RECENT LITERATURE

A Study of a Group of Penguins of Known Age.—L. E. RICHDALE. (Biol. Monog. No. 1: i–viii, 1–88, 10 figs., 1 diagram, 56 tables, index, 1949. (Otago Daily Times and Witness Newspapers Co., Dunedin, New Zealand). Price, 12/6. Also available from the author at 10/, 23 Skibo street, Kew, Dunedin, S. W. 1, New Zealand.—This is the first of a series of monographs, contemplated by the author, that will summarize his excellent longtime studies of penguins, petrels, albatrosses, and shearwaters. The present monograph deals with the Yellow-eyed Penguin, *Megadyptes antipodes*, about which the author has already written a good deal. Twelve seasons of intensive work on the Otago Peninsula, New Zealand, were devoted to observations on 162 individuals whose exact age, place of hatching, and parents were known, and on 298 others whose approximate age was known. Each individual was identified by a series of punctures in the webs of the feet and by bands that bore numbers large enough to be read at a distance through a telescope. This is a carefully organized statistical analysis of the accumulated data.

Of 398 fledglings which entered the sea, the fate of 96 is known, four per cent returned to nest in their place of hatching, nearly eight per cent in the nearest subsidiary breeding place, seven per cent in adjacent breeding areas, and six per cent farther afield. The post-juvenal molt occurs from 14 to 18 months after the young bird enters the sea.

Young males are slower to start breeding than females. Of two-year-olds, only seven per cent of the males nested but nearly 48 per cent of the females; of three-year-olds, 36 per cent of the males nested and 95 per cent of the females; of still older birds a female is rarely left unmated, but because of a surplus of males some males are not successful in acquiring mates.

A definite correlation occurs between behavior and physiological condition. For example, if ready to produce eggs the female mates with a male; if the breeding urge is not so strong she "keeps company" with a male; and finally, if the urge has not developed she does not fraternize with a male.

For pairs that returned, the mating bond remained intact for 87 per cent in the succeeding season. One pair remained mated for 10 consecutive seasons. Males generally mate with females younger than themselves because the older males are usually more successful than younger males in getting their attention. There is one record of inbreeding; a brother and sister, hatched four years earlier, successfully mated and reared one young from two eggs in each of two successive years.

Although there is no significant increase in the longer dimension of eggs as the birds become older, there are significant increases in the width and in the weight of the eggs. Fertility is low in two-year-old females and negligible among two-year-old males. Fertility increases considerably among three-year-old females but is greater among those that are laying for the second season. Fertility reaches its maximum in both male and female among four-year-olds and possibly remains high throughout life.

The percentage of non-breeding birds in the adult population may reach 61. This surplus of potentially breeding birds and the resulting intra-sexual competition may be an aid to breeding efficiency. Non-breeding birds begin their feather molt earlier than do those that are nesting.

The postulate that colonial nesting birds do not breed before a numerical threshold is attained is not valid among petrels and penguins. Small colonies in these species are usually new ones formed by juveniles or young birds which tend to wander more

than do adults, and breeding does not occur because they are sexually immature. Sexually mature adults will nest successfully even when isolated in single pairs.

Many other details are given and comparisons are made with other species in order to develop broad generalizations. This monograph, along with Richdale's other publications, makes the life-history of this species one of the best known in the class of birds.—S. CHARLES KENDEIGH.

Canada Geese of the Mississippi Flyway, with Special Reference to an Illinois Flock.—HAROLD C. HANSON AND ROBERT H. SMITH. Bull. Ill. Nat. Hist. Survey, 25 (Art. 3): 67–210, 82 figs., 47 tables, March, 1950.—This publication represents, in the reviewer's opinion, a significant landmark in the literature of North American waterfowl. It is an attempt to assay the basic phenomenon of a waterfowl population on a year-round scale.

Following presentation of data on breeding range, migration routes, and winter concentrations, the relationships and history of goose behavior, goose hunting, and the annual bag of geese in the Mississippi flyway are discussed. The effects of differential hunting losses by age groups, crippling losses, and miscellaneous mortality factors are then estimated. The authors delve deeply into the literature and into field notes to present the productivity of the population. A section entitled "Population Survival" by the senior author in his own words goes on to "exploit the data as far as possible" in order to arrive at a picture of the population changes over the period from 1925 to 1944, using data from the Jack Miner Refuge in Ontario, and from 1940–1947, using data from Horseshoe Lake Refuge in southern Illinois. Application of the sum total of the above information to management of the Canada Goose in the Mississippi is discussed with a final section describing the "Present Situation" (up through 1948) which appears to be a reasonably healthy one.

The publication is so full of data that no attempt can be made to discuss any of it. Rather the most significant portions may be cited. Of these the publication of the hitherto unexplored mass of banding information obtained by Jack Miner at his famous Kingsville, Ontario, sanctuary is a major addition to the literature. The more detailed results of banding 5,247 geese over an eight-year period at Horseshoe Lake are outstanding. The compilation of field data from Canada, information on the place of the Canada Goose in the life of the Indians of the James Bay Region, and the correlation of migration and bag records from many states should also be listed.

One hiatus in the bulletin which seems significant is the lack of specific information on the relation of the goose concentration at Horseshoe Lake to agriculture practices, commercial clubs, and law enforcement problems.

The publication should be of interest to the systematist for its discussion of different "sub-populations" of Canada Geese in the eastern United States, particularly the delineation of a "Southeast population," while for the wildlife manager interest will center on the history of the Horseshoe Lake Refuge and its attendant hunting ills. Persons studying population problems *per se* will benefit from the techniques used in analyzing banding and age data of a wild population. Thus the bulletin will serve as a stimulus to further research in many diverse branches of ornithology.

It is hoped that the intensive work at Horseshoe Lake will be continued to provide detailed population information over a continuing period.—WILLIAM H. MARSHALL.

Die Vogelwelt Macedoniens.—WOLFGANG MAKATSCH. Akademische Verlagsgesellschaft, Geest and Portig K. -G., Leipzig, pp. xi + 1–452, 145 figs., 14 col. pls., 1 map, 7 maps in text, 1950. Price, $10.00.—The volume treats the bird life of

Macedonia, that area of the Balkans which consists of parts of northern Greece and southern Yugoslavia. The author covers his subject with great thoroughness based on five years of personal observations and a close study of the literature. The first part of the work (77 pages) contains a description of the geography, a history of the ornithological exploration, and a very detailed listing and descriptions of all the habitats with their typical species of birds. The area is characterized by a mixture of east Mediterranean elements such as *Emberiza caesia*, *Lanius nubicus*, and *Hirundo daurica rufula*, and of central European elements, most of which are restricted to the coniferous forests of the mountains. The total list of recorded species and subspecies is 339. No less than 38 species have been added to the breeding list in the last 35 years.

