RECENT LITERATURE

EDITED BY FRANK McKINNEY

Anatomy and Embryology

Baird, J. 1958. The postjuvenal molt of the male Brown-headed Cowbird *(Molothrus ater)*. Bird Banding, **29:** 224–228.—Postjuvenal molt is incomplete.—R. E. P.

Harrison, J. G. 1958. Skull pneumaticity. The Wildfowl Trust 9th Annual Report: 193–196.—Study of skulls of 68 waterfowl species showed considerable variation in the degree of pneumaticity. No fully pneumatised skull was found; those of diving ducks were less pneumatic than those of geese, swans, and dabbling ducks. Goldeneyes have a special huge air sinus extending over the vault of the skull. Possible adaptive significance of these variations is discussed—F. M.

Portmann, A. 1959. Die Entwicklungsperiode vom 11. bis 14. Bruttag und die Verkürzung der Brutzeit bei Vögeln. Vierteljahrsschr. Ges. Naturforsch. Zürich, **104:** 200–207. *In* Festschr. Steiner.—The embryonic development between the 11th and 14th days of incubation.—E. E.

Verheyen, R. 1960. Considerations sur la colonne vertebrale des oiseaux (non-Passeres). Bull. Inst. Roy. Sci. Nat. Belge **36** (42): 1–24.—On the basis of the examination of about 1,800 skeletons, discusses the vertebral column in nonpasserine birds and lists the number of vertebrae found in each order and family (and genus or species when variable within a family). A useful compendium.—E. E.

Wetherbee, D. K. 1958. New descriptions of natal pterylosis of various bird species. Bird Banding, **29:** 232–236.—A list of species and extent of pterylosis of natal specimens.—R. E. P.

Behavior

Borgelt, L. H. 1960. Common Grackles [*Quiscalus quiscula*] anting with moth balls. Wilson Bull., **72:** 408–409.

Borror, D. J. 1961. Intraspecific variation in passerine bird songs. Wilson Bull., **73:** 57–78.—Variation in bird song was studied by analyzing recordings with a sound spectrograph. Individuals of some species have only one song pattern; others have two or many patterns. In most species the songs show individual differences. The causes and functions of the variations are discussed.—J. T. T.

Downs, E. H. 1958. Evening Grosbeaks at South Londonderry, Vermont: 1956. Bird Banding, **29:** 27–31.—General behavior notes on flocking and breeding, including courtship feeding by the male.—R. E. P.

Goodman, J. M. 1960. *Aves incendiaria*. Wilson Bull., **72:** 400–401.—Summarizing a number of reports of fires being caused by birds, some of which were possibly "anting" with burning cigarettes or embers.—J. T. T.

Hailman, J. P. 1958. Behavior notes on the Ipswich Sparrow. Bird Banding, **29:** 241–244.

Hailman, J. P. 1960. A field study of the Mockingbird's wing-flashing behavior and its association with foraging. Wilson Bull., **72:** 346–357.—Wing-flashing movements of *Mimus polyglottos* and related species are described. In Mock-

ingbirds, wing-flashing was almost always correlated with foraging activities or with begging by fledged young.—J. T. T.

Hailman, J. P. 1960. Anting of a captive Slate-colored Junco. Wilson Bull., **72:** 398–399.—*Junco hyemalis* "anting" with sawdust.—J. T. T.

Höglund, N. H. 1955. [Influence of different colors on the Capercaillie chick's choice of food.] Viltrevy, **1:** 122–128.—With a choice of six colors green was preferred. The chicks learned by trial and error what kind of green plant material was most easily obtained with their weak beaks. (Swedish, with English summary.)—M. D. F. U.

Höglund, N. H. 1957. [Instinctive activities in the copulatory behavior of Swedish grouse raised in captivity.] Viltrevy, **1:** 225–232. Describes the mating behavior of Capercaillie, black grouse, hazel grouse, and willow grouse. The hazel grouse shows marked difference from the other species. (In Swedish, with English and German summaries.)—M. D. F. U.

Immelmann, K. 1960. Contributions to the biology and ethology of the Red-tailed Firetail (*Zonaeginthus oculatus*). West. Austral. Nat., **7:** 142–159.—Field observations, chiefly ethological, on an Australian estrildine, with comparative data on *Z. bellus*.—E. E.

McKinney, F. 1959. Waterfowl at Cold Bay, Alaska, with notes on the display of the Black Scoter. The Wildfowl Trust 10th Annual Report: 133–140.

Newman, D. L. 1961. House Wrens and Bewick's Wrens in northern Ohio. Wilson Bull., **73:** 84–86. A pair of *Troglodytes aëdon* occupied a nesting territory adjacent to but not overlapping one of *Thryomanes bewickii*. The males fought each other vigorously at least once.—J. T. T.

Nolan, V., Jr. 1961. A wren singing combined House and Carolina Wren songs. Wilson Bull., **73:** 83–84.—A *Troglodytes aëdon*.

Selander, R. K. and D. K. Hunter. 1960. On the functions of wing-flashing in Mockingbirds. Wilson Bull., **72:** 341–345.—Individuals of *Mimus polyglottos* were observed wing-flashing before enemies and before other Mockingbirds in territorial disputes. It is suggested that the wing actions represent ritualized flight-intention movements, originally indicating wariness but with a secondary function in food-getting (possibly acquired by individual conditioning). Wing-flashing may have an intimidating function as well.—J. T. T.

Walters, J. 1959. Observations on two broods of Kentish Plovers, *Charadrius alexandrinus* on Texel. Ardea, **47:** 48–67.—The behavior of two broods with nests only 80 cm. apart. (In Dutch; detailed German summary.)—E. E.

