. *Acta Tropica*, vol. 10, nr. 3, p. 259-263.—In an attempt to study the utilization of nest boxes as an experimental approach to the problem of local settlement by hole-nesting birds in a "bushveldt" area south of Salisbury, Southern Rhodesia, the author put up 23 such boxes (of 3 sizes—titmouse, starling, and owl size). Not one was adopted by birds during two breeding seasons, although the birds were seen in the general vicinity, but over half were used by insects, chiefly bees and wasps the first year, and all were so occupied the second season. The inference is made that social insects may thus be an important factor in limiting the dispersal of hole-nesting birds.
- CADE, TOM J., and JOHN L. BUCKLEY. 1953. A mass emigration of Sharp-tailed Grouse from the Tanana Valley, Alaska, in 1934. *Condor*, **55**: 313.
- CAMPBELL, BRUCE. 1951. The work of the British Trust for Ornithology. *Can. Field-Nat.*, **65** (5): 159-162, 1 fig.—History and development, aims and activities. The Trust has its headquarters at the Edward Grey Institute, links the activities of some 1,800 bird watchers in Britain, assisting and suggesting field projects of importance and stressing the necessity for accurate methods of observation.
- CAMPBELL, MITCHELL. 1951. The Dickcissel (*Spiza americana*) on the outer North Shore of the Gulf St. Lawrence, P. Q. *Can. Field-Nat.*, **65** (6): 210.—Three observed October, 1950, one collected September, 1951.
- CARDIFF, EUGENE, and BRUCE CARDIFF. 1953. Additional records for the American Redstart in the Imperial Valley of California. *Condor*, **55**: 279.
- CENDRON, JEAN. 1953. La mue du Manchot Adélie adulte. *Alauda*, **21**: 77-85.—Observations on the molt during February and March at the rookery of Port aux Phoques, Adélie Land. In marked adults, the molt lasted from 9 to 17 days with an average of 12 days. During this period the bird did not feed and lost from 27 to 44 per cent of its body weight with an average loss of 40 per cent. A slight rise in body temperature took place.—C. Vaurie.
- CENDRON, JEAN. 1953. Notes sur les oiseaux de la Terre Adélie (Petrels et Skuas). *L'Oiseau*, **23**: 212-220, pls. 14-17 and 2 maps.—Observations on *Oceanites oceanicus*, *Pagodroma nivea*, *Daption capensis*, *Thalassoica antarctica*, *Fulmarus glacialisoides*, *Macronectes giganteus*, and *Catharacta maccormicki*.

- CLAY, GERVAS. 1953. Some notes on the birds of the Isoka District of the Northern Province of Northern Rhodesia. *Ostrich*, **24**: 76-97.
- CLEGG, R. E., and R. E. HEIN. 1953. P²² Distribution in the Serum Protein of the Chicken. *Science*, **117** (3052): 714-715, 2 figs.
- COMBS, G. F. 1952. Algae (*Chlorella*) as a Source of Nutrients for the Chick. *Science*, **116** (3017): 453-454, 3 tables.
- CONGDON, R. T., and MRS. CONGDON. 1952. Hudsonian Godwits found nesting again at Churchill. *Can. Field-Nat.*, **66** (5): 143-144.
- COOCH, GRAHAM. 1952. Unusual foot colouration in Pintails (*Anas acuta*) and note on European recoveries. *Can. Field-Nat.*, **66** (4): 111.—Of 108 Pintails banded in Labrador, 1951, 4 immature birds had white or pinkish webs rather than grey. One of these, banded September 7, 1951, re-trapped September 16, was shot nine days later in England.
- CRINGAN, A. T. 1953. Recent records of the Magpie in Northwestern Ontario. *Can. Field-Nat.*, **67** (1): 43-44.
- DELACOUR, JEAN. 1953. Position systématique du Diamant modeste d'Australie. *L'Oiseau*, **23**: 144.—The species *modesta*, formerly placed in the genus *Poephila* by the author, should be transferred to *Lonchura* as shown by habits and palatal markings of the young.
- DEMSTER, EVERETT R., I. MICHAEL LERNER, and DOROTHY LOWRY. 1952. Continuous Selection for Egg Production in Poultry. *Genetics*, **37** (6): 693-708, 1 fig., 7 tables.
- DICKINSON, J. C., JR. 1953. Report on the McCabe Collection of British Columbian birds. *Bull. Mus. Comp. Zool.*, **109**: 123-205, pls. 1-2.—Annotated list of specimens, with taxonomic notes on many of the species.
- DIETTER, ROBERT. 1953. La consolidation spontanée des fractures chez les oiseaux et la modification de l'architecture des travées osseuses. *L'Oiseau*, **23**: 81-87, pls. 6-9.—Spontaneous healing of fractures in several species with no apparent loss of function.
