PERIODICAL LITERATURE

EDITED BY GLEN E. WOOLFENDEN

Anatomy and Embryology

Brush, A. H. 1967. Additional observations on the structure of unusual feather tips. Wilson Bull., **79**: 322–327.

Clark, G. A., Jr. 1967. Individual variation in natal pterylosis of Red-winged Blackbirds. Condor, **69**: 423–424.

McNeil, R., and A. Martinez. 1967. Retarded or arrested cranial development in *Myiornis ecaudatus*. Wilson Bull., **79**: 343–344.

Michael, E. D. 1967. Behavioral interactions of birds and white-tailed deer. Condor, **69**: 431–432.

Myers, M. L., and J. Myers. 1967. Quantitative notes on the variation of wax on Cedar Waxwings (*Bombycilla cedrorum*). Kansas Orn. Soc. Bull., **18**: 1.—Of 303 banded birds (Johnson Co., Kansas) only 30 per cent had a more or less complete development of wax on the secondaries, a figure similar to that for museum specimens (Arvey, 1951). Of 537 banded birds, 2 had some wax on the rectrices and these both had wax on more than seven secondaries.—M.A.J.

Behavior

Baird, J. 1967. Some courtship displays of the Golden-winged Warbler. Wilson Bull., **79**: 301–306.

Brockway, B. F. 1967. The influence of vocal behavior on the performer's testicular activity in Budgerigars (*Melopsittacus undulatus*). Wilson Bull., **79**: 328–334.

Cade, T. J., and G. L. Maclean. 1967. Transport of water by adult Sandgrouse to their young. Condor, **69**: 323–343.

Collias, N. E., and E. C. Collias. 1967. A field study of the Red Jungle Fowl in north-central India. Condor, **69**: 360–386.

Dilger, W. C., and J. C. Wallen. 1966. The pecking responses of Peafowl chicks. Living Bird, **5**: 115–125.—Tests to determine size and color preference on variously colored backgrounds were made on four young *Pavo cristatus*. Discs of 2 mm were clearly preferred when offered sizes from 2 to 14 mm. Black and white were pecked most, followed in descending order by blue, green, yellow, and red; medium contrasts between discs and background were chosen over either extreme. Experience appeared more important than absolute age in how rapidly they learned not to peck inedible objects.—G.E.W.

Eddinger, C. R. 1967. Feeding helpers among immature White-eyes. Condor, **69**: 530.

Forsythe, D. M. 1967. Egg teeth and hatching methods of the Long-billed Curlew. Wilson Bull., **79**: 340–341.

Frohling, R. C. 1967. Bonaparte's Gull feeding on walnut meat. Wilson Bull., **79**: 341.

Fulk, G. W. 1967. The gaping response of nestling Bank Swallows. Wilson Bull., **79**: 344–345.

Gould, P. J. 1967. Nocturnal feeding of *Sterna fuscata* and *Puffinus pacificus*. Condor, **69**: 529.

HARDY, J. W. 1967. The puzzling vocal repertoire of the South American Collared Jay, *Cyanolyca viridicyana merida*. Condor, **69**: 513–521.

HECKENLIVELY, D. B. 1967. Role of song in territoriality of Black-throated Sparrows. Condor, **69**: 429–430.

HOLCOMB, L. C. 1967. Goldfinch accept young after long and short incubation. Wilson Bull., **79**: 348.

KLOPFER, P. H. 1967. Behavioral stereotypy in birds. Wilson Bull., **79**: 290–300.

OLSON, S. L., H. LOFTIN, AND J. WEISE. 1967. Observations on the behavior of Black and Turkey vultures at traps and in captivity. Bird-Banding, **38**: 75–76.—Describes different responses of these species to several trapping techniques, handling, and cage conditions.—M.A.J.

OTVOS, I. S. 1967. Observations on the feeding habits of some woodpeckers and woodcreepers in Costa Rica. Condor, **69**: 522–525.

PRESCOTT, K. W. 1967. Unusual activities of a House Sparrow and a Blue Jay at a Tufted Titmouse nest. Wilson Bull., **79**: 346–347.

RICKLEFS, R. E. 1967. A case of classical conditioning in nestling Cactus Wrens. Condor, **69**: 528–529.

RICKLEFS, R. E., AND F. R. HAINSWORTH. 1967. The temporary establishment of dominance between two hand-raised juvenile Cactus Wrens (*Campylorhynchus brunneicapillus*). Condor, **69**: 528.

SAUER, E. G. F., AND E. M. SAUER. 1966. The behavior and ecology of the South African Ostrich. Living Bird, **5**: 45–75.—*Struthio camelus* is well adapted to the arid veld of South West Africa, and at the same time able to occupy diverse niches with different nutritional sources. During the dry season Ostriches gather in superfamily groups of adults and immatures of both sexes. Group contacts are established through communication at pastures and water holes. Mating bonds are predominantly polygynous–polygamous, frequently with three hens and one cock, but other bonds exist. Availability of food and social standing of the hens appear to trigger reproduction. Many of the associated displays are described as are details of nesting and egg laying. Usually the dominant hen and the cock lead the chicks from the nest, and they remain associated for up to one year. Exceptions to this and other behavioral patterns demonstrate the adaptable nature of the species.—G.E.W.

SEIGER, M. B. 1967. A computer simulation study of the influence of imprinting on population structure. Amer. Nat., **101**: 47–57.—A model is presented to determine the effects of absolute imprinting on population structure when individuals will select only mates the same color as their parents. It is concluded that imprinting can act as a powerful sympatric speciation mechanism.—G.D.S.

STEWART, P. A. 1967. Diving Wood Duck ducklings entangled in filamentous algae. Condor, **69**: 531.

