

RECENT LITERATURE

EDITED BY FRANK MCKINNEY

ANATOMY AND EMBRYOLOGY

- COIL, W. H. and D. K. WETHERBEE. 1959. Observations on the cloacal gland of the Eurasian quail, *Coturnix coturnix*. Ohio Jour. Sci., **59**: 268-270.—A gland located on the dorsal lip of the cloaca exudes frothy mucoid secretions during sexual activity of the male. A penis-like structure was also identified. This gland may therefore serve as a source of lubrication during copulation.—H. C. S.
- COULOMBRE, A. J. 1957. The role of intraocular pressure in the development of the chick eye. Arch. Ophthal., **57**: 250-253.
- COULOMBRE, A. J. and J. L. COULOMBRE. 1957. The role of intraocular pressure in the development of the chick eye: III. Ciliary body. Amer. Jour. Ophthal., **44**: 85-92.
- COULOMBRE, A. J. and J. L. COULOMBRE. 1958. Intestinal development. I. Morphogenesis of the villi and musculature. Jour. Embryol. Exp. Morph., **6**: 403-411.
- COULOMBRE, A. J. and J. L. COULOMBRE. 1958. Corneal development. I. Corneal transparency. Jour. Cell. and Comp. Physiol., **51**: 1-12.
- COULOMBRE, A. J. and J. L. COULOMBRE. 1958. Corneal development. II. Transparency changes during rapid hydration. Amer. Jour. Ophthal., **46**: 276-280.
- COULOMBRE, A. J. and E. S. CRELIN. 1958. The role of the developing eye in the morphogenesis of the avian skull. Amer. Jour. Phys. Anth., **16**: 25-37.
- FISHER, H. I. 1959. Some functions of the rectrices and their coverts in the landing of pigeons. Wilson Bull., **71**: 267-273.—The effects of removing tail feathers and tail coverts in different patterns on the landing forces of pigeons were measured. These feathers function in "braking" and in supporting the bird's weight.—J. T. T.
- GLENNY, F. H. 1959. Specific and individual variation in reduction of the clavicles in the parrots. Ohio Jour. Sci., **59**: 321-322.—An examination of 67 genera and 221 species of parrots reveals considerable variation, both intra- and inter-specific.—H. C. S.
- LUCAS, A. M. 1959. A discussion of synonymy in avian and mammalian hematological nomenclature. Amer. Jour. Vet. Res., **20**: 887-897.
- PICKMAN, D. S., A. RIDLEY, M. ORGEL, and H. T. BLUMENTHAL. 1959. Effect of cortisone on growth of chick embryos during early embryogenesis. Endocrin., **64**: 790-794.—Direct inhibition of protein synthesis and growth.—H. C. S.

BEHAVIOR

- BORROR, D. J. 1959. Songs of the chipping sparrow. Ohio Jour. Sci., **59**: 347-356.—This analysis of songs recorded on 58 tapes from five states shows that the "simple trill" is more complex and variable than formerly supposed; no geographic variation was established.—H. C. S.
- BURNS, P. S. 1957. Rook and Jackdaw roosts around Bishop's Stortford. Bird Study, **4**: 62-71.—The results of five years' study of winter roosting habits.—F. M.
- ERARD, C. 1959. Observations sur les chants de la Poule d'eau et de la Marouette de Baillon. Nos Oiseaux, **25**: 116-120.—The vocalizations of the Common

- Gallinule, *Gallinula chloropus*, and Baillon's Crake, *Porzana pusilla*, in France.—E. E.
- FYFE, R. W. 1959. Great Horned Owl distraction display. *Blue Jay*, **17**: 106.
- GOODGE, W. R. 1959. Locomotion and other behavior of the Dipper. *Condor*, **61**: 4-17.—Includes analysis of movies of movement under water. Wings were used almost exclusively. Brief notes on courtship and feeding.—R. E. P.
- GRANT, J. 1959. Wing-clapping display of the Long-eared Owl. *Canad. Field-Nat.*, **73**: 174-175.
- GUNTER, G. 1958. Feeding behavior of Brown and White Pelicans on the Gulf Coast of the United States. *Proc. La. Acad. Sci.*, **21**: 34-39.—The Brown Pelican usually dives from the air, but also scoops up fish while sitting; Gulf Coast White Pelicans were never seen to dive.—E. E.
- HAMILTON, W. J. III. 1959. Aggressive behavior in migrant Pectoral Sandpipers. *Condor*, **61**: 161-179.—Detailed study of the territorial behavior of *Erolia melanotos* during fall migration. Individual territories were defended by some but not all of a flock of migrants, and the origin and significance of this are discussed.—R. E. P.
- HESS, E. H. 1959. Two conditions limiting critical age for imprinting. *Jour. Compar. and Physiol. Psychol.*, **52**: 515-518.—The maturing motor ability leads to an increase in imprinting behavior while the subsequent development of fear responses leads to a decrease of imprinting. In the fowl these two factors are sufficient to determine the maximum point of the critical period. It remains to be seen whether they will be sufficient in other species.—F. M.
- HICKLING, R. A. O. 1957. The social behaviour of Gulls wintering inland. *Bird Study*, **4**: 181-192.—Describes behavior associated with social feeding, resting, and roosting in a large wintering population of Black-headed Gulls and Herring Gulls.—F. M.
- KLOPPER, P. H. 1959. The development of sound-signal preferences in ducks. *Wilson Bull.*, **71**: 262-266.—Incubator-hatched Common Sheldrakes (*Tadorna tadorna*), which were allowed to follow the experimenter while being exposed to sound-signals, developed a preference for these sounds, while ducklings isolated from the experimenter did not do so. The results are compared with those of similar tests with other species of waterfowl.—J. T. T.
- LAHRMAN, F. W. 1959. Whooping Crane dance during migration. *Blue Jay*, **17**: 91-93.
- MOORE, N. W. 1957. Territory in dragonflies and birds. *Bird Study*, **4**: 125-130.—A stimulating comparison dealing mainly with the characteristics and possible functions of territorial behavior in dragonflies.—F. M.
- NERO, R. W. 1959. Apparent courtship behaviour of Least Flycatcher. *Blue Jay*, **17**: 56.
- NERO, R. W. 1959. Distraction display by Western Meadowlark. *Blue Jay*, **17**: 104-106.
- NICE, M. M. and W. E. SCHANTZ. 1959. Head scratching in Passerines. *Ibis*, **101**: 250-251.—A review of literature on head scratching, data on the variability of method (especially in the Parulidae), and new records of head scratching in warblers, grackles, kinglets, starlings, and juncos are presented. Head-scratching characters are less rigid than previously supposed, a point the authors make by citing instances of generic, specific and individual variation.—J. W. H.

- SABINE, W. S. 1959. The winter society of the Oregon Junco: intolerance, dominance, and the pecking order. *Condor*, **61**: 110-135.—Analysis of data from marked birds. Believes peck order a result of intolerance rather than dominance and presents evidence to refute concept of an integrating function of peck order.—R. E. P.
- SAUNDERS, A. A. 1959. Octaves and kilocycles in bird songs. *Wilson Bull.*, **71**: 280-282.—Mechanical (or electrical) analysis of bird song measures pitch in kilocycles, and can accurately measure time. Analysis by ear uses octaves to indicate pitch.—J. T. T.
- SICK, H. 1959. Estudo comparativo das cerimônias pré-nupciais de piprideos Brasileiros (Pipridae, Aves). *Bol. Museu Nacional, n.s. Zool.*, no. **213**: 1-17.—A comparative account of the prenuptial dances of certain Brazilian manakins. A more elaborate treatment in German is found in *Jour. f. Orn.*, **100**: 269-302, 1959. (In Portuguese; German summary.)—E. E.
- SMITH, W. and E. B. HALE. 1959. Modification of social rank in the domestic fowl. *Jour. Compar. and Physiol. Psychol.*, **52**: 373-375.—Conditioning experiments reversed the peck order.—F. M.
- SUCHANTKE, A. 1959. Die Paarung beim Flamingo. *Orn. Beob.*, **56**: 94-97.—The copulation of the flamingo *Phoenicopterus ruber roseus*, as observed in the Camargue, with good diagrams. The postures are compared with the rather different posture described and illustrated by Allen for the American form, *P. r. ruber*.—E. E.
- TINBERGEN, N. 1957. The functions of territory. *Bird Study*, **4**: 14-27.—An important discussion that cannot be fully summarized here. "Territory" results from two distinct tendencies, each of which may occur without the other: site attachment and (intraspecific) hostility. The role of hostility as a dispersion mechanism is discussed; a certain balance between attack and escape tendencies is characteristic of each species and is adaptive. Suggestions on promising lines of study are made.—F. M.
- TINBERGEN, N. 1959. Bauplan-ethologische Beobachtungen an Möwen. *Arch. Néerlandaises Zool.*, **13**, Suppl. L: 369-382.—Comments on the comparative ethology of gulls.—E. E.