- DOUGLAS, CARL D., *et al.* 1953. The Influence of X-irradiation and Atabrine Upon Feathering in the Chick. *Science*, **117** (3037): 274, 1 fig.
- DRURY, WILLIAM H., JR. 1953. Birds of the Saint Elias quadrangle in the southwestern Yukon Territory. *Can. Field-Nat.*, **67** (3): 103-128, 2 maps.—By-product of a botanical and archaeological reconnaissance, June-Sep., 1948, along Alaska Highway between Whitehorse and Alaska boundary. Nine major vegetational associations are described (primary and secondary plant species listed) and bird species are listed accordingly, then sub-divided into primary and secondary species. Bird species are then catalogued on the basis of geographical affinities, with particular reference to possible spread from large and small refugia postulated by Hultén. The author indicates a similarity of pattern to that found in studies of geographical botany. An annotated list covers 107 bird species observed, identification to subspecies resting on Rand's "List of Yukon Birds and those of the Canol Road (1946)."
- DUNBAR, MOIRA. 1951. Nighthawk stamina. *Can. Field-Nat.*, **65** (5): 186-187.—Wounded bird able to fly away strongly on release after 80 hours without food.
- ELLIOTT, H. F. I. 1953. The fauna of Tristan da Cunha. *Oryx: Journ. Fauna Preservation Soc.*, **2**: 41-53.—Includes Gough Island, with data on the status of such little known species as *Porphyriornis comeri*.
- ETCHÉCOPAR, R. D. 1953. Cinq spatules dans le Morbihan. *L'Oiseau*, **23**: 240—*Platalea leucorodia* in Brittany in August.

- ETCHÉCOPAR, R. D., and F. HUE. Notes prises au cours d'un voyage en Tunisie. *L'Oiseau*, **23**: 221-239.—Species noted.
- FISH, WILLIAM R. 1953. A method for the objective study of bird song and its application to the analysis of Bewick Wren song. *Condor*, **55**: 250-257.—Valuable discussion of equipment for recording and analyzing bird songs and an analysis of the song of *Thryomanes bewickii*, illustrating how this equipment may be used.
- GABRIELSON, IRA N. 1952. Notes on the birds of the north shore of the Gulf of St. Lawrence. *Can. Field-Nat.*, **66** (2): 44-59, 1 map, 6 photographs.—The author accompanied Dr. Harrison Lewis on his official inspection along the North Shore, June 4 to July 10, 1947. Ten waterfowl sanctuaries, numerous other islands and coastal points visited. General comments plus notes on 103 species. A useful map of North Shore.
- GABRIELSON, IRA N., and FREDERICK C. LINCOLN. 1953. Status of the Lesser Common Loon. *Condor*, **55**: 314-315.—Recommendation that *Gavia immer elasson* be reduced to a synonym of *G. i. immer*.
- GLOVER, FRED A. 1953. Summer foods of the Burrowing Owl. *Condor*, **55**: 275.—Five major food items in order of frequency of occurrence were: scorpions, lamellicorn beetles (Scarabidae), locusts (Locustidae), ground beetles (Carabidae), and pocket mice and kangaroo rats (Heteromyidae).
- GODFREY, EDWARD F., B. B. BOHREN, and R. GEORGE JAAP. 1953. "Jittery," A Sex-linked Nervous Disorder in the Chick. *Journ. Heredity*, **44** (3): 108-112, 2 figs, 6 tables.
- GODFREY, W. EARL. 1951. Comments on the races of the Myrtle Warbler. *Can. Field-Nat.*, **65** (5): 166-167.—Breeding birds of the Canadian Prairie Provinces, east of the Rockies, are nearer the nominate race, *Dendroica coronata coronata* (Linnaeus), than they are to *D. c. hooveri* of Alaska, Yukon, northern B. C., and probably Mackenzie Delta.
- GODFREY, W. EARL. 1951. A new northwestern Olive-backed Thrush. *Can. Field-Nat.*, **65** (5): 172-174.—*Hylocichla ustulata almae* Oberholser (1898) must, in the author's opinion, be relegated to the synonymy of *H. u. swainsoni*. A newly described race is named *H. u. incana*, known range being southern Yukon, northern B. C., and north central Alberta.
- GODFREY, W. EARL. 1952. Christmas bird census—1951. *Can. Field-Nat.*, **66** (2): 59-66.—From 27 locations across Canada from Newfoundland to Vancouver Island. Most are additional to those appearing in *Aud. Field Notes*.
- GODFREY, W. EARL. 1952. Erroneous records of *Empidonax wrightii* in Manitoba and at Belvedere, Alberta. *Can. Field-Nat.*, **66** (3): 89.—Manitoba specimens taken by P. A. Taverner, identified at the time as the Wright Flycatcher [1927, *Auk*, **46** (2): 224], prove upon re-examination to be *E. minimus*.
