RECENT LITERATURE

EDITED BY FRANK McKINNEY

ANATOMY AND EMBRYOLOGY

BERGER, A. J. 1957. On the anatomy and relationships of *Fregilupus varius*, an extinct starling from the Mascarene Islands. Bull. Amer. Mus. Nat. Hist., **113**, art. 3: 231–272. Concludes that *Fregilupus* was probably not a starling, after a comparative study of pterylosis, osteology and myology.

FERGUSON, T. M., R. H. RIGDON, and J. R. COUCH. 1957. Thyroid in B_{12} deficient chick embryos. Endocrin., **60**: 13–21.—An histological description of the thyroid gland.—H. C. S.

THOMSETT, D. H. 1957. Casts of the pulmonary system of birds. Ibis, **99**: 614–620.—A simple apparatus for making transparent synthetic resin casts of the pulmonary system is described.—R. F. J.

WETHERBEE, D. K. 1957. Natal plumages and downy pteryloses of passerine birds of North America. Bull. Amer. Mus. Nat. Hist., **113**, no. 5: 345–436. Most passerines are not naked when hatched, but show scanty, definitely distributed, downy tufts, the specialized tips of a few contour feathers. The downy tufts of 74 species were examined and tabulated as to distribution, number, length, and variation. Published and unplublished data on other species (often conflicting) are compiled; German sources are quoted, *without translation*. In certain families, e.g. Corvidae and Hirundinidae, some species are hatched completely naked while others have down; within genera the data indicate basic similarities, as well as specific (and also individual) differences. Included are drawings, one for each family, entitled "Basic neossoptile pterylosis", stated to be "qualitative abstractions". The usefulness of these drawings is greatly impaired by failure to state which (if any) species is depicted; no "norm" for a family can be assumed, as only a few species of each (sometimes only one or two) were examined, there are marked differences among genera and even species, and some of the families are probably polyphyletic.—E. E.

BEHAVIOR

ANDREW, R. J. 1956. Some remarks on behaviour in conflict situations, with special reference to *Emberiza* spp. Brit. Journ. Animal Behav., **4**: 41–45.—Conflict situations arise when tendencies to perform incompatible behavior patterns occur simultaneously. Instead of saying that fear and aggression are conflicting, it is better to specify the responses which are incompatible. Intention movements of flight are discussed. Examples of "compromise behavior" are given; a single pattern may simultaneously express two incompatible tendencies. A number of apparently irrelevant behavior patterns—cooling responses occurring during fear—are thought not to be displacement activities.—F. M.

ANDREW, R. J. 1956. Normal and irrelevant toilet behaviour in *Emberiza* spp. Brit. Journ. Animal Behav., **4**: 85–91.—Activities related to care of the body surface are described. Peripheral stimuli such as foreign material on the feathers, disarranged feathers, etc. are important in causing these behavior patterns and the reactions are often reflex-like. Examples of the irrelevant occurrence of activities such as feather-settling are given; they are frequent in conflict situations.—F. M.

ANDREW, R. J. 1956–57. The aggressive and courtship behaviour of certain Emberizines. Behaviour, **10**: 255–308.—A detailed description deals with threat postures and calls, soliciting and copulation, courtship displays, pair-formation,

song, paired behavior, sexual chases, and reproductive fighting. The origin and motivation of the behavior patterns are discussed. On the basis of this important comparative study, conclusions are drawn on relationships. Four rather separate groups are distinguished: (1) *Emberiza schoeniclus* and *E. cia*, (2) *Calcarius lapponicus* and *Plectrophenax nivalis*, (3) *E. calandra* and *E. bruniceps*, (4) *E. citrinella*, *E. hortulana*, and *E. cirlus*.—F. M.

FISHER, H. I. 1957. Footedness in Domestic Pigeons. Wilson Bull., **69**: 170–177.—Experiments to measure the landing force of *Columba livia* revealed that seven pigeons used the right foot predominantly, three the left foot, and one favored neither. There were some individual changes in footedness.—J. T. T.

