

RECENT LITERATURE

EDITED BY FRANK MCKINNEY

ANATOMY AND EMBRYOLOGY

- BERGER, A. J. 1956. The expensor secundariorum muscle, with special reference to passerine birds. *Journ. Morph.*, **99**: 137-168, 9 figs.
- BERGER, A. J. 1956. The appendicular myology of the Sandhill Crane [*Grus canadensis tabida*], with comparative remarks on the Whooping Crane [*G. americana*]. *Wilson Bull.*, **68**: 282-304.
- GLICK, B. 1956. Normal growth of the Bursa of Fabricius in Chickens. *Poultry Sci.*, **35**: 843-851.—Maximum bursa size was attained in Barred crosses, White Leghorns, and Rhode Island Reds between 10 and 12, 4½ and 6, and 8 and 11 weeks, respectively—all at an earlier age than previously reported. The bursa of males was larger than that of females during the first 4 weeks after hatching. Bursa weight declined between 4 and 13 weeks, much earlier than previously believed.—P. H. B.
- LUCAS, A. M., and E. M. DENINGTON. 1956. Morphology of the Chicken liver. *Poultry Sci.*, **35**: 793-806.—Describes and illustrates the shape of the liver and its lobes with an analysis of variation in measurements based on 128, 27-day-old birds from the same hatch and same inbred line.—P. H. B.
- MORENG, R. E., and R. L. BRYANT. 1956. The resistance of the Chicken embryo to low temperature exposure. *Poultry Sci.*, **35**: 753-757.
- RAND, A. L. 1954. Notes on downy plumages of Loons (Gaviidae). *Canad. Field-Nat.*, **68**: 13-15.
- ROMIJN, C., and W. LOKHORST. 1956. The caloric equilibrium of the Chicken embryo. *Poultry Sci.*, **35**: 829-834.
- SIBLEY, C. G. 1956. The aftershaft in jacamars and puff-birds. *Wilson Bull.*, **68**: 252-253.—Galbulidae and Bucconidae.

BEHAVIOR

- ARMSTRONG, E. A. 1956. Distraction display and the human predator. *Ibis*, **98**: 641-654.—It is concluded that distraction display has developed by the discriminating elimination of nest contents of inadequate performers by predators other than man.—R. F. J.
- BLEST, A. D. 1956. Protective coloration and animal behaviour. *Nature*, **178**: 1190-1191.—“. . . statements concerning the sensory capacities of animals . . . based on experiments involving the elicitation and measurement of responses from whole organisms, are only meaningful in terms of the precise experimental situations employed.”—H. C. S.
- BOYD, H. 1953. On encounters between wild White-fronted Geese in winter flocks. *Behaviour*, **5**: 85-129.—In *Anser a. albifrons*, counts of aggressive contacts relate the success of such encounters to the status of the birds involved. Two ranking systems are shown: 1. parents > paired adults > juveniles in families > single adults > unattached juveniles, 2. large families > smaller families. “The patterns of aggressive and submissive behaviour are described and classified by intensity. A direct relation between intensity of threat and response is found. Though the aggressive postures used by adults and juveniles are similar, adults are more vigorous than juveniles, and parents are more vigorous than adults without families.” Factors producing conflict are: sexual rivalry, interference with freedom of movement, and preservation of family coherence.—F. M.