Whitaker, L. M. 1960. Behavior of birds on warm surfaces. Wilson Bull., **72:** 403–404.—Birds of three or more species reacted to sun-heated surfaces by movements resembling those of bathing.—J. T. T.

Diseases and Parasites

Ash, J. S. 1957. Post-mortem examinations of birds found dead during the cold spells of 1954 and 1956. Bird Study, **4:** 159–166.

Beer, J. V. 1958. The isolation of *Aspergillus fumigatus* from wild Pink-footed Geese in England and Scotland. The Wildfowl Trust 9th Annual Report: 58–65.—Swabs of the mouth and pharynx of 1,188 apparently healthy geese over three seasons produced 86 (7.2%) positive cultures. The fungus was found in more males than females.—F. M.

Beer, J. V. 1959. The control of Aspergillosis in bird collections. The Wildfowl Trust 10th Annual Report: 41–42.

Boyd, E. M. 1958. Birds and some human diseases. Bird Banding, **29:** 34–38. —A discussion of a number of diseases and the role of birds in their transmission.—R. E. P.

Carriker, M. A., Jr. 1959. New species of Mallophaga (*Alcedoffula* and *Philopterus*) from Colombia and the United States. Neotropical Miscellany 12. Novedades Colombianas, **1:** (4): 205–213.—Mallophaga of four American kingfishers and of a South American dipper, *Cinclus leucocephalus*.—E. E.

Flint, V. E., A. Zemskaya, and V. E. Sidorov. 1959. [The role of ecological groupings of birds in the feeding of the tick *Ixodes persulcatus*.] Zool. Zhurn., **38:** 476–480.—In the Maritime Provinces of the U.S.S.R. infestation by ticks affected 80 per cent of bird species of river bottomland but only 30 per cent of taiga species. Tick density coincides with bird population density. (In Russian; English summary.)—E. E.

Harrison, J. G. 1958. Tuberculosis in wildfowl; tuberculosis from a Wigeon and a Shelduck from Britain. The Wildfowl Trust 9th Annual Report: 70–71.

Hyshka, W. B. 1960. Combating an outbreak of botulism at Old Wives Lake (1959). Blue Jay, **18:** 24–25.

Jennings, A. R. 1959. Causes of death of birds at Slimbridge, 1955–1957. The Wildfowl Trust 10th Annual Report: 37–40.—The results of postmortem examinations on 680 waterfowl.—F. M.

Lapage, G. 1958. Parasites of the Anatidae. The Wildfowl Trust 9th Annual Report: 66–68.—Includes a provisional list of the more dangerous genera of parasites which have been recorded in the family.—F. M.

Rasheed, S. 1960. The nematode parasites of the birds of Hyderabad (India). Biologia, **6:** 1–116.

Soulsby, E. J. L. 1958. Visceral parasites in wildfowl. The Wildfowl Trust 9th Annual Report: 68–69.

Distribution and Annotated Lists

Barcells, R. E. 1960. Fauna ornitológica barcelonesa. I) Curruca rabilarga (*Sylvia undata*, Bodd.) en landas del macizo del Tibidabo. II) Aves nidificadoras en jardin suburbano del Prat de Llobregat. III) Aves del jardin de la universidad. Misc. Zool. (Mus. Zool. Barcelona) **1** (3): 122–173.—Data on birds of Barcelona, Spain. The first section deals with the biology of *Sylvia undata;* the second with the breeding birds of a suburban garden; the third with the birds found in the garden of the University of Barcelona in the middle of the city. (In Spanish; summaries in English and German.)—E. E.

Bartlett, C. O. 1960. American Widgeon and Pintail in the Maritime Provinces. Canad. Field-Nat., **74:** 153–155.—Breeding records and summary of status.

Ellis, D. V. and J. Evans. 1960. Comments on the distribution and migration of birds in Foxe Basin, Northwest Territories. Canad. Field-Nat., **74:** 59–70.

Frade, F. and A. Bacelar. 1957. Catálogo das aves da Guiné Portuguesa. I. Non Passeres. Anais Junta de Investigações do Ultramar, 1955, **10**, t. 4, fasc. 2: 1–194. Estudos de Zoologia.—This catalog of the birds of Portuguese Guinea lists all nonpasserines (195 species), giving technical name, synonymy, Portuguese name, localities, measurements, color of soft parts, and general

distribution. The list is preceded by an ornithological history of the area, a gazetteer, and a bibliography.—E. E.

[Kunkle, D. *et al.*] 1959. First supplement to the Annotated List of New Jersey Birds. 13 pp. Urner Ornith. Club, Newark Mus., Newark, N. J.—A carefully prepared report on 96 species in which there have been changes in status or nomenclature or significant new developments since the 1955 booklet by David Fables. The committee that prepared this list adopted the sound view that subspecies identification must be supported by a specimen and thus be subject to verification by later workers, and that sight reports of species new to the state must be based on observations of more than one observer and accompanied by details. This report gives useful data on the northward range extension of several southern species, and on the increasing frequency of western wanderers to the Atlantic coast.—E. E.

Manville, R. H. 1960. Birds breeding at Cap des Rosiers, Quebec. Wilson Bull., **72:** 406–407.

Mills, E. L. 1960. Bird observations in the Queen Charlotte Islands, British Columbia. Canad. Field-Nat., **74:** 156–158.

Mueller, H. C. and D. D. Berger. 1959. The Swainson's Hawk in Wisconsin. Passenger Pigeon, **21:** 142–144.—Wisconsin records and field identification.

