

being habitable for only a part of the year; many factors and circumstances have since influenced these primary facts so that now the migration of almost every species is developed in ways peculiar to itself.

This brings us to the second part of this paper, an hypothesis as to how migration routes developed, lengthened and attained their present form. First came the invasion little by little but eventually to its farthest limit, of postglacially available breeding territory not suitable for winter occupancy. Retreat of the breeding population from this new territory in winter would congest the more or less original permanent resident range so that pioneers would push its southern limit southward. Either the entire population must shift south, the more southerly breeders evacuating territory occupied by birds from the north, or the northern migrants pass over residents, to occupy territory beyond them. As a matter of fact each condition has been demonstrated to exist today in certain cases. The primitive migration route, supposed to follow the line of original invasion, more or less direct or circuitous, must have been altered in many cases, alterations tending to make it more direct. A condition wherein summer and winter ranges overlap is presumed to be primitive. Environmental and economic conditions which tend to extend the summer range in one direction (to the north), the winter range in the other (to the south) are discussed, but not considered adequate to account for the evolutionary tendency which seems to have been active in thus lengthening the migration route, at both ends, so that the winter range is frequently in part, or in whole, removed beyond any faunal area where the species has affinities. It is suggested that the migration-urge once started, has tended to increase, as an evolutionary behavior rectegradation, causing the bird to swing annually pendulum-wise over an ever increasing course. The original home of the species, where it was at one time resident, may then lie neither in the present breeding or wintering areas, but at some intermediate point. As has been said, environmental influences are discussed in connection with the theory advanced, yet it may be that their influence has not been given full credit, either as a factor to, in some cases, turn migration from a direct course, or to produce it southward as a balance to its northward extension. Take for instance the case of the American Golden Plover, perhaps diverted eastward to the coast of Labrador in fall by the berry-crop, with winter range established in high latitudes of the southern hemisphere where winter conditions parallel those of the bird's summer home.—J. T. N.

Shorter Papers.

Berlepsch, Hans Freiherr von.—Twenty-second Review of Bird Conservation at Burg Seebach. [In German.]

Bowen, W. Wedgwood.—The South African Forms of *Saxicola torquata*. (*Proc. Acad. Nat. Sci. Phila.*, LXX XIII, pp. 7-9, February, 1931.)—Six races recognized of which *S. t. stonei* (p. 8) from Angola is described as new.

Brodkorb, Pierce.—Description of a New Warbler from Guadeloupe, West Indies. (*Proc. Biol. Soc. Washington*, Vol. 44, pp. 3-4, February 21, 1931.)—*Dendroica plumbea guadeloupensis* (p. 3).

Danforth, Stuart T.—Puerto Rican Ornithological Records. (*Jour. Dept. Agr. of Porto Rico*, XV, No. 1, January, 1931.)—Annotated list of 144 species with lists of specimens in the author's collection bringing the record of his ornithological observations in the island up to date.

Beatty, Harry A.—Notes on Birds Observed at Guanica Lagoon and its Vicinity (Porto Rico). (*Journ. Dept. Agr. Porto Rico*, XV, January, 1931.)—Notes on 24 species.

deSchauensee, R. M.—A New Species of Bustard for South Africa. (*Proc. Acad. Nat. Sci. Phila.*, LXX XII, pp. 427-428, January 12, 1931.)—*Eupodotis alleni* (p. 427) Spitz Koppij, Protectorate of S. W. Africa.

deSchauensee, R. M.—Two New Birds from South Africa. (*Proc. Acad. Nat. Sci. Phila.*, LXX XIII, pp. 5-6, January 24, 1931.)—*Lophoceros williaminae* (p. 5) Kachikau, Bechuanaland. *Certhilauda albofasciata boweni* (p. 5) Spitz Koppij, S. W. Africa.

Friedmann, Herbert.—The Geographic variations of *Neocichla gutturalis*. (*Jour. Wash. Acad. Sci.*, Vol. 20, p. 434, Oct. 19, 1930.)—*N. g. angustus* described as new from Tanganyika Territory.