- DILGER, W. C. 1956. Hylocichlid Thrushes in captivity with notes on their behaviour. *Avicultural Mag.*, **62**: 183-189.—A brief but valuable description of activities such as sleeping, bathing, pellet casting, defecation, and comfort movements in adult and young thrushes.—F. M.
- GOODWIN, D. 1955. Some observations on the reproductive behaviour of Rooks. *British Birds*, **48**: 97-105.—Nest building movements are apparently stereotyped, but in the early stages there is a reluctance to let go of a placed stick, lest it drop. Some male corvids can build nests but it seems that the presence of a female also doing so may be a necessary stimulus. Goodwin suggests that there is an innate attacking reaction to the sight of other rooks copulating, as Heinroth (1948) found in pigeons. These attacks occur even upon paired birds. Any intruding male who finds himself on top of the female during such an attack attempts to copulate. Once the female again finds a perch she is treated as a "territory owner" and the intruders depart. Evidently a sitting female is not so regarded; hence attempts at rape may occur. There is a discussion of attacks on avian cripples. A motivation similar to human "indignation" is suggested. It is absent in the mate of the cripple. The nesting of an unpaired female (disfigured) is discussed.—M. T. M.
- HALDANE, J. B. S., and H. SPURWAY. 1956. Imprinting and the evolution of instincts. *Nature*, **178**: 85-86.
- HINDE, R. A. 1953. The conflict between drives in the courtship and copulation of the Chaffinch. *Behaviour*, **5**: 1-31.—Observations on captive birds are described in detail. Threat displays are most frequent in situations where conflict between attack and escape tendencies is great. The male dominates the female in winter, but this situation is reversed in the breeding season, when the male's aggressiveness is reduced by his sex drive. "The male's displays occur in those situations where his tendencies to approach (court) and flee from the female are in approximate balance. The intensity of the displays depends on the intensity of the conflict. A similar analysis can be applied to the behaviour of the female."—F. M.
- KLOPFER, P. H. 1956. Comments concerning the age at which imprinting occurs. *Wilson Bull.*, **68**: 320-321.—Artificial selection may have modified the behavior of domesticated birds and produced variations in the sensitive periods.—J. T. T.
- MARLER, P. 1955-56. Studies of fighting in Chaffinches (1) Behaviour in relation to the social hierarchy. (2) The effect on dominance of disguising females as males. (3) Proximity as a cause of aggression. *Brit. Journ. Animal Behaviour*, **3**: 111-117, 137-146; **4**: 23-30.—The results of these detailed quantitative studies cannot be fully summarized. (1) Counts of aggressive encounters during winter among the birds in two captive flocks showed that there were straight-line, peck-right hierarchies with males dominant over females. The status of each bird was constant regardless of location of the encounter. When the birds were starved it was shown that males were more tolerant of females than of each other. (2) Females, with underparts dyed red, in imitation of the male, won the great majority of aggressive encounters with normal females, and dominated them in the hierarchy. Dyed females, which had been isolated from males for several weeks, won more fights against males than did uncolored females. The red breast of the male acts as a social releaser, inducing an innate tendency to avoid other Chaffinches. (3) Experiments with movable feeding hoppers were designed to measure the distance at which attacks occurred in winter. Around each bird lies a zone within which the probability of aggression increases. Among the

- factors influencing this individual distance are sex recognition (by the red breast of the male), behavior (birds behaving submissively are allowed to come closer), and individual characteristics.—F. M.
- MOYNIHAN, M. 1953. Some displacement activities of the Black-headed Gull. *Behaviour*, 5: 58-80.—A quantitative study of displacement nest-building and preening during incubation. These activities increased in frequency when 1, 2, or 3 eggs were taken from the nest, being most common when 3 eggs were removed. These displacement activities result from thwarting of the incubation drive. Nest-building and preening are thought to be true "alternative" displacement activities.—F. M.
- MOYNIHAN, M., and M. F. HALL. 1954. Hostile, sexual, and other social behaviour patterns of the Spice Finch (*Lonchura punctulata*) in captivity. *Behaviour*, 7: 33-76.—The gregarious tendencies of this well-known cage-bird influence many of its behavior-patterns, and the authors suggest that there is a "flocking" drive in this species. There was no evidence of a dominance hierarchy in captive birds. Clumping (roosting in contact with other birds) and social preening are highly developed. There are few ritualized "displays," the plumage is sombre, and the voice weak. It is concluded that selection has not favored the evolution of elaborate hostile signals, and this is thought to be a specialized rather than a primitive condition. The Spice Finch's "Jingle" is not a true song (in the sense of a vocalization which repels males and attracts females of the same species). It is suggested that there is an independent "Jingling tendency." The behavior associated with copulation is discussed in terms of the simultaneous activation of tendencies to attack, escape, and behave sexually, and in the male the further tendency to "Jingle."—F. M.
- PRECHTL, H. F. R. 1953. Zur Physiologie der angeborenen auslösenden Mechanismen I. Quantitative Untersuchungen über die Sperrbewegung junger Singvögel. *Behaviour*, 5: 32-50.—(From English summary.) A quantitative analysis of the factors affecting the gaping reactions of the young of five species of finch, Nuthatch, Spotted Flycatcher, and Swallow. "In those species of seed eating birds examined the intensity and duration of the discharge of a single gaping reaction is dependent upon the kind and not upon the intensity of the stimulus. The all-or-none-rule must be applied. In insect eating species the duration and intensity of the reaction is dependent upon the strength of the stimulus." Further conclusions, which throw light on the Innate Releasing Mechanism, are reported.—F. M.
- RAMSAY, A. O. 1953. Variations in the development of broodiness in fowl. *Behaviour*, 5: 51-57.—The maternal behavior of Cochin Bantam hens developed slowly in four stages: brooding, titbitting, clucking, and normal broody behavior. Experiments indicated that socially dominant hens were slower to accept chicks than the less aggressive hens. Hens confined with Mallard ducklings proceeded from stage to stage more rapidly than hens kept with chicks.—F. M.
- RAMSAY, A. O. 1956. Seasonal patterns in the epigamic displays of some surface-feeding ducks. *Wilson Bull.*, 68: 275-281.—From September to April the frequency of different displays, which are described, of *Anas platyrhynchos*, *Anas rubripes*, *Anas carolinensis*, and *Chaulelasmus streperus* varied; the periods of maximum display of the different species did not correspond. A few notes on other species are included.—J. T. T.
- SIMMONS, K. E. L. 1955. The significance of voice in the behaviour of the Little Ringed and Kentish Plovers. *British Birds*, 48: 106-114.—Part of Simmons' important work on the behavior of the plovers. Eight notes are described for