Olivares, A. 1959. Aves migratorias en Colombia. Rev. Acad. Colomb. Cien. Exact. Ris. Nat., **10** (41) : 1–72.—Description and status of 188 bird forms believed to be migratory or casual in Colombia; the overwhelming majority are North American. It should be noted that the Eared Grebe, here listed as migrant *Colymbus caspicus californicus,* has recently been described as a new resident form. (In Spanish; English summary.)—E. E.

Olivares, A. 1960. Algunas aves de Gaitania (Municipie de Atace, Tolima, Colombia). Caldasia, **8** (38) : 369–382.—Report on a collection made in the Upper Magdalena valley of Colombia. (In Spanish; English summary.)—E. E.

Oordt, G. J. van. 1959. Summer records on pelagic birds in the North Atlantic, 1948 and 1958. Ardea, **47:** 41–48.—An account of three trans-Atlantic voyages, making comparisons with reports of other observers.—E. E.

Southern, W. E. 1960. The birds of Hunt Hill Sanctuary. Passenger Pigeon, **22:** 3–10.—Check-list for the Audubon Camp of Wisconsin.

Traylor, M. A. 1960. Notes on the birds of Angola, non-passeres. Publ. Cult. Co. Diam. Angola, Lisboa, **51:** 129–186.—Taxonomic and distributional notes on 80 species of Angola birds, including additions to the avifauna. These notes are preparatory to a prospective check-list.—E. E.

Urban, E. K. 1959. Birds from Coahuila, Mexico. Univ. Kansas Publ. Mus. Nat. Hist., **11:** (8) 443–516.—A check-list of the 312 forms (249 species) known. The basis for the records is given, with details in the cases of the 500 specimens in the University of Kansas museum.—E. E.

Weeden, R. B. 1960. The birds of Chilkat Pass, British Columbia. Canad. Field-Nat., **74:** 119–129.

Ecology and Population

Anemars, A. 1959. On the determination of the size and composition of a passerine bird population during the breeding season. A methodological study. Vår Fågelvärld, Suppl. **2:** 1–114. Price, 9 Sw. kr.—An account of the errors made in the various methods used for determining bird populations with sugges-

tions for improving accuracy. There is a good deal of mathematical and statistical discussion and a good bibliography of bird censusing methods.—E. E.

Brooks, W. S. 1960. Songbird communities of two marsh habitats. Passenger Pigeon, **22:** 111–125.

Crowell, K. 1961. The effects of reduced competition in birds. Proc. Nat. Acad. Sci., **47:** 240–243.—Comparison of method of feeding, feeding height, and nesting habitat of populations of the Cardinal, Catbird, and White-eyed Vireo resident in Bermuda with those of eastern North America indicates that "absence of competition in Bermuda has allowed the few species present to attain far greater densities" than on the mainland.

Graber, R. S. and J. S. Golden. 1960. Hawks and owls: population trends from Illinois Christmas counts. Ill. Nat. Hist. Surv. Div. Biol. Notes, **41:** 1–24.—Analysis of data in the Audubon Christmas counts for Illinois from 1903–1955 indicates a marked general decline of wintering raptors, with the exception of the Bald Eagle, which has been noted more frequently since the 1940's.—E. E.

Höglund, N. H. 1955. [Body temperature, activity and reproduction of the Capercaillie] Viltrevy, **1:** 1–87.—An experimental study on hatchery-raised chicks. Homeothermy sets in at the age of 18 days when adult temperatures are reached and body weight has increased four times. Diurnal rhythmicity of body temperature is also shown. During the first fortnight, chicks must be brooded to maintain their body temperature. Adverse weather is critical at this stage because it reduces feeding time between broodings. Wet weather also had an effect because of inadequate waterproofing of the down. These findings are correlated with varying climatic conditions and the local success of populations in different parts of Sweden. For example, high maximum June temperature coincides with marked increase of the Capercaillie stock in central Sweden. Locally continental climate provides the bird with surer reproductive success than do the locally maritime regions; it is also significant that the northern populations have longer feeding days. (Swedish with copious English and German summaries.)—M. D. F. U.

Larson, S. 1960. On the influence of the Arctic Fox, *Alopex lagopus,* on the distribution of Arctic birds. Oikos **11** (2): 276–305.—The absence of certain arctic birds, and the scarcity of others, on low-arctic areas of Greenland and on low-arctic Spitsbergen, induced this study of distributional ecology. The predatory role of arctic fox, skua, and raven is discussed and compared with adaptations in choice of nesting habitat, presence or absence on certain parts of their circumpolar arctic range, and with antipredator behavior traits of arctic anatids, larids, and limicoles. These factors all point toward the main thesis of the author, *i.e.,* that where lemming is absent, the fox and other predators live on the tundra birds and these are controlled, or even limited in their distribution, by the predators. The above-outlined evidence is not of the nature that a student of population dynamics would accept as full documentation of facts; nevertheless these well-founded correlations warn us against overgeneralization of the importance of the food factor for population existence and abundance.—M. D. F. U.

Marcström, V. 1960. Studies on the physiological and ecological background to the reproduction of the Capercaillie (*Tetrao urogallus,* Lin.). Viltrevy, **2:** 1–85.—The yolk sac is an important food depot at hatching, and during the first 24 hours of life its content increases the dry weight of the chick by more than 10 per cent. This material gained from the yolk is used by the chick for

syntheses rather than for catabolism of the body. After 2½ days the protein, carbohydrates, and lipid content of the remainder of the yolk sac is different in fed and in starved chicks. The liver has no mobilizable food substances at hatching, but it gains in dry weight due to protein and carbohydrate increase even in starved chicks. Subcutaneous fat depots of the hatching chick are rapidly used up when starved. In starving chicks, such as under unfavorable weather conditions, the fat depots are used up after the yolk sac is depleted, and thus thermal insulation of the body is decreased. Thus the first day of life seems to be the least critical from the point of view of weather; on the other hand the detrimental effect of rain and cold lasts longer than the first week of their life. Egg production, fertility and hatchability of eggs, and the condition of the chick did not vary during the two seasons considered, although these years were different from the point of view of population fluctuations. It is concluded that meteorological conditions during reproduction are of fundamental importance to the reproductive capacity, and through it to the population fluctuations of the Swedish Capercaillie. (In English, with Swedish summary.)—M. D. F. U.

