

RECENT LITERATURE

EDITED BY JOHN WILLIAM HARDY

ANATOMY AND EMBRYOLOGY

- DONNER, K. O. 1960. On the effect of the coloured oil droplets on the spectral sensitivity of the avian retina. *Proc. XII Intern. Ornith. Congr.*, **1**: 167-172.—The droplets act as selectively absorbing filters, causing a general shift of sensitivity and hue discrimination curves toward the red spectrum. It seems likely that all birds are provided with identical cone pigment (or pigments) and that colored oil droplets form a more adaptive mechanism.—M.D.F.U.
- KADONO, H., O. TOSHIKAKI, AND O. KATSUTOSHI. 1963. Electromyographic studies on the respiratory muscles of the chicken. *Poultry Sci.*, **42**: 121-128.—Numerous trunk muscles are analyzed as to participation in expiratory and inspiratory movements.—P.H.B.
- KURODA, N. 1962. On the cervical muscles of birds. *Misc. Repts. Yamashina's Inst. Ornith. and Zool.*, **3**: 189-211.—A survey of cervical myology in 19 species representing 11 orders of birds. Much of the earlier literature on these muscles not being available to the author, he was obliged to use original nomenclature in some cases. In addition to presenting written descriptions and 13 plates of line drawings, the author suggests the functional basis for some of the variations noted. (In English.)—K.C.P.
- STINGELIN, W. 1960. Vorderhirn und Anpassungstypus. *Proc. XII Intern. Ornith. Congr.*, **2**: 681-693.—Studies of comparative morphology of the forebrain of birds show two new cerebral areas above the reptilian stage: a frontal mass originating from the ventral neo- and hyperstriatum, and a dorsal, sagittal elevation in each hemisphere, of neopallial origin. Extirpation experiments show that the sagittal elevation is an association area similar to that of mammals. These two areas dominate the avian cerebrum; histological studies and volume indices indicate correlations with the degree of complexity of achievements and with the degree of social organization. On the basis of certain correlations between neo-hyperstriatal development and manipulative use of the beak in several lower avian orders, it is surmised that this area has something to do with the specialized innervation of the beak. The sagittal elevations, while characterizing the higher orders (especially owls and passerines) show serial differentiation between related forms: the greater the body, the larger the lobe and the more sculptured is its surface. Thus, cerebral morphology of the lower orders shows special adaptations, while in the higher orders it points to parallels with the morphological, ethological, and ecological gradients of each evolutionary line.—M.D.F.U.

BEHAVIOR

- BORROR, D. J. 1963. Songs of finches (Fringillidae) of eastern North America. *Ohio J. Sci.*, **61**: 161-174.—Useful verbal descriptions, often in association with syllabic approximations and audiospectrograms, of the advertising songs of 43 species of Fringillidae. These birds are assigned to nine groups (not phylogenetic) based on the character of the song. A table shows pitch range. Individual, and in some instances geographic, variations are mentioned.—E.E.
- COLLIAS, N. E., AND E. C. COLLIAS. 1963. Selective feeding by wild ducklings of different species. *Wilson Bull.*, **75**: 6-14.—Ducklings of 10 species in their first week fed mainly on invertebrates, with some specialization on different kinds of food.—J.T.T.

- GOODWIN, D. 1963. Observations on Java Sparrows. *Avic. Mag.*, **69**: 54-69.—Ethological data on a pair of *Padda oryzivora* that bred in captivity.—E.E.
- HARE, H. L. 1963. Compulsory bird-watching. *Bokmakierie*, **14**: 31.—A pair of ostriches, *Struthio camelus*, drove a dog and a man from a place where ostrich chicks were lurking.—E.E.
- KLOPPER, P. 1963. Behavioral aspects of habitat selection: the role of early experience. *Wilson Bull.*, **75**: 15-22.—Experiments on the foliage preferences of *Spizella passerina* as affected by experience.—J.T.T.
- MCALLISTER, N. M., AND R. W. STORER. 1963. Copulation in the Pied-billed Grebe. *Wilson Bull.*, **75**: 166-173.—The behavior of copulating *Podilymbus podiceps* is described; it is generally similar to that of other grebes.—J.T.T.
- POULSEN, H. 1960. Vocal imitations in some birds. *Proc. XII Intern. Ornith. Congr.*, **2**: 621-625.—Where the song has to be learned, there are often short periods of learning by imitation only; where foreign song is imitated, there can, in some birds, be a specific pattern besides the imitated phrases. In general, the author of this review paper does not see any biological significance in vocal imitation by birds that are not genuine "mockers."—M.D.F.U.
- VOIPIO, P. 1962. Significance of interspecific and intraspecific bird calls in the predator-prey relation. *Ornis Fennica*, **39**: 96-101.—While calls serving as recognition signals must be clearly audible to function as part of the isolating mechanism, certain intraspecifically used calls, e.g., those between young and parent, must not be so audible that they can be easily localized by predators.—M.D.F.U.

DISEASES AND PARASITES

- BUENO, R. C., S. R. BAQUER, AND R. NAKANO. 1962. [Diseases of birds in São Paulo. Analysis of 28,147 cases.] *Arq. Inst. Biol. São Paulo*, **29**: 231-270.—Reports results of study of bird disease and mortality, conducted by the Poultry Disease Department of the Instituto Biológico of São Paulo, Brazil, from 1954-1960. Data on many wild species. (In Portuguese; brief English summary.)—E.E.
- SCHIEDDEGGER, S. 1960. Ornithosis. *Proc. XII Intern. Ornith. Congr.*, **2**: 649-650.—Ornithosis, or psittacosis, is a common disease of birds; in addition to infecting 30 species of parrots, ornithosis is also known from over 40 other kinds of birds, including domestic fowl and turkey. The pathological-anatomical findings concerning this infectious and dangerous virus are briefly described.—M.D.F.U.