STEWART, P. A. 1967. Hooting of Sitka Blue Grouse in relation to weather, season, and time of day. J. Wildl. Mgmt., **31**: 28–34.—Hooting occurred 7 April–12 June with a peak on 26 April; it occurred throughout the day with a lull from 5:00–7:00 AM, and was not affected by inclement weather except early in the season.—J.P.R.

ST. PAUL, U. VON, AND E. GWINNER. 1967. Raubwürger (*Lanius excubitor*) und Rotkopfwürger (*Lanius senator*) entstacheln Hymenopteren. Vogelwelt, **88**: 59.—Shrikes destinging bumblebees, illustrated by photos. (In German; photographs with English legends.)—E.E.

TOLMAN, C. W. 1967. The effects of tapping sounds on feeding behaviour of domestic chicks. Anim. Behav., **15:** 145–148.—A tapping sound increased feeding rate, especially when chicks were tested in pairs. Rates of 30 and 60 taps per minute produced little increase in feeding; rates of 120 and 240 elicited larger amounts.—A.S.G.

WALTER, H. 1967. Seidenreiher (*Egretta garzetta*) fängt Beute im Flug. Vogelwelt, **88:** 58–59.—Little Egret seen catching fish in flight. (In German.)—E.E.

WILLIAMS, P. I. 1967. Discrimination learning in the pigeon in relation to the number of negative stimuli. Anim. Behav., **15:** 79–81.—Pigeons were trained in two different situations to discriminate between two colors. One training situation presented 1 positive and 2 negative stimuli, the other 1 positive and 7 negative stimuli. Birds in the latter situation learned the correct color more quickly.—A.S.G.

DISEASES AND PARASITES

ANDERSON, K. S., R. J. TONN, E. J. RANDALL, AND A. MAIN. 1967. The Swamp Sparrow, *Melospiza georgiana*, as a host for long-term arbovirus studies. Bird-Banding, **38:** 79–80.—Wide distribution, nature of the breeding habitat, high percentage of banding returns, ability to withstand repeated bleedings, etc., make this species ideal for use as an indicator host of encephalitis.—M.A.J.

GLAZENER, W. C., R. S. COOK, AND D. O. TRAINER. 1967. A serologic study of diseases in the Rio Grande Turkey. J. Wildl. Mgmt., **31:** 34–39.—Antibodies to Newcastle disease, St. Louis viral encephalitis, ornithosis, and vesicular stomatitis were found, but little or no evidence of other encephalitis viruses, encephalomyocarditis, mycoplasmosis, or salmonellosis.—J.P.R.

MCLAUGHLIN, E. T., AND W. J. CRANS. 1966. A blood parasite survey of some estuarine birds in New Jersey. Proc. New Jersey Mosquito Extermination Assoc., **53:** 191–192.—No blood parasites were found in blood smears from 354 nestling birds of 13 species (chiefly herons and gulls) living in colonies in estuarine habitat in 1965 (presumably in New Jersey).—H.W.K.

SLATER, R. L. 1967. Helminths of the Robin, *Turdus migratorius propinquus* Ridgway, from northern Colorado. Amer. Midl. Nat., **77:** 190–199.—Of 62 Robins examined for helminth parasites, 58 proved to be infected by at least one species. Recovered were 1 species of Trematoda, 3 of Cestoda, 1 of Acanthocephala, and 6 of Nematoda. The survey established 4 new host records, 7 new geographic records for Colorado, and 1 distributional record for North America (*Microtetrames* sp.) Pertinent literature is reviewed.—A.S.G.

DISTRIBUTION AND ANNOTATED LISTS

ANDREWS, R. ET AL. 1967. The changing seasons. The winter season. 1966–67. Aud. Field Notes, **21:** 394–433, 438–460.—Wood Ibises, Roseate Spoonbills, herons, and ibises bred successfully in the southern states. Robertson points out that a number of Parulidae that winter in the tropics also regularly winter in the mangroves of southern Florida, notably the American Redstart and Northern Waterthrush. Numbers of Cattle Egrets were reported in southern California, although breeding has not yet been recorded. The introduced eastern population of House Finches continues to spread and shows migratory tendencies.—E.E.

BANKS, R. C. 1966. Terrestrial vertebrates of Anacapa Island, California. Trans. San Diego Soc. Nat. Hist., **14:** 173–188.—Anacapa Island, actually three islets, 30 miles off the coast of southern California, has a known terrestrial vertebrate fauna

of 1 amphibian, 2 reptiles, 69 birds, and 5 mammals. Only 28 species of birds are presumed to have nested, and only one of the mammals is native. Introductions, especially of sheep and exotic grasses, have had important effects on the native biota. Native *Peromyscus maniculatus* show minor differences from the mainland populations.—G.E.W.

CAMARGO, O. R. 1962. Aves Sulriograndenses do Museu de Caça e Pesca. Pesquisas, Zoologia (Instituto Anchietano de Pesquisas, São Leopoldo, Rio Grande do Sul, Brasil), **14:** 1–67.—A list of birds from the Brazilian state of Rio Grande do Sul, in the collection of the game and fish service of that state at Pôrto Alegre, includes 28 species not listed therefrom in Pinto's *Catálogo das Aves do Brasil.* (In Portuguese.)—E.E.

DEBENEDICTIS, P., AND R. G. MCCASKIE. 1967. Cassin's Kingbird and Plumbeous Solitary Vireo in the White Mountains of California. Condor, **69:** 424–425.

DE SCHAUENSEE, R. M. [1967]. Second addenda and corrigenda to The Species of Birds of South America. Acad. Nat. Sci. Philadelphia, 1967: 1 p.—Adds two species and corrects ranges of ten others. This sheet, together with an earlier four page addenda and corrigenda, can be obtained on request from the author.—E.E.