BIOGRAPHY AND HISTORY

- BANNERMAN, D. A. 1959. The British contribution to African ornithology. *Ibis*, **101**: 90-102.—The progress of African ornithology owes its largest debt to British ornithologists, perhaps foremost of these being the author of the present article. The contributions of the early explorers are summarized, and a comprehensive report is presented by regions.—J. W. H.
- BARCLAY-SMITH, P. 1959. The British contribution to bird protection. *Ibis*, **101**: 115-122.—Because of the world-wide extent of the British Empire, we are fortunate that the British have helped lead the way in the protection of wildlife. This has resulted in the preservation of many faunas and has provided an example for other governments to emulate.—J. W. H.
- GRANT, C. H. B. 1959. The expedition of the British Ornithologists' Union to New Guinea, 1909-1911. *Ibis*, **101**: 65-70.—A description of this famous expedition by its last survivor. The author died shortly after writing this article.—J. W. H.

- HUXLEY, J. 1959. The British contribution to our knowledge of the living bird. *Ibis*, **101**: 103-106.—A brief resume of the important part British ornithologists have played in studies of bird behavior and ecology.—J. W. H.
- LACK, D. 1959. Some British pioneers in ornithological research, 1859-1939. *Ibis*, **101**: 71-81.—Discusses those workers and their publications that are judged to have been most important in molding the character of British ornithology. Included are Selous ("Realities of Bird Life"), Howard ("The British Warblers"), W. Eagle Clarke ("Studies in Bird Migration"), Wilson et al. ("The Grouse in Health and Disease"), and Chance ("The Cuckoo's Secret").—J. W. H.
- MANSON-BAHR, P. 1959. Recollections of some famous British ornithologists. *Ibis*, **101**: 53-64.—Biographical sketches of Alfred Newton, Abel Chapman, Henry Eeles Dresser, R. Bowdler Sharpe, William Eagle Clarke, and E. G. B. Meade-Waldo.—J. W. H.
- MEINERTZHAGEN, R. 1959. Nineteenth century recollections. *Ibis*, **101**: 46-52.—Reminiscences concerning British ornithologists and their activities in the last century, written by a man intimately involved in the mainstream of British ornithology almost as much in that century as in the present one.—J. W. H.
- MOREAU, R. E. 1959. The centenarian 'Ibis.' *Ibis*, **101**: 19-38.—The present editor summarizes the remarkable history of the journal. Topic headings include production, editors, editorial policy, size, setting, illustrations, notices and reviews, indexing, cover, contents, and contributors. Included is an interesting table depicting the varying importance of different types of subjects published over the years and a concluding appendix entitled "Buried Treasure" in which humorous passages from the pages of *Ibis* are gathered together.—J. W. H.
- MOUNTFORT, G. 1959. One hundred years of the British Ornithologists' Union. *Ibis*, **101**: 8-18.—An interesting history of the formation of the Union. Specific subjects dealt with include finance, membership changes, relationship with other societies, meeting places, activities, expeditions, special publications, matters of argument, union awards, the British Ornithologists' Club, and the future of the organization.—J. W. H.
- NICHOLSON, E. M. 1959. The British approach to ornithology. *Ibis*, **101**: 39-45.
- ROBERTS, B. 1959. The British contribution to Antarctic ornithology. *Ibis*, **101**: 107-114.
- TENISON, W. P. C. 1959. The Zoological Record (Aves). *Ibis*, **101**: 123-125.—A brief discussion of the formation, history, and operation of zoology's most comprehensive bibliographic index.—J. W. H.
- THOMSON, A. L. 1959. The British contribution to the study of bird migration. *Ibis*, **101**: 82-89.—The subject is discussed under the following headings: collective recording, intensive observations, bird ringing, experimental work, observations abroad, and theoretical problems (causative factors, mode of operation).—J. W. H.
- THORPE, W. H. 1959. Foreword. *Ibis*, **101**: 1-7.—An introduction to the centennial number of the journal. The evolution of British ornithology during the last 100 years is described. There has been a gradual change in the nature of publications, from species lists and descriptions to the highly technical papers on ecology, migration, and behavior, currently being produced.—J. W. H.
- TINBERGEN, N. 1959. Recent British contributions to scientific ornithology. *Ibis*, **101**: 126-131.—A summary of the impressive forces at work today in Britain to forward the evolution of ornithology.—J. W. H.

DISEASES AND PARASITES

- BASSINI, E. 1959. Piroplasmosi ed entero-epatite in Gallinacei e Tinamidi. Riser. Zool. Appl. alla Caccia, **3**, no. **30**: 1-16. Lab. Zool. Appl. alla Caccia, Univ. Bologna.—Discussion of avian piroplasmosis in two species of francolins (*Francolinus*) and in the Chukar Partridge (*Alectoris chukar*), caused by *Egyptianella pullorum*; and of enterohepatitis in the tinamou *Eudromia calopezus*, caused by *Histomonas meleagridis*, the latter acquired in an aviary. The diseased francolins and partridge also showed *Histomonas* in the intestines. (In Italian; English, French and German summaries.)—E. E.
- CLAPHAM, P. A. 1957. Helminth parasites in some wild birds. Bird Study, **4**: 193-196.
- JENNINGS, A. R. and E. J. L. SOULSBY. 1957. Diseases of wild birds, fourth report. Bird Study, **4**: 216-220.
- TENDEIRO, J. 1958. Malófagos da Guiné Portuguesa. Anais da Junta de Investigações do Ultramar 1955. Estudos de Zoologia, **10**, t. 4, f. 1: 77-113.—Mallophaga of Portuguese Guinea. Includes papers on a parasite of *Pelecanus rufescens*, and on the mallophaga of Galliformes in Portuguese Guinea and Mozambique (including the domestic chicken and turkey). Mention is made of the finding of genera hitherto believed to be exclusive to Galliformes on certain Falconiform species and on a turaco (*Crimifer*). (In Portuguese; French and English summaries, the French much fuller.)—E. E.

DISTRIBUTION AND ANNOTATED LISTS

- BEALS, E. 1958. Notes on the summer birds of the Apostle Islands (Wisconsin). Passenger Pigeon, **20**: 151-160.
- BENSON, C. W. 1959. Turturoena iriditorques in the Mwinilunga District, Northern Rhodesia. Ibis, **101**: 240.
- BREESE, P. L. 1959. Information on Cattle Egret, a bird new to Hawaii. Elepaio, **20**: 33-34.—One hundred and five birds liberated on the main islands to help reduce the number of flies around cattle.—P. H. B.
- DAVIS, J. 1959. The Sierra Madran element of the avifauna of the Cape District, Baja California. Condor, **61**: 75-84.—Evidence that the avifauna is derived from the same populations as that of Mexico and the southwestern U.S., not from the Pacific coast of Mexico.—R. E. P.
- [DEED, R. F. et al.] 1959. Birds of Rockland County and the Hudson Highlands. 42 pp., map. Price, \$1.00. Rockland Audubon Society, West Nyack, N.Y.—A distributional list of an area in New York state, providing information on status, early and late dates, dates of peak abundance, and maximum numbers observed. It documents the recent northward range extension of several species.—E. E.
- FRADE, F. and E. A. BACELAR. 1959. Catálogo das aves da Guiné Portuguesa. II Passeres. Estudos de Zoologia, **7**: 1-116. Mem. da Junta de Investig. do Ultramar.—Completes the check-list of birds of Portuguese Guinea.—E. E.
- FRENCH, N. R. 1959. Distribution and migration of the Black Rosy Finch. Condor, **61**: 18-29.—Distributional and taxonomic data for *Leucosticte tephrocotis atrata* and *L. t. tephrocotis*. Breeding apparently limited by large tundra areas with sufficient moisture.—R. E. P.