DISTRIBUTION AND ANNOTATED LISTS

- BERLIOZ, J. 1962. Les caractères de la faune avienne en Nouvelle-Calédonie. *C. R. Soc. Biogéogr.*, no. 345: 65-69.—Characteristics of the avifauna of New Caledonia. (In French.)—E.E.
- BERLIOZ, J. 1962. Notes critiques sur quelques espèces des trochilidés. *L'Oiseau*, **32**: 135-144.—Critical notes on several hummingbirds (*Glaucis hirsuta*, *Phaethornis eurynome*, *Leucippus baeri*, *Agyrtrina fimbriata*, *Uranomitra* [= *Amazilia*] *violiceps* and *viridifrons*, *Amazilia castaneiventris*, and *Iolaema schreibersi whitelyana*), including some range extensions. (In French.)—E.E.
- BRANDER, T., J. JOKI, AND A. VÄRE. 1961. Lounais-Hämeen Selkäränkaiset, Vertebrata. (Vertebrates from SW. Häme.) *Lounais-Hämeen Luonto* (Memorial volume), 1961: 55-63.—A seemingly complete faunal list of southern Finland, but frequency of occurrence is subjective ("rare," "very rare," etc.). It is difficult to determine (in spite of the Swedish and German texts) which are nesting species and which species are only transients or visitors on the area.—M.D.F.U.

- ERARD, C., AND R. MENEUL. 1962. L'avifaune de la Marne. L'Ois. et la Rev. Franç. d'Orn., **32**: 15-27.—The avifauna of the Marne region is discussed, and changes in status since 1862 are indicated for some 80 species. Some old records are questioned, and some species are indicated as more or less common since the last report in 1870.—M.D.A.
- KURODA, N. 1962. On the melanic phase of the McCormick Great Skua. Misc. Repts. Yamashina's Inst. Ornith. and Zool., **3**: 212-217.—A very dark specimen of *Catharacta skua* collected off Hokkaido is identified as a melanic individual of *C. s. maccormicki*. It is described and compared in detail with normal individuals. Information obtained from New Zealand ornithologists indicates that the main breeding ground of the dark birds is western Antarctica; normal light *maccormicki* have been known to breed occasionally in association with the dark population, but only recently has it been shown that an occasional dark bird wanders into, and breeds in, skua colonies in the eastern Ross Sea area. The Japanese specimen is interpreted as having been such a straggler, which migrated north with normal *maccormicki*. (In English.)—K.C.P.
- KURODA, N. 1962. The first record of the White-necked Gadfly Petrel *Pterodroma externa cervicalis* from Japan. Misc. Repts. Yamashina's Inst. Ornith. and Zool., **3**: 222-224.—Captured alive in Nagoya City, Honshu, 29 July 1962, and died 10 days later in Higashiyama Zoo. Presumably was carried inland by the typhoon which passed the Nagoya district on 27-28 July. Illustrated with photograph of the study skin and drawings of various external details. (In English; Japanese summary.)—K.C.P.
- LABITTE, A., AND A. LANGUETIF. 1962. Notes sur les oiseaux nicheurs du Marais Vendéen. L'Ois. et la Rev. Franç. d'Orn., **32**: 57-73, 127-134.—Notes on 64 breeding species in the Marais region in 1960.—M.D.A.
- MALZY, P. 1962. La faune avienne du Mali (Bassin du Niger). L'Ois. et la Rev. Franç. d'Orn., **32**: 1-81.—The status of 220 species of birds in Mali, Africa, is reported, with comments on their distribution and numbers. Several vegetational zones are distinguished, from dense forest to true desert; there are dry and wet seasons, with a cold period in the dry season (December-January). Since part of this five-year study was concerned with avian damage to crops, considerable information is presented on food habits of the various species.—M.D.A.
- MOLTONI, E. 1962. Saggio sull'avifauna del Lago Trasimeno (Umbria). Riv. Ital. Orn., **32**: 153-234.—An annotated list of 168 kinds of birds known from Lake Trasimeno, Italy. (In Italian.)—E.E.
- MOLTONI, E. 1962. Altre notizie di catture, o comparse, del cuculo dal ciuffo—*Clamator glandarius* (L.)—in Italia. Riv. Ital. Orn., **32**: 282-283.—Additional records of Great Spotted Cuckoo from Italy. (In Italian.)—E.E.
- MOREL, G., AND F. ROUX. 1962. Données Nouvelles sur l'Avifaune du Sénégal. L'Ois. et la Rev. Franç. d'Orn., **32**: 28-56.—A list and discussion of 64 species obtained in the Senegal River basin in Africa.—M.D.A.
- OLIVARES, A. 1962. Aves de la comisaría del Vaupés (Colombia). Rev. Biol. Trop., **10**: 61-90.—Report on 100 species of birds collected in the Vaupés region of northern Amazonia in Colombia. Color of soft parts and gonadal condition given in most cases. (In Spanish; English summary.)—E.E.
- PULLIAINEN, E. 1962. The invasions of the Kittiwake (*Rissa tridactyla*) into Finland in February and March 1959 and 1962. Ornis Fennica, **39**: 81-96.—This gull is a vagrant in Finland; mature birds are blown inland by storms only in spring, whereas immatures occur there in both migration periods.—M.D.F.U.

- SCHÖNWETTER, M. 1962-63. Handbuch der Oologie. Lief., 6: 321-384; 7: 385-448. Akademie Verlag, Berlin. Price per Lief., DM 9.50.—Continues descriptive catalogue of eggs of birds of world. (See review of earlier parts, *Auk*, 80: 390-391, 1963.) These parts complete Gruiformes and cover most of Charadriiformes. (In German.)—E.E.
- VIELLIARD, J. 1962. Nouvelles captures intéressantes a Ouessant. L'Ois. et la Rev. Franç. d'Orn., 32: 74-79.—Three species, *Setophaga ruticilla*, *Muscicapa parva*, and *Emberiza pusilla*, were seen or taken on the Isle of Ouessant; the first is the sixth record of this North American bird.—M.D.A.
- WOO, H. C., S. W. KIM, AND P. O. WON. 1961. Avifauna of Korea. Avi-Mammalian Fauna of Korea, Inst. Agr., Suwon, Korea, 1-19.—This report, in Korean, discusses the summer birds on Dagelet Island and their status, wintering populations on the mainland and on several islands, and nesting of Black and Japanese storks in Korea.—M.D.A.