DYRCZ, A. 1967. [Breeding colonies of the bee-eater near Przemyśl.] Acta Orn., **10:** 41–45.—In 1965, 10 breeding colonies of *Merops apiaster* were found. Breeding of bee-eaters in Poland is known from only two other (19th century) records. (In Polish; English summary.)—M.A.J.

FESTETICS, A. 1967. Zur Ökologie der Reiherente (*Aythya fuligula*), eines neuen Brutvogels in Österreich. Vogelwelt, **88:** 43–58.—The Tufted Duck has been extending its range in central Europe. In Austria it is breeding in artificial fish-ponds which are shallow and stagnant during the breeding season. (In German; English summary.)—E.E.

FRIEDMANN, H. 1966. A contribution to the ornithology of Uganda. Bull. Los Angeles Co. Mus. Nat. Hist., Sci., no. 3: 55 pp.—This report covers only the birds collected by the Knudsen–Machris 1963 Expedition of the Los Angeles County Museum of Natural History in three forests of extreme western Uganda (Budongo, Bwamba, and Kibale) and on Mt. Moroto in northeastern Uganda. In each of these areas the new information adds importantly to previously published knowledge. It adds 30 species to the Kibale list, 13 to that of Bwamba, 70 to that of Budongo, and 44 to the reported ornis of Mt. Moroto. No new species or subspecies are described, but the annotated list contains much new information on many of the 284 species discussed.—H.F.

FRIEDMANN, H., AND K. E. STAGER. 1967. Results of the 1966 Cheney Expedition to the Samburu District, Kenya. Ornithology. Los Angeles Co. Mus. Contr. Sci., no. 130: 34 pp.—A report on 151 species and subspecies of birds obtained during a short expedition to the little worked Samburu district of northwestern Kenya, includes many new distributional data.—H.F.

GILL, F. B. 1967. Observations on the pelagic distribution of seabirds in the western Indian Ocean. Proc. United States Natl. Mus., **123:** 1–33.—Between 26 January and 4 May 1964 two longitudinal transects were made aboard the R/V *Anton Brunn*, one at 55° E and the other at 75° E. Observations made from the commercial vessel s.s. *Kampala* are included.—G.E.W.

HINZ, W. 1967. Notizen zur Vogelwelt Spitzbergens. Vogelwelt, **88:** 39–42.—Notes on the birds of Spitzbergen. (In German; English summary.)—E.E.

IRWIN, M. P. S., AND C. W. BENSON. 1967. Notes on the birds of Zambia: part IV. Arnoldia (Rhodesia), **3**(8): 27 pp.—Final part of a series of taxonomic notes on Zambian birds, preliminary to the publication of a revised checklist. One new form is described, *Pytilia melba hygrophila*, from Mweru Marsh.—M.A.T.

JANOWSKI, K. 1967. [Some birds observed in the Widawa River valley, Lower Silesia.] Acta Orn., **10:** 51–54.—(In Polish; English summary.)—M.A.J.

KOZLOWSKI, J. M. 1967. [Water birds on the Vistula near Krakow in 1962–1965.] Acta Orn., **10:** 54–63.—(In Polish; English summary.)—M.A.J.

MCCASKIE, R. G., R. STALLCUP, AND P. DEBENEDICTIS. 1967. The status of certain fringillids in California. Condor, **69:** 426–429.

NAVAS, J. R. 1962. [Recent find of *Rallus limicola antarcticus* King (Aves, Rallidae)]. Neotropica, **8:** 73–76.—Sixth specimen from Argentina; male collected 29 October 1959 at El Bolsón, province of Río Negro. Includes earlier records, descriptions, and measurements.—C.F.S.

NAVAS, J. R. 1963. [Two new birds for Chaco.] Neotropica, **9:** 115–116.—One male *Crypturellus u. undulatus* collected 25 October and two female *Tityra cayana braziliensis* collected 30 October 1962 near Puerto Las Palmas add two species to those known to occur in the province Chaco, Argentina. (In Spanish.)—C.F.S.

NAVAS, J. R. 1965. [The geographic distribution of *Phytotoma rara* (Aves, Phytotomidae).] Neotropica, **11:** 38–40.—New localities for *Phytotoma rara* extend the known range in the Andean region more than 1,000 km southward and 900 km northward. (In Spanish; from author's English summary.)—C.F.S.

OGDEN, J. C., AND F. L. CHAPMAN. 1967. Extralimital breeding of Painted Buntings in Florida. Wilson Bull., **79:** 347.

OLROG, C. C., AND J. R. NAVAS. 1961. [*Sicalis lutea* in the Argentine fauna (Aves, Fringillidae).] Neotropica, **7:** 55–57.—Although the species does occur in Argentina, many earlier references are based on misidentifications. Measurements are given for 6 specimens. The known range in Bolivia is extended by specimens from Cochabamba and Esperanza. (In Spanish.)—C.F.S.

PHILLIPS, R. S. 1967. Buff-breasted Sandpiper in northwestern Ohio. Wilson Bull., **79:** 340.

PINTO, A. A. DA R. 1965. Contribuição para o conhecimento da avifauna da região nordeste de distrito do Moxico, Angola. Bol. Inst. Invest. Cient. Angola, **1:** 153–249.—A valuable contribution to our knowledge of a little-known part of eastern Angola; records 228 forms, with extensive field and systematic notes. (In Portuguese.)—M.A.T.

RISING, J. D. 1967. Mid-winter bird count for 1966. Kansas Orn. Soc. Bull., **18:** 2–7.—Of the 113 species recorded, some "unusual" ones and some seen in large numbers are probably a result of the mild winter.—M.A.J.