- GODFREY, W. EARL. 1953. Christmas bird census—1952. *Can. Field-Nat.*, **67** (1): 32-39.—26 censuses from points across Canada, Newfoundland to Vancouver Island; some additional to those appearing in *Aud. Field Notes*.
- GODFREY, W. EARL. 1953. Notes on Ellesmere Island birds. *Can. Field-Nat.*, **67** (2): 89-93.—Comments on two small bird collections from Ellesmere recently received by Natl. Mus. Can., with particular reference to affinities with Greenland avifauna. Extension of breeding range into Canada of such Old World races as *Arenaria interpres interpres*, *Calidris canutus canutus* and, probably, *Acanthis hornemanni hornemanni*. Annotated list of 20 species.
- GRAY, J. C., and E. W. POWELL. 1952. Maintenance of contraction of Embryonic Chick Hearts *in vitro*. *Science*, **116** (3009): 232-233.

- GRIFFIN, DONALD R. 1953. Acoustic orientation in the Oil Bird, *Steatornis*. Proc. Nat. Acad. Sci., **39**: 884-893.—Evidence to show that *Steatornis* "guides its flight through dark caves by a type of acoustic orientation similar to that used by bats, but the oil bird employs for this purpose short pulses of sound that lie well within the frequency range of human hearing."
- GUHL, A. M., and L. L. ORTMAN. 1953. Visual patterns in the recognition of individuals among chickens. *Condor*, **55**: 287-298.—Results of this experimental study indicate that recognition of individuals and memory promote the stability of the social organization. Modification of features must be abrupt and quite pronounced to cause a loss of recognition.
- GUIGNET, C. J. 1952. The European Starling on Vancouver Island. *Can. Field-Nat.*, **66** (1): 37.—Now established.
- HAMMOND, JOHN, JR. 1953. Photoperiodicity in Animals: The Role of Darkness. [Comments and Communications section.] *Science*, **117** (3041): 389-390, 1 table.
- HAMRUM, CHARLES L. 1953. Experiments on the Senses of Taste and Smell in the Bob-white Quail (*Colinus virginianus virginianus*). *Amer. Midland Nat.*, **49**: 872-877.—"These experiments indicate that both the odor and taste of a food probably influence food choice of this animal."
- HERBERIGS, H. 1953. Note sur le comportement de la buse (*Buteo buteo*) dans ses quartiers d'hiver. *Gerfaut*: **43** (2-3): 132-142.
- HERMAN, C. M. 1952. Wildlife Disease Association. *Science*, **116** (3011): 269-270.—This organization was formed at 17th N. A. Wildlife Conference.
- HERROELEN, P. 1953. Note sur le comportement du Martinet noir (*Apus apus*) au Congo Belge. *Gerfaut*, **43** (2-3): 161-164.—First migrants appear in the beginning of August in bands of 30 to 50 individuals, increasing later to several hundreds. The return flight starts at the end of February but some individuals do not leave until the end of May. The molt lasts from August to February. In Flemish with French résumé.—C. Vaurie.
- HÖHN, E. O. 1951. Courtship behaviour of the Bohemian Waxwing. *Can. Field-Nat.*, **65** (5): 168-169.
- HÖHN, E. O. 1953. Display and mating behaviour of the Black Grouse, *Lyrurus tetrix* (L.). *Brit. Journ. Animal Behaviour*, **1**: 48-58.
- HÖHN, E. O. and A. OEMING. 1953. Song Sparrows in central Alberta in winter. *Can. Field-Nat.*, **67** (2): 94.
- HOLDOM, MARTIN W. 1952. White-crowned Sparrow (*Zonotrichia leucophrys pugelensis*) and Bantam Hen. *Can. Field-Nat.*, **66** (2): 68.—A Bantam Hen brooding eggs in nest of White-crowned Sparrow.
- HOLLIDAY, C. S. and I. C. TAIT. 1953. Note on the nidification of *Buccanodon olivacea woodwardi* (Shelley). *Ostrich*, **24**: 115-117.
- HOLLOM, P. A. D. 1953. Le Chevalier stagnatile en Camargue. *Alauda*, **21**: 135.—A record of *Tringa stagnatilis* on May 11.
- HUE, FRANÇOIS. 1953. Oiseaux rencontrés au Tafilalet et au sud du Haut Atlas. *Alauda*, **21**: 128-131.—List of species observed in southern Morocco.
- HUGHES, WM. M. 1951. Wintering of Golden-crowned Sparrows *Zonotrichia coronata* (Pallas), at Vancouver, B. C. *Can. Field-Nat.*, **65** (5): 186.—Fifteen immature birds banded winter 1950-51.