- FYFE, R. W. 1959. Golden Eagles nesting in Saskatchewan. *Blue Jay*, **17**: 110-111.
- GODFREY, W. E. 1959. Notes on the Great Auk in Nova Scotia. *Canad. Field-Nat.*, **73**: 175.—Based on identification of bone material from a prehistoric shell heap.—R. W. N.
- HARRISON, T. and B. E. SMYTHIES. 1959. Some Bornean rarities. *Ibis*, **101**: 244-245.—On the basis of new and old rediscovered specimen records, eight species of birds are added to the Bornean check-list.—J. W. H.
- HOFFMANN, R. S., R. L. HAND, and P. L. WRIGHT. 1959. Recent bird records from western Montana. *Condor*, **61**: 147-151.
- HÖHN, E. O. 1958. Some birds of Jasper Park. *Canad. Field-Nat.*, **72**: 167-168.
- HÖHN, E. O. 1959. Birds of the mouth of the Anderson River and Liverpool Bay, Northwest Territories. *Canad. Field-Nat.*, **73**: 93-114.
- HOLLOM, P. A. D. 1959. Notes from Jordan, Lebanon, Syria and Antioch. *Ibis*, **101**: 183-200.—Observations on distribution and field characters made during two short visits to the area lying between southern Turkey and southern Jordan. General accounts of habitat, status, and habits are given for 81 common species, with less-detailed notes on many others.—J. W. H.
- HOUSTON, S. 1958. Saskatchewan nesting records of the Cooper's Hawk. *Blue Jay*, **16**: 153-154.
- JOHNSTON, R. F. 1959. The Green Jay (*Cyanocorax yncas*) in Kenedy County, Texas. *Texas Jour. Sci.*, **11**: 320.—Northeasternmost record, some 50 miles from the Rio Grande valley. Subspecific name *luxuosus* is misspelled "*luxosa*."—K. C. P.
- JOHNSTON, R. F. and J. W. HARDY. 1959. The Ridgway Whip-poor-will and its associated avifauna in southwestern New Mexico. *Condor*, **61**: 206-209.
- KRAUS, M. 1959. Der Rohrschwirl (*Locustella luscinioides*) in Süddeutschland. *Zoologischer Anzeiger [Leipzig]*, **163**: 142-148.—Analysis of recent range extension of Savi's Warbler, with ecological notes.—K. C. P.
- LUMSDEN, H. G. 1959. Mandt's Black Guillemot breeding on the Hudson Bay coast of Ontario. *Canad. Field-Nat.*, **73**: 54-55.
- MACPHERSON, A. H. and I. A. McLAREN. 1959. Notes on the birds of southern Fox Peninsula, Baffin Island, Northwest Territories. *Canad. Field-Nat.*, **73**: 63-81.
- MITCHELL, G. J. 1959. Bird observations at Tahsis Inlet, Vancouver Island, British Columbia. *Canad. Field-Nat.*, **73**: 6-13.
- NERO, R. W. 1959. Red-bellied Woodpecker at Regina. *Blue Jay*, **17**: 95-96.
- PAKENHAM, R. H. W. 1959. Field notes on the birds of Zanzibar and Pemba. *Ibis*, **101**: 245-247.—An annotated list of birds based on records gathered over the period 1946-1956. Notes are mainly on distribution, breeding periods, and migration dates.—J. W. H.
- PASSBURG, R. E. 1959. Bird notes from northern Iran. *Ibis*, **101**: 153-169.—Based on observations over three years, the author discusses habits and migration of 274 species, mainly near Tehran and on the south shore of the Caspian Sea. A map, brief gazetteer, discussion of migration, and an annotated list of birds are presented.—J. W. H.
- PAUL, W. A. B. 1959. The birds of Kleena Kleene, Chilcotin District, British Columbia, 1947-58. *Canad. Field-Nat.*, **73**: 83-93.
- PAYNTER, R. A. JR. 1959. Birds in the Upper Arctic. *In* Scientific studies at Fletcher's Ice Island, T-3 (1952-1955). vol. 1. Geophysical Research Pap., no.

- 63:** 104. Geophysics Research Directorate. (Available at U.S. Dept. of Commerce, Office of Technical Services, Washington 25, D.C.)—One of a number of papers in a volume containing a variety of articles on geophysics, oceanography, and biology of the Arctic Ocean. (For some additional bird records from Fletcher's Ice Island, see Auk, **75:** 468, 1958.)—E. E.
- QUAY, T. L. and J. B. FUNDERBURG, JR. 1959. Expansion of Cattle Egret nesting in North Carolina in 1959. Chat, **23:** 63.
- RABOR, D. S., A. C. ALCALA, and R. B. GONZALES. 1958. A brief list of land vertebrates of Negros Island. Silliman Jour. [Dumaguete City, Philippines], **5:** 286–300.—Nominal list of 254 birds, including first published records from Negros of two migrants, *Himantopus himantopus leucocephalus* and *Apus affinis subfurcatus*.—K. C. P.
- RUTLEDGE, R. F. 1957. The birds of Inishbofin, Co. Galway. Bird Study, **4:** 71–80.
- SAGE, B. L. 1959. Some recent observations at Aden. Ibis, **101:** 252–253.—New distributional information on Arabian birds observed at Aden in November 1958 by the author.—J. W. H.
- SCOTT, D. M. 1959. Observations on marine birds off southwestern Nova Scotia. Canad. Field-Nat., **73:** 15–20.
- SÉLANDER, R. K. and D. R. GILLER. 1959. The avifauna of the Barranca De Oblatos, Jalisco, Mexico. Condor, **61:** 210–222.
- SICK, H. 1959. A invasão da América Latina pelo pardal, *Passer domesticus* Linnaeus 1758. Com referência especial ao Brasil (Ploceidae, Aves). Bol. Museu Nacional, n.s. Zool., no. **207:** 1–31.—The distribution of the House Sparrow in Latin America, with special reference to Brazil. Introduced in Rio de Janeiro, *P. d. domesticus* is now widely distributed south of Lat. 15° S. The limiting factor northward may be temperature and rainfall. A map of world distribution is included, which appears to bring the North American range south to Honduras, although the text states (correctly) that in middle America it has been recorded only to Mexico. (In Portuguese; German summary.)—E. E.
- SMITHE, F. B. 1959. Birds of Tikal. A check list. 11 pp. and map. Price, 50 cents. (F. B. Smithe, 645 West 44 St., New York 36, N.Y.)—A useful list of the species known from the area of Tikal, Peten, Guatemala, giving scientific, English, and local names. The map showing location of trails and of the famous Mayan ruins helps visitors to combine archaeology and ornithology. Included are an introduction describing the environment and a good bibliography.—E. E.
- STEVENS, W. E. and E. O. HÖHN. 1958. Some additions to the list of birds of the Mackenzie Delta, N.W.T. Canad. Field-Nat., **72:** 168–170.
- SUTTER, E., ET AL. 1959. Verzeichnis der schweizerischen Vogelarten. Orn. Beob., **56:** 69–93.—The species (binomials only) of birds of Switzerland, giving German, French, and Italian Swiss names, with indication of status.—E. E.
- TUCK, L. M. 1958. Present distribution and population of the starling in Newfoundland. Canad. Field-Nat., **72:** 139–144.
- TUCK, L. M. and L. LEMIEUX. 1959. The Avifauna of Bylot Island. Dansk Orn. Foren. Tidssk., **53:** 137–154.—An account of the birds observed in 1957 on a Canadian Arctic island north of Baffin Island. Among birds definitely breeding: European Ringed Plover, *Charadrius h. hiaticula*, *Calidris (Erolia)*

- maritima*, *Larus a. thayeri*, *Sterna paradisaea*. (In English; Danish summary.)—E. E.
- TUCK, R. F. 1959. Summer observations of the birds of the Fezzan and Tibesti. *Ibis*, **101**: 251–252.—Distribution and status of birds in two areas of the Sahara.—J. W. H.
- WARNER, D. W. and R. W. DICKERMAN. 1959. The status of *Rallus elegans tenuirostris* in Mexico. *Condor*, **61**: 49–51.—Specimens considerably extend known range of subspecies.