ROSCHE, R. C. 1967. Birds of Wyoming County, New York/A contribution to the ornithology of the northern Allegheny Plateau. Bull. Buffalo Soc. Nat. Sci., **23:** 1–89.—A brief description of the region and an annotated list based primarily on field work by the author since 1949. The 232 (131 breeding) accounts of species give information on abundance, breeding status, frequency of observations, seasonal occurrence, extreme dates of occurrence, peak dates of migration, and nesting.—G.D.S.

RYDZEWSKI, W. (ed.) 1967. [Notes on the avifauna of Poland.] Acta Orn., **10:** 26–40.—Short communications by various authors regarding birds observed, mostly in 1964–65. (In Polish; detailed English summary.)—M.A.J.

SEALY, S. G. 1967. The occurrence and possible breeding of McKay's Bunting on St. Lawrence Island. Condor, **69:** 531–532.

SUFFEL, G. S. 1967. An additional specimen of Coues' Flycatcher in California. Condor, **69:** 430–431.

TATSCHL, J. L. 1967. Breeding birds of the Sandia Mountains and their ecological distribution. Condor, **69:** 479–490.

THOMPSON, C. F. 1967. Notes on the birds of the northeast cape of St. Lawrence Island and of the Punuk Islands, Alaska. Condor, **69:** 411–419.

TOMIALOJĆ, L. 1967. [A possible record of the Black-winged Pratincole in Poland.] Acta Orn., **10:** 67–70.—The author considers *Glareola nordmanni* as specifically distinct from *G. pratincola*, and presents details on what may be the first documented sighting of the former in Poland. (In Polish; English summary.)—M.A.J.

TOMIALOJĆ, L. 1967. [Whiskered Tern observed in Lower Silesia.] Acta Orn., **10:** 70–71.—A male and female *Chlidonias hybrida* observed 6 June 1965. (In Polish; English summary.)—M.A.J.

VAN VELZEN, W. T. 1967. Coastal California record af a Tree Sparrow. Condor, **69:** 431.

WAUER, R. H. 1967. New status for the Rufous-crowned Sparrow in Utah. Wilson Bull., **79:** 348–349.

WAUER, R. H., AND R. C. RUSSELL. 1967. New and additional records of birds in the Virgin River valley. Condor, **69:** 420–423.

WOLK, K. 1967. [Terek Sandpiper in Poland.] Acta Orn., **10:** 72–73.—The third sight record of *Xenus cinereus* in Poland. (In Polish; English summary.)—M.A.J.

WOLK, K. 1967. [The first record of the Icelandic Golden-eye in Poland.] Acta Orn., **10:** 73–74.—Four pairs of *Bucephala islandica* seen near Lubin 31 March 1957. (In Polish; English summary.)—M.A.J.

WOLK, K. 1967. [The occurrence of shrikes in Podlasie (E. Poland).] Acta Orn., **10:** 74–76.—Breeding of *Lanius collurio, L. senator, L. minor*, and *L. excubitor* is documented. (In Polish; English summary.)—M.A.J.

ZIMMERMAN, D. A., AND J. W. BOETTCHER. 1967. The Common Loon in Sonora, México. Condor, **69:** 527.

ECOLOGY AND POPULATION

BAILLIE, J. L. 1967. A century of change—birds. Ontario Nat., **5:** 14–19.—Several western birds have extended their breeding ranges eastward, and some southern ones northward into Ontario, Canada. Aside from the introduced Starling and House Sparrow, only the Great Black-backed Gull seems to have entered recently from the east. Two species have been extirpated and five greatly reduced.—E.E.

BERGER, A. J. 1967. Josselyn Van Tyne's Common Nighthawk nesting return. Wilson Bull., **79:** 343.

BLAKE, C. H. 1967. Purple Finches at Hillsborough, N. C., 1961–65. Bird-Banding, **38:** 1–17.—High and low populations of *Carpodacus purpureus* occur in alternate years. Spring migration is deficient in "off years." Survival rates, percentage of

wintering birds, age composition of a standardized population, and sex ratio of local birds are among the items estimated.—M.A.J.

BLUS, L. J. 1967. Sharp-tailed Grouse relations to a food source near a dancing ground. Condor, **69**: 532–533.

BRACKBILL, H. 1967. Cardinal being eaten alive by gray squirrel. Bird-Banding, **38**: 236.

BROOKS, W. S. 1967. Food and feeding habits of autumn migrant shorebirds at a small Midwestern pond. Wilson Bull., **79**: 307–315.

CARTER, W. A. 1967. Ecology of the nesting birds of the McCurtin Game Preserve, Oklahoma. Wilson Bull., **79**: 259–272.

CHURCH, R. L. 1967. Capture of a hoary bat, *Lasiurus cinereus,* by a Sparrow Hawk. Condor, **69**: 426.

DIAMOND, J. M., AND J. W. TERBORGH. 1967. Observations on bird distribution and feeding assemblages along the Rio Callaria, Department of Loreto, Peru. Wilson Bull., **79**: 273–282.

DYRCZ, A., AND L. TOMIALOJĆ. 1967. [Ornithological observations on the lower Bug.] Acta Orn., **10**: 45–50.—Reports water birds seen in various habitats along 234 km of the river. The results are tabulated. (In Polish; English summary.)—M.A.J.

FANKHAUSER, D. P. 1967. Survival rates in Red-winged Blackbirds. Bird-Banding, **38**: 139–142.—The weighted annual survival rate of *Agelaius phoeniceus* after their first January was 53.4 per cent for the 325 banded and recaptured birds and, in close agreement, 51.1 per cent for 87 banded and shot birds.—M.A.J.