The body of the volume (pages 86–436) contains a very detailed annotated faunal list with dates, localities, habitats, and altitudes of the recorded species. When available, measurements and weights of collected specimens and dimensions of eggs are given. There is a bibliography of 280 titles and an index. The volume is well illustrated by 145 photographs of landscapes, of birds and their nests, as well as by 14 colored plates, three of which depict eggs. The emphasis throughout the volume is faunistic-ecological; it should serve as a solid foundation for the students of life histories and for the conservationist. This is one of the last areas of Europe in which some of the large hawks and water birds have a stronghold.—ERNST MAYR.

Birds of the West.—ERNEST SHELDON BOOTH. Illustrated by Harry Baerg and Carl Petterson. (Stanford Univ. Press, Stanford, Calif.), xii + 402 pp., 8 col. pls., 12 photos., many drawings, 1950. Price, $6.00.—This is a new edition of the work by the same title, published by the author in 1948 and reviewed at length by William H. Behle in 'Bird-Banding' (vol. 19: 185–186). Principally a handbook for the identification of birds in the field, it features a system of keys which, the author claims, will enable "a person ten years old, or a person eighty-five years old" to find out "the name of any bird he comes to, no matter how difficult the bird may be to identify." The book's organization and text differ only slightly from the original edition's but its usefulness is greatly enhanced by the addition of color plates depicting the more common bird species west of the Great Plains. On these plates, the artist (Harry Baerg) has succeeded admirably in arranging an impressively large number of birds. For example, the plate of ducks shows 55 individual birds, all in like positions. The appendix, which deals with such miscellaneous subjects as nests and eggs, bird photography, feeding tables, nesting boxes, bird banding, bird societies and journals, and bird books and check-lists, might well have included more reference material. Baker's 'The Audubon Guide to Attracting Birds,' one of the best books of its kind, is not mentioned, and there is no listing of books or check-lists on the birds of Idaho, Montana, Colorado, Utah, Nevada, and Arizona—states where the work will be used. The National Audubon Society's former Broadway address is given (p. 386) even though the Society moved to its quarters on Fifth Avenue over ten years ago.—OLIN SEWALL PETTINGILL, JR.

La Distribution et La Vie des Oiseaux en Serbie.—S. D. MATVEJEV. Academie Serbe des Sciences, Monographies—T. 161, 363 pp., Belgrade, 1950.—This volume on the bird life of Serbia is in Serbian but with a short (11 pages) French summary. The first part of the volume (pp. 9–99) is an analysis of the ecology of Serbian birds. The second part (pp. 101–122) contains a zoogeographical analysis, and finally the third part (pp. 123–300) a listing of the recorded species with a number of distribution maps. This publication fills a very distinct gap in the literature on Balkan birds.—ERNST MAYR.

A Naturalist in Sarawak.—E. BANKS (Kuching Press, Kuching, Sarawak), 125 pp., 2 maps, 1949.—The author was for 25 years curator of the Sarawak Museum; when I met him last summer he was working in the Bird Room of the British Museum. This is a curious little book. Though it embodies a great deal of work, both in Sarawak and in European museums, there is not a scientific name in the book, and the data themselves are presented in such condensed form as to lose some of their value. Nevertheless there is much information here about geographical variation and distribution in the East Indies, particularly Borneo, and about the factors responsible for the fauna as it exists today. There is also a most interesting chapter on the great caves frequented by hordes of edible-nest swiftlets and bats. —DEAN AMADON.

A New Journal—'Columba.'—Ever since 'Bird-Lore' has shifted emphasis to conservation we lack in this country a good popular bird journal for the beginner. The recently founded journal 'Columba' fills this gap in Germany. It is furnished with attractive photographs, sketches for the beginner, short essays on the various species, life histories, and bird calendars. To the more sporting readers may appeal an identification contest in each issue, showing photographs of a bird nest, of a bird in flight, and of a female or young. Though evidently addressed to a lay audience, the contributions are consistently of high level. Orders may be placed with Hans Taubenberger, Schwärzenbach am Tegernsee, U. S. Zone, Germany. —E. MAYR.

ARMSTRONG, EDWARD A. 1950. Right thing, wrong time. Animal Kingdom, **53** (6): 174–179, 4 photos.—A popular account of "releasers" and conditioning that cause "displacement activity" which is often odd and inappropriate activity "set off" by unusual circumstances.

ARMSTRONG, EDWARD A. 1950. Intruder responses by birds outside their breeding areas. Brit. Birds, **43** (10): 332.—"Incomplete mobbing" by Arctic Terns.

ASMUNDSON, V. S. 1950. Sex-linkage in the turkey (*Meleagris gallopavo*). Journ. Hered., **41**: 205–207, 2 tables.

AUSTIN, OLIVER L. 1949. Notes on the birds of the Izu Islands. Tori, **12** (59): 262–267.—Report on 200 specimens of 60 forms; only additions or changes in status are presented in detail.

BÄHRMANN, UDO. 1950. Das Totalgewicht des Hühnerhabichts, Accipiter gentilis gallinarum (Br.), und seine Bedeutung als Hilfsmittel zur Unterscheidung der Habichtsrassen. Vogelwelt, **71** (5): 177–183, 2 tables.—Seasonal variation in weights of *A. g. gallinarum* and *A. g. tischleri*—males, females, and juveniles.

BAILEY, ROBERT E. 1950. Inhibition with prolactin of light-induced gonad increase in White-crowned Sparrows. Condor, **52** (6): 247–251, 2 figs.—Prolactin did inhibit this type of recrudescence of the gonads; singing did not occur in the experimentals which may indicate inhibition of production of sex hormones.

BAKKER, D. 1950. Een nieuw broedgeval van de grauwe gans, *Anser a. anser* (L.) in Nederland. Limosa, **23** (3–4): 357–364, 2 figs., 2 tables.—English summary. First recorded nesting of Gray Goose in the Netherlands since 1909.

BAKKER, D., AND A. STAM. 1950. Noordoostpolderbewoners, 8e bericht; broedseizoen 1949. Limosa, **23** (3–4): 292–315, 2 figs., 4 maps.—English summary. Data on breeding birds that have moved into a reclaimed part of the Zuidersee, which was again put under cultivation in 1949.