ECOLOGY AND POPULATION

- BOYD, H. 1957. Mortality and fertility of the White-fronted Goose. *Bird Study*, **4**: 80–93.—An analysis of banding returns and field observations at Slimbridge, Gloucestershire, of the Russian-breeding, British-wintering population of *Anser a. albifrons*. Survival rate and seasonal losses of adults and prebreeders have been calculated. The population has not fluctuated greatly in recent years; large-scale breeding failures are thought to occur in most years.—F. M.
- BURTON, J. F. and D. F. OWEN. 1957. The census of heronries 1955–56. *Bird Study*, **4**: 121–124.
- COULSON, J. C. and E. WHITE. 1957. Mortality rates of the Shag estimated by two independent methods. *Bird Study*, **4**: 166–171.
- COULTER, M. W. 1957. Predation by snapping turtles upon aquatic birds in Maine marshes. *Jour. Wildl. Mgt.*, **21**: 17–21.—Twenty-seven per cent of 157 turtles had eaten birds, mostly ducks, grebes, and rails. Predation appeared to be important only where both turtles and ducklings were abundant.—J. P. R.
- CULLEN, J. M. 1957. Plumage, age and mortality in the Arctic Tern. *Bird Study*, **4**: 197–207.—Relation between age and plumage was studied in banded birds. Most birds breed first when three years old. In the Farne Island colony some younger males failed to get mates; some of these joined mated pairs and even helped in raising the family. The survival of 102 banded adults showed an annual mortality of 18 per cent.—F. M.
- DRINNAN, R. E. and M. G. RIDPATH. 1957. Counting flocks of roosting birds by photography. *Bird Study*, **4**: 149–159.
- GIBB, J. 1957. Food requirements and other observations on captive tits. *Bird Study*, **4**: 207–215.—Feeding trials with wild-caught birds showed that the energy requirements of the Great Tit were greatest. The requirements of Blue Tits were slightly less than those of Coal Tits, despite the larger body size of the former. Data are also given on defecation rate.—F. M.
- GOMPERTZ, T. 1957. Some observations on the Feral Pigeon in London. *Bird Study*, **4**: 2–13.—An interesting account of the behavior and ecology of London pigeons. Comparisons are made with wild Rock Doves, the general pattern of behavior being the same in the two forms.—F. M.
- HAARTMAN, L. VON. 1957. Population changes in the Tufted Duck, *Aythya fuligula* (L.). *Soc. Scient. Fennica. Comment. Biol.*, **16**, no. 5: 1–11.—Counts of nesting birds in Finland between 1935–1955, causes of fluctuations, with a method for statistical analysis of incomplete material (i.e., where survey areas were not all investigated during the same years) by G. Elfving.—E. E.
- HAARTMAN, L. VON. 1958. The decrease of the Corncrake (*Crex crex*). *Soc. Scient. Fennica. Comment. Biol.*, **18**, no. 2: 1–29.—While there have been fluctuations, in Finland, the Corncrake has had a persistent declining trend since

- 1905, attributable probably to the increasing use of mowing machinery and the earlier harvesting of hay.—E. E.
- JONSELL, B. 1959. The birds in the Källskär—Vattungar archipelago. Variation in the number of breeding birds from about 1890 to 1957. *Vår Fågelvärld*, **18**: 97–128.—The avifauna of this northern Swedish archipelago consists chiefly of species found in North America. The change in populations of larids is of special interest. (In Swedish; English summary.)—E. E.
- LOWE, J. I. 1956. Breeding density and productivity of mourning doves on a county-wide basis in Georgia. *Jour. Wildl. Mgt.*, **20**: 428–433.—Density and production were correlated with call counts on eight 150-acre study areas in 1954. 2.5 pairs per 100 acres produced an average of 2.0 young. The data are expanded to give an estimate for the county.—J. P. R.
- SCHORGER, A. W. 1958. Extirpation of a flock of wild turkeys in Adams Co., Wisconsin. *Passenger Pigeon*, **20**: 170–171.—Account of a 20-year survival period.
- SHELDON, W. G. 1956. Annual survival of Massachusetts male woodcocks. *Jour. Wildl. Mgt.*, **20**: 420–427.—Spring trapping from 1950–1955 yielded 128 return records from 86 adult males. These indicate a minimum annual survival of 57 per cent. It is estimated that chicks suffer 69 per cent mortality in their first year.—J. P. R.
- SWINK, F. A. 1959. A four-year survey of the ecology of land birds of the Chicago area—Part one [Woodpeckers]. *Audubon Bull.*, no. **111**: 11–13.—Gives number of observations for six species, the kind of tree or other object on which perched, as well as the months.—E. E.
- YEAGER, L. E. and H. M. SWOPE. 1956. Waterfowl production during wet and dry years in north-central Colorado. *Jour. Wildl. Mgt.*, **20**: 442–446.—In 1955, during drought, production was 75 per cent less than in 1949, during high water. Over a wider area the decline was only 44 per cent because production in some areas compensated for losses in others.—J. P. R.

GENERAL BIOLOGY

- ADAMS, D. A. and T. L. QUAY. 1958. Ecology of the clapper rail in southeastern North Carolina. *Jour. Wildl. Mgt.*, **22**: 149–156.—Breeding biology, seasonal populations, and behavior of *Rallus longirostris* in salt marshes at Southport, N.C., 1955–1956.—J. P. R.
- ANDERSON, A. H. and A. ANDERSON. 1959. Life history of the Cactus Wren. Part II: the beginning of nesting. *Condor*, **61**: 186–205.—Nesting ecology including territorial behavior and the influence of temperature and rainfall on date of first egg.—R. E. P.
- BANKS, R. C. 1959. Development of nestling White-crowned Sparrows in central coastal California. *Condor*, **61**: 96–109.—Description of growth and development based on twice-daily measurements and observations.—R. E. P.
- COWLES, G. S. and D. GOODWIN. 1959. Seed digestion by the Fruit-eating Pigeon Treron. *Ibis*, **101**: 253–254.
- FOX, G. A. 1959. A study of early spring nesting of the Horned Lark in the area of Kindersley, Sask. *Blue Jay*, **17**: 107–109.
- FRINGS, H. and M. FRINGS. 1959. Problems of Albatrosses and men on Midway Islands. *Elepaio*, **20**: 6–9, 14–16, 23–25, 30–33.—Albatrosses were kept successfully in captivity by supplementing food with salt. Length of bill and width

- of head were used to distinguish sexes in the field. Types of beak sounds and vocalizations are enumerated and reflections presented concerning minimizing interference of bird with aircraft.—P. H. B.
- FRITH, H. J. 1959. Breeding of the Mallee Fowl, *Leipoa ocellata* Gould (Megapodiidae). C.S.I.R.O. Wildlife Research, **4**: 31–60.—The breeding season is determined by the availability of natural heat to ferment the organic material in the mounds and achieve the necessary incubation temperature within the mound. Incubation periods varied from 50 to 90 days; the longer periods are believed to reflect lower temperatures. Much data on breeding biology and behavior.—E. E.
- FRITH, H. J. and R. A. TILT. 1959. Breeding of the Zebra Finch in the Murrumbidgee Irrigation Area, New South Wales. *Emu*, **59**: 289–295.—Though in arid areas *Taeniopygia castanotis* breeds after rainfall whenever that occurs, where irrigation provided a permanent water supply breeding occurred throughout the year, except the coldest month, but with a well-defined peak in spring and a lesser one in autumn.—E. E.
- GEIS, M. B. 1956. Productivity of Canada geese in the Flathead Valley, Montana. *Jour. Wildl. Mgt.*, **20**: 409–419.—Nonbreeding, reneating, nest success, egg success, and gosling mortality were studied in a population of from 800 to 1,077 geese in 1953–1954. 3.16 young/pair were produced in 1953 and 2.32 in 1954.—J. P. R.
- GOLLOP, J. B. 1958. Do Eared Grebes have dump nests? *Blue Jay*, **16**: 151.—Eggs in two apparent dumps between nests numbered 94 and 101.—R. W. N.
- HANKS, E. S. 1959. Cuckoos and the parasitic habit. *Emu*, **59**: 250–258.—Discusses chiefly the Australian cuckoos.
- HANSON, H. C. and C. W. KOSSACK. 1957. Weight and body fat relationships of mourning doves in Illinois. *Jour. Wildl. Mgt.*, **21**: 169–181.—Average age and frequency of age classes varied in immature doves from different parts of Illinois. Males averaged heavier than females. Rate of gain in body weight and body fat decreased during molt. Great gains of fat were correlated with fertile soil and availability of corn. No consistent relationship appeared between amount of fat, age, and migratory habits.—J. P. R.
- HOFFMANN, L. ET AL. 1959. Station Biologique de la Tour de Valat. Quatrième compte rendu d'activité et recueil des travaux 1957: 1–10, over 200 pp.—The report for 1957 of the biological station in the Camargue, France, including reprints of 18 articles by various authors published between 1956–1959, which deal chiefly with Camargue birds. The papers are in French, except for two in English and one in German.—E. E.
- JENKINS, D. 1957. The breeding of the Red-legged Partridge. *Bird Study*, **4**: 97–100.—Records incubation by males and cases of both cock and hen of a pair incubating separate clutches.—F. M.
- KAASA, J. 1959. [On the knowledge of the food of the Black Grouse (*Lyrurus tetrix* (L.)) in Norway.] *Pap. Norwegian State Game Research*, ser. 2. no. **4**: 1–112.—(In Norwegian; English summary table headings, and legends to illustrations.)
- LEMIEUX, L. 1959. The breeding biology of the Greater Snow Goose on Bylot Island, Northwest Territories. *Canad. Field-Nat.*, **73**: 117–128.
- LEMIEUX, L. 1959. Histoire naturelle et aménagement de la grande oie blanche, *Chen hyperborea atlantica*. *Naturaliste Canadien*, **86**, nos. 8–9: 133–192.—Life history of the Greater Snow Goose—a form with a remarkably restricted range,