Nero, R. W. 1960. Mass mortality of Western Grebes. Blue Jay, **18:** 110–112.

Provost, M. W. 1959. Impounding salt marshes for mosquito control and its effects on bird life. Florida Nat., **32:** 163–170.—In Florida the use of impoundments to flood salt marshes during the egg-laying season of mosquitos and sand flies to prevent their propagation, without injuring fisheries, is greatly increasing the bird life of the intertidal area.—E. E.

Sladen, W. J. L. 1960. The flora of a breeding area of Pink-footed Geese in central Iceland. Proc. Linnean Soc. London, 171 sess., 1958–59, pt. 1: 30–52.—Botanical communities of the largest breeding colony of *Anser brachyrhynchus* are analyzed.—E. E.

Tinbergen, L. 1960. The dynamics of insect and bird populations in pine woods. Archiv. Néerland. Zool., **13** (3): 259–472.—This memorial volume to the late L. Tinbergen includes articles by Tinbergen and his collaborators or students, de. Ruiter, H. Klomp, N. Prop, J. H. Mook, L. J. Mook, H. S. Heikens, and P. Glas on population dynamics, particularly the effect of bird predation and parasites on the control of insects, the role of "searching images" on the hunting of titmice, and the effect of population density on habitat selection.—E. E.

Wynne-Edwards, V. C., D. Jenkins, and A. Watson. 1960. A population study of Red Grouse in Scotland. New Scientist, **8:** 709–711.—*Lagopus scoticus* may control their own population by expelling some of their number when food resources are limited.—E. E.

Young, H. 1958. Some repeat data on the Cardinal. Bird Banding, **29:** 219–223.—Data from 225 catches of 88 Cardinals are used to evaluate accuracy of recapture data for estimation of population parameters. Evidence is presented to show trap-shy and "trap-happy" and how they may bias samples.—R. E. P.

General Biology

Anderson, H. G. 1959. Food habits of migratory ducks in Illinois. Ill. Nat. Hist. Surv. Bull., **27**, art. 4: 289–344.—Study of 17 species based on gizzard contents.—E. E.

Balen, J. H. van. 1959. [On the reproduction of the Black-tailed Godwit, *Limosa limosa* L.] Ardea, **47:** 76–86.—The taking of 30 first clutches resulted

in 12 second clutches within the area, and on removal of these in 3 third clutches. Intervals between egg-taking and first egg of new clutch were 5–16 (av. 7.2) days. When eggs were taken in a late stage of incubation, birds usually left the area. A table summarizes comparable data for many species. (In Dutch; English summary.)—E. E.

Blurton Jones, N. G. and R. Gillmore. 1959. Some observations on wild geese in Spitsbergen. The Wildfowl Trust 10th Annual Report: 118–132.—Information of distribution, hatching and fledging dates, breeding success, nest sites, brooding and care of goslings, and molt in Pink-footed Geese.—F. M.

Dennis, J. V. 1958. Some aspects of the breeding ecology of the Yellow-breasted Chat (*Icteria virens*). Bird Banding, **29:** 169–183.—A study of the habitat occupied and life history information that might have a bearing on fall occurrence of the Chat north of its breeding range. Includes weights, characters for sexing, sex ratios.—R. E. P.

Getz, L. L. 1961. Hunting areas of the Long-eared Owl. Wilson Bull., **73:** 79–82.—*Asio otus* hunted in open, grassy areas, catching primarily *Microtus pennsylvanicus*.—J. T. T.

Höglund, N. H. 1956. [On sex-distinguishing characters in Capercaillie chicks.] Viltrevy, **1:** 150–157.—Color of the beak, of the growing secondaries, and other feather markings aid aging of the chicks during the first four weeks of their life. (Swedish, with English and German summaries.)—M. D. F. U.

Keith, L. B. 1960. Observations on Snowy Owls at Delta, Manitoba. Canad. Field-Nat., **74:** 106–112.—Includes measurement data on 13 juveniles, bursal regression rate, daily movements in winter.—R. W. N.

Koskimies, J. 1956. [Age determination of gallinaceous birds by the 'outer primary' method.] Viltrevy, **1:** 158–161.—The outer primary is not molted during the first fall molt of the juvenile bird: color and shape characters are useful in aging. (Swedish, with English and German summary.)—M. D. F. U.

Larimer, E. J. 1960. Winter foods of the Bobwhite in southern Illinois. Ill. Nat. Hist. Surv. Div. Biol. Notes, **42:** 1–35.—Analysis of crops from 4,606 birds taken during the hunting seasons of 1950 and 1951.—E. E.

Laskey, A. R. 1958. Blue Jays at Nashville, Tennessee. Movements, nesting, age. Bird Banding, **29:** 211–218.—Information from banding 1,000 jays. Some behavior and life history observations.—R. E. P.

Lehmann, V. F. C. 1959. Contribuciones al estudio de la fauna de Colombia XIV. Nuevas observaciones sobre *Oroaëtus isidori* (Des Murs). Novedades Colombianas, **1** (4): 169–195.—Behavior and nesting of a little-known South American eagle; well illustrated.—E. E.