ECOLOGY AND POPULATIONS

- ENEMAR, A. 1959. On the determination of the size and composition of a passerine bird population during the breeding season. Vår Fågelvärld, Suppl. 2. 114 pp.—This is a substantial study of techniques for censusing breeding populations. In three summers' work in a forested valley of southernmost Sweden, Enemar concentrated upon testing different census methods. An exact description of his plot is not given; thus, effects of plot size on efficiency of census techniques, optimum size of plots, and results obtained by averaging data from several plots are not discussed. Above all, limitations of the method became evident. Eight to ten surveys, accompanied by mapping of territorial males, allowed determination of the size of the resident population; the number of species present can be assessed with 94 per cent accuracy from three censuses. One census during the best four weeks of the northern spring results in 60 per cent (on the average) of the total population being noticed. There is a detailed discussion of sources of error, and of correction methods applied by different workers to their raw data. There are many interesting conclusions that cannot be reviewed briefly.—M.D.F.U.
- KEAST, A. 1960. Bird adaptations to aridity on the Australian continent. Proc. XII Intern. Ornith. Congr., 1: 373-375.—Birds are dependent on rainfall for breeding; 30 per cent are nomadic. Those in the interior move north in autumn to places where rain has just fallen. In the north (wet summers), breeding occurs during or soon after rains. Molt may occur during breeding, if breeding started before onset of rain. Droughts and heat waves reduce or halt breeding and may cause catastrophic die-offs; recovery of populations thereafter is accomplished by concentration of breeding in the most favorable areas, increased numbers of broods, and larger clutch sizes.—M.D.F.U.
- KURODA, N. 1960. Remarks on the breeding seasons in the Tubinares, particularly of the North Pacific. Proc. XII Intern. Ornith. Congr., 2: 445-449.—This group shows a reversal of the breeding season from the arctic through the tropics to the antarctic. Discussing mainly the north Pacific species, the author finds a correlation of sea temperatures with the breeding and off-season habitats, and also with food supply in these areas. Kuroda discusses his belief that these species evolved in the northern hemisphere.—M.D.F.U.
- PALMGREN, P. 1960. The distribution of the Finnish bird fauna. Proc. XII Intern. Ornith. Congr., 2: 586-591.—A broad sketch of the ecological avigeography of the tundra, subalpine, and taiga biomes in Finland.—M.D.F.U.

- PORTENKO, L. A. 1960. Ornithological explorations in north-eastern Asia. Proc. XII Intern. Ornith. Congr., **2**: 615-620.—Field work in 1957 (and earlier) in the Koryak Highlands (South of the Anadyr region, in north-eastern Siberia) revealed similarities of the avifauna to that of the Anadyr river basin. The principal faunal group is common to the rest of eastern Siberia, especially in the forest-tundra ecotone, which is wider in this area than anywhere else in Eurasia.—M.D.F.U.
- TURČEK, F. J. 1960. The properties of plumage, organic matter and water content in the bodies of some birds. Proc. XII Intern. Ornith. Congr., **2**: 724-729.—This paper contains a statistical analysis of data, mainly from 51 species of passerine birds, on body weight, water content, organic and mineral content of the plucked body, and weight of the plumage. These preliminary findings indicate a negative correlation between body weight and plumage weight, possibly an adaptive feature concerned with heat conservation of smaller birds. The discussion is primarily on the use of data on avian biomass in speculation about community energetics. Biomass is usually expressed by body weight, but since the production of organic material is of primary interest in community ecology, Turček thinks that organic content should be the basis of the "true biomass." In passerine birds, this constitutes, on the average, 26 per cent of the plucked body weight. A unique and thought-provoking paper.—M.D.F.U.
- VALVERDE, J. A., AND F. BERNIES. 1960. Sur l'écologie de *Gyps fulvus* en Espagne. Proc. XII Intern. Ornith. Congr., **2**: 737-740.—A fascinating and unique analysis of the present and past ecology of the scavenging birds (principally the Griffon Vulture) of Spain. The Griffon Vulture is still common; the 140 known colonies allow an estimate of 5,000-8,000 individuals in the country. Their abundance is related to the principal beasts of burden and grazing animals in the different major habitats. A concise account of the role of corvids, smaller raptors, and large scavenger birds and mammals indicates that the Griffon Vulture is the primary devourer of livestock carcasses.—M.D.F.U.
- WON, P. O., AND H. C. WOO. 1961. An examination of the food habits of the forestry birds of Korea. *Avi-Mammalian Fauna of Korea*, Inst. Agr., Suwon, Korea, 21-30.—Nine species of birds were examined and their stomach contents noted.—M.D.A.
- YAPP, W. B. 1960. The colonization of coniferous plantations by birds. Proc. XII Intern. Ornith. Congr., **2**: 801-803.—A total of 37 passerine and 12 non-passerine species was reported from these woods, and the sequence of settling is described. Yapp suspects that the sudden appearance of numbers of usually rare passerines means that the overflow population from more favorable habitats is invading the pine plantations; the invading population increases in size until it is acted upon by some new limiting factor.—M.D.F.U.

EVOLUTION AND GENETICS

- KEVE, A. 1960. Variation-Studien über die Populationen des Haussperlings, *Passer domesticus domesticus* L. Proc. XII Intern. Ornith. Congr., **1**: 376-395.—Preliminary results of studies and a long summary of literature. Discolored urban specimens are unsuitable for color study. Montane populations seem to have shorter beaks, and overseas introductions showed no significant change in characters considered.—M.D.F.U.
- MEISE, W. 1960. Über Verbreitung, Verbreitungsgeschichte und Evolution afrikanischer Vögel. Proc. XII Intern. Ornith. Congr., **2**: 499-506.—By starting with a taxonomic detail and by expanding on the influence of the open ring of savannah

- upon the rest of Africa's biomes, the author offers a broad perspective in which evolution of the African avifauna is placed. Meise takes up the faunal analysis where Moreau's work (1952) left it, and he deals with the history of genera and families rather than of species.—M.D.F.U.
- OWEN, D. F. 1963. Polymorphism in the Screech Owl in eastern North America. *Wilson Bull.*, **75**: 183-190.—Rufous and gray forms of *Otus asio* apparently represent a case of polymorphism, with rufous birds being more frequent in warmer climates. Those of Florida are an exception in that color intermediates compose up to 40 per cent of the population.—J.T.T.
- PEITZMEIER, J. 1960. Selbstselektion und Selbstisolation als Weg der intraspezifischen Differenzierung. *Proc. XII Intern. Ornith. Congr.*, **2**: 595-597.—Observations in Germany of colonization of different habitats by birds led the author to recognize the importance of climatic influences and habitat selection in speciation. He surmises the following chain of events: first mutants arise which have the potentiality to settle in habitat slightly different from the usual habitat of the species; these mutants may stay latent for a time, but at high population pressure may colonize beyond the normal limits of the species. If habitat suitable for their ecological valency is found, they settle there and their habitat selection mechanism (behavioral selection) becomes adapted to the new habitat. Such pioneer populations may remain isolated and may be subjected to new and different selection pressures; thus, morphological differentiation might result as well.—M.D.F.U.