the adult, and two for the flightless chicks, of *Charadrius dubius*. There are a few remarks on the calls of *C. alexandrinus*. Studies of voice support the conclusion that sexual displays show elements of both escape and attack motivations in the Charadriiformes.—M. T. M.

- WILLIAMS, C., and W. H. MCGIBBON. 1956. An analysis of the peck-order of the female Domestic Fowl, *Gallus Domesticus*. Poultry Sci., 35: 969-976.—Four breeds were studied. A linear peck-order rather than triangular was characteristic of the females of this study. No changes in peck order were observed as a result of implantation of gonadal hormones.—P. H. B.
- WOOD-GUSH, D. G. M. 1955. The behaviour of the domestic chicken: a review of the literature. Brit. Journ. Animal Behaviour, 3: 81-110.
- ZIRNER, F. 1956. The Great Horned Owl. Passenger Pigeon, 18: 99-109.—Some unusual observations of the behavior of the Great Horned Owl (*Bubo virginianus*) by a Wisconsin naturalist over a 20-year period.—R. W. N.

DISEASES AND PARASITES

- CARRIKER, M. A., JR. 1955. The Ischnocera of the Trogonidae. Novedad. Colomb., 2: 87-100. Univ. del Cauca.—Mallophaga of the trogons, with descriptions of new forms.—E. E.
- CLARKSON, M. J. 1956. Experimental infection of turkey poults with *Eimeria adenoides* (Moore and Brown, 1951) isolated from a natural case in Great Britain. Nature, 178: 196-197.
- EDWARDS, G. R. 1955. Excrescences about the eyes and on the legs and feet of Dunnocks. British Birds, 48: 186-187.—Such excrescences have been reported before from *Prunella modularis*. In this case a number of infected birds was trapped and the infection was evidently of short duration. One bird infected in August was retrapped, quite free of it, in December. There is an editorial note suggesting a virus as causative agent.—M. T. M.
- JUDD, W. W. 1954. Insects collected from birds' nests at London, Ontario. Canad. Field-Nat., 68: 122-123.

DISTRIBUTION

- BALL, S. C. 1954. Additional birds from eastern Gaspé. Canad. Field-Nat., 68: 103-109.
- BANFIELD, A. W. F. 1953. Notes on the birds of Kluane Game Sanctuary, Yukon Territory. Canad. Field-Nat., 67: 177-179.
- BANFIELD, A. W. F. 1953. Additions to the list of Banff National Park birds. Canad. Field-Nat., 67: 179-180.
- BANFIELD, A. W. F. 1954. Notes on the birds of Jasper National Park, Alberta. Canad. Field-Nat., 68: 9-10.
- BANFIELD, A. W. F. 1954. Further notes on the birds of Banff National Park, Alberta. Canad. Field-Nat., 68: 182.
- BENSON, C. W. 1956. New or unusual records from northern Rhodesia. Ibis, 98: 595-605.
- BRECKENRIDGE, W. J. 1955. Birds of the lower Back River, Northwest Territories, Canada. Canad. Field-Nat., 69: 1-9.
- BULLETIN OF THE MAINE AUDUBON SOCIETY. Name changed to *Maine Field Naturalist* beginning with volume 12, 1956. Change results from joint publication with Portland Society of Natural History and inclusion of articles on groups other than birds.—L. M. B.
- CARRIKER, M. A., JR. 1955. Notes on the occurrence and distribution of certain