BALTHASAR, VLADIMÍR. 1950. Ptactvo gottwaldovského (zlínského) regionu. Sylvia, **11–12** (1): 1–36, 1 pl.—French summary. Species accounts of birds of

region of Zlin, southeast Moravia; 227 forms of which 129 breed and 83 are migrants or winter visitants.

BANKS, E. 1950. Breeding seasons of birds in Sarawak and North Borneo. Ibis, **92** (4): 642.

BEHLE, WILLIAM H. 1950. A new race of Mountain Chickadee from the Utah-Idaho area. Condor, **52** (6): 273–274.—*Parus gambeli wasatchensis* (Silver Lake P. O. (Brighton), 9,000 feet, head of Big Cottonwood Canyon, Wasatch Mts., Salt Lake Co., Utah).

BLAKE, EMMET R. 1950. Report on a collection of birds from Guerrero, Mexico. Fieldiana: Zool., **31** (39): 375–393.—Twelve additional species in 342 specimens of 109 forms; species accounts contain gross data on condition of gonads.

BLAKE, EMMET R. 1950. Report on a collection of birds from Oaxaca, Mexico. Fieldiana: Zool., **31** (40): 395–419.—Adds 126 forms to the known avifauna, mostly of tropical origin.

BLAKE, EMMET R. 1950. Birds of the Acary Mountains, Southern British Guiana. Fieldiana: Zool., **32** (7): 419–474, map.—Physical characteristics and faunal affinities of the region are discussed; accounts of 156 forms (500 specimens) of which 17 are additions to fauna of British Guiana.

BOND, JAMES. 1950. Some remarks on West Indian Icteridae. Wilson Bull., **62** (4): 216–217.—Questions several points made by Beecher (Wilson Bull., **62**: 51–86, 1950) as to invasion routes and "production" of certain adaptations.

BRIAN, MICHAEL V., AND ANNE D. BRIAN. 1950. Bird predation of defoliating caterpillars. Scot. Nat., **62** (2): 88–92, 2 tables.—Experimental and statistical study to show that birds may exert a depressing effect on populations of certain caterpillars.

BRUNS, HERBERT. 1950. Pflanzenassoziation, Biotop und Vogelwelt. Orn. Mitt., **2** (7): 157–162.

BUSSMANN, JOSEF. 1950. Zur Brutbiologie des Wiedehopfes (*Upupa epops*). Orn. Beob., **47** (4): 141–151, 4 figs.—Pair-formation, incubation period, brooding, feeding of young, relative rate of growth of young.

CLANCEY, P. A. 1950. A new race of *Turdus viscivorus* Linnaeus from the western Palaearctic. Limosa, **23** (3–4): 337–338.—*Turdus viscivorus precentor* (Darnley, E. Renfrewshire, SW. Scotland).

CLARK, CHARLES T., AND MARGARET M. NICE. 1950. William Dreuth's study of bird migration in Lincoln Park, Chicago. Chicago Acad. Sci. Spec. Publ. No. **8**: 1–43, 6 tables, 1 pl.—A tabulation of 16 years of observation in the field. The 256 species (260 subspecies) are listed as to: earliest and latest dates seen; average date of arrival; frequency of observation; and changes in status. Twenty-nine species are included as breeding in the Park.

CONDON, H. T. 1950. The Royal Penguin in Australian waters. Emu, **50** (1): 59–61.—Records specimen of *Eudyptes schlegeli* from South Australia and gives key to the species of *Eudyptes*.

CURRY-LINDAHL, KAI. 1950. Berguvens, *Bubo bubo* (L.), förekomst i Sverige jämte något om dess biologi. Vår Fågelvärld, **9** (3): 113–165, 5 photos, 1 table, 1 map.—English summary. Occurrence of Eagle Owl in Sweden and details of its biology. All known records summarized to show great decrease in numbers; reasons for decline; breeding behavior; food habits.

DANFORTH, C. H. 1950. Evolution and plumage traits in Pheasant hybrids, *Phasianus* x *Chrysolophus*. Evol., **4** (4): 301–315.—Most of the "taxonomic characters" are shown to be the result of relatively large gene complexes. It is

suggested that recessive mutations perhaps play a greater rôle in evolutionary progress than has been suspected. Many of the plumage traits, which in those forms seem to be the result of action of *groups* of genes, behave in first generation hybrids as though they were *simple*, recessive units.

DE HAAN, G. A. L. 1950. Notes on the invisible [sic] flightless rail of Halmahera. Amsterdam Nat., **1**: 57–60.—Habits of the little known *Habroptila wallacii*, with colored plate.

DEIGNAN, H. G. 1950. A tentative revision of the Australian races of the Grey-crowned Babbler, *Pomatostomus temporalis* (Vigors and Horsfield), with descriptions of two new subspecies. Emu, **50** (1): 17–21.—*P. t. mountfordae* (Groote Eylandt, Gulf of Carpentaria), *P. t. browni* (between Yirrkala and Melville Bay, Cape Arnhem Peninsula).

DEIGNAN, H. G. 1950. Two new races of the Spotted Nightjar. Emu, **50** (1): 21–23.—*Eurostopodus guttatus gilberti* (Ambukwamba, Groote Eylandt, Gulf of Carpentaria), *E. g. insulanus* (Tepa, Babar Island, Banda Sea).

DELACOUR, JEAN. 1950. Variability in *Chloephaga picta*. Amer. Mus. Nov., No. **1478**: 1–4.—Recognizes *C. p. picta* from southern tip of S. America and *C. p. leucoptera* from the Falkland Islands.

DESCHAUENSEE, RODOLPHE MEYER. 1950. Colombian Zoological Survey, Part VII.—A collection of birds from Bolívar, Colombia. Proc. Acad. Nat. Sci. Philadelphia, **102**: 111–139.—*Ramphocelus dimidiatus molochinus* (San Angustín, 5100 ft., Huila, Colombia), *Spermophila aurita chocoana* (Nuquí, 300 ft., Chocó, Colombia), new subspecies.

DUFFEY, ERIC. 1950. Non-breeding in the Fulmar *Fulmarus glacialis*. Scot. Nat., **62** (2): 111–121.—Non-breeding Fulmars are usually present in breeding colonies. It is suggested that the Fulmar breeds in its third year and then every two years, or that it breeds in its third year and then every three years.

DUFFEY, ERIC, AND DAVID E. SERGEANT. 1950. Field notes on the birds of Bear Island. Ibis, **92** (4): 554–563.—List of 28 species with notes on status, reproduction, and food habits.

EISENMANN, EUGENE. 1950. Behavior and habitat of *Thryophilus leucotis* in Central Panamá. Wilson Bull., **62** (4): 216.