GENERAL BIOLOGY

- BENGSTON, S. A. 1962. [The occurrence and breeding biology of the Spotted Crake (*Porzana porzana*) in Northeastern Scania (56°N, 14°15' E).] *Vår Fågelvärld*, **21**: 253-266.—Life history data, emphasizing habitat types, diurnal activity, and breeding biology, are discussed. (In Swedish; English summary.)—M.D.F.U.
- BERLIOZ, J. 1962. Étude d'une collection des oiseaux de Guyane Française. *Bull. Mus. Natl. d'Hist. Nat. Paris*, **34**: 131-143.—Report on a bird collection made in French Guiana in 1961. Notes on plumages, stomach contents, soft parts, and taxonomy. New species described: *Myiochanes albogularis* from Maripasoula, based on a single male; said to resemble *M.* [= *Contopus*] *cinereus*, but much smaller, and uniformly slate gray below except for pure white throat. (In French.)—E.E.
- BERLIOZ, J. 1962. Observations ornithologiques à Trinidad et à Tobago. *L'Ois. et la Rev. Franç. d'Orn.*, **32**: 193-210.—Bird notes on a trip to Trinidad and Tobago. (In French.)—E.E.
- BORRERO, H. J. I. 1962. Notas varias sobre *Asio flammeus bogotensis* en Colombia. *Rev. Biol. Trop.*, **10**: 45-59.—Notes on the Bogotá race of the Short-eared Owl, with data on nesting, ecology, feeding habits, development, and plumages of young. (In Spanish; English summary.)—E.E.
- CHIBA, S. 1962. Some experiments on grain consumption by the Tree Sparrow. *Tori*, **17**: 172-178.—*Passer montanus* is the most important "problem bird" in rice fields. Field and laboratory experiments indicate that sparrows will take grains with sprouts of less than 20 mm that are less than 20 mm deep. Results of treatment of grain with dyes and chemicals were not decisive. (In Japanese; English summary.)—K.C.P.
- DORST, J. 1962. A propos de la nidification hypogée de quelques oiseaux des hautes Andes Péruviennes. *L'Ois. et la Rev. Franç. d'Orn.*, **32**: 5-14.—Several Andean species that nest in subterranean chambers are discussed from the standpoint of

- microclimate and reduction of predation. Vocalization and distinctive coloration of the buccal area (at times bearing conspicuous "beads") are described.—M.D.A.
- HELMINEN, M., AND J. VIRAMO. 1962. Animal food of the Capercaillie (*Tetrao urogallus*) and Black Grouse (*Lyrurus tetrix*) in autumn. *Ornis Fennica*, **39**: 1–12.—Extensive stomach sampling shows that animal food diminished rapidly in the fall diet of the two grouse and was insignificant by mid-November, even in young, which ingest an average of 35 per cent animal food in early September (adults: 10 per cent).—M.D.F.U.
- HIRABAYASHI, H. 1962. Observations on the roosting of crows in Yamanashi and Nagano, Honshiu. *Tori*, **17**: 123–144.—Roosting of *Corvus leuicollis* and *C. corone* described. Fall and spring flocks were augmented in December and January by crows from an additional area; in some populations winter roosting habits may differ from fall and spring habits. Pre-roosting assembly site for flocks coming in (from four directions) from feeding areas was determined by the evening feeding place of a small flock that remained near the roost all day. Pre-roosting assembly began about 2 hours before sunset. Morning departure from roosts began in the dark. Flocks returned to roosts along definite flight lines from within an area about 80 km in diameter. (In Japanese; English summary.)—K.C.P.
- HOSONO, T. 1962. Roosts and roosting observations of the Grey Starling *Sturnus cineraceus* in Karuizawa, Nagano. *Tori*, **17**: 145–162.—Six small roosts (24–60 birds each), usually in birches, studied during the breeding seasons (March–June) of 1960 and 1961. (In Japanese; English summary.)—K.C.P.
- KOJIMA, T. 1962. An example of plumage colour change after moult by climatic displacement in a Varied Tit. *Tori*, **17**: 204–205.—A female *Parus varius* of the dark race *ovstoni* from the Seven Islands of Izu, taken to Tokyo in October, molted the following September into a paler plumage almost indistinguishable from that of the mainland race *P. v. varius*. (In Japanese; English summary.)—K.C.P.
- KURODA, N. 1962. Comparative growth rate in two Grey Starling chicks, artificially raised with animal and plant foods. *Misc. Repts. Yamashina's Inst. Ornith. and Zool.*, **3**: 174–184.—Field studies published earlier had shown that young of *Sturnus cineraceus* in rural areas were fed primarily mole-crickets, with no vegetable matter, while those in the city were given a mixture of animal and vegetable foods with cherries predominating. City-raised chicks had more variable growth rates than rural, in which growth rates were both uniform and good. Growth rates of two captive chicks were measured, one being fed cherries, the other basket-worms (mole-crickets were not available). The cherry-fed bird exhibited delayed growth and a weakened condition. Reversal of foods led to reversal of relative growth rates. Body weight was affected more than growth in bone length. (In Japanese; English summary.)—K.C.P.
- NAKAMURA, T. 1962. Observations on the breeding biology of Long-tailed Tits. *Misc. Repts. Yamashina's Inst. Ornith. and Zool.*, **3**: 155–173.—Detailed observations on 48 pairs, 71 nests of *Aegithalos caudatus trivirgatus* during breeding seasons 1951–61. (In Japanese; English summary.)—K.C.P.
- NAKAMURA, T. 1962. Roosts and roosting behaviour of Long-tailed Tits. *Tori*, **17**: 109–122.—Some 58 winter roosts (20 studied) of *Aegithalos caudatus* were located in the period 1951–61 at Nagano, Japan. Roosts were usually in deciduous bushes and were less than 2 meters above ground. Behavior of birds preparing to roost, roost tenacity, and seasonal change are analyzed. (In Japanese; English summary.)—K.C.P.
- PEIPONEN, V. A. 1962. Ueber Brutbiologie, Nahrung und geographische Verbrei-