- species of Colombian birds. *Novedad. Colomb.*, **2**: 48-64. Univ. del Cauca.— Adds certain species and subspecies to the Colombian avifauna, indicates range extensions and corrections for others.—E. E.
- CHAPMAN, E. A., and MCGEOCH, J. A. 1956. Recent field observations from Iraq. *Ibis*, **98**: 577-594.
- DAVIS, W. F. 1953. Birds observed on a canoe trip in northern Manitoba. *Canad. Field-Nat.*, **67**: 148-154.
- GODFREY, W. E. 1954. The Cattle Egret at sea off Newfoundland. *Canad. Field-Nat.*, **68**: 139-140.
- HANDLEY, C. O., JR. 1956. The northernmost nesting of the Rough-legged Hawk in North America. *Wilson Bull.*, **68**: 246-248.—Nest with two eggs of *Buteo lagopus* on Prince Patrick Island, Canada.—J. T. T.
- HÖHN, E. O. 1955. Birds and mammals observed on a cruise in Amundsen Gulf, N. W. T., July 29th—August 16th, 1953. *Canad. Field-Nat.*, **69**: 41-44.
- HOUSTON, S. 1956. The Caspian Tern in Saskatchewan—with first nesting record. *Blue Jay*, **14**: 116-117.
- KENNEDY, P. G., (and Editorial). 1955. Royal Tern in Dublin: A New British Bird. *British Birds*, **48**: 116-117.—A decomposed specimen of *Sterna maxima* was found on the shore near Dublin on 24th March 1954, the first record for Europe. Its condition and site of discovery suggest that the bird died close to where it was discovered. Oceanographic studies show that Dublin is an unlikely area for a trans-Atlantic (Gulf Stream-carried) bird to be deposited. Floating objects from further south would get trapped on the south-western coasts. Though there are populations in Africa as well as America it seems that this was a genuine vagrant.—M. T. M.
- MOWAT, F. M., and A. H. LAWRIE. 1955. Bird observations from southern Keewatin and the interior of northern Manitoba. *Canad. Field-Nat.*, **69**: 93-116.
- NEW HAMPSHIRE BIRD NEWS. **8** (1955), pp. 3-130; **9** (1956) pp. 3-126.—Each issue contains a report of the season's field records, arranged by species. "A List of the Birds of New Hampshire" is concluded, with a supplement covering exterminated and accidental forms (vol. 9, no. 4) bringing the total list to 350 forms. Short notes primarily of local interest round out each issue.—L. M. B.
- PACKARD, C. M. 1956. Holboell's Grebes wintering in Maine. *Me. Field Nat.*, **12**: 40-41.—Regularly occurring winter flocks of 25-125 birds in the area between Biddeford Pool and Cape Neddick, York County, seem to constitute a "center" for wintering. They scatter during the day but raft up in late afternoon.—L. M. B.
- SHEPPARD, R. W. 1954. Phalaropes at Niagara Falls. *Canad. Field-Nat.*, **68**: 137-138.—Several autumnal records of the Red Phalarope (*Phalaropus fulicarius*) and Northern Phalarope (*Lobipes lobatus*).—R. W. N.
- SUTTON, G. M., and D. F. PARMELEE. 1956. On certain charadriiform birds of Baffin Island. *Wilson Bull.*, **68**: 210-223.—Twenty species and the habitat are discussed.—J. T. T.
- SNYDER, L. L. 1954. On the distribution of *Colymbus grisegena holbölli*. *Canad. Field-Nat.*, **68**: 41-42.—Evidence is presented for decreasing the described breeding range of this species ". . . by approximately thirty per cent."—R. W. N.
- TABER, W. E. 1955. The Isles of Shoals. *Bull. Me. Aud. Soc.*, **11**: 58-66.—A brief historical sketch of the islands is followed by a comparison of the author's observations of bird abundance with the records of previous writers.—L. M. B.
- TABER, W. 1956. Pelagic peculiarities of the Gulf of Maine. *Me. Field Nat.*, **12**: 73-76.—Circular currents with speeds up to 2 knots over the shoal waters of