Geiser, S. W.—Naturalists of the Frontier, VIII, Audubon in Texas. (Autumn 1930, Number of the *Southwest Review*).—An interesting journal of Audubon's trip along the coast of Louisiana and Texas in the spring of 1837, reconstructed from the Buchanan biography and entries in the 'Birds of America.' The author while very properly deploring the errors in Buchanan's 'Life of Audubon,' makes a few of his own. The Audubon biography of 1898, for instance, was by Audubon's granddaughter not his daughter and Audubon's 'Birds of America' was not the first "repayment by the New World to the Old for inspiration and leadership in science," since Alexander Wilson's 'Ornithology' was completed thirteen years before Audubon's work was begun, and to quote Baron Cuvier it "treated American birds better than those of Europe have yet been treated."

Griscom, Ludlow.—Studies from the Dwight Collection of Guatemala Birds III. (*Amer. Mus. Novitates*, No. 438, Dec. 15, 1930, pp. 1-18.)—Twenty new subspecies described with reviews of the forms of *Icterus gularis*, *I. sclateri* and *Zonotrichia capensis*. A new generic name *Smaragdolanus* (p. 3) is proposed for *Vireolanus pulchellus*.

Groebbels, Franz.—Physiological Investigations of Transient Birds of Heligoland (*Zeitschr. f. vergl. Physiologie*, 1930, pp. 682-702). [In German.]—Other papers on bird flight by the same author are published in 'Die Naturwissenschaften' XVII, Heft 46, XVIII, Heft 38; 'Forschungen u. Fortschritte' V, No. 16 and *Verh. Ornith. Ges. Bayern*, XVIII, Heft 1-2.

Groebbels, Franz.—On Assimilation and Food Waste in Birds. (*Der Zool. Garten*, III, Heft 9-10, 1930.) [In German.]—Other papers by Groebbels on digestion, food reactions, etc., in birds, are published in *Pflugers*

Archiv. f. die gesamte Physiologie des Menschen und der Tiere, 216, Heft 6; 218, Heft 1; and 224, Heft 6.

Groebbels Franz.—On the Color of the Cuticle of the Stomach Muscles of Birds. (*Zeitsch. f. vergleich. Physiologie*, X, Heft 1.) [In German.]

Groebbels, Franz.—On the Life of the Bird Embryo and the Length of Life of the Cuckoo in the Egg. (*Ornith. Monatsber.*, May, 1930.) [In German.]

Harper, Francis.—Physiographic and Faunal Areas in the Athabasca and Great Slave Lake Region. (*Ecology*, XII, Jan. 1931, pp. 18–32.)

Kuroda, Nagamichi.—On the Geographic Distribution of the Birds of Japan and Vicinity. (*Proc. Fourth Pacific Scientific Congress*, Java, 1929.)

Lefevre, Rufus H.—Summer Birds of Hong Kong. (*Lingnan Science Journal*, Canton, IX, Nos. 1–2, June, 1930.)

Ortenburger, A. J. and Little, Elbert L., Jr.—Notes on a Collection of Birds from Western Oklahoma. (*Biol. Survey (Oklahoma)* II, No. 4, 1930.)

Nice, Margaret M.—A List of the Birds of the Campus of the University of Oklahoma (*Biol. Survey (Oklahoma)* II, No. 4, 1930.)—113 species listed, 13 residents, 27 summer residents, 9 winter visitants and 65 transients.

Peters J. L.—Additional Notes on the Birds of the Almirante Bay Region of Panama. (*Bull. Mus. Comp. Zool.*, LXXI, No. 5, Feb. 1931, pp. 293–345.)—Annotated list of a collection of over 1000 skins made by H. Wedel and presented to the museum by F. H. Kennard. A supplementary list includes additional species recorded from the region by others: *Leptotila plumbeiceps notius* (p. 298) Almirante and *Oreopelia laurencii lentipes* (p. 300) Tenorio River, Costa Rica, are described as new.