- tung des Birkenzeisigs (*Carduelis flammea*). *Ornis Fennica*, **39**: 37-60.—Interesting details of the breeding biology of the Common Redpoll in Finnish Lapland are revealed. Nest building and incubation are the duties of the female; the male feeds the incubating mate. The young hatch in the sequence of laying. The feeding study shows great reliance of redpolls on birch seeds: in the arctic, seeds of dwarf birch are not shed until long after the snow has melted. In summer insect food is taken, and may account for 80 to 90 per cent of the total food in mid-summer. Late summer, fall, and winter food is mainly birch and alder seed. The breeding distribution in Scandinavia corresponds with that of the dwarf birch, and elsewhere with related species of *Betula*.—M.D.F.U.
- PILLA, A. M. 1962. Alcune osservazioni sulla deposizione di uova nella Quaglia giapponese (*Coturnix c. japonica*). *Ric. Zool. appl. alla Caccia*, **36**: 1-14. (Univ. Bologna).—Studies on egg laying of Japanese Quail in captivity. Some females start laying when 75 days old, and lay 267 eggs in a year (average 210.8). The egg is larger in proportion to the bird's weight than the egg of a domestic chicken. Molt lasts an average of 44.5 days. (In Italian; summaries in English, French, and German.)—E.E.
- ROLLIN, N. 1962. Melanistic Orange Bishop Bird. *Ostrich*, **33**: 35-37.—This individual showed partial melanism in nuptial plumage but none in the following eclipse plumage. The author considers that the melanism was, therefore, not hereditary. However, before this can be considered proved, it should be determined whether melanism recurs in the succeeding nuptial plumage.—M.A.T.
- RUSCHI, A. 1962. [The molt in *Heliomaster furcifer* (Shaw) and *Heliomaster squamosus* (Temminck).] *Bol. Mus. Biol. Prof. Mello-Leitão*, no. 35: 2 pp.—These Brazilian hummingbirds have two molts a year. In July, after the breeding season, the males lose the brilliant color and acquire a dull plumage like that of females. The nuptial dress is acquired between October and January. These are the only hummingbirds so far known to the author in which males lose their iridescent patches seasonally. (In Portuguese; English summary.)—E.E.
- RUSCHI, A. 1962. [The molt in *Calliphlox amethystina* (Boddaert) and *Calliphlox mitchellii* (Bourcier).] *Bol. Mus. Biol. Prof. Mello-Leitão*, no. 36: 2 pp.—Males of these hummingbirds have two molts per year: the prenuptial molt begins in July and ends in September; the postnuptial molt begins in March and ends in April. The chief differences are in the color of the posterior underparts. Seasonal and geographic variations in color of *C. amethystina* suggest that *mitchellii* should rank only as a subspecies. (In Portuguese; English summary.)—E.E.
- SCHORGER, A. W. 1962. Wildlife restoration in Wisconsin. *Trans. Wisconsin Acad. Sci., Arts, and Letters*, **51**: 21-30.—The history of stocking or introducing rare, extirpated, or exotic species in Wisconsin is succinctly and informatively presented. The story is essentially one of costly failures with exotic or peripheral species, and encouraging successes or hopeful prospects with species decimated by human interference.—J.T.E.
- SLATER, P. [1962?]. Western Australian birds. B. P. (British Petroleum), Kwinana, Perth, Western Australia.—A booklet containing 20 handsomely reproduced color photographs of birds of western Australia, some photographed for the first time. Slater's short accounts also have some new material. For example, a nest of the honeyeater, *Melithreptus laetior*, was built by a party of five adults, which continued to attend the nest and often queued up to feed the young after they hatched.—D.A.
- TANIGUCHI, K. 1962. Observation of roosting flight numbers of the House Swallow

- from post-breeding to departure period. *Tori*, **17**: 183-189.—Evening roosting flights of *Hirundo rustica* began ca. 90 minutes before sunset, with peak 15-30 minutes before sunset. Seasonal peak in numbers was in late August and early September; departure was complete in two out of three seasons by 27 September. Especially interesting is the author's observation that the present pattern of feeding on hillsides by day and returning to the plain to roost seems to have become established since the use of insecticides began in lowland areas formerly used for feeding. (In Japanese; English summary.)—K.C.P.
- WATSON, G. E. 1962. Notes on the Spotted Rail in Cuba. *Wilson Bull.*, **74**: 349-356.—The range of *Pardirallus maculatus* is extended to the western province of Pinar del Rio. Notes are included on the taxonomy, molt, and habits of the species.—J.T.T.
- WON, P. O. 1961. Studies on the avi-mammalian fauna of Korea from the viewpoint of the forestry protection. *Avi-Mammalian Fauna of Korea*, Inst. Agr., Suwon, Korea, 31-139.—A summary of the mammals of Korea, their status and economic relationships, and of the birds, their food habits, utilization of nest boxes, etc. An excellent summary of work in Korea, including bibliography. (In English.)—M.D.A.