- the continental shelf may provide excellent feeding places for pelagic species and explain the rare occurrence of these species closer to land. Such currents and shoals are described.—L. M. B.
- VON SNEIDERN, K. 1955. Notas ornitológicas sobre la colección del Museo de Historia Natural de la Universidad del Cauca. *Novedad. Colomb.*, 2: 35-44.—Birds in the above-named museum previously unrecorded or little known in Colombia; among them *Cypseloides fumigatus rothschildi* (= *major* auct.), identified by Wetmore. [The previous Colombian record of this southern species (*Novedad. Colomb.*, 1: 14) proves to be *C. cryptus*, *vide* Wetmore *in litt.* E. E.] *Ciccaba virgata occidentalis*, new subspecies.
- WALKINSHAW, L. H. 1956. Some bird observations in the northern peninsula of Michigan. *Jack-Pine Warbler*, 34: 107-117.
- WETMORE, A. 1955. Further additions to the avifauna of Colombia. *Novedad. Colomb.*, 2: 45-47.—Range extensions into Colombia. *Catharus fuscater operataneus*, new subspecies.—E. E.
- YOCOM, C. F. 1956. Re-establishment of breeding populations of Long-billed Curlews in Washington. *Wilson Bull.*, 68: 228-231.—*Numenius americanus*, extirpated once from many areas of eastern State of Washington by human settlement, has become re-established where land has returned to pasture.—J. T. T.

ECOLOGY AND POPULATION

- ARNOLD, J. W. 1953. Breeding-bird census 1952. *Canad. Field-Nat.*, 67: 180-181.—Nine species were found breeding in a deciduous woodland of approximately 15 acres in Quebec.—R. W. N.
- BEER, J. R., L. D. FRENZEL, and N. HANSEN. 1956. Minimum space requirements of some nesting passerine birds. *Wilson Bull.*, 68: 200-209.—The available nesting space for birds breeding on small islands in northern Minnesota lakes was determined from the area of each island and the number of resident pairs of each species: *Melospiza melodia*, *Dendroica petechia*, and *Vireo olivaceus*. The least area occurred in cases of one pair per island and was considerably less than the minimum territory reported for each species from studies on the mainland. The minimum area increased with the number of pairs per island until three to five pairs were present, when the area approximated that from mainland studies. There follows a concise and interesting discussion of the possible functions of territorial behavior.—J. T. T.
- COTTAM, C. 1956. Uses of marking animals in ecological studies: marking birds for scientific studies. *Ecol.*, 37: 675-681.—Description of methods, history of bird-banding, and objectives.—S. C. K.
- DILGER, W. C. 1956. Adaptive modifications and ecological isolating mechanisms in the thrush genera *Catharus* and *Hylocichla*. *Wilson Bull.*, 68: 171-199.—*Hylocichla mustelina*, *Catharus fuscescens*, *C. guttatus*, *C. ustulatus*, and *C. minimus* (the last four formerly classified in *Hylocichla*) typically overlap each other in that order from south to north. Competition appears to be reduced by an alternation of terrestrial feeding niches with arboreal feeding niches, and partially, of forest edge with forest interior habitats. Correlations are made between foraging habits and leg and jaw proportions. The course of evolution of these differences is hypothesized.—J. T. T.
- EMLEN, J. T., JR. 1956. Juvenile mortality in a Ring-billed Gull colony. *Wilson Bull.*, 68: 232-238.—In a colony of *Larus delawarensis* in Michigan there was a loss of about 1.5 chicks per territory, mostly as a result of the killing of wandering chicks by terrestrial adults, and a fledging of 0.67 chicks per territory.—J. T. T.

- EMLÉN, J. T., JR. 1956. A method for describing and comparing avian habitats. *Ibis*, **98**: 565-576.—A tested, quantitative method for describing significant characteristics of vegetational canopy, screening efficiency, foliage type, nature of twigs, area coverage and dispersion, topography, water, soil, and culture is presented. Some methods of using such data are indicated.—R. F. J.
- HILLABY, J. 1956. Death of flamingoes in the Camargue. *Nature*, **177**: 1247.—Between 2000-3000 estimated to have perished from cold weather in February, 1956.—H. C. S.
- JOHNSGARD, P. A. 1956. Effects of water fluctuation and vegetation change on bird populations, particularly waterfowl. *Ecol.*, **37**: 689-701.—Most bird species adhere to a pothole type or vegetation stage of succession. Changes caused by fluctuating water levels result in a redistribution of bird populations throughout the area (Grant Co., Washington).—S. C. K.
- MORLAND, T. F. T. 1955. Bird breeding census, 1953. *Canad. Field-Nat.*, **69**: 25.—Twenty-two species were found breeding in a deciduous forest of 19 acres in Quebec.—R. W. N.
- SOLOMONSEN, F. 1955. The food production in the sea and the annual cycle of Faeroese marine birds. *Oikos*, **6**: 92-100.—Correlates plankton production and life-cycles of marine birds.—S. C. K.