- HUGHES, WM. M. 1951. Some observations on the Rusty Song Sparrow, *Melospiza melodia morphna* Oberholser. *Can. Field-Nat.*, **65** (5): 186.—Behavior.
- HUTT, F. B. 1952. The Jansen Khaki Campbell Ducks. *Journ. Heredity*, **43** (6): 277-281, 4 figs., 1 table.

- HUTT, F. B. and R. K. COLÉ. 1953. The Interaction of Genetic and Environmental Influences Affecting the Incidence of Avian Leucosis. *Science*, **117** (3051): 695-697, 1 fig.
- HYDE, A. SIDNEY. 1953. Perceptive powers of a Duck Hawk. *Condor*, **55**: 277.
- IRWIN, M. R. 1953. Evolutionary Patterns of Antigenic Substances of the Blood Corpuscles in Columbidae. *Evolution*, **7** (1): 31-50, 4 tables.
- JOBIN, LÉO. 1953. A record of the Hudsonian Godwit in the Cariboo District of British Columbia. *Condor*, **55**: 318.
- JOHNSGARD, PAUL A. 1953. Waterfowl of North Dakota. (N. Dak. Inst. Regional Studies and N. Dak. Agric. College, Fargo) 16 pp.—Identification, status, and habits.
- JOHNSTON, DAVID W. 1953. Wintering Palm Warbler at Berkeley, California. *Condor*, **55**: 276-277.—*Dendroica palmarum palmarum* taken January 23, 1953.
- JOUANIN, CHRISTIAN. 1953. Note sur la *Sterna fuscata* L. en Polynésie française. *L'Oiseau*, **23**: 149-150.—Report on and list of the colonies in the Tuamotus and Marquesas.
- JUDD, W. W. 1951. *Lynchia americana* (Leach) (Diptera: Hippoboscidae) from a Great Horned Owl at St. Thomas, Ontario. *Can. Field-Nat.*, **65** (5): 187.
- KIEFFER, C. 1953. Quelques observations sur le *Picathartes oreas* Reichenow. *L'Oiseau*, **23**: 142-144.—Observations chiefly on nesting habits in Cameroon.
- KIRKPATRICK, C. M., and A. C. LÆOPOLD. 1953. [Comments and Communications section. Comments on communication by John Hammond, Jr. under title "Photoperiodicity in Animals: The Role of Darkness"]. *Science*, **117** (3041): 390-391, 1 table.
- KIRKPATRICK, CHARLES M., and A. CARL LEOPOLD. 1952. The Role of Darkness in Sexual Activity of the Quail. *Science*, **116** (3011): 280-281, 1 fig., 1 table.—Experiment showed that 10 hours of light including a night interruption resulted in full sexual activity in both sexes whereas the same light ration given without interruption did not. J. C. Howell.
- KROG, JOHN. 1953. Notes on the birds of Amchitka Island, Alaska. *Condor*, **55**: 299-304.—Includes observations on the breeding birds and data on the food of the Bald Eagle.
- LACK, DAVID. 1953. Darwin's Finches. *Scientific American*, **188** (4): 66-72, 4 figs.—"In 1835 a group of small, unimpressive birds in a Pacific archipelago stimulated Charles Darwin's speculations on the origin of species. Today the birds are studied anew as an example of how species originate."
- LANDAUER, WALTER. 1953. Genetic and Environmental Factors in the Teratogenic Effects of Boric Acid on Chicken Embryos. *Genetics*, **38** (3): 216-228, 7 tables.
- LARSON, STEN. 1953. Gypaète en Corse. *Alauda*, **21**: 134.—*Gypaetus barbatus* observed on Corsica on January 28.
- LAWRENCE, LOUISE DE KIRILINE. 1952. New sight records of three species at Pimisi Bay, Ontario. *Can. Field-Nat.*, **66** (2): 67-68.—Yellow-billed Cuckoo, Virginia Rail, Connecticut Warbler.
- LAWRENCE, LOUISE DE KIRILINE. 1953. Nesting life and behavior of the Red-eyed Vireo. *Can. Field-Nat.*, **67** (2): 47-77, 10 tables, 1 map.—A detailed and painstaking study conducted over a period of years on a 16-acre plot in central Ontario, east of North Bay. Subjects dealt with: the land, arrival in spring, territories, pre-nesting activities, the nests, the building of the nest, the egg-laying, incubation, development of the young, defense behavior, re-nesting and

- nesting success, feeding habits, voice, departure from nesting grounds. Statistical treatment of such matters as singing, incubation, brooding data, feeding young. Particularly interesting study of various song patterns and their implications. A first-class behavior study of the species, carried out in the Nice tradition, with a number of new approaches and a wealth of findings that should give useful leads to those working on life-history or behavior projects.—W. W. H. Gunn.