HALE, E. B. 1956–57. Breed recognition in the social interactions of domestic fowl. Behaviour, **10**: 240–254.—Experiments showed that in small flocks containing different breeds one breed was dominant over the other. A single brief experience with a member of another breed had a profound influence on subsequent reactions to members of this breed. Experimental plumage coloring did not affect recognition of members of dominant breed by subordinate breed birds, but did affect individual recognition within a breed.—F. M.

HAMILTON, W. J., III. 1957. Blue-winged Teal [*Anas discors*] parasitized by Brown-headed Cowbird [*Molothrus ater*]. Wilson Bull., **69**: 279.

HINDE, R. F., W. H. THORPE, and M. A. VINCE. 1956. The following response of young coots and moorhens. Behaviour, **9**: 214, 242.—Experiments with hand-raised *Gallinula chloropus* and *Fulica atra* showed that following can be evoked by a variety of moving objects. Birds trained to follow one model would also follow other models. It is suggested that increase in the tendency to flee during the first few days of life may be an important factor limiting the "sensitive period" for the establishment of the following response. Learning occurs when the bird follows the moving object. "Imprinting" is not fundamentally different from other types of learning.—F.M.

MEYERRIECKS, A. J. 1957. "Bunching" reaction of Cedar Waxwings [*Bombycilla cedrorum*] to attacks by a Cooper's Hawk [*Accipiter cooperii*]. Wilson Bull., **69**: 184.

MOYNIHAN, M. 1956. Notes on the behavior of some North American gulls. I. Aerial hostile behavior. Behaviour, **10**: 126, 178.—Detailed descriptions of the aerial hostile patterns of *Larus delawarensis*, *L. pipixcan*, *L. argentatus smithsonianus*, *L. californicus*, *L. atricilla*, and *L. philadelphia* are given and comparisons are drawn between the behavior of these species and that of the european *L. r. ridibundus* and *L. minutus*. While some of these behavior patterns occur in only one species, most of them have homologues in each species studied. The aerial reactions of the hooded gulls are performed much more frequently than those of the Ring-billed and Herring Gulls.—F.M.

SICK, H. 1957. Anting by two tanagers in Brazil. Wilson Bull., **69**: 187–188.—*Tangara cyanicollis* and *T. cyanoventris*.

THOMAS, J. W. 1957. Anting performed by Scaled Quail [*Callipepla squamata*]. Wilson Bull., **69**: 280.

WHITAKER, L. M. 1957. Lark Sparrow oiling its tarsi. Wilson Bull., **69**: 179, 180.—A captive *Chondestes grammacus* smeared with its bill oil from its oil gland on its tarsi and feet.—J.T.T.

WHITAKER, L. M. 1957. A résumé of anting, with particular reference to a captive Orchard Oriole. Wilson Bull., **69**: 195–262.—The anting behavior of a captive *Icterus spurius* is described in detail and illustrated by several photographs. The

literature on anting is summarized and there is a bibliography covering eleven pages, altogether providing a valuable review of the subject. Active anting involves anointing the feathers or body by ants held in the bill; passive anting is accomplished by allowing ants to invade the plumage. Birds seem to have used only species of ants that either spray or exude fluids that cause a burning or heating sensation. The region surrounding the vent is the area most frequently anointed in active anting. These related observations suggest that birds are pleasurably, possibly sexually, stimulated by anting.—J.T.T.

WILLIAMS, C., and W. H. MCGIBBON. 1957. The relationship of the various mating behavior activities of the male domestic fowl. Poultry Science, **36:** 30–33.

DISEASES AND PARASITES

COHEN, J., and P. G. 'ESPINASSE. 1957. A basal-cell carcinoma in the fowl. Nature, **179:** 207–208.

FALLIS, A. M., and D. M. WOOD. 1957. Biting midges (Diptera: Ceratopogonidae) as intermediate hosts for Haemoproteus of ducks. Canad. Journ. Zool., **35:** 425–435.—Biting midges (*Culicoides* sp.) are suitable intermediate hosts for *Haemoproteus nettionis* in domestic ducks.—F.M.