GENERAL BIOLOGY

- BROOKS, M. 1956. Winter foods of Evening and Pine Grosbeaks in West Virginia. *Wilson Bull.*, **68**: 249-250.—*Hesperiphona vespertina* and *Pinicola enucleator*.
- FOWLE, C. D., and A. M. FOWLE. 1954. Observations at a Whip-poor Will's nest. *Canad. Field-Nat.*, **68**: 37-39.—Observations at a nest of a Whip-poor Will (*Caprimulgus vociferus*) in Ontario yielded information on the nest site, incubation, development of the young, and behavior of the young and adults.—R. W. N.
- FRITH, H. J. 1956. Breeding habits in the Family Megapodiidae. *Ibis*, **98**: 620-640.—Egg sites are composed of mounds of vegetable material and soil (*Megapodius*, *Aepyodius*, *Tallegallus*), vegetable material covered with soil (*Leipoa*), vegetable material alone (*Alectura*) or are holes in sand (*Megacephalon*, *Eulipoa*?). Eggs are warmed by solar (or volcanic) heat (*Megacephalon*, *Eulipoa*, and some *Megapodius* and *Leipoa*), fermentation heat (*Alectura*, *Tallegallus*, *Aepyodius*, and some *Megapodius*), or solar plus fermentation heat (most *Leipoa* and *Megapodius*).
- Mound temperatures are regulated by the birds to around 90° to 100° F. Mounds are uncovered and covered, releasing excess heat or warming surfaces, thus maintaining desired temperatures; in some species at least the bare head and neck are used as thermometers to test interior temperatures. In *Leipoa* and *Alectura*, clutch-size (total eggs per season) is around 18 to 24 eggs; this is determined by the length of the season. Incubation period is variable, but in *Leipoa* is about 57 days. The breeding season in the mound-building types is coincident with an environment favorable to incubation of eggs. In *Leipoa* the cessation of breeding may be related to selection operating on adults through the food supply: when food becomes scarce there is not enough time each day for adults to forage and still attend to the exacting duties at the mound.—R. F. J.
- FRITH, H. J. 1956. Temperature regulation in the nesting mounds of the Malleefowl, *Leipoa ocellata* Gould. *C. S. I. R. O. Wildlife Research*, **1**: 79-95.—By means of recording instruments it is shown that incubation is largely achieved

- by heat generated by the fermentation of organic matter. "By manipulation of the covering soil the birds keep the temperature within the range at which egg development takes place. The principal activity is designed to keep the mound temperature down. Towards the end of the season the heat from the sun becomes important, and at the end of the season active steps are necessary to increase the amount of heat reaching the eggs from this source."—F. M.
- HAVERSCHMIDT, F. 1956. The nest and egg of *Tachyphonus phoenicius*. Wilson Bull., 68: 322-323.—The Red-shouldered Tanager of northern South America.—J. T. T.
- HILPRECHT, A. 1956. Höckerschwan, Singschwan, Zwergschwan. Die Neue Brehm-Bücherei, A. Ziemsen Verlag, Wittenberg Lutherstadt. 3.75 DM. 151 pages, 47 photographs, 12 figs.—This monograph on the Mute Swan (*Cygnus olor*), Whooper Swan (*C. cygnus*), and Bewick's Swan (*C. bewickii*) will prove a most useful work of reference. Among the subjects dealt with are distribution, molt, size and weight, breeding biology, food, and migration. There are many interesting photographs and a five-page bibliography.—F. M.
- LACK, D. 1956. Further notes on the breeding biology of the swift *Apus apus*. Ibis, 98: 606-619.—Inception of breeding is earlier, clutch- and brood-size higher, nestling periods shorter, nestling growth rate more rapid in fine (sunny) as compared with poor (wet) summers. Large brood-size is of deleterious influence on nestling survival only in wet summers. There is a general positive correlation between abundant and accessible food and fine summers.—R. F. J.
- LOUGHREY, A. G., and R. H. STINSON. 1955. Feeding habits of juvenile Ring-necked Pheasants on Pelee Island, Ontario. Canad. Field-Nat., 69: 59-65.—Analysis of 251 full crops of juvenile Ring-necked Pheasants.—R. W. N.
- MEANLEY, B. 1956. Foods of the Wild Turkey in the White River bottomlands of southeastern Arkansas. Wilson Bull., 68: 305-311.—The principal foods secured by *Meleagris gallopavo silvestris* in three separate habitats were determined by analysis of droppings and of crop contents. Fruits and seeds were most important.—J. T. T.
- MONROE, B. L., JR. 1956. Observations of Elegant Terns at San Diego, California. Wilson Bull., 68: 239-244.—Observations on plumage, behavior, etc., of *Thalasseus elegans*, which is increasing in numbers in southern California.—J. T. T.
- MURIE, A. 1956. Notes on the nesting of the Wandering Tattler. Wilson Bull., 68: 323-324.—Descriptions of the nest and of the behavior of adults with young of *Heteroscelus incanus*.—J. T. T.
- SNOW, D. W. 1955. The abnormal breeding of birds in the winter of 1953-54. Brit. Birds, 48: 120-126.—In the British Isles, temperatures were consistently above the mean at the end of November and beginning of December, 1953. "Freak" breeding of resident species (Blackbird, Song Thrush, Robin, Starling, House Sparrow, Dunnock, and Skylark) was widespread, though on a small scale. Calculated dates of the first egg show that 23 of 34 clutches were begun in the second half of November and first half of December. Some clutches were started in early November. Of 27 nests of Blackbird, Song Thrush, and Robin, young were hatched in 9. Breeding seems to have arisen from the failure of the usual seasonal decline in temperature from October through December. Reasons for a regular autumn breeding period not becoming established in warmer climates are discussed.—M. T. M.
- STONEHOUSE, B. 1956. The King Penguin of South Georgia. Nature, 178:

1424-1426.—This original investigation gives much information on the breeding cycle of *Aptenodytes patagonica*. It is found that the cycle lasts longer than a year and typically two chicks are raised every three years.—H. C. S.

WARREN, E. F. 1955. The Fledging of a brood of Ravens. *British Birds*, **48**: 172-175.

MIGRATION AND ORIENTATION

BAILLIE, J. L. 1955. On the spring flight of Blue and Snow Geese across northern Ontario. *Canad. Field-Nat.*, **69**: 135-139.

BRÖEKHUYSEN, G. J. 1956. Moulting adaptation in relation to long-distance migration. *Nature*, **178**: 489-490.—A high percentage of swallows (*H. rustica*, *D. urbica*) had molting flight feathers at Cape Town in April, the time when they leave south Africa for northern breeding quarters.—H. C. S.

CARRICK, R., and N. TURNBULL. 1956. Second annual report of the Australian bird-banding scheme, July 1955 to June 1956. *C. S. I. R. O. Wildlife Research*, **1**: 114-130.—“The large-scale movement of young giant-petrels, *Macronectes giganteus* (Gmelin), from Heard Island and Macquarie Island is confirmed, and it is also shown that these birds remain in lower latitudes into their second year. There is a wide dispersal of crested terns [*Sterna bergii*] (13 records) and silver gulls [*Larus novae-hollandiae*] (66 records) from their breeding places, mainly northwards especially in the case of the gulls in eastern Australia.”

DICKENS, R. F. 1955. The passage of Black Terns through Britain in Spring 1954. *British Birds*, **48**: 148-169.—In each of the years 1946, 1948, 1949, 1950, and 1954 a heavy spring passage of *Chlidonias niger* passed through Great Britain. The earlier ones have been reported on in *British Birds*. The largest passage of all was in 1954. Direction of flight was between east and north-eastwards. Movements are preceded by a rise in temperature in the Bay of Biscay; they take place in the face of east or north-easterly winds over Britain. In 1954 Black Terns may have been carried west of the normal routes by lateral easterly winds in the Biscay area, as in other peak years.—M. T. M.

FOBES, C. B. 1956. Weather fronts and migration, April 3-6, 1956. *Me. Field Nat.*, **12**: 71-73.—A number of “earliest arrival dates” established during this period are attributed to low pressure and cold front over the middle U. S. and high pressure and warm front over the Atlantic creating a northward flow of warm moist air on which the birds moved into southwestern Maine.—L. M. B.

JAMES, P. 1956. Destruction of warblers on Padre Island, Texas, in May 1951. *Wilson Bull.*, **68**: 224-227.—An estimated 10,000 migrants of at least 39 species, arriving at the Gulf coast and meeting a cold front, were killed by collision with poles and other objects in a brightly lighted area.—J. T. T.