FORSTER, W. L., AND J. TATE, JR. 1966. The activities and coactions of animals at sapsucker trees. Living Bird, **5**: 87–113.—A 3-year study of the summer feeding areas of six *Sphyrapicus varius* in northern lower Michigan. The summer feeding trees had a significant effect on the local ecosystem. Insects, birds, and mammals were attracted to these trees by the flowing sap or by the insects. Ruby-throated Hummingbirds were the most numerous birds at these trees; segregation of the sexes was noted, and one female hummingbird nested near a sapsucker tree and centered her activities around it. A social hierarchy developed among the visitors.—G.E.W.

FRANCIS, W. J. 1967. Prediction of California Quail populations from weather data. Condor, **69**: 405–410.

GIBB, J. A. 1966. Tit predation and the abundance of *Ernarmonia conicolana* (Heyl) on Weeting Heath, Norfolk 1962–63. J. Anim. Ecol., **35**: 43–53.—Measurements of abundance of larvae of the eucosomid moth in *Pinus sylvestris* cones and of predation by tits (*Parus* spp.) upon them supplement and confirm data from an earlier study by Gibb (1958). Tit predation varied but increased abruptly with more than 10 larvae per 50 cones and reached 60 per cent on trees with 50–60 larvae per 50 cones. Tit predation on overwintering larvae averaged more than 50 per cent of fully grown larvae, but neither predation nor density effects between larvae are sufficient to regulate the moth population.—H.W.K.

GODDARD, S. V., AND V. V. BOARD. 1967. Reproductive success of Red-winged Blackbirds in north central Oklahoma. Wilson Bull., **79**: 283–289.

HAGAR, J. A. 1966. Nesting of the Hudsonian Godwit at Churchill, Manitoba. Living Bird, **5**: 5–43.—*Limosa haemastica*, long considered rare and decreasing in numbers, is common in summer in certain parts of subarctic Canada. Large postbreeding

flocks are reported only from Canada and southern Argentina and Chile, which accounts for the erroneous estimates of population size (the species is truly a long-distance migrant). The Hudsonian Godwit nests in the narrow inland strip of sedge and moss-lichen tundra at the northern edge of treeline. Displays, vocalizations, and the breeding cycle are described. The nesting season is extremely compressed, and adults migrate before the young. Included is a color figure of the downy chick.—G.E.W.

JENKINS, D., A. WATSON, AND G. R. MILLER. 1966. Population fluctuations in the Red Grouse (*Lagopus l. scoticus*). J. Anim. Ecol., **35:** 97–122.—This part of a long-term investigation of factors affecting population density in the Red Grouse deals with seasonal mortality of young and adults, local breeding population fluctuations from year to year, and the reasons for differences in average numbers of grouse on different habitats.—H.W.K.

JOHNSTON, R. F. 1967. Some observations on natural mass mortality of House Sparrows. Kansas Orn. Soc. Bull. **18:** 9–10.—Autopsies were performed on 34 of several hundred killed in a hailstorm and on 153 of thousands killed in a severe windstorm in Kansas. Percentages of birds showing physical damage are given. Mass mortality is discussed with reference to flocking, the relative violence of midwest summer storms, and population structure.—M.A.J.

KOLB, H. ET AL. 1967. Winter bird-population study. Aud. Field Notes, **21:** 461–478.—Most of the 39 studies were in woodlands, but censuses were also made in habitats such as third winter hayfield, cornstalks, cornfield, corn stubble, brackish coastal pond, ditched salt marsh, etc.—E.E.

KOZLOWSKI, P. 1967. Contributions to the avifauna of Kartuzy district. Acta Orn., **10:** 1–24.—Observations from 1957–1965 in a 114,500 hectare area with various habitats. Symbols indicate the status of the 170 species noted. Emphasizes lack of some species characteristic of other regions of Poland. (In Polish; English summary.)—M.A.J.

KUŹNIAK, S. 1967. [Water and marsh birds observed during a flood near Leszno, prov. Poznań.] Acta Orn., **10:** 64–67.—(In Polish; English summary.)—M.A.J.

LAWRENCE, G. E. 1966. Ecology of vertebrate animals in relation to chaparral fire in the Sierra Nevada foothills. Ecology, **47:** 278–291.—Chaparral covers more than 7 per cent of California, and is frequently burned to make room for valuable grasses. To determine the effects of controlled burning on the total biota, part of a 1,200-acre study area was burned. Censusing of plants and animals conducted for 1 year before and 3 years after the fire revealed little evidence of direct mortality from the fire. Populations of most small mammals and brush-dwelling birds decreased after the fire because of predation, and seed-eating birds and predatory birds and mammals increased because of the opportunity to forage on exposed earth. Most trees sustained little damage, although digger pines were largely eliminated, brush was reduced by 90 per cent, and invading grasses and forbs increased. Birds and mammals preferring chaparral were reduced in numbers in the years following the burn, but not eliminated; birds preferring grassland or oak woodland increased in number, resulting in increased densities of nesting birds.—C.F.S.

LEOPOLD, A. S. 1966. Adaptability of animals to habitat change. Pp. 66–75 *in* Future environments of North America. Natural History Press.—Species dependent upon undisturbed climax situations suffer most from environmental changes; these species are considered nonadaptive and include some extinct and all rare or en-

dangered species. Affinity to seral or subclimax biotas seems to be correlated with adaptability, or capacity to adjust to change. Adaptability, characteristic of many of the common game birds and mammals, appears to involve two components: genetic plasticity and ability to learn new habits.—C.F.S.