EVANS, FRANCIS C. 1950. Relative abundance of species and the pyramid of numbers. Ecology, **31**: 631–632.—Three graphic presentations are given, analyzing relative abundance of 79 species of breeding-birds on a 17000-acre tract in New York State.

FLEAY, DAVID. 1950. Random notes on the White Goshawk. Emu, **50** (1): 1–4, 2 pls.

FLEMING, C. A. 1950. New Zealand Flycatchers of the Genus Petroica Swainson. Trans. Roy. Soc. New Zealand, **78**: 14–47, 127–160.—In this systematic study of the New Zealand flycatchers the author includes in one genus the species hitherto included in the genera *Petroica* and *Miro*, this latter genus being reduced to the rank of subgenus. The classification adopted is as follows: *Petroica* (*Petroica*) *macrocephala macrocephala*, *P.* (*P.*) *m. toitoi*, *P.* (*P.*) *m. chathamensis* n. name, *P.* (*P.*) *m. marrineri*, *P.* (*P.*) *m. dannefaerdi*, *P.* (*Miro*) *australis australis*, *P.* (*M.*) *a. rakiura* new subspecies, *P.* (*M.*) *a. longipes*, *P.* (*M.*) *traversi*. The main changes involved are the merging of *macrocephala* and *toitoi* in one species, of *australis* and *longipes* in another species, and the transfer of *dannefaerdi* from *Miro* to *Petroica*. Each subspecies is treated fully under the headings—characters, moult and plumages, habitat, general habits, nest and eggs, affinities, distribution.—W. R. B. Oliver.

FORD, RICHARD L. E. 1950. Eggs and Nests of British Birds. (Adam and Charles Black, London), pp. vi + 7–96, 24 pls. (8 col.). Price, $1.25.—Another in "Black's Young Naturalist's Series"; excellent photographs and colored plates of eggs.

GÉROUDET, PAUL. 1950. La Fauvette orphée aux environs de Genève *Sylvia hortensis* Gm. Nos Oiseaux, **20** (211/12): 221–232, 2 figs., 1 photo.—Distribution, ecological niche, migration dates, behavior, song, nests, and eggs.

GIBB, JOHN. 1950. The breeding biology of the Great and Blue Titmice. Ibis, **92** (4): 507–539.—In the first three months of 1947, 200 nesting boxes were placed in a mixed deciduous wood at a density of about two boxes per acre. The combined population of the two species increased from 43 pairs in 1947 to 135 pairs in 1949 with practically all pairs of both species using the boxes. Breeding dates varied from two to three weeks in different years; it is believed that the exact season is timed to the period of abundance of the particular species of larvae on which the young are fed. The average number of eggs per clutch for *Parus major* varied from 10.0 in 1949 to 12.3 in 1948; for *P. caeruleus* 10.4 in 1949 to 13.4 in 1947. The author distinguishes between "repeat clutches" (following desertion of first clutches) and "genuine second clutches" (following the successful rearing of a first brood). There is much valuable information on the egg weights of both species, variation of egg weight with clutch size, temperatures during incubation, nestling weights of first and second broods, nestling periods, etc. Exclusive of losses due to human agency, the breeding success of both species of tits was about 90 per cent.—J. Peters.

GIBSON, J. A. 1950. Methods of determining breeding-cliff populations of Guillemots and Razorbills. Brit. Birds, **43** (10): 329–331.

GRABER, RICHARD AND JEAN. 1950. New birds for the state of Kansas. Wilson Bull., **62** (4): 206–209.—Twelve forms.

GROSS, ALFRED O. 1950. Nesting of the Streaked Flycatcher [*Myiodynastes luteiventris*] in Panama. Wilson Bull., **62** (4): 183–193, 3 photos, 1 table.—Also some data on call notes and food habits.

GULLION, GORDON W. 1950. Voice differences between sexes in the American Coot [*Fulica americana*]. Condor, **52** (6): 272–273, 1 fig.—Female calls are nasal-like and lower than those of male; male lacks nasal quality; correlated with differences in structure of syrinx, which are figured.

HACHISUKA, MASAUJI. 1949. A biography of Marquis Kuroda. Tori, **12** (59): 212–215.—In Japanese.

HACHISUKA, MASAUJI. 1949. President Kuroda's Zoological Bibliography. Tori, **12** (59): 218–261.—In Japanese.

HARTLEY, P. H. T. 1950. An experimental analysis of interspecific recognition. Symposia Soc. Exp. Biol., No. **4**, Animal Behaviour, pp. 313–336, 4 figs., 1 pl., 2 tables.—Using the mobbing reaction as the criterion of recognition, it was found that many passerine species recognized owls by the *same* combination of visual characters. The process is thought to be innate.

HINDWOOD, K. A. 1950. The Little Grass-bird in Queensland. Emu, **50** (1): 36–40.—The five published records for the occurrence of *Megalurus gramineus* are based on sight or voice and are not considered acceptable from a scientific standpoint.

HINDWOOD, K. A. 1950. The late Neville W. Cayley: an appreciation. Emu, **50** (1): 52–56.

HINDWOOD, K. A., AND J. M. CUNNINGHAM, 1950. Notes on the birds of Lord Howe Island. Emu, **50** (1): 23–35, 2 pls.

HOGG, PETER. 1950. Some breeding records from the Anglo-Egyptian Sudan. Ibis, **92** (4): 574–578.

KELSO, LEON. 1950. Testing the film on the feather. Biol. Leaflet No. **53**: 1–2.—Surface film on feather conducts current.

KLIMMEK, FRITZ. 1950. Brutbiologische Beobachtungen beim Weissternigen Blaukehlchen [*Luscinia svecica cyanecula*]. Vogelwelt, **71** (5): 145–148.—Time of nesting and behavior.

KOSKIMIES, JUKKA. 1950. Tuloksia Riistaelainten Merkitsemisestä Suomessa vv. 1947–49. Suomen Riista (Helsinki), **5**: 134–143.—English summary. Records of 30 recoveries from 1500 wing-marked birds and ear-marked mammals.

KRAMER, GUSTAV. 1950. Der Nestbau beim Neuntöter (*Lanius collurio* L.). Orn. Ber., **3** (1): 1–14, 2 figs.—Nest construction.

KRAMER, GUSTAV. 1950. Über die Mauser, insbesondere die sommerliche Kleingefiedermauser beim Neuntöter (*Lanius collurio* L.). Orn. Ber., **3** (1): 15–22, 1 table.