GLASGOW, L. L., and R. HENSON. 1957. Mourning Dove nestlings infested with larvae of *Philornis*. Wilson Bull., **69:** 183–184.—Two nestling *Zenaidura macroura* were parasitized by 17 and 26 maggots of *Philornis* (Muscidae).—J.T.T.

DISTRIBUTION

ALLOUSE, B. E. 1957. On a recent ornithological excursion in Iraq made by Dr. Makatsch. (May 28–June 9, 1957). Iraq Nat. Hist. Mus. Publ. **13:** 17–21.—Notes on 35 species.

ALLOUSE, B. E. 1957. On a collection of birds from Mosul, Iraq. Bull. Coll. Arts Sci., Baghdad, **2:** 162–181.—List of 91 species, based on the collection in the Mosul Museum of Natural History.

AMADON, D. and A. BASILIO. 1957. Notes on the birds of Fernando Poo Island, Spanish Equatorial Africa. Amer. Mus. Novit. no. 1846: 1–8.

BOSWELL, C., and P. NAYLOR. 1957. A preliminary note on four birds which appear to be new to the Iraq list. Iraq Nat. Hist. Mus. Publ. **13:** 16.

ELLIOTT, H. F. I. 1957. A contribution to the ornithology of the Tristan da Cunha group. Ibis, **99:** 545–586.—Natural history and taxonomy of the oceanic and terrestrial avifauna of this south Atlantic island group.—R.F.J.

GINÉS, HNO., and YÉPEZ T., G. 1956. Avifauna de las Islas, pp. 68–77, *in* El Archipiélago de los Roques y La Orchila. Soc. Cienc. Nat. La Salle (Caracas, Venezuela).—(In Spanish.) During a general scientific survey of this island group located off the Caribbean coast of Venezuela, made at irregular intervals between 1940 and 1954, 46 kinds of birds were collected on Los Roques, and 17 on Orchila. The total list for the entire group is 48 forms. An abundant lizard, *Cnemidophorus lemniscatus nigricolor* Peters ate the eggs of the Brown Booby, whenever these were left unprotected, breaking them by pushing them off the rocky ledges where the nests were located. *Coereba flaveola lowii* Cory is restricted to Los Roques. Another local subspecies, *Dendroica petechia obscura* Cory, ranges to an adjacent island group, Las Aves. The Golden Warbler of Orchila is listed as *Dendroica petechia rufopileata* Ridgway, a race that has a wide insular distribution from Aruba and Curaçao to Margarita Island.

SERLE, W. 1957. A contribution to the ornithology of the eastern region of Nigeria. Ibis, **99**: 371–418, 628–685.—An annotated list stressing ecology and taxonomy.—R.F.J.

ZAHAVI, F. 1957. The breeding birds of the Huleh swamp and lake (northern Israel). Ibis, **99**: 600–607.—A check-list with notes on habitats and on habitat selection in certain sylviids.—R.F.J.

ZIMMERMAN, D. A. 1957. Notes on Tamaulipan birds. Wilson Bull., **69**: 273–277.—Field observations on 27 species.—J.T.T.

ECOLOGY AND POPULATION

DORST, J. 1957. The puya stands of the Peruvian high plateaux as a bird habitat. Ibis, **99**: 594–599.—An examination of *Puya raimondii* associations of the Peruvian *altiplano* as avian habitats.—R. F. J.

HAGAR, D. C., JR. 1957. Nesting populations of Red-tailed Hawks and Horned Owls in central New York State. Wilson Bull., **69**: 263–272.—In a 52-square-mile area in Madison County, N. Y., through four nesting seasons, the nesting and non-nesting *Buteo jamaicensis* and *Bubo virginianus* were located and observed. Density, interspecific intolerance, nesting success, and other conclusions are reported.—J. T. T.