- breeding on Bylot Island and neighboring Arctic areas and wintering on the Atlantic coast between Delaware Bay and North Carolina. The entire population (estimated at 70,000 in the fall of 1957, but only 47,500 in 1958) spends October and November (nonbreeders arrive in September) and April and most of May on a short strip of the St. Lawrence feeding chiefly on *Scirpus americanus*.—E. E.
- LIDDY, J. 1960. Notes on the Black Kite in north-west Queensland. *Emu*, **59**: 268–274.—Food and behavior of *Milvus migrans*.
- MARCHANT, S. 1959. The breeding season in S.W. Ecuador. *Ibis*, **101**: 137–152.—Discusses general aspects of the breeding season of birds of the Santa Elena Peninsula, Ecuador, based on data gathered from 1954 to 1958. Deals with broad aspects of the environment, breeding incidence, specific breeding periods, annual fluctuations in breeding, and a comparison with breeding in the Galapagos Islands (same near-equatorial latitude, similar climate).—J. W. H.
- MCCLURE, H. E., M. YOSHII, Y. OKADA, and W. F. SCHERER. 1959. A method for determining age of nestling herons in Japan. *Condor*, **61**: 30–37.—Measurements of upper mandible, tarsus, and third primary of known-aged young were variable but allowed better aging than gross observation of size and development.—R. E. P.
- NEWTON, R. 1959. Notes on the two species of *Foudia* in Mauritius. *Ibis*, **101**: 240–243.—Discussion of occurrence, habits, and habitat of *Foudia madagascariensis* and *rubra*. Contains historical notes.—J. W. H.
- OWEN, D. F. 1959. The breeding season and clutch-size of the Rook *Corvus frugilegus*. *Ibis*, **101**: 235–239.—Data were gathered in the Oxford district in 1952–1957. Discussion is of breeding season, including egg laying, weekly air temperature, clutch-size, nesting success, survival of nestlings in relation to brood size, and annual differences in survival. Variations in breeding season near Oxford could be correlated with mean air temperatures in the period before egg laying. In five of six years, broods starting at five raised more young than those starting at four.—J. W. H.
- PETTINGILL, O. S., JR. 1959. King Eiders mated with Common Eiders in Iceland. *Wilson Bull.*, **71**: 205–207.—Male King Eiders (*Somateria spectabilis*) mated with female Common Eiders (*S. mollissima*)—a colored photograph of such a pair is included—are a rare but regular occurrence in Iceland, where *S. mollissima* is the common species. The reciprocal mating has not been observed.—J. T. T.
- ROYAMA, T. 1959. A device of an auto-cinematic food-recorder. *Tori*, **15**: 172–176.—A description, in English, with diagrams, of a device for recording the food brought to nestlings.—E. E.
- SKUTCH, A. F. 1959. Life history of the Blue Ground Dove. *Condor*, **61**: 65–74, with color plate by Don Eckelberry.—Includes observations on the role of the sexes through the breeding cycle in the sexually dimorphic *Claravis pretiosa*.—R. E. P.
- STABLER, R. M. 1959. Nesting of the Blue Grosbeak in Colorado. *Condor*, **61**: 46–48.
- STEEL, P. E., P. D. DALKE, and E. G. BIZEAU. 1957. Canada goose production at Gray's Lake, Idaho, 1949–1951. *Jour. Wildl. Mgt.*, **21**: 38–42.—Data from 380 nests on time of nesting, nest sites, nest and egg success, clutch-size and gosling production.—J. P. R.

- SUTTON, G. M. 1959. The nesting fringillids of the Edwin S. George Reserve, southeastern Michigan. (Pt. 3). Jack-Pine Warbler, **37**: 77-101.—Notes on general behavior, plumages, molt, and nesting of the Cardinal, Rose-breasted Grosbeak, and Indigo Bunting.—E. E.
- SWIFT, J. J. 1959. Le Guépier d'Europe *Merops apiaster* L. en Camargue. Alauda, **27**: 97-143.—Life-history data on the European Bee-eater in the Camargue. This species has been extending its range in western Europe. (In French; English summary.)—E. E.
- WESTERSKOV, K. 1959. The nesting habitat of the Royal Albatross on Campbell Island. Proc. N.Z. Ecol. Soc., no. **6**: 16-20.—*Diomedea e. epomophora*, the largest of sea birds, breeds on Campbell Island, where there is almost permanent strong wind. On rare calm days the birds may be grounded. Nests are usually on the leeward side of ridges in tussock, and are used for years. Individuals nest only in alternate years.—E. E.
- WINGE, A. 1959. [The Mute Swan (*Cygnus olor*) in Scania, southern Sweden, in 1957.] Vår Fågelvärld, **18**: 1-11.—The Mute Swan breeds not only in the brackish water creeks of the Baltic but on the saline southwest coast using wrackbeds as nests. (In Swedish; English summary.)—E. E.

GENETICS AND EVOLUTION

- BOWERS, D. E. 1959. A study of variation in feather pigments of the Wren-tit. Condor, **61**: 38-45.—Microscopic measurements of melanin aggregations in two races of *Chamaea fasciata* suggest relatively simple genetic differences.—R. E. P.
- HAILMAN, J. P. 1959. Why is the male Wood Duck strikingly colorful? Amer. Naturalist, **93**: 383-384.—The theoretical answer to this question supplied by Dilger and Johnsgard (Wilson Bull., **71**, 1959: 46-53) is amplified. Hailman suggests that the slow and late visual learning of young *Aix* (as shown by Klopfer, Ecology, **40**, 1959: 90-102) is compensated for by the exceptionally striking plumage of the male, allowing easier recognition by the female, thus reducing the likelihood of hybridization.—K. C. P.
- IRWIN, M. R. 1959. Interrelationships of genetic characters which differentiate species of doves (*Streptopelia*). Syst. Zool., **8**: 48-57.—Information derived from laboratory crosses and backcrosses of *S. chinensis*, *risoria*, and *senegalensis*. Size differences appear to be based on multiple genes with individually small effects. Comparisons of erythrocyte antigens indicate that pairs of species share certain antigenic characters, but may have as many as 10 species-specific unit antigenic characters. There are less genes for antigenic characters distinguishing *chinensis* and *senegalensis* than distinguish either from *risoria*, indicating a relatively closer taxonomic relationship of the first two species.—K. C. P.
- MUNKÁCSI, F. 1959. Iso-serological studies in ducks. Acta Biologica, **10**: 101-105. Hungarian Academy of Sciences, Budapest.—Crossing of Muscovy (*Cairina moschata*) with two breeds of domestic ducks, Khaki Campbell and Pekin (both *Anas platyrhynchos*), resulted in some fertile hybrids where the drake was Campbell and the duck Muscovy, but not from the reciprocal cross, nor from the cross between Muscovy and Pekin. Tests were made to determine whether hybrid sterility was the result of blood-group factors.—E. E.
- O'DONALD, P. and P. E. DAVIS. 1959. The genetics of the colour phases of the Arctic Skua. Heredity, **13**: 481-486.—Three color phases of *Stercorarius para-*

- siticus* are described. On the basis of the numbers of the different phases at Fair Isle since 1951, it is suggested that there is a stationary cline.—F. M.
- SIBLEY, C. G. and L. L. SHORT, JR. Hybridization in some Indian Bulbuls *Pycnonotus cafer* X *P. leucogenys*. *Ibis*, **101**: 177–182.—*P. leucogenys* and *leucotis* are probably conspecific. The ranges of *cafer* and *leucogenys* overlap; the area of overlap (in central and northern India) is a zone of secondary contact. Local hybridization only, of the two forms, indicates evolution has proceeded almost to the point of complete genetic isolation. Hybrids rarely occur except where one species is uncommon. Hybrid incidence is probably decreasing, the isolating mechanism being enforced.—J. W. H.
- UDAGAWA, T. 1958. Karyogram studies of birds. X. The chromosome(s) of some species of the Passeres and Limicolae. *Annot. Zool. Japon.*, **31**: 43–48.—*Garrulus glandarius* 82 chromosomes, *Parus varius* 82, *Regulus regulus* 82, *Saxicola torquatus* 86, *Rostratula benghalensis* 84.—P. H. B.