KRAMER, VOLKHARD. 1950. Ernährungsbiologische Beobachtungen an den Horsten des Sperbers (Accipiter n. nisus L.) in der südlichen Oberlausitz von 1944–1948. Vogelwelt, **71** (5): 183–189.—Foods taken by more than 84 breeding pairs are given in tabular form by years.

LACK, DAVID. 1950. Family-size in Titmice of the genus *Parus*. Evol., **4** (4): 279–290, 11 tables.—Hatching success is similar for clutches of all sizes but survival over long periods may be slightly lower in large broods. It may be that small clutches are laid when conditions for raising young are less favorable. Clutch-size decreases markedly as the laying season advances and as food supply declines, but seasonal, regional, and individual differences in clutch-size are so great that one can hardly generalize on the data presented.—H. I. F.

LANZ, HANS. 1950. Vom Dreizehenspecht (*Picoides tridactylus alpinus* Brehm) und seinem Brutleben. Orn. Beob., **47** (4): 137–141.

LASKEY, AMELIA R. 1950. Cowbird behavior. Wilson Bull., **62** (4): 157–174, 1 table, 1 photo.—Songs, call notes, display, social dominance, pair formation, copulation, territory, and egg-laying were observed in 29 color-banded individuals.

LEA, ROBERT B., AND ERNEST P. EDWARDS. 1950. Notes on birds of the Lake Patzcuaro Region, Michoacan, Mexico. Condor, **52** (6): 260–271, 1 fig.—Brief notes in species accounts.

LEOPOLD, A. STARKER. 1950. Vegetation zones of Mexico. Ecology, **31**: 507–518.—Types of vegetation recognized and mapped: boreal forest, pine-oak forest, chaparral, mesquite-grassland, desert, cloud forest, tropical rain forest, tropical evergreen forest, tropical savannah, tropical deciduous forest, thorn forest, arid tropical scrub.

LINDROTH, HELMER, AND LARS LINDGREN. 1950. Metson Hakomisen Metsänhoidollisesta Merkityksestä. Suomen Riista (Helsinki), **5**: 60–81.—English summary. A study of the effect produced on trees by the habit of the Capercaillie, *Tetrao urogallus* L., of feeding on pine-needles.

LINSDALE, JEAN M. 1950. Observations on the Lawrence Goldfinch. Condor, **52** (6): 255–259, 2 figs.—Natural history notes including: food, habitat, flocking, courtship, nesting, incubation, and attentive periods.

LIPPENS, L. 1950. Migration d'Etourneaux [*Sturnus vulgaris*] a l'Embouchure de l'Escaut et au littoral Belge. Gerfaut, **40** (3): 73–102, 7 figs.—Routes of migration; numbers; time of migration; and behavior.

LONG, DOROTHY A. C., *et al.* 1950. [Concealment of food by Coal-Tit and Marsh-Tit]. Brit. Birds, **43** (10): 335–337.

LOWTHER, E. H. N. 1950. A Bird Photographer in India. (Oxford Univ. Press, London), pp. xii + 150, 78 pls. Price, $5.50.—Excellent photographs of many little-known birds; natural history notes in narrative.

MACKWORTH-PRAED, C. W., AND C. H. B. GRANT. 1950. On the relationship of *Pternistis afer* (Müller), *Pternistis cranchii* (Leach), and *Pternistis humboldtii* (Peters). Ibis, **92** (4): 596–601.—*Pt. afer* is maintained as a distinct species; *Pt. cranchii* and *Pt. humboldtii* are considered conspecific. The authors recognize 16 races of *cranchii* which are listed together with their synonyms, characters, and geographic distribution.

MACLAREN, P. I. R. 1950. Bird-ant nesting associations. Ibis, **92** (4): 564–566.—Near Lagos, Nigeria, *Spermestes cucullatus* prefers to nest in trees in which a species of a large red ant is also nesting.

MACQUEEN, PEGGY MUIRHEAD. 1950. Territory and song in the Least Flycatcher [*Empidonax minimus*]. Wilson Bull., **62** (4): 194–205, 1 fig., 2 tables.—At Douglas Lake, Michigan, 44 nests were studied in 1942, 1944, and 1946. Population of broken aspen woods was 200 to 271 pairs per 100 acres; in uniform, unbroken aspen woods it was 70 pairs per 100 acres. Territories were of two kinds—one in which the pair mated, nested, and fed throughout the reproductive cycle, and one in which pair mated and nested but fed in undefended, communal areas. Thirty-three territories averaged 0.18 acres in extent and were defended primarily by males.

MARIEN, DANIEL. 1951. Notes on the bird family Prunellidae in southern Eurasia. Amer. Mus. Nov., No. **1482**, 28 pp.—A careful study of the genus *Prunella* based chiefly upon 350 specimens in the Walter Koelz Collection. Subspeciation, speciation, and ecology are considered. Although several of the 12 species of the genus may exist in the same general region, they are, with one doubtful exception, rather clearly separated ecologically, and hence probably do not compete severely with each other.—D. A.

MARSHALL, A. J. 1950. The function of vocal mimicry in birds. Emu, **50** (1): 5–16, 1 pl.—In Australia at least, the superior mimics are found among those species in whose habitat visibility is restricted by dense vegetation. It is suggested that lack of visibility renders it biologically advantageous for birds to rely more on sound in announcing territory.

MAŠTROVIĆ, ANTUN. 1947. *Charadrius alexandrinus alexandrinus* u oblasti jugoslavenske faune. Hrvatsko Prirodoslovno Drustvo (Soc. Sci. Nat. Croatica), Glasnik, ser. II/B, T. 1: 99–108, pl. 5. (Resumé in Yugoslav.)

MAYR, ERNST, AND E. THOMAS GILLIARD. 1950. A new Bower bird (*Archboldia*) from Mount Hagen, New Guinea. Amer. Mus. Nov. No. **1473**: 1–3.—*Archboldia papuensis sanfordi*, new subspecies from sw. slope of Mt. Hagen, 4 mi. W. Tomba, Central Highlands, New Guinea.

MAYR, ERNST, AND ERWIN STRESEMANN. 1950. Polymorphism in the Chat genus *Oenanthe* (Aves). Evol., **4** (4): 291–300, 2 figs., 2 tables.—Six of 18 species show polymorphism in which a certain character is either present or absent (not partial or continuous as it would be if controlled by a series of genes). Many so-called "neutral characters" may actually have selective value.

MCELROY, THOMAS P., JR. 1950. Handbook *of Attracting Birds.* (Alfred A. Knopf, New York), pp. xiv + 163, 51 line cuts. Price, $2.75.—Ways and means

of attracting birds by artificial means (feeding, boxes, etc.) and by improvement of natural environment (planting for food and cover, water).