- LEBEURIER, E. 1953. Le Corbeau freux (*Corvus f. frugilegus*) dans le Finistère. *L'Oiseau*, 23: 171–211, figs. 1–12. A study continued over a period of 30 years of the rookeries in extreme northwestern France. These rookeries are quite isolated from the other French populations and although quite persecuted and faced by a progressive destruction of their habitat due to increasing deforestation are, apparently, maintaining themselves.—C. Vaurie.
- LIPPENS, L. 1953. Une invasion de Pétrels Cul-blancs (*Oceanodroma leucorhoa*) en Belgique. *Gerfaut*, 43 (2–3): 165–168.
- MACKWORTH-PRAED, C. W., and C. H. B. GRANT. 1953. On the status of *Pterinistis cooperi* Roberts *Ostrich*, 24: 123. They believe it a dark individual of *P. cranchii swynnertoni*.
- MANNING, T. H. 1952. Birds of the west James Bay and southern Hudson Bay coasts. *Nat. Mus. Canada Bull.* 125, 114 pp., 7 pls.
- MANNING, T. H., and D. F. COATES. 1952. Notes on the Birds of Some James Bay Islands. *Bull.* 126, Annual Rept. Natl. Mus. Canada, 1950–1951: 195–207.—Annotated list of 30 species.
- MANNING, T. H. and A. H. MACPHERSON. 1952. Birds of the east James Bay coast between Long Point and Cape Jones. *Can. Field-Nat.*, 66 (1): 1–35, 29 tables, 8 photographs, 1 map.—Based on observations and collections (498 birds) made between June 26 and September 2, 1950, at two major and numerous minor collecting stations along the coastline from the region of Old Factory River to the northeastern extremity of James Bay. Outlines previous ornithological work done in the region and gives physical and ecological descriptions both of the general area and the immediate vicinity of the locations visited. A careful record of the number of hours spent in observation at each location, sub-divided by habitat. The catalogue of birds observed includes reference to previous records and specimens, deals with 104 species, lists specimens collected, discusses subspecific characters and preferred habitat. Tables on population densities of commoner species. An example of the authors' ability to make the most of a collecting trip by the inclusion of modern observing techniques to provide a quantitative indication of population density and ecological background.—W. W. H. Gunn.
- MARTIN, N. D. 1952. Fraser's observations of screech owls at a nest-box. *Can. Field-Nat.*, 66 (3): 81–82, 1 fig.—Notes on behavior of a pair nesting in a box on the side of a house.
- MAYR, ERNST. 1952. German experiments on orientation of migrating birds. *Biol. Reviews*, 27: 394–400.—A review of work by Drost, Schüz, and others.
- MCLEOD, J. A., and G. F. BONDAR. 1953. A brief study of the Double-crested Cormorant on Lake Winnipegosis. *Can. Field-Nat.*, 67 (1): 1–11, 2 tables, 3 figs.—Investigation during 5 summers in period 1943–1951. Estimated 39,448 birds present in 1945. Large fish consumption comprises 7.2 per cent commercial species. At present population level, fish predation problem less acute than formerly but still requires attention. Chemical solution used gave not more than 50 per cent efficiency in destroying eggs.
- MEWALT, L. R., and DONALD S. FARNER. 1953. The composition of a wintering population of White-crowned Sparrows in southeastern Washington. *Condor*.

- 55: 313-314.—Significantly more males than females found in winter; in the Snake River Canyon the data suggest a greater tendency for adult rather than first-year birds to winter in the area.
- MILBOURN, L. W. H. 1952. Snipe at sea. *Can. Field-Nat.*, **66** (4): 113.—*Capella* sp. aboard eastbound ship 1,000 miles east of Newfoundland, May 4, 1951.
- MILLER, LOYE. 1953. California's first fossil bird. *Pacific Discovery*, **6** (4): 18-21.—An account of *Mancalla californiensis*.
- MISONE, X. 1953. Les Grand Quartiers d'hiver du Sud-est de la Mer Caspienne. *Gerfaut*, **43** (2-3): 103-127, pls. 1-4, and 4 figs.—Observations on the wintering quarters of birds on the southern part of the Caspian Sea. This region is one of the richest in the world, and it is not unusual for several millions of winter visitors to be observed, these visitors coming from the Urals, Siberia, and Turkestan. Peregrine falcons and three species of eagles are abundant, as well as several hundred thousands of geese, ducks and thousands of flamingo.—C. Vaurie.
- MONTGOMERY, K. C. and ERIC G. HEINEMANN. 1952. Concerning the Ability of Homing Pigeons to Discriminate Patterns of Polarized Light. *Science*, **116** (3017): 454-456, 2 tables. It is concluded (a) that if homing pigeons can discriminate at all among patterns of polarized light, they can do so only with extreme difficulty, and (b) that it is highly unlikely that homing pigeons make use of patterns of polarized sky light as cues in their homing flights. J. C. Howell.