TURČEK, F. J. 1957. The bird succession in the conifer plantations on mat-grass land in Slovakia (ČSR). Ibis, **99**: 587–593.—Bare pasture had the lowest number of birds but largest avian biomass, conifer plantations 1–5 years old an intermediate number of birds but smallest biomass, and plantations 6–20 years old the most birds but an intermediate biomass.—R. F. J.

GENERAL BIOLOGY

DE CARVALHO, C. T. 1957. Notas ecológicas sôbre *Volatinia jacarina* (Passeres, Fringillidae). Bol. Mus. Paraense Emilio Goeldi, n.s. Zoologia, no. 2: 1–10. Belém, Pará, Brazil. Nesting and general behavior of the Blue-black Grassquit. (In Portuguese; English summary.)

DE CARVALHO, C. T. 1957. A nidificação do *Turdus l. albiventer* Spix (Passeres, Turdidae). Bol. Mus. Paraense Emilio Goeldi, n.s. Zoologia, no. 4: 1–13. Nesting and general behavior of *T. leucomelas albiventer*. (In Portuguese; English summary.)

DE CARVALHO, C. T. 1957. Notas sôbre a biologia do *Ramphocelus carbo* (Passeres, Thraupidae). Bol. Mus. Paraense Emilio Goeldi, n.s. Zoologia, no. 5: 1–19. Breeding biology of the Silver-beaked Tanager. (In Portuguese; English summary.)

NOVAES, F. C. and C. T. DE CARVALHO. 1957. Observações sôbre a nidificação de *Glaucis hirsuta* (Gmelin)—Trochilidae Aves. Bol. Mus. Paraense Emilio Goeldi. Nova serie. Zoologia, no. 1: 1–11. Belém, Pará, Brazil. Observations on the nesting of the hummingbird *Glaucis hirsuta*. (In Portuguese; English summary.)—E. E.

THOMSON, A. L., and R. E. MOREAU. 1957. Feeding habits of the palm-nut vulture *Gypohierax*. Ibis, **99**: 608–613.—*G. angolensis* feeds partly on fishes and also uses the oil-rich fruits of the palm *Elaeis*; it probably prefers the latter to meat.—R. F. J.

VAN BREE, P. J. H. 1957. Variations in length and breadth of eggs from a colony of black-headed gulls (*Larus r. ridibundus* Linnaeus) on the island of Texel. Beaufortia, Zool. Mus. Amsterdam, **5**, no. 67: 245–255. Statistical analysis of 1246 eggs.

Management and Conservation

Lamb, G. H. 1957. The Ivory-billed Woodpecker in Cuba. Pan-American Section, International Committee for Bird Preservation. Research Rept. no. 1: 1–17. (Obtainable from S. D. Ripley, Peabody Mus.Nat. Hist., Yale Univ., New Haven, Conn.) The last remnant, in northeastern Oriente Province, amounted to six pairs in 1956. The birds survive only in pine forest on lateritic soil, where large dead pines persist. Deforestation has been the main cause of extirpation. Valuable account of distribution, feeding and other aspects of behavior. Suggestions for saving the woodpecker from extinction.—E. E.

Lamb, G. H. 1957. On the endangered species of birds in the U. S. Virgin Islands. Pan-American Section, International Committee for Bird Preservation. Research Rept. no. 2: 1–5. Colonial sea-birds and their nesting sites in the Virgin Islands are listed. Sites are tiny cays, owned by government, but unprotected from regular commercial exploitation for eggs and young. It is urged that Bureau of Sport Fisheries and Wildlife be placed in charge. Lack of protection has reduced sole breeding colony of White-crowned Pigeons to 300.—E. E.

Migration and Orientation

Bagg, A. M. 1957. The changing seasons. A summary of the spring migration. Audubon Field Notes, **11**: 312–325.—An analysis of the 1957 spring migration in the light of weather conditions. 26 weather maps show the position of highs, lows, and airflows on the key days. Heavy diurnal migration across the Gulf of Mexico was seen in progress and further evidence was obtained on the time taken by migrants to make the crossing. Detailed regional reports on migration complete this issue (p. 325–377) and these should be used in conjunction with the summary. —F. M.