MIGRATION AND ORIENTATION

- FREDGA, K., AND K. FREDGA. 1962. [Calculation of the "bee line" between two places on the surface of the earth.] *Vår Fågelvärld*, **21**: 205-207.—"A formula is presented for determining the distance between two places on the surface of the earth. The authors point out the value of this formula when calculating the minimum distance between the place of banding and of recovery of a bird." (From authors' summary.) (In Swedish; English summary.)
- JAHNUKAINEN, M. 1963. On the spring migration of the Whooper Swan in the Helsinki region in the years 1950-61. *Ornis Fennica*, **40**: 1-12.—Several hundred to more than 1,000 swans cross the area annually, most passing over within a few days. There is a significant correlation between the onset of swan migration and migration of 10 other early migrants.—M.D.F.U.
- KUMARI, E. 1960. Einige Resultate der Vogelzugforschung im ostbaltischen Gebiet. *Proc. XII Intern. Ornith. Congr.*, **2**: 439-444.—A systematic study of bird migration along the east Baltic coast began in 1953. By 1958, 22 observation points were strategically located from the White Sea south through Estonia and the other Baltic states to northern Germany. Some migration patterns are discussed. Coastal migration is characterized by great numbers of passerines (mainly fringillids) in the southern Baltic, and by ducks and loons in the northern Baltic. The two groups have migratory peaks on different days, but peak numbers of several passerine migrants may pass on the same day. The sea duck migration in Estonia is spectacular; up to 200,000 migrating Black Scoters may be seen on a single afternoon.—M.D.F.U.
- MOLTONI, E. 1962. Passo di anatidi non communi in Alta Italia nel no novembre-dicembre 1961 e gennaio 1962. *Riv. Ital. Orn.*, **32**: 285-289.—Notes on captures of the Mute Swan, *Cygnus olor*, and the Goosander, *Mergus m. merganser*, in northern Italy during the winter of 1961-62. (In Italian.)—E.E.
- NILSSON, L. 1962. [Studies on the migration of waders at Lake Hullsjön (58°17' N, 12°23' E) in 1959 as correlated with the temperature.] *Vår Fågelvärld*, **21**: 15-25.—The author found a correlation of spring migration of transient waders with

- rising temperature; fall migration of waders intensified following a drop in temperature. (In Swedish; English summary.)—M.D.F.U.
- RYDZEWSKI, W. 1960. A tentative analysis of the migrational populations of Starling (*Sturnus vulgaris*).—Proc. XII Intern. Ornith. Congr., **2**: 641-644.—Starlings of northern Poland migrate west to the Atlantic coast and to England; those from southern Poland go to the western Mediterranean area. Birds from a dividing strip 150 km in width have their own wintering area in southern France and adjacent Spain, but some go to the western or southwestern wintering areas of the two main groups. There are no records to indicate that an individual from the "mixed" zone ever alternates between the wintering areas, and there is some evidence that birds return to the same wintering grounds in subsequent years. The terms monohiemy and polyhiemy are proposed. A monohiemic population has only one wintering area, which may be shared with another population. A polyhiemic population has several wintering areas, e.g., Starlings from the author's mixed zone. The two main Polish Starling populations differ in another respect, *viz.* the "Zwischenzug," i.e., early summer migration of the northern, but not the southern, Starlings.—M.D.F.U.
- ULFSTRAND, S. 1960. Some aspects of the directing and releasing influence of wind conditions on visible bird migration. Proc. XII Intern. Ornith. Congr., **2**: 730-736.—Wind is only one of many factors releasing and modifying migrational flight. Head wind stimulates migration. Wind direction also influences altitude of migration, thereby modifying the direction taken when overland migrants reach the coast. Guide-line efficiency is higher with head wind, since the altitude of flight is lower, and vice versa: Birds flying higher with tail wind tend to be guided less by shore lines. Work in Scania (Sweden), Holland, and Denmark provided the empirical basis for these conclusions.—M.D.F.U.
- URAMOTO, M. 1962. 1st annual report on the bird ringing scheme for the year ending 31st March 1962. Misc. Repts. Yamashina's Inst. Ornith. and Zool., **3**: 138-143.—During this period 2,321 birds of 62 species were banded; by the end of the banding period 10 birds, of 6 species, had been recovered. Also, 5 birds (of 5 species) banded abroad were recovered (including a Pintail banded as a juvenile 10 September 1958 at Hills Lake, Mackenzie, Canada, recovered in February, 1961, on Honshu). (In Japanese; English summary.)—K.C.P.
- YAMASHINA, Y. 1962. On the new scheme of bird-banding in Japan. Misc. Repts. Yamashina's Inst. Ornith. and Zool., **3**: 135-137.—Banding in Japan was conducted by the Ministry of Agriculture and Forestry prior to World War II. After the war little systematic banding was carried on until 1961, when the government agreed to subsidize a banding program conducted by the staff of the Yamashina Institute, and banders trained by them. The paper includes a bibliography of banding in Japan. (In Japanese; English summary.)—K.C.P.

NEW SERIES

- The Puku**—Occas. Papers Dept. Game and Fisheries, Northern Rhodesia, no. 1, 1963, 218 pp.—The first issue of this new publication, named after a local antelope, has an article on breeding seasons of game birds by C. W. Benson and short notes on other birds.—D.A.

PHYSIOLOGY

- DORST, J. 1961. Étude d'une collection des oiseaux rapportée de la vallée de Sandia, Pérou méridional. Bull. Mus. Natl. d'Hist. Nat., **33**: 563-570.—Report on a