- MONTGOMERY, VESTER. 1953. The Leconte Sparrow in New Mexico. *Condor*, **55**: 277.
- MOREJOHN, G. VICTOR. 1953. A Gene for Yellowish-White Down in the Red Jungle Fowl. *Journ. Heredity*, **44** (2): 47-53, 3 figs.
- MORRIS, DAVID M. 1953. Adrenal Hypertrophy in the White Leghorn Cockerel after Treatment with Thiouracil and Thyroidectomy. *Science*, **117** (3029): 61-62, 2 tables.
- MUSACCHIA, X. J. 1953. A study of the lipids in Arctic migratory birds. *Condor*, **55**: 305-312.—Values for fatty acids, lipid phosphorus, cholesterol, and cholesterol esters in liver and kidney of *Clangula hyemalis*, *Pluvialis dominica*, *Phalaropus fulicarius*, and *Erolia alpina*.
- NICE, MARGARET M. 1953. The earliest mention of territory. *Condor*, **55**: 316-317.
- NICHOLS, J. T. 1953. Shorebird Memories. *Birds of Long Island*, **7**: 169-221.—These reminiscences include many original and interesting observations on the shorebirds of Long Island.
- OLIVIER, GEORGES. 1953. Nidification du Faucon pèlerin sur les édifices. *L'Oiseau*, **23**: 109-124, pls. 10-12.
- PARKES, KENNETH C. 1952. Wayne's Long-billed Marsh Wren in New Brunswick. *Can. Field-Nat.*, **66**: (6): 173-174.—A rare species in New Brunswick, but a breeding colony recently discovered. Breeding birds are referred to *Telmato-dytes palustris dissaëptus* Bangs, but two October (1895, 1930) specimens are referred to *T. p. waynei*, the breeding form of the coast of North Carolina.
- PARKES, KENNETH C. 1953. Evidence for the suppression of the American race of the pintail. *Condor*, **55**: 275-276.
- PARLAMAN, ROBERT D. 1953. Pileated Problem. *Penna. Game News*, **24** (9): 45-46, 2 figs.—Damage by Pileated Woodpeckers (*Dryocopus pileatus*) to wooden electric light poles in rural areas in northwestern Pennsylvania reported to total thousands of dollars.

- PAULUSEN, W. 1953. Note sur le nombre de couvées du ramier (*Columba palumbus*) et du colombin (*C. oenas*). *Gerfaut*, 43 (2-3): 128-131.—In Flemish with French résumé.
- PEARSON, OLIVER P. 1953. The Metabolism of Humming Birds. *Scientific American*, 188 (1): 69-72, 3 figs.—“During the day this smallest of the warm-blooded animals consumes energy at a terrific rate, and spends most of its time eating. Unable to feed itself at night, it must go into deep ‘hibernation’ to avoid starving.”
- PETERS, HAROLD S., and THOMAS D. BURLINGH. 1951. Birds of the St. Pierre and Miquelon Islands. *Can. Field-Nat.*, 65 (5): 170-172.—Recorded during a four-day visit July 19-22, 1945.
- PHELPS, WILLIAM H., and WILLIAM H. PHELPS, JR. Eight new birds and thirty-three extensions of ranges to Venezuela. *Proc. Biol. Soc. Wash.*, 66: 125-146. *Otus albo-griseus obscurus* (Cerro Pojochaina), *Dendrocincla homochroa meridionalis* (Burgua), *Pachyramphus albogriseus coronatus* (Cerro Tamuypejocha), *Diglossa barbitula coelestis* (Barranquilla), *Basileuterus tristriatus perijanus* (Cerro Pejochaina), *Thlypopsis fulviceps obscuriceps* (Cerro Pejochaina), *Hemisphingus [sic] frontalis flavidorsalis* (Cerro Jurustaca), and *Catamblyrhynchus diadema federalis* (E. Junquito), new subspecies.
- PHILLIPS, H. J., and I. L. WILLIAMS. 1953. The Oxidation of Chicken Fat Tissue. *Science*, 117 (3050): 658-659, 2 figs.
- PINCHON, R. 1953. Aperçu sur l'avifaune de la Désirade. *L'Oiseau*, 23: 161-170, pl. 13. This small island which measures 11 by 2 to 2.5 kms. and is only 12 km. from Guadeloupe has a relatively rich avifauna which is little disturbed and, as a result, denser than in the neighboring island.—C. Vaurie.