MEINERTZHAGEN, R. 1950. The Namib of South West Africa. Ibis, **92** (4): 567–573.—Description of the Namib, a strip of coastal desert between the Kunene River and Port Nolloth, and a generalized account of its bird life.

MILLER, ALDEN H., AND ROBERT W. STORER. 1950. *A new race of* Parus sclateri *from the Sierra Madre del Sur of Mexico.* Journ. Wash. Acad. Sci., **40** (9): 301–302.—*P. s. rayi* (Omilteme, Guerrero, Mexico).

MILON, LT. COL. PH. 1950. Quelques observations sur la nidification des sternes dans les eaux de Madagascar. Ibis, **92** (4): 545–553.—*Hydroprogne caspia* breeds in Madagascar on small islands near Diégo-Suarez Bay, near Tuléar, and near Tamatave; *Sterna bergii* and *Sterna bengalensis* breed on Nosy-Tsara near Diégo-Suarez Bay; *Sterna dougallii*, 4000 pairs breed on Nosy-Manitra off the southwest coast, also believed to breed in the Tamatave region, east coast. *Sterna fuscata nubilosa* and *S. anaetheta* breed in small numbers on Nosy-Manitra and Nosy-Mborono. *Anous t. tenuirostris* in small numbers on Nosy-Manitra.

MOLTONI, EDGARDO. 1950. Dati positive sull' alimentazione dei Rondoni (*Micropus*) in Italia. Riv. Ital. Orn., **20** (4): 140–144.—Foods of *Micropus apus* and *M. melba* in Italy.

MOORE, ROBERT T. 1950. A new race of *Melanerpes chrysogenys* from Central México. Proc. Biol. Soc. Wash., **63**: 109–110.—*M. c. morelensis* (Cuernavaca, Morelos, México, altitude 4700 feet).

MOREAU, R. E. 1950. A "stepped cline" in *Bessonornis*. Ibis, **92** (4): 642–643.

NOVAES, FERNANDO C. 1950. Sôbre las Aves de Sernambetiba, Distrito Federal, Brasil. Rev. Brasil. Biol., **10** (2): 199–208, 1 table, 4 photos.—Breeding populations of 26 species in August, September, and October, and their relationship with vegetation types.

ODUM, EUGENE P. 1950. Bird populations of the Highlands (North Carolina) Plateau in relation to plant succession and avian invasion. Ecology, **31**: 587–605.—Breeding populations varied between 396 and 160 pairs per 100 acres in shrubland, intermediate forest, and climax forest in the hemlock and the oak-chestnut seres. Species composition varied markedly between shrubland and forest but was essentially the same in mixed conifer and hardwood in North Carolina, West Virginia, and New York.

OHTA, HARUO. 1949. A life history of *Alseonax l. latirostris*. Tori, **12** (59): 269–271.—Nesting habits noted briefly; suggestion that two broods may be raised annually. In Japanese.

PAAVOLAINEN, EERO-PEKKA. 1950. Piirteita provoon Lantisen Saaris-toalueen Linnustosta. Suomen Riista (Helsinki), **5**: 28–59.—English summary. Description and measurement of bird populations in the western archipelago of Porvoo.

PALMGREN, PONTUS. 1949. Some remarks on the short-term fluctuations in the numbers of northern birds and mammals. Oikos, **1**: 114–121.—The average interval between peaks of population in seven species of European birds and in eight species of mammals varies from 3.13 to 4.00 years. These fluctuations seem explainable "as a compound result of random variation of some master factors, apparently climatic, and the influence of the population density of the preceding year."

PAULUSSEN, W. 1950. Nidologische Aantekeningen over de Spotvogel [*Hippolais icterina*]. Gerfaut, **40** (3): 103–106.—121 nests studied; normal set is 5 eggs; incubation is 13 days; territories established in late April or early May; nesting starts early in June.

PENNIE, IAN D. 1950. The history and distribution of the Capercaillie [*Tetrao urogallus*] in Scotland (to be cont.). Scot. Nat., **62** (2): 65–87.—Introduction of, habitat, and present distribution.

PHELPS, WILLIAM H., AND WILLIAM H. PHELPS, JR. 1950. Three new subspecies of birds from Venezuela. Proc. Biol. Soc. Wash., **63**: 43–50, 1 pl.—*Lepidocolaptes souleyetii uaireni* (Hato Santo Teresa, Bolívar); *Diglossa duidae parui* and *Atlapetes personatus parui* (Cerro Paru, Terr. Amazonas).

PHILLIPS, ALLAN R. 1950. The pale races of the Steller Jay. Condor, **52** (6): 252–254.—Recognizes: *Cyanocitta stelleri macrolopha* Baird; *C. s. diademata* (Bonaparte); and *C. s. browni*, new subspecies from Carter Canyon, near Summerhaven, Santa Catalina Mts., Arizona.

PRESTWICH, ARTHUR A. 1950. Records of Birds of Prey Bred in Captivity. (A. A. Prestwich, Southgate, London), pp. 1–24.

PYNNÖNEN, ALPI. 1950. Pyyn elintavoista. Suomen Riista (Helsinki), **5**: 7–27.—English summary. Mating and nesting behavior of the Hazel Grouse, *Tetrastes b. bonasia*.

RAITASUO, KALEVI. 1950. Peto-, Varis-Ja Lokkilintu-Jemme Tenteminen. Kenttäopas metsästäjille ja riistanhoitajille. Hur Man Känner Igen Våra Rov-, Kråk-och Måsfåglar. Suomen Riista (Helsinki), **5**: 92–133.—English summary. A field guide, with many original drawings, to birds of prey, crows, gulls, and terns.

RICHDALE, L. E. 1950. The Pre-egg Stage in the Albatross Family. (Biol. Monog. No. 3). (Otago Daily Times, Dunedin, N. Z.), pp. 1–92, 7 tables, 13 figs. Price, 12/6.—This work is a detailed account of the habits of the Royal Albatross, *Diomedea epomophora sanfordi*, at Taiaroa Head, Otago, and a shorter account of other species of the family Diomedeidae, especially *D. exulans*, *D. immutabilis*, and *D. bulleri*. Under each of these two main headings the information is given under three subheadings: type of behavior, behavior of breeding birds, unemployed birds. The author defines a number of types of behavior such as, billing, yapping, sky call, gawky look, parties, visiting, clapping, and so on. A general discussion concludes the book. W. R. B. Oliver.