Meanley, B. 1961. Late-summer food of Red-winged Blackbirds in a fresh tidal-river marsh. Wilson Bull., **73:** 36–40.—In the Chesapeake Bay region large numbers of *Agelaius phoeniceus* fed in the wild rice beds, primarily on the seeds of this and two other aquatic plants. The attractiveness of these foods apparently reduced damage by blackbirds to nearby corn.—J. T. T.

Skutch, A. F. 1961. Life history of the White-crested Coquette Hummingbird. Wilson Bull., **73:** 5–10.—*Paphosia adorabilis* nests in southern Costa Rica from December through February. Courtship, nest and eggs, incubation and feeding of young (both solely by the female) are described. A colored plate by D. R. Eckelberry accompanies the article.—J. T. T.

Terrill, L. M. 1961. Cowbird hosts in southern Quebec. Canad. Field-Nat., **75:** 2–11.

Timmerman, A. and M. F. Morzer Bruijns. 1959. [The breeding season of the Lapwing, *Vanellus vanellus* in 1957.] Ardea, **47:** 87–98.—Comparison is made between egg laying in areas where collection of eggs for food is permitted for the first part of the breeding season and areas of complete protection in the Netherlands. (In Dutch; English summary.)—E. E.

Warham, J. 1958. The nesting of the Pink-eared Duck. The Wildfowl Trust 9th Annual Report: 118–127.—Observations on *Malacorhynchus membranaceus* made in Western Australia. Breeding grounds, nest, incubation and hatching behavior, characteristics and calls of the ducklings, and feeding habits are described.—F. M.

Weller, M. W. 1961. Breeding biology of the Least Bittern. Wilson Bull., **73:** 11–35.—The nesting habitat of *Ixobrychus exilis* was studied in several marshes in Iowa. Nesting activities and behavior are described in detail and illustrated with photographs. Experiments were performed on the releasing stimulus for feeding in young.—J. T. T.

Wilhelm, E. J., Jr. 1960. Marsh Hawk breeding in northwestern Arkansas. Wilson Bull., **72:** 401–402.—Incubation period and pellet analysis at one nest.

Woodford, J. and F. T. Lovesy. 1958. Weights and measurements of wood warblers at Pelee Island. Bird Banding, **29:** 109–110.

Management and Conservation

Borg, K. 1955. [The use of chloralose for capture of corvids and other birds.] Viltrevy, **1:** 88–121.—An experimental study of the effects, lethal dose, and availability of the narcotic chloralose with respect to bird control. It is an excellent and humane means of controlling crows, gulls, feral pigeons, etc. with little risk of secondary poisoning. (Swedish, with English and German summaries.)—M. D. F. U.

Boyd, H. 1958. Wildfowling in the U.S.A. and Britain. The Wildfowl Trust 9th Annual Report: 137–142.—Although a detailed survey has not yet been undertaken, wildfowlers probably comprise a much smaller proportion of the population in Britain and they travel less than American hunters.—F. M.

Griffin, D. N. 1959. The poisoning of meadowlarks with insecticides. Wilson Bull., **71:** 193.—Seven *Sturnella magna* and *S. neglecta* were killed by eating oat and barley seeds that had been treated with insecticides.—J. T. T.

Holm, E. R. and R. V. Bauer. 1959. Potentialities of certain species of waterfowl for mass production. N. Y. Fish and Game Journ., **6:** 1–45.—Deals chiefly with Pintail, Gadwall, Redhead, and Canvasback.—E. E.

Jahn, L. R. 1961. The status of waterfowl conservation. A contribution from the Wilson Ornithological Society Conservation Committee. Wilson Bull., **73:** 96–106.—A review of recent developments in the management of waterfowl habitat and populations. "The major immediate needs to conserve waterfowl are known. Prairie pothole type breeding habitat must be preserved, especially on the Canadian prairie. Crop depredations must be controlled. Hunting mortality must continue to be regulated in relation to the status of populations, particularly for individual species and manageable flocks." The need for prompt action, especially in the preservation of pothole breeding habitat, is stressed. While the extinction of species is not imminent, waterfowl populations must be maintained at a reasonable level to meet increasing public demands.—F. M.

Marshall, D. B. 1958. The Pacific Flyway. The Wildfowl Trust 9th Annual

Report: 128–137.—A popular account of the waterfowl of the western states, the refuge system, and management techniques.—F. M.

Matthews, G. V. T. 1958. Feeding grounds for waterfowl. The Wildfowl Trust 9th Annual Report: 51–57.—Proposes encouraging landowners to practice rotational winter flooding of grasslands to provide feeding areas near wildfowl reserves in Britain.—F. M.

Matthews, G. V. T. 1958. Wildfowl conservation in the Netherlands. The Wildfowl Trust 9th Annual Report: 142–153.—An interesting discussion of the status of waterfowl management with special emphasis on the problems of reclamation, drainage, hunting, and duck decoys.—F. M.

Matthews, G. V. T. 1959. Wildfowl conservation in Denmark. The Wildfowl Trust 10th Annual Report: 71–77.—Shooting pressure is higher in Denmark than in the Netherlands, but, in the absence of duck decoys, the total wildfowl taken is of the same order. All license income is devoted to conservation interests. Recent research and management programs are described.—F. M.

Stephen, W. J. D. 1960. The use of exploders in protecting crops against Sandhill Crane depredations. Blue Jay, **18:** 23–24.

Teplov, V. F. and N. N. Kartashev. 1958. Wildfowl research in Russia. The Wildfowl Trust 9th Annual Report: 157–169.—A translation of a paper published in Russian in the (Moscow) Zoological Journal, **35** (1): 77–88 (1956), providing information on waterfowl distribution, migrations, and hunting in the Ryazan district in the European part of the U.S.S.R. Data on spring shooting, the use of decoys, and the banding program are given. The authors' suggestions for waterfowl management procedures are particularly interesting.—F. M.