Bellrose, F. C. 1957. A spectacular waterfowl migration through central North America. Illinois Nat. Hist. Survey, Biol. Notes No. **36**, Urbana, pp. 24.—A detailed account, compiled from reports of many observers, of the mass migration of waterfowl which occurred on November 1–3, 1955. This flight was very well documented since census figures are available for a number of areas in the Mississippi flyway just before and after the migration. Details are given of the direction, speed, and altitude of the flight and of the species involved. Weather conditions are analysed: the flight is thought to have been initiated by a southward flow of a mass of Continental Arctic air which resulted from low pressure areas in Canada.—F. M.

Miller, L. 1957. Some avian flyways of western America. Wilson Bull., **69**: 164–169.—Migrating birds have been observed flying through mountain passes, either fault lines or erosion gaps, in California and Arizona. Thus they avoid climbing over mountains and so conserve energy.—J. T. T.

Physiology

Bartholomew, G. A., and T. J. Cade. 1957. The body temperature of the American Kestrel, *Falco sparverius*. Wilson Bull., **69**: 149–154.—Continuous temperature records were acquired from thermocouples fastened in different parts of the body of ten individuals. At normal environmental temperatures, there is a diurnal cycle of body temperatures fluctuating around 41°C. At air temperatures up to 48°C, the body (cloacal) temperature rose to 44°C with no permanent damage to the birds.—J. T. T.

BERNSTORF, E. C. 1957. Difference in response of the capon comb to intraperitoneally and subcutaneously injected testosterone propionate. Endocrin., **60:** 173–184.

FERGUSON, T. M., J. B. TRUNNELL, B. DENNIS, P. WADE, and J. R. COUCH. 1957. The influence of vitamin B_{12} deficiency on the uptake of I^{131} by the thyroid gland in adult and embryonic chickens. Endocrin., **60:** 28–32.—The uptake of I^{131} is decreased.—H. C. S.

GLICK, B. 1957. Experimental modification of the growth of the bursa of Fabricius. Poultry Science, **36:** 18–23.

HIMENO, K., and Y. TANABE. 1957. Mechanism of molting in the hen. Poultry Science, **36:** 835–842.

KARE, M. R., R. BLACK, and E. G. ALLISON. 1957. The sense of taste in the fowl. Poultry Science, **36:** 129–138.

KIRKPATRICK, C. M. 1957. Bobwhite weight gains on different light-dark cycles. Poultry Science: **36:** 989–993.

LOFTS, B., and A. J. MARSHALL. 1957. The interstitial and spermatogenetic tissue of autumn migrants in southern England. Ibis, **99:** 621–627.—Autumnal recrudescence of testes was demonstrated in adult passerine migrants. Cholesterol material was present in testes, and since this is probably the androgenic precursor, autumnal sexual behavior (even in migrants) is probably caused by this.—R. F. J.

MELLEN, W. J., and B. HARDY, JR. 1957. Blood protein-bound iodine in the fowl. Endocrin., **60:** 547–551.—The PBI level in chickens and ducks was consistently lower than in mammals.—H. C. S.

NORRIS, R. A., C. E. CONNELL, and D. W. JOHNSTON. 1957. Notes on fall plumages, weights, and fat condition in the Ruby-throated Hummingbird. Wilson Bull., **69:** 155–163.—A September concentration of *Archilochus colubris* in South Carolina was used to make studies of these and other characteristics.—J. T. T.

POLIN, D., and P. D. STURKIE. 1957. The influence of the parathyroids in blood calcium levels and shell deposition in laying hens. Endocrin., **60:** 778–784.—Parathyroids play a role in regulating plasma calcium concentration and thus indirectly influence shell deposition.—H. C. S.