MEANLEY, B. 1966. Some observations on habitats of the Swainson's Warbler. Living Bird, **5:** 151–165.—*Limnothlypis swainsonii* breeds locally on the South Atlantic and Gulf Coastal Plains and the southern Piedmont Plateau north to West Virginia. On the Coastal Plain in Georgia and South Carolina the preferred habitat seems to be in the canebrakes in the river floodplain forests near the Fall Line; here they occur in small groups. Near Savannah, Georgia, swamp forest-scrub palmetto habitats are also occupied. In West Virginia mature cove hardwoods mountain habitat is selected. In general, deep shade, moderately dense undergrowth, and dry land near a river floodplain are preferred. The presence of bachelor males in lower coastal-plain forests suggests this habitat is marginal. Historical accounts suggest the species has declined in numbers.—G.E.W.

METZGAR, L. H. 1967. An experimental comparison of Screech Owl predation on resident and transient white-footed mice (*Peromyscus leucopus*). J. Mammal., **48:** 387–391.—In a laboratory transient mice were subject to greater predation than the residents, thus supporting the idea that possession of a familiar home range confers a considerable advantage.—(From author's abstract.)—H.W.K.

MORTON, M. L. 1967. Diurnal feeding patterns in White-crowned Sparrows, *Zonotrichia leucophrys gambelii*. Condor, **69:** 491–512.

MUELLER, H. C., AND D. D. BERGER. 1967. Observations on migrating Saw-whet Owls. Bird-Banding, **38:** 120–125.—Of 213 *Aegolius acadicus* netted in Wisconsin (autumns, 1962–64), two-thirds were taken within a 2-week period centered on 23 October. The age-ratio and numbers varied considerably from year to year. Adults weigh slightly more than immatures, and some birds feed in the daytime.—M.A.J.

MYTON, B. A., AND R. W. FICKEN. 1967. Seed-size preference in chickadees and titmice in relation to ambient temperature. Wilson Bull., **79:** 319–321.

NELSON, J. B. 1966. Population dynamics of the Gannet (*Sula bassana*) at the Bass Rock, with comparative information from other Sulidae. J. Anim. Ecol., **35:** 443–470.—Nelson's fourth paper on the Gannet examines seven factors affecting population dynamics in a colony in Scotland, including recruitment, mortality, clutch size, replacement laying, deferred maturity, and adult nonbreeders. These are related to current theories on seabird population control. Among the Sulidae only the Gannet seems to lack an "orthodox" relation between clutch size and food supply and fishing habits. An excellent study.—H.W.K.

OWRE, O. T. 1967. Predation by the Chuck-will's Widow upon migrating warblers. Wilson Bull., **79:** 342.

PACKARD, G. C. 1967. House Sparrows: evolution of populations from the Great Plains and Colorado Rockies. Syst. Zool., **16:** 73–89.—Differentiation in color and morphology was studied in 785 House Sparrows collected along a 1,000-mile transect including 12 localities in Illinois, Kansas, and Colorado. Results indicate conspicuous adaptive differentiation in color and morphology involving a number of characters.—G.D.S. [See also Johnston, R. F., 1966 under next heading.]

PRESCOTT, K. W. 1967. Slate-colored Junco killed by a gray squirrel. Bird-Banding, **38:** 152.

ROGERS, J. P. 1967. Flightless Green-winged Teal in southeast Missouri. Wilson Bull., **79:** 339.

ROGERS, J. P., AND J. L. HANSEN. 1967. Second broods in the Wood Duck. Bird-Banding, **38:** 234–235.—Reports five instances of renesting by *Aix sponsa* after a successful first nest, and suggests that dissolution of the bond between brood and hen may stimulate renesting.—M.A.J.

SEALY, S. G. 1967. The Peregrine Falcon in the Perry River area, Northwest Territories. Bird-Banding, **38:** 73–74.—In 1965 four nests averaged 2.8 eggs, hatching success was 63.6 per cent, fledging success was unknown. Notes on nests, food items, and behavior are included.—M.A.J.

SMITH, S. M. 1967. Seasonal changes in the survival of the Black-capped Chickadee. Condor, **69:** 344–359.

SOUTHERN, W. E. 1967. Colony selection, longevity, and Ring-billed Gull populations: preliminary discussion. Bird-Banding, **38:** 52–60.—This banding study in Michigan suggests that individual *Larus delawarensis* may select their first breeding colony randomly, although probably within a particular large area (e.g. young from Lake Huron seem to return to breed near that lake). Birds usually return annually to their first breeding colony; older adults may occasionally change colonies.—M.A.J.

STEWART, P. A. 1967. Disgorging of food by Wood Ducks. Wilson Bull., **79:** 339–340.

VERMEER, K. 1967. Foreign eggs in nests of California Gulls. Wilson Bull., **79:** 341.

VUILLEUMIER, F. 1967. Mixed species flocks in Patagonian forests, with remarks on interspecies flock formation. Condor, **69:** 400–404.

WATERS, J. H. 1967. Avian populations in a recently disturbed old field succession. Bird-Banding, **38:** 17–37.—Banding results (1960–64) and breeding pairs seen (1964) in adjacent successional habitats in Massachusetts, some of the area recently cleared for a housing development. Further study is needed to elucidate possible trends in bird populations.—M.A.J.

WILLIS, E. O. 1966. The role of migrant birds at swarms of army ants. Living Bird, **5:** 187–231.—Ecological relationships between resident and nonresident birds in neotropical forests. The habitual and facultative army ant followers among the resident birds exhibit high competition and, as a group, display almost total dominance over the nonresident species. Nevertheless certain nonresidents such as wintering Acadian Flycatchers, Wood Thrushes, and Kentucky Warblers are regular ant followers, positioning themselves at the periphery of the swarms. In 1960 and 1961 fall migrants also occurred at the swarms, especially three hylocichlid thrushes and Canada Warblers. Other nonresidents, *Seiurus* species for example, ignored ants. Wintering species tend to occupy different niches than the residents. Little competition among the migrants was noted, and wintering species seemed, generally, to be territorial. The peripheral position of the nonresidents at ant swarms and their greater tendency to be associated with the ant species having more erratic wanderings suggest successful exclusion by the residents, which are mostly suboscines. Furthermore the nonresident species appear to favor the irregular habitats and to avoid extensive tropical forests. These and other observations are presented in a lengthy discussion of the relationships between resident and nonresident passerines.—G.E.W.