RINGLEBEN, HERBERT. 1950. Zur Ausbreitung und Verbreitung des Weisstorches, Ciconia c. ciconia (L.), in Nordost-Europa. Orn. Ber., **3** (1): 27–53, 1 fig.

SCHWARTZ, CHARLES W., AND ELIZABETH REEDER SCHWARTZ. 1950. Breeding habits of the Barred Dove in Hawaii with notes on weights and sex ratios. Condor, **52** (6): 241–246, 2 figs., 3 photos.—Breed throughout the year but two periods of increased activity occur; development up to 10 days is described; weight of adult males, 59.7 grams; weight of adult females, 55.2 grams; sex ratio in 207 adults was 115 males to 100 females.

SERLE, WILLIAM. 1950. A contribution to the ornithology of the British Cameroons. Ibis, **92** (4): 602–638.—This second and concluding installment, while devoted largely to taxonomy and distribution, contains numerous field notes and descriptions of nests and eggs.

SICK, HELMUT. 1950. Eine neue Form von Dendrocincla fuliginosa vom Alto Xingu, Zentralbrasilien (*D. f. trumaii* subsp. nova). Orn. Ber., **3** (1): 23–26.

SICK, HELMUT. 1950. Contribuição ao Conhecimento da Ecologia de "Chordeiles rupestris" (Spix) (Caprimulgidae, Aves). Rev. Brasil. Biol., **10** (3): 295–306, 3 figs., 2 photos.—English summary. Refers to biology of this Nighthawk in the Mato Grosso. A sand-colored bird, this species lives and nests on low, sandy, open areas. Terrestrial locomotion is gull-like, and flight and voice are tern-like. It is quite active diurnally.

SIMMONS, K. E. L. 1950. A Buff-backed Heron incapacitated by Mallophaga. Ibis, **92** (4): 648.

SIMMONS, K. E. L. 1950. Display of the Egyptian Hoopoe *Upupa epops major*. Ibis, **92** (4): 648.

SNOW, D. W. 1950. The birds of São Tomé and Principe in the Gulf of Guinea. Ibis, **92** (4): 579–595.—The islands lying about 150 miles off the coast of Africa are of volcanic origin. Little of the original forest remains on either except on the less accessible slopes. But 13 species of resident land birds are common to the two islands; the commonest species are mostly the endemic ones, and it is the non-endemic ones that are now in danger of extinction. The annotated list of species contains much useful information on status, habits, breeding, voice, and food.

SORENSEN, J. H. 1950. The Royal Albatross. Scientific Results of the New Zealand Sub-Antarctic Expedition 1941–45. Cape Expedition Series Bull. No. **2**: 1–39 (Wellington, N. Z.)—The author spent several years at the Auckland and Campbell Islands as a member of one of the watching parties stationed there during the war. Detailed investigation of the life history of the Royal Albatross, *Diomedea e. epomophora*, was made on Campbell Island. The scope of the research is shown by the following section headings: habitat, mortality, unusual behavior, walking and flight, sexual dimorphism, courtship and nesting, eggs and incubation, hatching of the chicks, food and feeding, moult and parasites, weekly description of chicks, history of the royal albatross colony. The author records the fact, not known before his visit, that the sexes of the subspecies of Royal Albatross on Campbell Island differ in color and size. The male has more white on the humeral flexure than the female. The sexes of *D. e. sanfordi* are similar in color. The report is amply illustrated by tables, graphs, and photographs.—W. R. B. Oliver.

SUTTON, GEORGE MIKSCH. 1950. The Crimson-collared Grosbeak [*Rhodothraupis celaeno*]. Wilson Bull., **62** (4): 155–156, 1 col. pl.—Natural history notes.

SVÄRDSON, GUNNAR. 1949. Competition and habitat selection in birds. Oikos, **1**: 157–174.—Birds select their proper habitat through a "heterogenous summation of stimuli" from the outside. These stimuli are analyzed for four species of *Anthus*. Both intraspecific and inter-specific competition is discussed and related to distribution, speciation, and fluctuations in abundance.

TEBBUTT, C. F. 1950. Birds becoming "caught" in flocks of other species. Brit. Birds, **43** (10): 332–333.—Wood-pigeon unable to escape from flock of Mallards, with which it had flushed, until ducks settled on water.

TINBERGEN, L. 1950. Der geheime Finkenzug. Orn. Beob., **47** (5/6): 164–170.—Effects of meteorological conditions on the fall flights of *Fringilla coelebs*.

TODD, W. E. CLYDE. 1950. A new race of Hudsonian Chickadee. Ann. Carnegie Mus., **31**: 333–334.—*Penthestes hudsonicus labradorius* (Rigolet, Labrador).

VAN BENEDEN, A. 1950. Moeurs hivernales du Pipit Aquatique *Anthus sp. spinoletta* (L.). Gerfaut, **40** (3): 107–119.—Song, behavior, pairing.

VAN IJZENDOORN, A. L. J. 1950. Broedvogels van de Wieringermeer in 1948 en 1949. Limosa, **23** (3–4): 338–357, 4 figs.—English summary.—Breeding birds of a part, reclaimed in 1930, of the Zuidersee; analysis of changes in populations.

VAURIE, CHARLES. 1950. Notes on some Asiatic Nuthatches and Creepers. Amer. Mus. Nov. No. **1472**: 1–39, 4 figs., 6 tables.—*Sitta europea koelzi* (Patkai Hills, Assam-Burma border), new subspecies; primarily taxonomic.

VAURIE, CHARLES. 1950. Variation in *Oenanthe lugubris*. Ibis, **92** (4): 540–544.

VERHEYEN, R., AND GEO. LE GRELLE. 1950. Interpretation des Resultats du

Baguage Relatifs au Pipit des Pres *Anthus pratensis* (L.). Gerfaut, **40** (3): 124–131.

VERHEYEN, R. 1950. Étude relative a la Migration et aux Quartiers d'Hiver du Faucon Hobereau (*Falco subbuteo*). Gerfaut, **40** (3): 142–152.

VERHEYEN, R. 1950. Resultats du Baguage des Oiseaux en Belgique—Exercice 1949. Gerfaut, **40** (3): 152–177.—Lists of recoveries and distances traveled.

VLEUGEL, D. A. 1950. Windrichtung und Zugstärke beim Buchfinken (*Fringilla coelebs* L.). Orn. Beob., **47** (5/6): 158–164.—Effect of wind on flights of these birds in Holland.