MANAGEMENT AND CONSERVATION

- AGEE, C. P. 1957. The fall shuffle in central Missouri bob-whites. *Jour. Wildl. Mgt.*, **21**: 329–335.—Fall movements and social changes in a marked population of wild quail including a discussion of covey formation.—J. P. R.
- ALDRICH, J. W., A. J. DUVAL, and A. D. GEIS. 1958. Racial determination of origin of mourning doves in hunters' bags. *Jour. Wildl. Mgt.*, **22**: 71–75.—Mourning doves in hunters' bags in Texas and Georgia were separated into eastern or western races or an intermediate between them by examination of wings.—J. P. R.
- CARNEY, S. M. and G. A. PETRIDES. 1957. Analysis of variance among participants in pheasant cock-crowing censuses. *Jour. Wildl. Mgt.*, **21**: 392–397.—Variation among experienced counters was less than among inexperienced, and greater for both groups when calls of more than one species were counted.—J. P. R.
- DORNEY, R. S. and F. V. HOLZER. 1957. Spring aging methods for ruffed grouse cocks. *Jour. Wildl. Mgt.*, **21**: 268–274.—Spring-trapped cocks were classified as juveniles or adults with high accuracy by using six different age criteria.—J. P. R.
- DORNEY, R. S., D. R. THOMPSON, J. B. HALE, and R. F. WENDT. 1958. An evaluation of ruffed grouse drumming counts. *Jour. Wildl. Mgt.*, **22**: 35–40.—Drumming counts accurately reflected the number of territorial males on two study areas in Wisconsin. There was also close correlation between drumming counts and winter flush counts.—J. P. R.
- DURANT, A. J. 1956. Impaction and pressure necrosis in Canada geese due to eating dry hulled soybeans. *Jour. Wildl. Mgt.*, **20**: 399–404.—Geese at Swan Lake Refuge in Missouri were fatally injured when they gorged on soybeans, which swelled in the esophagus. Injuries are described and management recommendations presented.—J. P. R.
- FANT, R. J. 1957. Criteria for aging pheasant embryos. *Jour. Wildl. Mgt.*, **21**: 324–328.—Includes a discussion of embryonic mortality.—J. P. R.
- HAMMOND, M. C. and G. E. MANN. 1956. Waterfowl nesting islands. *Jour. Wildl. Mgt.*, **20**: 345–352.—The utilization of man-made islands by nesting ducks and geese on Lower Souris Refuge in North Dakota is described. Nesting

- density, species involved, behavior of pairs, methods and costs of construction are discussed.—J. P. R.
- HAUGEN, A. O. 1957. Distinguishing juvenile from adult bobwhite quail. *Jour. Wildl. Mgt.*, **21**: 29–32.—The 7th upper primary covert is useful in aging the 2-3 per cent of quail wings not separable by other plumage characters.—J. P. R.
- HOUSTON, S. 1958. The diving duck crisis. *Blue Jay*, **16**: 163–164.—General report of declining populations.—R. W. N.
- JOHNSGARD, P. A. and I. O. BUSS. 1956. Waterfowl sex ratios during spring in Washington state and their interpretation. *Jour. Wildl. Mgt.*, **20**: 384–388.—15,000 ducks of 17 species were counted in 1954. Factors affecting the counts are discussed, and a comparison is made with other published data.—J. P. R.
- JUMBER, J. F., H. O. HARTLEY, E. L. KOZICKY, and A. M. JOHNSON. 1957. A technique for sampling mourning dove populations. *Jour. Wildl. Mgt.*, **21**: 226–229.—A technique for estimating production by counting doves fledged from nests in sample blocks of trees in Lewis, Iowa. Dove production for 1938–1940 is compared with that for 1955.—J. P. R.
- KORSCHGEN, L. J. 1958. Food habits of the mourning dove in Missouri. *Jour. Wildl. Mgt.*, **22**: 9–16.—Crop contents of 2,000 doves collected April–October, 1951–1953, are reported. Two thirds of the food was from agricultural crops. Major changes in food habits between different months and years were noted.—J. P. R.
- LABISKY, R. F. 1957. Relation of hay harvesting to duck nesting under a refuge-permittee system. *Jour. Wildl. Mgt.*, **21**: 194–200.—Discusses the destruction of duck nests by haying operations on Horicon National Wildlife Refuge in Wisconsin. Management recommendations are included.—J. P. R.
- LARSEN, J. A. and J. F. LAHEY. 1958. Influence of weather upon a ruffed grouse population. *Jour. Wildl. Mgt.*, **22**: 63–70.—Statistical techniques show an association between population variability and annual changes in the distribution pattern of maximum temperature. Warm days in spring and summer are associated with a high population the following April and warm days in winter with a low population.—J. P. R.
- LOCKIE, J. D. and D. STEPHEN. 1959. Eagles, lambs and land management on Lewis. *Jour. Animal Ecol.*, **28**: 43–50.—Investigation of a complaint of lamb killing by Golden Eagles on the island of Lewis. Rabbit was the main food; lambs were killed occasionally. Overstocking of habitat with sheep has caused considerable winter and spring losses. This carrion is thought to be maintaining an artificially high density of eagles. Improved land use rather than shooting is suggested.—F. M.
- MCCABE, R. A. and G. A. LEPAGE. 1958. Identifying progeny from pheasant hens given radioactive calcium (Ca^{45}). *Jour. Wildl. Mgt.*, **22**: 134–141.—Radioactive Ca^{45} shows up in the eggs and subsequently in the bones of young in the fall when implanted subcutaneously as a pellet of $\text{Ca}_3(\text{PO}_4)_2$ in spring-released pheasants.—J. P. R.
- NELSON, D. J. 1957. Some aspects of dove hunting in Georgia. *Jour. Wildl. Mgt.*, **21**: 58–61.—Information on the dove kill from hunter bag checks, 1949–1953, including hunter success, crippling loss, and dove movements.—J. P. R.
- ROSENE, W., JR. 1957. A summer whistling cock count of bobwhite quail as an index to wintering populations. *Jour. Wildl. Mgt.*, **21**: 153–158.—In Alabama and South Carolina during four years the number of winter coveys could be predicted from summer whistle counts. Areas 500–1,700 acres in size, totaling

- at least 12,000 acres within a similar environment, were necessary for reliable results.—J. P. R.
- SCHULTZ, V. and R. D. McDOWELL. 1957. Some comments on a wild turkey brood study. *Jour. Wildl. Mgt.*, **21**: 85–89.—The usefulness of brood data in providing information on the status of turkeys is statistically analyzed.—J. P. R.
- WARBACH, O. 1958. Bird populations in relation to changes in land use. *Jour. Wildl. Mgt.*, **22**: 23–28.—Modern conservation farming was applied to a 210-acre partly abandoned farm on the Patuxent Research Refuge in Maryland from 1947 to 1950. The number of nesting species declined 10 per cent, and the number of nesting pairs declined 40 per cent. Brushland species suffered most. The change is attributed more to the loss of thickets and second growth to cultivation than to the kind of farming practiced.—J. P. R.