- POLUNIN, NICHOLAS, and CARL R. EKLUND. 1953. Notes on food habits of waterfowl in the interior of Ungava Peninsula. *Can. Field-Nat.*, 67 (3): 134-137.—Based on analysis of stomach contents of 4 Ungava Canada Geese, one Old-squaw Duck and one Black Duck. Aquatic plants lacking in area. Geese had consumed mainly monocotyledonous plants—*Carex* spp., *Juncus* spp., *Poa arctica*; *Equisetum arvense* also important in bulk. Sedgy marshes suggested as feeding areas.
- PRESTON, F. W., and E. J. PRESTON. 1953. Variation of the shapes of birds' eggs within the clutch. *Ann. Carnegie Mus.*, 33: 129-139.—Precise study of 20 sets of eggs of the Laughing Gull (*Larus atricilla*); the last egg of the clutch differs significantly in form from the earlier eggs.
- PUTMAN, WM. L. 1952. Bird migration along the Lake Ontario Shore of the Niagara Peninsula. *Can. Field-Nat.*, 66 (2): 39-44.—Waterfowl migration is along the shore, westward in spring, eastward in fall, fall migration less conspicuous. Hawks migrate westward parallel to shore in spring, but the autumn migration misses this district. Some other land birds follow same route in spring.
- RICHMOND, STANLEY M. 1953. The attraction of Purple Martins to an urban location in western Oregon. *Condor*, 55: 225-249.—Includes an interesting account of raising young martins by hand, information on the ecological requirements of martins in the wild, and the apparent need for extra calcium in the diet in regions in which there may be insufficient calcium in the soil.
- RIPLEY, S. DILLON. 1953. Notes sur les oiseaux du Laos. *L'Oiseau*, 23: 89-92.—A few notes on the David-Beaulieu collection. About half of this collection was destroyed in the war in Indochina, and the remainder is now in the Peabody Museum at Yale University. *Spizaetus nipalensis nipalensis*, new for the Indo-

- china list. *Paradoxornis verreauxi beaulieui*, and *Yuhina flavicollis constantiae*, both from Phou Kobo, Laos, new subspecies.
- ROBERTS, E., W. E. SHAKLEE, and H. F. FALLS. 1952. A Red-eye Mutation in White Plymouth Rocks. *Journ. Heredity*, **43** (5): 201-204, 3 figs.
- RUWET, J.-C. 1953. Notes sur l'ouverture des bouteilles de lait par les Mésanges bleues (*Parus c. caeruleus*) et charbonnières (*Parus m. major*). *Gerfaut*, **43** (2-3): 168-171.—Belgian tits do not open milk bottles for such bottles are not left outdoors in Belgium and are closed by mechanical or metallic caps, but a series of tests show that they learn to open bottles stopped with cardboard in a few days and show initiative, adaptation, and visual imitation, *P. caeruleus* learning the more quickly.—C. Vaurie.
- SAEZ-ROYUELA, RAMON. 1953. Liste des Passeriformes de l'Espagne (Ire. partie). *L'Oiseau*, **23**: 93-108.—First installment of a list of the birds of continental Spain compiled from the works of various authors. Brief statements of range are given and recoveries of banded birds are cited. The author, unfortunately, accepts uncritically a number of forms the validity of which has been questioned or rejected.—C. Vaurie.
- SALOMONSEN, FINN. 1952. Systematic Notes on some Philippine Birds. *Vidensk. Medd. fra Dansk naturh. Foren.*, **114**: 341-364, 1 pl.—*Tanygnathus lucionensis hybridus* (Polillo), *Chrysocolaptes lucidus montium* (Luzon), *Orthotomus atrogularis davao* (Mindanao), *Cinnyris sperata manueli* (Polillo), *Cinnyris sperata minima* (Mindanao), *Rhabdornis longirostris* (Luzon), *Sarcops calvus similis* (Negros), *Sarcops calvus samarensis* (Samar), and *Sarcops calvus minor* (Mindanao) described as new.
- SALT, GEORGE WILLIAM. 1953. An ecologic analysis of three California avifaunas. *Condor*, **55**: 258-273.—The avifaunas of three California localities were classified on the basis of location of the feeding site within the strata of the vegetation and the type of food taken. Yearly changes in the bird life of these localities were diagramed according to this system. Differences in the structure and proportions of the avifaunas of these localities presumably reflect differences in vegetation structure and climate.
- SHAKLEE, WILLIAM E., and C. S. SHAFFNER. 1952. High and Low Thyroidal Response to the Feeding of Thiouracil to New Hampshire Chickens. *Journ. Heredity*, **43** (5): 238-242, 3 figs.
- SHAVER, WILLIAM E. 1953. Owl obit. *Penna. Game News*, **24** (9): 36.—Great Horned Owl (*Bubo virginianus*) descended chimney after "swallows," presumably Chimney Swifts.