VOIPIO, PAAVO. 1950. Jaksoittainen Runsauden-vaihtelu Ja Paikallisten Eläinkantojen Säilyminen. Suomen Riista (Helsinki), **5**: 144–164.—English summary. Study of genetic factors involved in the survival of cyclic species.

VOOUS, K. H. 1950. Geographical variation in the Lesser Sparrow Hawks from Indonesia (*Accipiter virgatus*). Amsterdam Nat., **1**: 95–107.—*Accipiter virgatus vanbemmeli*, new subspecies, from northeastern Sumatra.

VOOUS, K. H. 1950. The post-glacial distribution of *Corvus monedula* in Europe. Limosa, **23** (3–4): 281–292, 1 fig.—The post glacial distribution of *Corvus monedula* based upon the taxonomy and the ranges of geographic races. These are compared with the distributional history of *Dendrocopos major* and *P. pyrrhula*. The present European populations appear to consist of Asiatic, southeast European, and southwest European components which were isolated from each other during the last glacial period. Additional populations from the Iberian Peninsula and North Africa probably became isolated before the last glaciation. Practically the whole of central Europe is occupied by populations which must have been derived from the southwestern European glacial refuge.—H. I. F.

WILKINSON, D. H. 1950. Flight recorders: A technique for the study of bird navigation. Journ. Exper. Biol., **27**: 192–197, 3 figs.—A device (plate and source of radiation) is described by which the actual time in flight may be determined by counting particle tracks on a negative.

WILLIAMS, GEORGE G. 1950. The nature and causes of the 'coastal hiatus.' Wilson Bull., **62** (4): 175–182, 1 fig.—This "hiatus" appears to be a lacuna between two major migration routes. Few transient species found here in fair weather. Cold fronts and north winds often force birds into the area and out over the Gulf where they have been mistaken for trans-Gulf migrants.

WILLIAMS, JOHN G. 1950. A new race of *Cinnyris regius* from Tanganyika. Ibis, **92** (4): 644–645.—*Cinnyris regius anderseni* (Mahari Mts., *ca.* 6000 feet, eastern shores of Lake Tanganyika).

WILLIAMS, JOHN G. 1950. On the status of *Cinnyris mediocris moreaui*. Ibis, **92** (4): 645–647.—Believed to be a distinct species closely allied to *C. loveridgei*.

WILLIAMS, JOHN G. 1950. Further notes on *Cinnyris moreaui*. Ibis, **92** (4): 647.

WILSON, HUGH. 1950. The R. A. O. U. camp-out at Lake St. Clair [Tasmania], November, 1949. Emu, **50** (1): 41–51, 4 pls.—Ecological notes and species of birds observed.

ZIMMER, JOHN T. 1950. Studies of Peruvian birds. No. 58. The genera Chlorostilbon, Thalurania, Hylocharis, and Chrysuronia. Amer. Mus. Nov., No. **1474**: 1–31.—*Hylocharis cyanus conversa* (Camp-woods, 750 meters, Province of Sara, Bolivia), new subspecies.

ZIMMER, JOHN T. 1950. Studies of Peruvian birds. No. 59. The genera Polytmus, Leucippus, and Amazilia. Amer. Mus. Nov., No. **1475**: 1–27.—*Amazilia fimbriata alia* (Porto de Moz, Rio Xingú, Brazil), new subspecies.

ZIMMER, JOHN T., AND WILLIAM H. PHELPS. 1950. Three new Venezuelan birds. Amer. Mus. Nov., No. **1455**: 1–7.—*Acestrura heliodor meridae* (Páramo Conejos, State of Mérida); *Picumnus spilogaster orinocensis* (Altagracia, Orinoco R., State of Mérida) new subspecies, and *Picumnus nigropunctatus* (Araguaimujo Mission, Orinoco Delta) new species.

ZIMMERMANN, KLAUS. 1950. Jährliche Schwankungen in der Ernährung eines Waldohreulen-Paares [*Asio otus*] zur Brutzeit. Vogelwelt, **71** (5): 152–155.—Food habits during the breeding seasons of four years.

OBITUARIES

ROLLO HOWARD BECK, a Life Member of the American Ornithologists' Union, died at Planada, Merced Co., California, November 22, 1950, at the age of 80. He was born August 26, 1870, at Los Gatos, Santa Clara Co., California, on the west side of the Santa Clara Valley. When he was about six years old his parents moved to Berryessa on the east side of the valley where he attended grammer school, worked in the orchards, and formed a life-long friendship with Frank H. Holmes who taught him how to make bird skins and to mount birds. He joined the Cooper Ornithological Club and was elected an associate of the American Ornithologists' Union in 1894, and in 1917 became a Member of the Union.

He visited various points in California collecting birds and eggs, and while on a trip to Lake Tahoe he received an invitation to join the F. B. Webster-Harris Expedition to the Galapagos Islands to collect giant tortoises for Lord Rothschild. In 1905 he made a second expedition to the Galapagos to collect birds and tortoises for the California Academy of Sciences. The next few years were spent in collecting sea birds off the California coast near Monterey Bay and waterfowl in the San Joaquin Valley near Los Baños. In 1908 Beck made a trip to Alaska with A. C. Bent and Alexander Wetmore, and in December, 1912, he left for the coast of Peru where he rediscovered the long lost Hornby Petrel. His main work however began later in the South Pacific where, in company with his wife whom he had married in 1907, he headed the Whitney South Sea Expedition and spent several years exploring the various islands of the South Pacific and the interior of New Guinea for the American Museum of Natural History. Finally, tiring of the hardships of a wandering life of field collecting, he retired to his orchard at Planada where he spent the remainder of his life.

As a collector, Beck was noted for his beautiful symmetrical skins of sea birds and waterfowl. He developed a technique and rapidity in making skins that was unsurpassed. His field reports were illustrated with fine photographs. His publications, beginning in 1893 and extending over a period of more than 40 years, include a series of articles and short notes on California birds in 'The Auk,' 'Condor,' 'Nidologist,' and 'Osprey.' One of his most important contributions was an annotated list of 94 species of "Water Birds of the Vicinity of Point Pinos, California," published in the 'Proceedings of the California Academy of Sciences' in 1910. He also prepared a brief autobiography and a summary of his expeditions which appeared in 1936 in R. C. Murphy's "Oceanic Birds of South America."—T. S. PALMER.

GEORGE KRUCK CHERRIE, a Member of the American Ornithologists' Union, died at Newfane, Vermont, January 20, 1948, at the age of 82. He was the son of Martin and Agnes Breckenridge Cherrie and was born in Knoxville, Iowa, August 22, 1865. His education was received in the schools at Knoxville and at the State Agricultural