Peters, J. L.—Notes on Some Night Herons. (*Proc. Boston Soc. Nat. Hist.*, Vol. 39, No. 7, November, 1930.)—Sharpe in his 'Handlist' recognized eight species of Night Herons. Of these Mr. Peters makes *tayazu-guira* a synonym of the earlier *hoactli*, which replaces the untenable name *naevia* for the bird of America; true *nycticorax* of Europe and *cianocephalus* of Patagonia, etc., are recognized as distinct subspecies, while *leuconotus* is referred to a separate genus *Caltherodius* erected for it and the more recently described *magnificus*. The last four of Sharpe's species are regarded as subspecies of *caledonicus* and four additional races of it are described.

Peters, J. L.—Remarks on the Hawks hitherto included in the Genus *Ibycter*. (*Proc. Biol. Soc. Wash.*, Vol. 44, pp. 23–26, Feb. 21, 1931.)—The species *ater* and *americanus* are referred to *Daptrius* which has priority over *Ibycter* and is not considered separable while the other species—*australis albogularis*, *megalopterus*, and *carunculatus* are referred to *Phalco-banus* with which *Senex* is merged.

Portenko, L. A.—*Hypotriorchis subbuteo*. (*Bull. Acad. Sci. U.S.S.R.*,

1930, pp. 299-300.)—Six races recognized of which *H. s. distinguendus* (p. 302) and *H. s. planicola* (p. 308) are described as new. [In Russian.]

Riley, J. H.—Description of three New Birds from Siam. (*Proc. Biol. Soc. Washington*, Vol. 43, pp. 189-192, Nov. 29, 1930.) *Arborophila diversa* (p. 189); *Garrulax ferrarius* (p. 190) and *Dicaeum umbratile* (p. 191).

Robinson, H. C. and Kloss, C. B.—A Second Collection of Birds from Pulo Condore. (*Jour. Siam Soc. Nat. Hist., Suppl.* VIII, No. 2, Nov. 1930, pp. 79-86.)—*Otus bakkamoena condorensis* (p. 81) is described as new.

Stone, Witmer.—Three New Birds from Honduras. (*Proc. Acad. Nat. Sci. Phila.*, LXX XIII, p. 123, Jan. 23, 1913.)—*Myiochanes emleni* (p. 1); *Catharus melpomene worthi* (p. 2); *C. frantzi juancitonis* (p. 2).

Stresemann, Erwin.—Which Paradise Birds are of Hybrid Origin? (*Novitates Zoologicae*, XX XVII, pp. 6-15, Nov. 1930.) [In German.]—No less than seventeen named forms are regarded as hybrids between well known species belonging to different genera, and one between two congeneric species. Several genera based upon these hybrid forms will also fall if Dr. Stresemann's views are accepted.

Swenk, M. H.—The Food of the Ring-necked Pheasant in Central Nebraska. (*Bull. 50 Agr. Exper. Sta., Univ. Nebraska.*)—About 89% of the food consists of grain etc., and 11% of insects. The economic status of the bird will vary locally sometimes being rated as injurious to crops and at others a valuable factor in destroying grasshoppers. The safest procedure is not to allow it to increase too much in any limited area. It is estimated that there are now about one million of these Pheasants in Nebraska.

vanRossem, A. J.—The Sonoran Races of *Camptostoma* and *Platypsaris*. (*Proc. Biol. Soc. Washington*, Vol. 43, pp. 129-132, July 18, 1930.)—*C. i. ridgwayi* is regarded as recognizable and is restored to the North American list replacing *C. i. imberbe*, while the Arizona *Platypsaris* is named *P. a. richmondi* (p. 130), true *aglaiae* being restricted to southern Mexico.