- collection of birds from the valley of Sandia, southern Perú, made between 24 November and 2 December (the start of the rainy season). Most insectivorous and nectarivorous birds (except hummingbirds) showed gonadal development, but granivorous species showed no sign of sexual activity. (In French.)—E.E.
- ENGELS, W. L. 1961. Photoperiodism and the annual testicular cycle of the Bobolink (*Dolichonyx oryzivorus*), a transequatorial migrant, as compared with two Temperate Zone migrants. *Biol. Bull.*, **120**: 140-147.—Caged Bobolinks maintained on 14 hours of light daily through fall, winter, and spring failed to develop black bills (indicator of testicular activity), whereas birds first placed on 10, 11, or 12 hours of light during October and November got black bills after about three months of 14-hour photoperiods. Juncos and White-throated Sparrows required a similar preparation period at a 10-hour photoperiod, after which the testes became active within one and one-half months on a 14-hour daily photoperiod. This is interpreted to mean that the transequatorially migrating Bobolink can overcome its photoperiodic refractoriness on days of intermediate length, but responds more slowly than these two northern hemisphere migrants.—J.T.E.
- ENGELS, W. L. 1962. Day-length and termination of photo-refractoriness in the annual testicular cycle of the transequatorial migrant *Dolichonyx* (the Bobolink). *Biol. Bull.*, **123**: 94-104.—Captive Bobolinks placed on 14 hours of light daily after 2 October (natural photoperiod then 12.5 hours) failed to develop black bills (indicator of testicular activity), whereas birds so placed after 1 November (natural photoperiod then 11.5 hours) developed black bills in a few months. Birds held at a photoperiod of 12.5 hours for four weeks in October also developed black bills after being returned to 14 hours of light. Wild Bobolinks migrate after a few weeks at photoperiods of less than 12.5 hours. The period of short day lengths required to overcome photo-refractoriness is thus met by the birds' natural migration schedule. It is comparable in duration to, but less extreme (shortness of days) than, the period required by *Junco* and *Zonotrichia*.—J.T.E.
- ENGELS, W. L. 1962. Migratory restlessness in caged Bobolinks (*Dolichonyx oryzivorus*), a transequatorial migrant. *Biol. Bull.*, **123**: 542-554.—Captive Bobolinks held in outdoor cages in North Carolina started nocturnal unrest in late March; birds kept at a 14-hour photoperiod after 28 November showed nocturnal unrest about three weeks earlier. This is interpreted as evidence that photoperiod either induces nocturnal unrest (reflecting the migratory state) or influences a primary internal rhythm involving this unrest.—J.T.E.
- JOHNS, J. E., AND E. W. PFEIFFER. 1963. Testosterone-induced incubation patches of phalarope birds. *Science*, **140**: 1225-1226.—Bailey (*Condor*, 54: 121, 1952) postulated that in those avian species in which only males have incubation patches, androgen might have the same relation to development of the patch as estrogen does in passerines. This hypothesis was tested with captive specimens of *Steganopus tricolor* and *Lobipes lobatus*, to which were administered estradiol, testosterone, or prolactin, alone or in various combinations. The only birds affected were those receiving both prolactin and testosterone; in this group, both sexes developed incubation patches.—K.C.P.
- JUHN, M. 1963. An examination of some interpretations of molt with added data from progesterone and thyroxine. *Wilson Bull.*, **75**: 191-197.—There appears to be no one mechanism causing molt in White Plymouth Rock castrates.—J.T.T.
- KAHL, M. P. 1963. Thermoregulation in the Wood Stork, with special reference to the role of the legs. *Physiol. Zool.*, **36**: 141-151.—The Wood Ibis, *Mycteria americana*, as well as other storks, excretes urine on its legs. Experiments indicate

- that this is a means of temperature regulation (evaporative cooling) when ambient temperatures rise above the body temperature.—E.E.
- LASIEWSKI, R. C. 1963. Oxygen consumption of torpid, resting, active, and flying hummingbirds. *Physiol. Zool.*, **36**: 122-140.—Hummingbirds reduce oxygen consumption and body temperature in response to reduced ambient temperatures, becoming torpid at temperatures of 20°C. Torpidity does not occur every night, except in individuals with restricted energy reserves. The average metabolism in flight is less than had been computed previously; calculations indicate that the Ruby-throated Hummingbird has sufficient energy reserves to fly non-stop across the Gulf of Mexico (ca. 500 miles).—E.E.
- MERKEL, F. W. 1960. Zur Physiologie der Zugunruhe nachtllich ziehender Kleinvoegel: eine Arbeitshypothese. *Proc. XII Intern. Ornith. Congr.*, **2**: 507-512.—This is a condensation of the author's hypothesis, based on experimental work on caged passerines. He presents a chart of the annual cycle of energy storing, activity, and basal metabolism of birds that display nocturnal Zugunruhe. Hyperphagy accompanies Zugunruhe, but does not release it; hyperphagy occurs in the daylight period, at which time the birds show decreased activity and symptoms of altered metabolic and endocrine balance. Zugunruhe in caged birds may continue throughout the summer if reproductive drive does not extinguish it, but in the short photoperiod of winter there is always a refractory phase. While his experimental birds, the warbler, *Sylvia communis*, and the robin, *Erithacus rubecula*, are usually considered as typical "instinctive migrants" (*sensu* Weigold), he was able to show by long-term experiments that in constant photoperiod their activity pattern remained unchanged, i.e., Zugunruhe disappeared. Thus photoperiodicity governs the Zugunruhe cycle even in these birds.—M.D.F.U.
- NAKAMURA, T. 1962. The change of body lipid amount and some chemical observations in migratory Eastern Great Reed-warbler in the breeding ground. *Misc. Repts. Yamashina's Inst. Ornith. and Zool.*, **3**: 185-188.—Body lipids were extracted from 37 specimens of *Acrocephalus arundinaceus orientalis* prior to fall migration from the breeding ground. The "lipid index" increased from 3 per cent prior to the molt to 16.4 per cent just prior to migration. Certain changes in the chemical nature of the lipids during the same period are analyzed. (In Japanese; English summary.)—K.C.P.

TAXONOMY AND PALEONTOLOGY

- BERLIOZ, J. 1962. Notes critiques sur quelques espèces de Trochilidés. *L'Ois. et la Rev. Franç. d'Orn.*, **32**: 135-144.—Critical notes on the systematic position of seven species of tropical hummingbirds.—M.D.A.
- BRODKORB, P. 1962. A teal from the Lower Pliocene of Kansas. *Quart. J. Florida Acad. Sci.*, **25**: 157-160.—Description of *Nettion ogallalae*, new species.
- BRODKORB, P. 1963. Fossil birds from the Alachua clay of Florida. *Florida Geol. Survey Spec. Publ.* 2, no. 4: 11 pp.—*Nycticorax fidens*, *Ereunetes rayi*, and *Palaeostruthus eurius* described from deposits of Lower Pliocene age.
- CARRIKER, M. A., JR. 1962. Studies in Neotropical mallophaga. XII (Pt. 8): Lice of the tinamous. *Rev. Bras. Biol.*, **22**: 433-448.
- MILLER, L. 1961. Birds from the Miocene of Sharktooth Hill, California. *Condor*, **63**: 399-402.—*Puffinus priscus* and *Puffinus mitchelli* described from Temblor formation, Upper Middle Miocene, with a fragmentary humerus referred to *Moru; vagabundus* Wetmore.
- MISHIMA, T. 1962. Nomenclatorial notes on Jungle Crow, Wryneck, Kentish

Plover and Green Pheasant. Misc. Repts. Yamashina's Inst. Ornith. and Zool., **3**: 218-221.—Subspecific identification of various Japanese populations of *Corvus leuclantii*, *Jynx torquilla*, *Charadrius alexandrinus*, and *Phasianus colchicus*. (In Japanese; English summary.)—K.C.P.