- SHEPPARD, R. W. 1952. The Black Tern as an insect-eater. *Can. Field-Nat.*, **66** (5): 129.
- SHULTZ, FRED T., and W. E. BRILES. 1953. Adaptive Value of Blood Group Genes in Chickens. *Genetics*, **38** (1): 34-50.
- SIBLEY, CHARLES G. 1953. Forster Terns breeding on San Francisco Bay. *California. Condor*, **55**: 278-279.
- SKEAD, C. J. 1953. A study of the Spectacled Weaver (*Ploceus ocularius* Smith). *Ostrich*, **24**: 103-110.—Life history.
- SLADEN, W. J. L. 1953. The Adelie Penguin. *Nature*, **171**: 952-955.—A summary of the breeding routine.
- SMITH, W. JOHN. 1952. Summer observations of the evening grosbeak in southern Ontario and Quebec. *Can. Field-Nat.*, **66** (3): 89.—Summer of 1951.
- SNYDER, L. L. 1950. A classification of Ontario Birds. *Misc. Pub. Roy. Ont. Mus. Zool.*, No. 3, 1-11.—Classification from Class to Species, covering all species

- credited to the province on the basis of one or more collected specimens. Primarily for teaching purposes, a useful reference.
- SNYDER, L. L. 1953. On eastern *Empidonax* with particular reference to variation in *E. traillii*. Contr. Roy. Ont. Mus. Zool. and Pal., No. 35, 1-26, 2 tables, 4 figs.—Differences between the 3 eastern species of *Empidonax* are summarized and their close similarities emphasized; non-morphological differences are more striking than the morphological ones, which are largely a matter of degree, but their specific rank is unquestioned. Geographic variation in *E. traillii* is then considered. Western populations may be divided from eastern and northern populations, on basis of tenth primary being shorter than fifth (map, fig. 2). On slight morphological differences, but more constant and more pronounced differences with respect to type of nest and songs, eastern populations may be divided into two races, one occupying the area from northeastern United States across Canada to Alaska (greener dorsal surface, more yellow pigment on ventral surface, "phe-be-o" song, untidy nest, damp habitat), the other ranging from the great plains of the United States eastward to New York (brownier dorsal surface, whiter on ventral surface, "fitz-bew" song, neat felted nest, dryer habitat). Author disagrees with Aldrich's premise that population in middle south need be provided with a new name and considers it most reasonable to retain the name *E. t. traillii* (Audubon) for the southern race, and to apply *E. t. alnorum* Brewster to the northern race ranging from northeastern United States to Alaska.—W. W. H. Gunn.
- SNYDER, L. L., and H. G. LUMSDEN. 1951. Variation in *Anas cyanoptera*. Occ. Pap. Roy. Ont. Mus. Zool. No. 10, 1-18, 2 tables, 3 figs.—A comparative survey of the Cinnamon Teal of the two Americas, based on study of 144 specimens. Certain morphological differences are correlated with geographic and ecological zones. Differences extend to characteristics of a physiological and conditioned nature. A plumage in the sequence of the developing male is common to South American but omitted in North American populations. Phylogeny of "eclipse" plumage discussed. Five races of the species are recognized, three of which are newly described. The nominate race is restricted to southern South America, and the name *Anas cyanoptera septentrionalium* is proposed for the birds of the whole North American segment of range. The large form (Peru, Chile) *A. c. orinomus* (Oberholser) is recognized; the other two races, *A. c. borreioi* and *A. c. tropicus*, are from Colombia.—W. W. H. Gunn.
- SPAEPEN, J. 1953. La migration du Pipit des arbres (*Anthus trivialis*) en Europe et en Afrique. *Gerfaut*, 43 (2-3): 178-228, figs. 1-6.—In Flemish with a French résumé which, unfortunately, is inadequate in view of the length of the article and its wealth of documentation.—C. Vaurie.
- STIRRETT, GEORGE M. 1952. Rough-legged hawk migration in James Bay area. *Can. Field-Nat.*, 66 (3): 87.—Southwestward movement, October 15-16, 1949.
- STIRRETT, GEORGE M. 1952. Lawrence's Warbler in Canada. *Can. Field-Nat.*, 66 (4): 11.—Two sight records, one north of Kingston, Ont., in June, 1947 (plumage and song described), one near Toronto, May, 1951.
- STULLKEN, DONALD E., and WILLIAM A. HÆSTAND. An experimental study of the influence of pelage pigmentation on metabolic rate and its possible relationship to body temperature control and ecological distribution. *Ecology* 34 (3), 1953: 610-613.—Oxygen consumption of albino mice whose hair was dyed black and natural black mice was increased more rapidly by a drop in air temperature than in non-dyed albino controls. This indicates that white coloration in northern

- animals during the winter may be advantageous in conserving body heat as well as acting as concealing coloration.
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