EVOLUTION AND GENETICS

DILLON, D. 1967. Why "supposed" subspecies of North American House Sparrows? Syst. Zool., **16:** 286.—A reply to a critique by Johnston and Selander (Syst. Zool., **15:** 357–358, 1966) concerning the author's references to subspecies in an earlier paper (Syst. Zool., **15:** 112–126, 1966) on the life cycle of the House Sparrow. [See Selander below.]—G.D.S.

HAMILTON, T. H., AND I. RUBINOFF. 1967. On predicting insular variation in endemism and sympatry for the Darwin finches in the Galápagos Archipelago. Amer. Nat., **101:** 161–171.—Endemism of Darwin finches was predicted by nearest-neighbor isolation (a measure of distance from the nearest island). Species abundance or sympatry was predicted by average isolation (the average distance to all other islands in the archipelago). The two measures of isolation were of little predictive value when tested on avifaunas of six other archipelagos or island groupings. Other aspects of insular species and endemics are discussed.—G.D.S.

HARDY, J. W. 1967. Evolutionary and ecological relationships between three species of blackbirds (Icteridae) in central Mexico. Evol., **21:** 196–197.—Two subspecies of the Red-winged Blackbird, *Agelaius phoeniceus gubernator* and *A. p. nelsoni*, breed in adjacent but ecologically different portions of the Lerma marshes. *A. p. nelsoni*, which appears to be a newcomer to the area, occupies the seemingly preferable tule habitat. It is hypothesized that this habitat was originally occupied by the now extinct grackle, *Cassidix palustris*, and that this species forced *A. p. gubinator* into the less desirable bog habitat. When the grackle became extinct about 1910, *gubernator* either could not or did not re-invade the tule marshes, and a pioneer group of *A. p. nelsoni* was able to settle in an unoccupied niche. There is now evidence of introgression between the two populations.—A.S.G.

JOHNSGARD, P. A. 1967. Sympatry changes and hybridization incidence in Mallards and Black Ducks. Amer. Midl. Nat., **77:** 51–63.—The major zone of sympatry of *Anas platyrhynchos* and *A. rubripes* has moved about 300 miles east in the last half century. Records of hybrids from 34 states indicate a minimal current hybridization rate of about 4 per cent of the frequency expected according to mathematical probabilities of chance contact. This effective isolation is probably based on male plumage differences; "mistakes" made by females of either species evidently occur with equal likelihood. Equivalent degrees of intrinsic isolation occur throughout the zone of sympatry, indicating no reinforcement of isolating mechanisms in primary contact areas. Although the Black Duck is vulnerable to eventual swamping, the present low hybridization rate makes this unlikely in the foreseeable future.—C.F.S.

JOHNSTON, R. F. 1966. Colorimetric studies of soil color-matching by feathers of House Sparrows from the central United States. Kansas Orn. Soc. Bull., **17:** 19–23.—Analysis of about 800 *Passer domesticus* taken in fall from 12 localities in a 1,000-mile transect from Colorado to Illinois. Pigments of the breast feathers of the females and of the soil removed from the birds' feathers were nearly identical colorimetrically, differing only in brightness. It is concluded that local differentiation in color may develop rapidly (within 90 generations), probably from environmental pressures such as selection by visual predators.—C.F.S.

LESLIE, P. H. 1966. The intrinsic rate of increase and the overlap of successive generations in a population of Guillemots (*Uria aalge* Pont). J. Anim. Ecol., **35:** 291–301.—A statistical analysis of data from studies on the distribution of the bridled form of the Common Guillemot by Southern *et al.* (see below) based on the as-

sumption that the bridled genotype is a single factor recessive or dominant. The rate of change in percentage of the bridled birds is very slow, apparently because of the overlap of successive generations that cannot be distinguished from each other.—H.W.K.

MILLER, A. H. 1966. Animal evolution on islands. *In* The Galápagos; proceedings of the symposia of the Galápagos Internat'l Sci. Project, Univ. of California Press. (R. I. Bowman, ed.).—The colonization, immediate survival problems, difficulties of establishment, and evolution of animals on islands, as exemplified by birds and certain other animals. Few ancient phyletic lines are found on islands; the possibility of extinction is enhanced by small land masses and consequent small populations, reduced ecologic diversity, and possible submergence of the island. Selection on islands for reduced powers of flight, the low incidence of waifs and rafting opportunities, and the presence of established competitors once a new area is reached make expansion from islands unlikely. Although island animals rarely, if ever, enter the mainstream of evolution, they contribute enormously to our understanding of evolutionary processes.—C.F.S.

PARKES, K. C. 1966. Speculations on the origin of feathers. Living Bird, **5:** 77–86.—A theory on the structure and functions of the first feathers. After a review of the feathering of *Archaeopteryx*, the author presents his view that the first feathers were pennaceous and were associated with gliding in a leaping, arboreal, proavian reptile. The thermoregulatory function of feathers came later, as did plumulaceous down which many authors have suggested came first. The article includes a detailed color plate of *Archaeopteryx* and some comments by the illustrator, R. Freund.—G.E.W.

SELANDER, R. K. 1967. Why there are no subspecies of North American House Sparrows. Syst. Zool., **16:** 286–287.—In reply to Dillon (see above) the author states: "The fact of the matter is that, until someone formally describes and names subspecies, there are no subspecies of North American House Sparrows. Hopefully, this situation will not change."—G.D.S.