PHILLIPS, A. R. 1962. Notas sistemáticas sobre aves mexicanas. I. Anales Inst. de Biol., Univ. Aut. Nac. de Méx., **32** (Annals for 1961): 333-381. (Stated date of publication 30 March 1962; actual date, 27 April 1962.)—Extensive comments and suggested changes concerning species to be covered by the sixth edition of the A.O.U. Check-list. *Chaetura rutila* is considered part of the genus *Cypseloides*, with only races *brunneitorques* and *nubicola* in Mexico and Central America. *Chaetura vauxi similis* replaces *C. v. richmondi*. *Atthis heloisa margarethae* is a synonym of *A. h. morcomi* which replaces *A. h. heloisa* as used in the A.O.U. Check-list. *Phaethornis superciliosus griseoventer*, new subspecies, is described from coastal Jalisco. *Colaptes cafer*, *C. chrysooides*, and *C. mexicanoides* are designated subspecies of *C. auratus*. *Dendrocopos a. arizonae* and *D. a. fraterculus* are designated races of *D. stricklandi*, with new subspecies *D. s. websteri* described from Nayarit. *Troglodytes brunneicollis* and *T. rufociliatus* are designated races of *T. aedon*. The races of *Mimus gilvus* become races of *M. polyglottos*. (*M. p. leucopterus* is not recognized.) A major revision of *Catharus* (*Hylocichla* of A.O.U.) *guttatus* recognizes the following subspecies: *nanus* (includes *faxoni*, and, tentatively, *crymophilus* and *euborius*), *munroi* (new subspecies from British Columbia), *guttatus*, *verecundus* (includes, tentatively, *vaccinius*), *slevini*, *oromelus*, *jewetti* (new subspecies from coastal Washington), *auduboni* (includes *polionota*), and *sequoiensis*. *Catharus frantzii* is a valid species. Validity of *Vermivora* is questioned. *V. virginiae* and *V. crissalis* are designated subspecies of *V. ruficapilla*. *Parula pitiayumi* and *P. graysoni* are designated subspecies of *P. americana*. *Dendroica auduboni* is designated a race of *D. coronata*, with subspecies *D. c. goldmani* recognized. *Geothlypis* contains only three species in North and Central America: *G. nelsoni*, *G. speciosa*, and *G. trichas* (including *G. rostrata*, *G. beldingi*, *G. chapalensis*, and *G. flavovelata*). *Icterus fuertesi* is designated *I. spurius fuertesi*. *I. bullockii* and *I. abeillei* are designated subspecies of *I. galbula*. *Passerina amoena* is a subspecies of *P. cyanea*. *Hesperiphona vespertina brooksi* is a synonym of *H. v. montana*, the Mexican populations being *H. v. mexicana*. *Pipilo ocai* subspecies are forms of *P. erythrophthalmus*. *P. ocai* (Lawrence) is a synonym of *P. e. torquatus*. Two species, only, of *Junco* are recognized: *J. phaeonotus* and *J. hyemalis*. *J. h. cismontanus* is invalid. *J. h. henshawi*, new subspecies, is renamed from British Columbia. *J. h. shufeldti* is restricted to the interior of southern British Columbia, Washington, and Oregon. *J. h. simillima*, new subspecies, is renamed from the coastal slopes of Oregon. *J. h. mutabilis* is a variable population in southern Nevada.

The subspecies *Troglodytes aedon baldwini*, *Thryomanes bewickii altus*, *T. b. marinensis*, *T. b. correctus*, and *Telmatodytes* (= *Cistothorus*) *palustris aestuarinus* are considered to be based on found specimens and not valid.

Phillips recommends that *Catharus* [= *Hylocichla*] *guttatus dwighti* and the *Geothlypis trichas* races *riparia*, *ontarionicola*, *ohionicola*, *coloradonicola*, *utahicola*, and *oregonicola* be suppressed by the International Commission of Zoological Nomenclature under Article 25c. The original description of *Anthus spinoletta geophilus* Oberholser should also be suppressed, but the name is validated by, and should be credited to, Lea and Edwards (1950). Migration is discussed in *Cypseloides*,

Catharus guttatus, *Mimus*, and *Junco*. (In Spanish; brief English summary.)—R.W.D.

- STEINER, H. 1962. Befunde am dritten Exemplar des Urvogels *Archaeopteryx*. Vierteljahrsschr. Naturf. Ges. Zürich, **107**: 197–210.—The tarsometatarsus is similar to that in modern birds. There is also a condition indicating diastataxy, like that described by Steiner for the London specimen.
- VAURIE, C. 1963. Systematic notes on Palearctic birds. No. 51. A review of *Burhinus oedicnemus*. Amer. Mus. Novitates, no. 2131: 1–13.—Six subspecies of the Common Thick-knee are recognized including *B. o. harterti*, *subsp. nov.* (type locality Kafir Qala, northeastern Iran). Clinal variation in color appears to be correlated with climate, birds from humid regions being darker, browner, and more heavily streaked than those from arid regions. Among the latter, inhabitants of colder steppes and mountains are grayer, those of deserts and semideserts more rufescent. Hartert described as *astutus* the population here named *harterti* by Vaurie, but unfortunately chose a type specimen belonging to the race *saharae*, necessitating the redescription. It is possible that the race *indicus* may be subdivided when more material is available.—K.C.P.
- VAURIE, C. 1963. Systematic notes on Palearctic birds. No. 52. Supplementary notes on *Bubo bubo*. Amer. Mus. Novitates, no. 2132: 1–10.—An earlier revision of this species (*Amer. Mus. Novitates*, no. 2,000, 1960) was based on some 220 skins. Examination of about 300 more skins in European museums leads the author to admit 4 additional subspecies, for a total of 20. A new series of wing measurements, a map of subspecies distribution in western and central Asia, and a photograph of a living juvenile of *B. b. gladkovi* from the east coast of the Caspian Sea are presented.—K.C.P.