Migration and Orientation

Abramson, I. J. 1960. Migration on the Dry Tortugas. Florida Nat., **33:** 139–144.—Birds on Garden Key, Florida, increased enormously in species and numbers when a cold front passed over during the night of 7–8 May 1960.—E. E.

Anweiler, G. 1960. The Boreal Owl influx. Blue Jay, **18:** 61–63.

Baird, J., C. S. Robbins, A. M. Bagg, and J. V. Dennis. 1958. "Operation recovery"—the Atlantic coastal netting project. Bird Banding, **29:** 137–168.—Description of operation and results from cooperative netting at 22 stations along the Atlantic coast during Aug.-Sept. 1957. Discusses returns and effects of weather on migration.—R. E. P.

Bellrose, F. C. 1958. Celestial orientation by wild Mallards. Bird Banding, **29:** 75–90.—Wild-trapped Mallards showed a strong tendency to fly north on clear days or nights when released after variable holding periods from release sites 11 to 33 miles from the Illinois River valley. Orientation was random on overcast days or nights, and was independent of the season or of the presence or absence of the moon.—R. E. P.

Blake, C. H. 1958. Leg sizes and band sizes; third report. Bird Banding, **29:** 90–98.

Boyd, H. 1959. Greylag Geese in Britain in winter. The Wildfowl Trust 10th Annual Report: 43–58.—Counts in the field suggest that in late November 1957 and 1958 the population numbered between 17,000 and 23,000. Analysis of banding recoveries shows that wintering geese bred in Iceland. The small Scottish breeding population is nearly sedentary. Distribution of flocks throughout the winter and local movements are documented.—F. M.

Boyd, H. 1959. Movements of marked Sea and Diving Ducks in Europe. The Wildfowl Trust 10th Annual Report: 59–70.—Analysis of banding recoveries for Pochard, Scaup, Common Scoter, Velvet Scoter, Long-tailed Duck, Goldeneye, Red-breasted Merganser, and Goosander.—F. M.

Coffey, L. C. 1958. Weights of some Chimney Swifts at Memphis. Bird Banding, **29:** 98–104.—Seasonal variations indicate rapid build-up of weight just before fall departure. Study based on weights of 1,839 swifts. Information is given on weight loss during time necessary for weighing and banding large numbers.—R. E. P.

Donker, J. K. 1959. Migration and distribution of the Wigeon, *Anas penelope* L., in Europe, based on ringing results. Ardea, **47:** 1–28.—Most Wigeon wintering in western Europe derive from U.S.S.R. Iceland-bred birds winter chiefly in the British Isles, but of 70 recoveries six were from the Atlantic coast of North America. Some Iceland-bred birds were later recovered in U.S.S.R. during the breeding season, apparently having accompanied U.S.S.R. Wigeon after pairing on winter quarters.—E. E.

Hamilton, W. J., III and M. C. Hammond. 1960. Oriented overland spring migration of pinioned Canada Geese. Wilson Bull., **72:** 385–391.—Adult, pinioned *Branta canadensis,* released or escaping from captivity in spring, walked and occasionally swam from two to 25 miles northward toward their breeding grounds.—J. T. T.

Hickey, M. B. 1960. Migrants at airport ceilometers. Passenger Pigeon, **22:** 23–26.—Account of mortalities in Wisconsin in 1952 and 1959.—R. W. N.

Höglund, N. H. 1956. [Swedish Sportsmen's Association's marking of game 1945–1954.] Viltrevy, **1:** 162–224.—A marking method has been worked out whereby downy young of gallinaceous birds and waterfowl can be tagged on the patagium with a safety pin bearing an aluminum plate 1 sq. cm. in size. This allows marking at the time they are easiest to catch and when the tarsus could not bear an adult-sized band. Over 21,000 birds of many species have been tagged or banded during the period here accounted for, and 960 recoveries are reported in the paper. (Swedish, with English summary.)—M. D. F. U.

Höglund, N. H. 1957. [Swedish Sportsmen's Association's marking of game 1955–1956.] Viltrevy, **1:** 283–317.—Data on marking recoveries (especially long-range recoveries of birds) out of about 4,500 marked birds and mammals. (Swedish, with English summary.)—M. D. F. U.

Höglund, N. H. 1960. [Swedish Sportsmen's Association's marking of game 1957–1958.] Viltrevy, **1:** 352–397.—Over 7,500 birds marked each year, 75 per cent upland game birds. Nearly 900 recoveries are reported here; wing marks proved to be very useful, those recovered after 5–10½ years had no sign of corrosion. (Swedish, with English summary.)—M. D. F. U.

Kemper, C. A. 1959. More TV tower destruction. Passenger Pigeon, **21:** 135–142.—A review of past records in this area, an account of mortalities in 1959 (1,200 on one occasion), and a new theory for their occurrence.—R. W. N.

Middleton, R. J. 1958. Banding Catbirds at Norristown. Bird Banding, **29:** 229–232.

Moltoni, E. 1959. [Incursion in Italy of the Bohemian Waxwing—*Bombycilla g. garrulus* (L.)—in 1959.] Riv. Ital. Orn., **29:** 170–172.—In Europe, as in America, there was a waxwing incursion during the winter of 1958–59. (In Italian.)—E. E.

Odum, E. P. 1958. The fat deposition picture in the White-throated Sparrow in

comparison with that in long-range migrants. Bird Banding, **29:** 105–108.—Weight data from birds killed at a TV tower in Florida support the idea that birds of passage are fatter than birds destined to stop in the area. Compares White-throats with warblers and vireos.—R. E. P.