vanRossem, A. J.—A New Race of Gilded Flicker from Sonora. (*Trans. San Diego Soc. Nat. Hist.*, VI, No. 5, July 12, 1930.)—*C. chrysoides tenebrosus* (p. 171). Other new Sonoran forms are named in the same *Proceedings* as follows: *Columba flavirostris restricta* (No. 8, p. 197, Aug. 30); *Myiozetetes similis primulus* (No. 8, p. 198, Aug. 30); *Auriparus flaviceps fraterculus* (No. 9, p. 201, Aug. 30); *Toxostoma curvirostre insularum* (No. 11, p. 207, Sept. 30); *Pheugopedius felix sonorae* (No. 11, p. 208, Sept. 30); *Piaya cayana stirtoni* (No. 12, p. 219, Sept. 30); San Miguel El Salvador; *Piaya c. extima* (No. 12, p. 210, Sept. 30), *Izobrychus ezilis pullus* (No. 15, p. 227, Nov. 28).

VanRossem, A. J.—Four New Birds from Northwestern Mexico. (*Trans. San Diego Soc. Nat. Hist.*, VI, No. 14, 213-226, Nov. 28, 1930.)—*Passerculus sandwichensis atratus* (p. 218), Tobarí Bay, Sonora; *Amphispiza bilineata tortugae* (p. 222); Tortuga Island, Gulf of California; *A. b. cana* (p. 223), San Esteban Island, Gulf of California; *Heleodytes brunnei-capillus purus* (p. 225), Middle Lower California. In considering the

Passerculus rostratus group the author unites *guttatus* with *rostratus* and restricts *sanctorum* as a resident form on the San Benito Islands. He agrees with Oberholser (vid. sup.) that the recently described *anulus* of Huey is a form of *sandwichensis* but goes farther and treats all of the *rostratus* group in the same manner.

Dickey, Donald R.—A New Clapper Rail from Sonora. (*Trans. San Diego Soc. Nat. Hist.*, VI, No. 18, December 24, 1930.)—*Rallus obsoletus rhizophorae* (p. 235).

Wetmore, Alexander.—The Bullfinch of Ile a Vache, Haiti. (*Proc. Biol. Soc. Washington*, Vol. 44, Feb. 21, 1931.)—*Loxigilla violacea parishii* (p. 27).

The Ornithological Journals.

Bird-Lore. XXIII, No. 1. January–February, 1931.

The Rosy Finch, a Friendly Winter Bird in Colorado. By Mrs. George J. Bailey.—A popular account of the Leucostictes.

The Season and the Christmas Census take up most of the issue. In the latter Cape May, N. J., with 78 species heads the list for the north-eastern states.

Dr. A. A. Allen has an interesting life history of the Cormorant; there is a color plate of the Burrowing Owl by Brooks and a photograph and account of the outrageous killing of Hawks at Cape May against which we have repeatedly protested. The New Jersey Game Commission has promised to "look into the matter," but the feeling on the part of sportsmen and game breeders is so strongly against the Hawks that it will probably take action on the part of all bird lovers in the State to produce any results!

The Condor. XXIII, No. 1. January–February, 1931.

Some Flocking Habits of the California Quail. By John B. Price.

Notes on the Spotted and Flammulated Screech Owls in Arizona. By E. C. Jacot.

Variation in Color of Male House Finches. By H. Michener and Josephine R. Michener.—This is an exceedingly interesting and suggestive paper. The authors took a few feathers from the rump of every male bird that visited their traps and succeeded in some cases in securing several samples at considerable intervals from the same individuals showing the actual change in color. In all, 1980 plumages samples were obtained and it was found that of these, 383 individuals were orange or yellow instead of red and that those that repeated in later years usually changed to red but there was no evidence of any reverse change once the red plumage was attained. The brightening of the red color is attributed to the loss of the gray barbules and reference is made to a similar explanation in a previous paper by Dr. Grinnell. We would call attention to the fact that this matter was fully explained with photomicrograph illustrations by Dr. J. Dwight still earlier in his 'Sequence of Plumages and Moults of the Passerine Birds of N. Y.' (*Annals N. Y. Acad. Sci.* XIII, 1900). This, the