MIGRATION AND ORIENTATION

- BARD, F. G. 1959. Annual report of Whooping Cranes in Saskatchewan, 1958. *Blue Jay*, **17**: 9–11.
- BOURNE, W. R. P. 1959. Notes on autumn migration in the Middle East. *Ibis*, **101**: 170–176.—Evidence is given for passage of small land birds and water birds directly across the Arabian desert in migration from the Palaearctic to the Ethiopian region (avoiding the Mediterranean and Sahara). Local movements of larks and sand-grouse are discussed, and the arrival of winter visitors from the north described.—J. W. H.
- BOYER, G. F. 1959. Hand-reared Mallard releases in the Maritime Provinces. *Canad. Field-Nat.*, **73**: 1–5.—Mallards introduced into this area of the Black Duck range “were in the process of being absorbed into the vastly larger Black Duck population.”—R. W. N.
- GRABER, R. R. and W. W. COCHRAN. 1959. An audio technique for the study of nocturnal migration of birds. *Wilson Bull.*, **71**: 220–236.—The equipment consisted of a parabolic reflector, microphone, amplifier, and tape recorder by which the calls of night migrants were recorded. The construction, modification, and use of the equipment are described. It successfully recorded identifiable calls and allowed measurements of flight density variations.—J. T. T.
- GROH, H. 1958. Blue Jay flyway near Ottawa. *Canad. Field-Nat.*, **72**: 167.
- HARPER, W. G. 1959. Roosting movements of birds and migration departures from roosts as seen by radar. *Ibis*, **101**: 201–208.—Observations were made with 10-cm. plan-position and range-height radars at a station 30 miles northwest of London. This is an area particularly subject to wintering movements of flocks of birds from north-central Europe. Echoes attributable to roosting movements of large flocks and to departures from roosts on migratory flights are illustrated. Most striking displays are received from Starlings. There is evidence of more rapid break-up of flocks on migration at night than by day.—J. W. H.
- HELMS, C. W. 1959. Song and Tree Sparrow weight and fat before and after a night of migration. *Wilson Bull.*, **71**: 244–253.—Individuals of Song Sparrows (*Melospiza melodia*) and Tree Sparrows (*Spizella arborea*) before a migratory flight have significantly higher body weight and fat than do post-migratory individuals. Two patterns of weight and fat variation in emberizines are described.—J. T. T.

- HORVÁTH, L. 1959. Observations on the potamic and pelagic migrations of birds along the Danube and in the Levant. *Acta Zool. Acad. Sci. Hungar.*, **5**: 353-366.
- LACK, D. 1959. Migration across the North Sea studied by radar Part 1. Survey through the Year. *Ibis*, **101**: 209-234.—A thorough treatment of migration across the North Sea off Norfolk using radar records for three years. Unknown until this study were large eastward emigrations in spring, arrivals southwest, presumably from Scandinavia, in late fall, and possible redetermined movements eastward after drifted arrivals. Characteristic migratory patterns of different kinds of birds are discussed.—J. W. H.
- MEDeiros, J. S. 1958. Present status of migratory waterfowl in Hawaii. *Jour. Wildl. Mgt.*, **22**: 109-117.—The past and current status of waterfowl, especially ducks, in Hawaii, and results of a banding study of pintails, 1949-1955. Data on migration between Hawaii and continental N. America are presented.—J. P. R.
- MOREAU, R. E. 1959. Problèmes de la migration au Maroc. *Alauda*, **27**: 81-96.—Problems of migration in Morocco. (In French; English summary.)
- NISBET, I. C. T. 1957. Wader migration at Cambridge sewage farm. *Bird Study*, **4**: 131-148.—An important analysis of records of 24 migrant shorebird species based on counts for six years and less-detailed counts over 30 years. A few species show a double peak of abundance, both in spring and fall; most show a single peak in spring, double peak in fall (adults early, young later). The duration of spring migration is correlated with the extent of the breeding range. The date of peak migration in spring is correlated with the latitude (longitude in arctic birds) of the breeding range, and with size (wing length).—F. M.
- NISBET, I. C. T. 1959. Calculation of flight directions of birds observed crossing the face of the moon. *Wilson Bull.*, **71**: 237-243.—Instructions and tables are given from which observers without mathematical training can calculate flight directions and approximate densities of migrating birds observed flying across the face of the moon.—J. T. T.
- OEMING, A. F. 1958. Recoveries in Alberta of banded Snowy Owls. *Canad. Field-Nat.*, **72**: 171-172.
- PENOT, J. 1959. Aperçu sur les migrations du Canard Colvert (*Anas platyrhynchos*) d'après les données françaises du baguage recueillies jusqu'en 1958. *L'Oiseau*, **29**: 51-62.—French banding records of the Mallard.—E. E.
- PERDECK, A. C., H. KLOMP, *et al.* 1959. [Annual report of the Vogeltrekstation, Netherlands for 1958.] *Limosa*, **32**: 87-107.—Includes reports on orientation experiments with teal and starlings and interesting observations on the direction of visible migration of chaffinches in autumn. (In Dutch; English summary.)—E. E.
- RAYNOR, G. S. 1959. A meteorological analysis of the 1958 Island Beach netting data. *Ebba News*, **22**: 73-81.—September mist-netting correlations with weather at Island Beach, New Jersey.—E. E.
- ROSENBERG, N. T. 1959. [Observations of the spring migration at Gilleleje, North Zealand, Denmark.] *Dansk Orn. Foren. Tidssk.*, **53**: 121-136.—Numbers are greatest along the north coast when the wind is southeasterly; this is attributed to drift. (In Danish; English summary.)—E. E.
- SAUNDERS, A. A. 1959. Forty years of spring migration in southern Connecticut. *Wilson Bull.*, **71**: 208-219.—Migration data are summarized for summer residents, winter visitors, and transients in the area. The arrival dates for four selected years are compared with the average to illustrate conspicuous differences between years.—J. T. T.

- SAUER, F. and E. SAUER. 1959. Nächtliche Zugorientierung europäischer Vögel in Südwestafrika. *Vogelwarte*, **20**: 4-31.—Various European passerines normally wintering in South West Africa were transported to that country south of the Equator just before the fall migration. Placed in a rotatable cage, open to the sky during the period of migration, these birds faced to the south in the fall and the north in the spring, when the nights were clear, but the period of activity in the fall was shortened. This is attributed to seeing the stars of the winter quarters. Moonlight and sheet lightning caused positive phototactic deviations, partial clouds caused correction movements, and heavy overcast general disorientation. (In German; English summary.)—E. E.
- SICK, H. 1959. Vom Vogelzug vor der afrikanischen NW-Küste. *Vogelwarte*, **20**: 31-32.—Notes on migrant birds seen at sea off the coast of northwest Africa.—E. E.
- SOUTHERN, W. E. 1959. Homing of Purple Martins. *Wilson Bull.*, **71**: 254-261.—All of 16 *Progne subis* released at distances between 1.75 and 234 miles from their nests returned to their nests, one covering 234 miles in 8.58 hours of nocturnal flight.—J. T. T.
- STOLT, B-O. 1959. [The autumn migration at Norra Kvarngärdet Uppsala, and its relation to the weather conditions.] *Vår Fågelvärld*, **18**: 12-33.—Nocturnal migration often took place in the night of a temperature fall, the diurnal migration on the following morning. A rise in temperature was an inhibiting factor. Fall in temperature generally occurs in Scandinavia when a cyclone passes towards the east, followed by an air stream from the north. (In Swedish; English summary.)—E. E.

PHYSIOLOGY

- ADLER, H. E. and J. I. DALLAND. 1959. Spectral thresholds in the Starling (*Sturnus vulgaris*). *Jour. Compar. and Physiol. Psychol.*, **52**: 438-445.
- ELTON, R. L., I. G. ZARROW, and M. X. ZARROW. 1959. Depletion of adrenal ascorbic acid and cholesterol: a comparative study. *Endocrin.*, **65**: 152-157.—Exposure to severe cold and injections of ACTH failed to produce depression of adrenal ascorbic acid in chickens.—H. C. S.
- HOWELL, T. R. and G. A. BARTHOLOMEW. 1959. Further experiments on torpidity in the Poor-will. *Condor*, **61**: 180-185.—Body temperature and oxygen consumption of a captive Poor-will induced to undergo repeated torpidity by low ambient temperatures.—R. E. P.
- PEREK, M., B. ECKSTEIN, and Z. ESHKOL. 1959. The effect of ACTH on adrenal ascorbic acid in laying hens. *Endocrin.*, **64**: 831-832.—Whereas ascorbic acid was depleted 57 per cent in one-year-old laying hens, no effect could be elicited in three-month-old pullets.—H. C. S.
- RALPH, C. L. and R. M. FRAPS. 1959. Effect of hypothalamic lesions on progesterone-induced ovulation in the hen. *Endocrin.*, **65**: 819-824.—Preoptic hypothalamus is undoubtedly concerned with gonadotrophin liberation following progesterone administration.—H. C. S.
- RAYMOND, A. M. 1958. Responses to electrical stimulation of the cerebellum of unanesthetized birds. *Jour. Comp. Neur.*, **110**: 299-320.
- SHELLABARGER, C. J. 1959. Biological potency of 3,3', 5' triiodothyronine in birds. *Endocrin.*, **65**: 503-504.