Parmalee, P. W. and B. G. Parmalee. 1959. Mortality of birds at a television tower in central Illinois. Audubon Bull., **111:** 1–4.—On 16–17 September 1958 an estimated 1,000–1,500 birds were killed; 827 specimens of 40 species were examined; *Hylocichla ustulata* and *H. minima* accounted for over 30 per cent. —E. E.

Proescholdt, B. 1961. Weather and early spring migration in Iowa. Wilson Bull., **73:** 41–45.—In March 1959 the northward movement of many migrants was associated with a warm wind from the south. A day or two later a cold front crossed the area, and moderate numbers of blackbirds were observed moving southward.—J. T. T.

Russell, J. C. 1960. Eastern Kingbird in numbers during migration. Florida Nat., **33:** 225.—In Lake Alfred section of Florida "at least a thousand" seen on 26 August about 500 at one time.—E. E.

Shaub, B. M. 1958. A juvenal Evening Grosbeak appears in Northampton, Massachusetts in late October 1957. Bird Banding, **29:** 31–34.

Sladen, W. J. L. and W. L. N. Tickell. 1958. Antarctic bird-banding by the Falkland Islands Dependencies Survey, 1945–1957. Bird Banding, **29:** 1–26.—Report on the banding activities of the FIDS, including information on bands, techniques, distribution, ages, mating permanence, and homing of antarctic birds.—R. E. P.

Turček, F. J. 1958. On bird banding in the U.S.S.R. Bird Banding, **29:** 111–112.—Gives numbers of birds banded by families and some of the numbers banded at different stations, as well as band types.—R. E. P.

Walkinshaw, L. H. 1960. Migration of the Sandhill Crane east of the Mississippi River. Wilson Bull., **72:** 358–384.—From the summarized migration records of *Grus canadensis* it is apparent that cranes migrate on a relatively direct route between the Lake Michigan area and southeastern Georgia, most of them making this distance in one flight.—J. T. T.

Wolfson, A. 1960. Experimenting with bird migration. Northwestern Tri-Quarterly, Fall, 1960: 23–30.—A lucid popular account of experiments on the role of light and darkness in stimulating spring migration. The dark periods seem most important in producing the essential preparatory (refractory) phase; the light periods seem effective in the progressive phase, which results in the physiological condition that precedes migration.—E. E.

Physiology

Blake, C. H. 1958. Respiration rates. Bird Banding, **29:** 38–40.

Fabricius, E. 1959. What makes plumage waterproof? The Wildfowl Trust 10th Annual Report: 105–113.—Experiments involving the removal of the oil-gland from Tufted Ducks showed that the secretion from the gland is not essential for waterproofing. Contact with smearing substances (*e.g.*, raw fish) causes plumage to lose its waterproofing. Madsen's view that waterproofing is achieved by finely distributed air in the feathers is confirmed.—F. M.

Höhn, E. O. 1960. Seasonal changes in the Mallard's penis and their hormonal control. Proc. Zool. Soc. London, **154:** 547–555.

Marcström, V. 1956. [Body temperature of Capercaillie chicks during and after hatching.] Viltrevy, **1:** 139–149.—Relatively high (mean of 45 records: 39.5°C) hatching temperature is believed due to high muscular activity; during drying of the down evaporative cooling has been shown. (Swedish, with English and German summaries.)—M. D. F. U.

Wilson, P. N. and D. F. Osbourn. 1960. Compensatory growth after undernutrition in mammals and birds. Biol. Rev., **35:** 324–363.—Review of the literature indicating that after being kept with an inadequate diet, animals usually gain quickly their normal weight, or may even overcompensate, when a normal food supply is afforded.—E. E.

Taxonomy and Palaeontology

Amadon, D. 1959. Behavior and classification. Vierteljahrsschr. Naturforsch. Ges. Zürich, **104:** 73–78. *In* Festschr. H. Steiner.—Even when a behavior pattern involves learning, it may be useful to systematists if under normal conditions it develops with reasonable consistency.—E. E.

Johansen, H. 1957. [Subspecies and populations of the Capercaillie, *Tetrao urogallus.*] Viltrevy, **1:** 233–266.—A study based mainly on the color variation of around 350 skins from the whole distribution area of the species. The ranges of the subspecies are mapped, and also groups recognizable on account of minor color differences are described; a postglacial distributional account is attempted. (German with Swedish summary.)—M. D. F. U.

Mainardi, D. 1960. Immunological relationships and taxonomic position of the Linnet, a cardueline bird. Atti, V Riunione Sci. dell'A.G.I.: 3–8.—Though Vaurie places the Linnet, as *Acanthis cannabina,* in a genus separate from the Goldfinch, *Carduelis carduelis,* the Siskin, *C. spinus,* and the Greenfinch, *C. chloris,* immunological studies indicate that the Linnet is more closely related to these birds (particularly to the Siskin) than they are to each other.—E. E.

Matthews, G. V. T. 1959. Techniques in wildfowl taxonomy. The Wildfowl Trust 10th Annual Report: 31–36.—A brief review of recently developed techniques.—F. M.

Miller, L. 1960. Some Indian midden birds from the Puget Sound area. Wilson Bull., **72:** 392–397.—The bird species represented by bones in two midden collections from the Pacific Northwest are compared.—J. T. T.

Verheyen, R. 1959. Note sur la systematique de base des Lariformes. Inst. Roy. Sci. Nat. Belgique Bull., **35** (9): 1–16.—Though near relatives of the shorebirds (Charadrii), the gull group is considered entitled to ordinal rank. On anatomical grounds two suborders are recognized, Rynchopi for the skimmers and Lari for the rest. The family and subfamily treatment is like that of Peters, except that *Gygis* is given subfamily rank, equal to the Sterninae, and —more surprising—the noddies are removed from the terns and made a subfamily (Anoinae) of the Stercorariidae.—E. E.