POLIN, D., P. D. STURKIE, and W. HUNSAKER. 1957. The blood calcium response of the chicken to parathyroid extracts. Endocrin., **60:** 1–5.—The blood calcium increased, especially in laying hens.—H. C. S.

TAXONOMY

AMADON, D. 1956. Remarks on the starlings, family Sturnidae. Amer. Mus. Novit., no. 1803: 1–41. Amadon recognizes 27 genera and 110 species of starlings in his treatment for the "Check-list of birds of the world". Here he outlines the reasons for his conclusions in the controversial situations and offers comments on relationships and evolution.—E. E.

AMADON, D. 1957. Remarks on the classification of the perching birds, [order Passeriformes]. Proc. Zool. Soc. Calcutta, Mookerjee Memor. Vol.: 259–268. The bases and difficulties of phylogenetic classification in passerine birds are discussed. The families of Oscines are considered to fall into three groups, with the corvids in the most primitive group, the muscicapids in the intermediate group, and the emberizines in the most recent group. The arrangement of families is closer to that of Wetmore (Smith. Misc. Coll., 117, no. 4: 1–122, 1951) than to that proposed some years ago by Mayr and Amadon (Amer. Mus. Novit., no. 1496: 1–42, 1951).—E. E.

ANDREW, R. J. 1956. Intention movements of flight in certain passerines, and their use in systematics. Behaviour, **10:** 179–204.—Intention movements of flight—incomplete take-offs, wing-flicks, and tail-flicks—are described in *Emberiza* spp. The detailed form of these tail movements is compared in about 100 species (chiefly Emberizines, Richmondenines, Carduelines, and Ploceids) and this character is shown to be useful in defining relationships. The Emberizinae are significantly distinguished from nearly all the other systematic groups; *Fringilla* is thought to be most closely related to the Carduelinae; the Estrildinae are a natural and somewhat isolated group. The function of the pre-flight tail-flicks is to make the bird conspicuous to other members of the species.—F. M.

DELACOUR, J. and C. VAURIE. 1957. A classification of the Oscines (Aves). Los Angeles Cty. Mus. Contrib. Sci., no. 16: 1–6. Reconsideration is urged of the decision reported by Mayr and Greenway (Breviora, 58: 1–11, 1956) to place the corvine assemblage at the end of the Oscines, rather than near the beginning, in the forthcoming continuation of Peters' Check-list. The writers prefer Wetmore's sequence (which Peters had proposed to follow), with some modifications. A proposed systematic sequence is attached of families and subfamilies, which resembles that of Amadon (1957, *supra*) in general approach but differs in some respects.—E. E.

RAND, A. L., and R. L. FLEMING. 1957. Birds from Nepal. Fieldiana, Zool., **41:** no. 1: 1–218.—Report on a series of collections made by the junior author from 1949 to 1954, comprising some 2500 specimens representing 490 species and subspecies. Collections were made from far western to eastern Nepal.—M. A. T.

VAURIE, C. 1956–1957. Systematic notes on Palearctic birds. No. 24 Ploceidae: the genera *Passer, Petronia,* and *Montifringilla.* No. 25 Motacillidae: the genus *Motacilla.* No. 26 Paridae: the *Parus caeruleus* complex. Amer. Mus. Novit. no. 1814: 1–27; no. 1832: 1–16; no. 1833: 1–15. The latest papers of an important series, begun in 1953, treating problems of taxonomy and distribution in the Passeriformes of the Palearctic. These meticulous and informative studies explain the bases for the conclusions embodied in Vaurie's forthcoming book on Palearctic passerines.—E. E.

WARNER, D. W., and B. E. HARRELL. 1957. The systematics and biology of the Singing Quail, *Dactylortyx thoracicus.* Wilson Bull., **69:** 123–148, 1 color plate by G. M. Sutton.—This quail inhabits a number of forest types and several disjunct areas in Mexico. Its behavior and habits are described. The species is split into 18 subspecies, eight new ones being described here.—J. T. T.