LLOYD, H. 1955. Mid-Atlantic migration of Long-tailed Jaegers and Terns (sp?). *Canad. Field-Nat.*, **69**: 24.

SAUER, F., and E. SAUER. 1955. Zur Frage der nächtlichen Zugorientierung von Grasmücken. *Revue Suisse De Zoologie*, **62**: 250-259.—Blackcaps (*Sylvia atricapilla*) and Garden Warblers (*S. borin*) were tested for nocturnal migratory directional tendencies in a circular cage which screened off the environment below an angle of 68 degrees. Definite orientation was observed under clear or partly cloudy skies, even when the birds were raised from one day old in artificial light and arbitrarily selected day length. The birds showed positive phototropic response to the moon, bright meteorites, and directed artificial light. Complete disorientation occurred with full overcast, diffused light, and polarized light.—H. C. M.

- SR. PAUL, U. v. 1953. Nachweis der Sonnenorientierung bei nachtlich ziehenden Vogeln. *Behaviour*, **6**: 1-7.—(From English summary.) Training in an experimental cage and with an artificial sun showed that typical night-migrants (*Sylvia nisoria* and *Lanius collurio*) have the ability to orientate by means of the sun.—F. M.
- WHITAKER, B. 1955. Yellowthroat on Lundy: A new British Bird. *British Birds*, **48**: 145-147.—A specimen of *Geothlypis trichas* was trapped on Lundy Island, Devon, on 4 November 1954. In an editorial note it is stated that weather conditions were ideal for a drift passage between 31 October and 4 November. It is pointed out that passerine birds regularly migrate between Greenland and Europe, that assisted passages by ship would be admissible, and that suitable weather conditions immediately prior to discovery are no exact proof of drift migration.—M. T. M.
- YAPP, W. B. 1956. Two physiological considerations in bird migration. *Wilson Bull.*, **68**: 312-319.—Calculations based on various hypotheses indicate that different means of orientation in overseas flight have little selective (in the sense of natural selection) advantage over each other. Further calculations estimate the energy losses, the corresponding weight losses, of small birds in long migratory flights.—J. T. T.

PHYSIOLOGY

- BEEKMAN, B. E. 1956. The effect of synthalin A on blood sugar and pancreatic alpha islet cells of the fowl. *Endocrin.*, **59**: 708-712.
- BRANT, J. W. A., and A. V. NALBANDOV. 1956. Role of sex hormones in albumen secretion by the oviduct of Chickens. *Poultry Sci.*, **35**: 692-700.
- COCK, A. G., and M. CLOUGH. 1956. Successful skin homographs in inbred chickens. *Nature*, **178**: 136-137.
- HÖHN, E. O. 1956. Seasonal recrudescence of the thymus in adult birds. *Canad. Journ. of Biochem. and Physiol.*, **34**: 90-101.—“The thymus of adult mallards and house sparrows of both sexes and of female robins shows a marked enlargement following the annual breeding season. In male robins the thymus begins to enlarge earlier, almost synchronously with the testes.” The enlarged thymus becomes indistinguishable from that of immatures. The bursa Fabricii of adults does not enlarge. The distribution of thymus tissue in passerine birds and hawks differs from that in the chicken. Thymic enlargement out of season was not induced by castration or unilateral adrenalectomy in mallards.—F. M.
- KRISS, J. P., F. S. GREENSPAN, W. H. CARNES, and W. LEW. 1956. Alterations in chick thyroid function induced by cobalt. *Endocrin.*, **59**: 555-564.
- LAKE, P. E., and D. G. M. WOOD-GUSH. 1956. Diurnal rhythms in semen yield and mating behaviour in the domestic cock. *Nature*, **178**: 853.—Volume of semen and number of spermatozoa greatest in late afternoon; mating highest when semen yields are at their best.—H. C. S.
- NAKAO, S., and K. TANAKA. 1956. Prolactin potency of the cephalic and the caudal lobe of the Anterior Pituitary in relation to broodiness in the Domestic Fowl. *Poultry Sci.*, **35**: 990-994.
- ROMANOFF, A. L., and H. LAUFER. 1956. The effect of injected thiourea on the development of some organs of the chick embryo. *Endocrin.*, **59**: 611-619.—Thyroid hypertrophy, increase in weight of testes and adrenals, decrease in liver, and irregular decrease in ovarian weights.—H. C. S.