Verheyen, R. 1959. Contribution à l'anatomie et à la systematique de base des Ciconiiformes (Parker 1868). Inst. Roy. Sci. Nat. Belgique Bull., **35** (24): 1–34.—Though allied, the flamingos are placed in their own order, for their inclusion would render it impossible to define the Ciconiiformes. On anatomical grounds, Ciconiiformes are divided into four suborders, Ardeae (*Cochlearius* being given only tribal status in Ardeidae), Scopi, Balaenicipites, and Ciconiae (Ciconiidae and Plegadidae).—E. E.

Verheyen, R. 1960. Outline of procedure in basic avian systematics. Gerfaut, **50:** 223–230.—The writer says "there are no two species with exactly the same skeleton and pterylosis," though accurate description of the differences may be difficult. Urges that even though selection of characters is subjective, if all characters known are weighed equally, a more objective classification will result where a large number of characters are involved.—E. E.

Verheyen, R. 1960. Les nandous (Rheiformes) sont apparentés aux tinamous (Tinamidae/Galliformes). Gerfaut, **50:** 289–293.—Points out characters in which the rheas resemble the tinamous and concludes that they are more closely allied than are the rheas to the ostriches. (English summary).—E. E.

Verheyen, R. 1960. Les Kiwis (Apterygiformes) dans les systèmes de classification. Bull. Soc. Roy. Zool. d'Anvers, **15:** 1–11.—The Kiwis have skeletal characters suggesting distant relation to the penguins. *Apteryx owenii* Gould is held generically distinct from *A. australis* and a new genus *Kiwi* is erected for it; *Stictapteryx* Iredale and Mathews 1926 is considered a *nomen nudum.* (English summary.)—E. E.

Verheyen, R. 1960. Les tinamous dans les systèmes ornithologiques. Inst. Roy. Sci. Nat. Belgique Bull., **36** (1) : 1–11.—Verheyen concludes that the tinamous should be treated as a suborder of the Galliformes, and that the resemblances are not the result of convergence. Unfortunately, as with other papers of this series, Verheyen lists characters of the tinamous, but gives no indication which are shared with the Galliformes and which by the Rheiformes; he merely states baldly that 76 per cent of the listed characters are shared with Galliformes and that they are closest to the *Cracidae* and the *Odontophorini.*—E. E.

Verheyen, R. 1960. Les Pelecaniformes et le paille-en-queue (*Phaëthon*). Inst. Roy. Sci. Nat. Belgique Bull., **36** (25) : 1–18.—A case is made for removing the tropicbirds, Phaëthontidae, from the order Pelecaniformes, on the basis of differences from all the other included groups in anatomical, morphological, and behavioral characters. Verheyen places *Phaëthon* in a separate order, Phaëthoniformes, allied to the Lariformes and Procellariiformes. The Pelecaniformes are divided into four suborders and five families.—E. E.

Voous, K. H. 1959. Individual and geographical variation in the Songthrush, *Turdus philomelos* Brehm. Ardea, **47:** 28–41.

Miscellaneous

Coulter, M. W. 1958. A new waterfowl nest trap. Bird Banding, **29:** 236–241.—Describes a hoop net that is staked around the nest and "sprung" by pulling it up around the incubating bird by a string leading to a suitable observation point.—R. E. P.

Hoffmann, L. *et al.* 1960. Station biologique de la Tour du Valat. Cinquième compte rendu d'activité et recueil des travaux. 1958.—This report of the activities of the biological station in the Camargue, southern France, includes complete reprints of 17 Camargue papers by various authors published between 1958–1960 in a variety of journals, plus accounts of bird banding results during 1958. Eight of the papers deal with ornithology; among these two by J. J. Swift on the reason for crowded nesting by flamingos and on the biology and ethology of the European Bee-eater have especially wide interest. Articles by L. Hoffmann on the control of lead poisoning and by U. Glutz von Blotzheim on sex and age recognition and body weights of the European Coot will inter-

est waterfowl students. (In French or German; some papers with English summaries.)—E. E.

Labisky, R. F. 1959. Night-lighting: a technique for capturing birds and mammals. Biol. Notes, **40:** 1–11. Ill. Nat. Hist. Survey Div.

Scott, P. and H. Boyd (Eds.) 1958. The Ninth Annual Report of The Wildfowl Trust, 1956–1957. Country Life, London. 10/.—In addition to papers on anatomy, breeding biology, diseases and parasites, and various aspects of conservation and management (see separate abstracts) this report includes information on a variety of waterfowl topics: a census of Barnacle Geese in western Scotland; food and feeding habits of wildfowl; observations on waterfowl made by Peter Scott in Australia, New Zealand, and New Guinea (including such little-known species as *Anas waiguensis, Hymenolaimus malacorhynchos* and *Anas chlorotis*); the effect of weather on the distribution of Pink-footed Geese in Europe; the proportion of first-winter birds in flocks of Brent Geese in Essex; and an account of an expedition to northeast Greenland.—F. M.

Scott, P. and H. Boyd (Eds.) 1959. The Tenth Annual Report of The Wildfowl Trust, 1957–1958. 10/.—Papers on behavior, migration, conservation, general biology, and physiology are abstracted separately. This report also contains contributions on many aspects of the Trust's work—wildfowl counts, aerial surveys, establishing Canada Geese, research on Brent Geese. Visits to Iceland, Ungava Bay, the Canadian prairies, and European zoos are described. A list of British literature on European wildfowl covering the years 1945–1957 is a useful addition.—F. M.