- SOLOMON, J. and R. O. GREEP. 1959. The growth hormone content of several vertebrate pituitaries. *Endocrin.*, **65**: 334-335.—Includes chicken, which had only a small potency for the test used.—H. C. S.

TAXONOMY AND PALAEOLOGY

- CLANCEY, P. A. and J. G. WILLIAMS. 1959. On the unknown female dress and specific relationships of *Ploceus golandi* (Clarke). *Ibis*, **101**: 247-248.—The previously unique type was collected in 1955. The species has recently been discovered in numbers in Kenya. This paper contains the first description of the female plumage, based on the first female specimen. It is concluded that though females of *golandi* and *weynsi* are much alike, the two forms are distinct species.—J. W. H.
- DOWNES, T., H. HOWARD, T. CLEMENTS, and G. A. SMITH. 1959. Quaternary animals from Schuiling Cave in the Mojave Desert, California. L.A. Co. Mus. Contrib. Sci. No. **29**, 21 pp.—Fifteen species of birds are included in the fauna represented by skeletal remains. Included are *Gymnogyps amplus* Miller and a large form of *Bubo virginianus*. The total faunal content and the geology of the cave suggest late Pleistocene age for the cave fauna.—H. H.
- HOWARD, H. 1958. Miocene sulids of southern California. L.A. Co. Mus. Contrib. Sci. No. **25**, 15 pp.—Three Miocene localities in Los Angeles County (two newly recorded) yielded fossil sulids. *Sula willetti* Miller is tentatively recorded; *Sula pohli* is described as a new species, and *Sula stocktoni* Miller is recorded under the newly described genus, *Paleosula*.—H. H.
- HUSAIN, K. Z. 1959. Taxonomic status of the Burmese Slaty-headed Parakeet. *Ibis*, **101**: 249-250.—Evidence is presented indicating the specific distinctness of *Psittacula himalayana* (Lesson 1832) and *P. finschii* (Hume 1874).—J. W. H.
- LINSLEY, E. G. and R. L. USINGER. 1959. Linnaeus and the development of the International Code of Zoological Nomenclature. *Syst. Zool.*, **8**: 39-47.—A brief review of the history of codes of zoological nomenclature, culminating in the International Code. Post-1901 changes in the latter are summarized, and major remaining problems (particularly "conservation" of names) critically discussed.—K. C. P.
- MAINARDI, D. 1959. Un nuovo metodo di immunologia comparata a scopo sistematico basato sulla somministrazione degli antigeni comuni. Istituto Lombardo Accad. di Sci. e Lettere (Milan), **93**: 91-96.—A new immunological method confirms that the Domestic Goose (*Anser anser*) is distantly related to the Mallard (*Anas platyrhynchos*) and still more distantly to the Muscovy (*Cairina moschata*).—F. M.
- MILLER, L. and R. I. BOWMAN. 1958. Further bird remains from the San Diego Pliocene. L.A. Co. Mus. Contrib. Sci. No. **20**, 15 pp.—Of the 10 species discussed, three are new to science: *Sula humeralis*, *Colymbus subparvus*, and *Ptychoramphus tenuis*.—H. H.
- PARKES, K. C. 1959. Subspecific identity of introduced Tree Sparrows *Passer montanus* in the Philippine Islands. *Ibis*, **101**: 243-244.—*P. montanus manillensis* Hachisuka must be placed in synonymy with *P. m. saturatus* rather than with *malaccensis*. Vaurie's synonymization of *bokotoensis* with *saturatus* was in error. The former now becomes a synonym of *hibilaeus*. It is concluded that *P. montanus* has been introduced into the Philippines from two sources: in

- Luzon, *saturatus* from the north (probably Japan or Formosa); and in Cebu, *malaccensis* from the Malay Peninsula, perhaps Singapore. Conclusions are based on plumage and bill-size considerations.—J. W. H.
- RAND, A. L. 1959. Tarsal scutellation of song birds as a taxonomic character. *Wilson Bull.*, **71**: 274–277.—The character proved too variable to be of great use in classification.—J. T. T.
- RAND, A. L. 1960. A new species of babbling thrush from the Philippines. *Fieldiana, Zool.*, **39**, no. 33: 377–378.—Description of a new species of babbler, *Napothera rabori*, from northern Luzon. The genus was not previously known from the Philippines.—M. A. T.
- SIBLEY, C. G. and P. A. JOHNSGARD. 1959. Variability in the electrophoretic patterns of avian serum proteins. *Condor*, **61**: 85–95.—Profiles of several species are given, and the sources of the great intra-specific variation are examined. Egg-white protein is more satisfactory for taxonomic purposes.—R. E. P.
- STEARNS, W. T. 1959. The background of Linnaeus's contributions to the nomenclature and methods of systematic biology. *Syst. Zool.*, **8**: 4–22.—A valuable survey of the historical development of Linnaeus' philosophy of classification. Ironically, Linnaeus, revered as the father of binomial nomenclature, considered the diagnostic polynomials in his works as more important than the binomials.—K. C. P.
- STRESEMANN, E. 1959. Die Gliederung der Schlangenaadler-Gattung *Spilornis*. Vierteljahrsschr. Naturforsch. Ges. Zürich, **104**: 208–213. Festschrift H. Steiner.—On the taxonomy of the Snake-Eagle genus. Stresemann disagrees with Meise's "oversimplification," which reduced the genus to three polytypic species. "Since the term 'intergradation' was stricken from the subspecies definition, . . . trinomial nomenclature has followed a dangerous course. . . . When too broadly applied, trinomial nomenclature becomes not a mirror of nature, but a caricature." Examples are given of various birds of prey that seemed to be allopatric subspecies, until sympatry was proved.—E. E.
- TODD, W. E. C. 1958. Newfoundland race of the Gray-cheeked Thrush. *Canad. Field-Nat.*, **72**: 159–161.
- VAURIE, C. 1959. Systematic notes on Palearctic birds. No. 36. Picidae: The genera *Dendrocopos* (Part 2) and *Picooides*. *Amer. Mus. Novitates*, **1951**: 24 pp.—*D. hyperythrus* has four valid races as listed by Peters, but his outline of the range of *D. h. subrufinus* was erroneous, as he was unaware that this race is migratory. *Picus incognitus* Scully, 1879, is an older name for *D. auriceps conoveri* Rand and Fleming, 1956. Of 28 described races of *D. minor*, 13 at most are considered valid. Of the 15 currently accepted races of *D. canicapillus*, only the three Palearctic ones are discussed. *Dryobates obscurior* Rothschild, known only from the type, is a normal juvenile of *D. c. omissus*, not an aberration as claimed by other authors. Nine races of *D. kizuki* are admitted, and, tentatively, eight Palearctic races of *P. tridactylus*.—K. C. P.
- VAURIE, C. 1959. Systematic notes on Palearctic birds. No. 37. Picidae: The subfamilies Jyninae and Picumninae. *Amer. Mus. Novitates*, **1963**: 16 pp.—In addition to the five races of *Jynx torquilla* recognized by Peters, Vaurie admits *sarudnyi* Loudon from Transcausia, and describes *himalayana* from Kashmir as new. Three races of *Picumnus innominatus* reach the Palearctic.—K. C. P.

- VAURIE, C. 1959. Systematic notes on Palearctic birds. No. 38. Alcedinidae, Meropidae, Upupidae, and Apodidae. Amer. Mus. Novitates, **1971**: 25 pp.—Three races of *Ceryle rudis* are admitted. Although only peripherally Palearctic, *Merops albicollis* is carefully reviewed; there are no valid races. The genus *Aerops* is considered inseparable from *Merops*. The five Palearctic races of *M. orientalis* are reviewed. There are four valid Palearctic races of *Upupa epops*; its relationship to *U. africana* is discussed. Swifts reviewed are *Apus pallidus*, *pacificus*, and *melba*; *A. acuticaudatus* is a good species and not a race of *pacificus*.—K. C. P.
- WEBSTER, D. J. 1959. A revision of the Botteri Sparrow. Condor **61**: 136–146.—Based on a study of most of the skins in the U.S. (398 specimens examined).—R. E. P.
- WEBSTER, J. D. 1959. The taxonomy of the Robin in Mexico. Wilson Bull., **71**: 278–280.—Notes on *Turdus migratorius propinquus* and *T. m. phillipsi*.
- WILLS, R. G. 1958. The dowitcher problem. Passenger Pigeon, **20**: 95–105.—A critical examination of available Wisconsin specimens.