SOUTHERN, H. N. 1966. Distribution of bridled Guillemots in East Scotland over eight years. J. Anim. Ecol., **35:** 1–11.—The percentage of the bridled variant of the Common Guillemot was checked by yearly sample counts at four cliff-breeding colonies between 1950–57 to discover how this percentage varied from colony to colony and within, from subcolony to subcolony. Results showed little change in bridled ratio, which provides evidence for a stable gene ratio in these colonies. Adult survival rate of 87 per cent per annum indicates a slow population turnover.—H.W.K.

WARD, R. 1966. Regional variation in the song of the Carolina Chickadee. Living Bird, **5:** 127–150.—During the nesting seasons of 1963, 1964, and 1965, tape recordings were made of 2,706 songs of 130 *Parus carolinensis* at nine localities throughout the species' range along the Atlantic coast. Regional characteristics were evident in five of the nine localities, but attempts to explain them by environmental factors were unsuccessful. The sedentary nature of the bird probably influences the development of localized song.—G.E.W.

General Biology

ANDERSON, K. S., E. J. RANDALL, A. J. MAIN, AND R. J. TONN. 1967. Recoveries of birds banded by Encephalitis Field Station, 1957–1965. Bird-Banding, **38:** 135–138.—Histories of 41 recaptured birds from 10,000 banded.—M.A.J.

BAIRD, J. 1967. Arrested molt in Tennessee Warblers. Bird-Banding, **38:** 236–237.—A male and female *Vermivora peregrina*, when banded in Massachusetts, fall, 1966, had started the postnuptial molt but stopped molting before completing it.—M.A.J.

BLAKE, C. H. 1967. More on the wing length of the Slate-colored Junco. Bird-Banding, **38:** 234.—Wing lengths of adult *Junco hyemalis* from North Carolina indicate a 0.5 mm difference between sexes. Wintering males may be more numerous than females in the area.—M.A.J.

CLEAVES, H. H. 1967. The Purple Martins at Lemon Creek. Proc. Staten Island Inst. Arts and Sci., **22:** 19–23.—The only breeding colony of *Progne subis* in New York City. The species was attracted to martin houses in 1955 and has bred there ever since. Counts of the number of breeding pairs, migration dates, and other biological data are given for the ensuing 13 years.—G.E.W.

DEXTER, R. W. 1967. Nesting behavior of a crippled Chimney Swift. Bird-Banding, **38:** 147–149.—Unanalyzed details.—M.A.J.

DOLNIK, V. R., AND T. I. BLYUMENTAL. 1967. Autumnal premigratory and migratory periods in the Chaffinch (*Fringilla coelebs coelebs*) and some other temperate-zone passerine birds. Condor, **69:** 435–468.

FROHLING, R. C. 1967. A partial albino Laughing Gull. Bird-Banding, **38:** 235–236.—Apparently the first recorded instance for *Larus atricilla*.—M.A.J.

JOHNSTON, D. W. 1967. The identification of autumnal Indigo Buntings. Bird-Banding, **38:** 211–214.—Describes plumage, skull, and mensural characters of *Passerina cyanea* useful in ageing and sexing the birds in autumn.—M.A.J.

KIPP, F. A. 1967. Uber einige Aberrationen bzw. Mutationen der Rauschschwalbe (*Hirundo rustica*). Vogelwelt, **88:** 33–39.—Some plumage aberrations in the European race of the Barn Swallow. The aberrant characters coincide with features present in other species of swallows. (In German; English summary.)—E.E.

KUREK, H. 1967. [A breeding colony of the bee-eater near Przemyśl, prov. Rzeszów.] Acta Orn., **10:** 63–64.—A breeding colony of *Merops apiaster* in 1965, with 60 holes. Only five or six pairs bred successfully; young left the holes in mid-August. (In Polish; English summary.)—M.A.J.

MITTERLING, L. A. 1967. Fledgling Blue Jays (*Cyanocitta cristata*) raised in captivity. Bird-Banding, **38:** 77–78.—Some methods, plus weights of eight birds on four dates.—M.A.J.

PACKARD, G. C. 1967. Seasonal variation in bill length of House Sparrows. Wilson Bull., **79:** 345–346.

SCHWAB, R. G., AND R. E. MARSH. 1967. Reliability of external sex characteristics of the Starling in California. Bird-Banding, **38:** 143–147.—Sex determination of *Sturnus vulgaris* based on both bill color and eye-ring, for those birds (93 per cent) in which these were well-defined, proved 97.7 per cent accurate.—M.A.J.

SCOTT, D. M. 1967. Postjuvenal molt and determination of age of the Cardinal. Bird-Banding, **38:** 37–51.—Rectrices 5 and 6 of winter-caught *Richmondena cardinalis* have either blunt or pointed tips, the difference not a result of wear. Immatures (first-winter birds) may have either. All adults have blunt tips. The pointed rectrix is a juvenal feather, thus some immatures (68 per cent, in Ontario) have an incomplete postjuvenal molt. Completeness of molt is related to hatching date. During the ensuing breeding season birds can still be aged in this manner.—M.A.J.

TRUSLOW, F. K. 1966. Ground-nesting Great Horned Owl: a photographic study. Living Bird, **5:** 177–186.—*Bubo virginianus*, breeding documented by 14 black and white photographs of habitat, eggs, young, and adult. The same adult photographed with the same lighting showed a more constricted pupil early in the study. The greater dilation later may indicate less fear with continued similar disturbances.—G.E.W.

MANAGEMENT AND CONSERVATION

BEDNAREK, R., AND C. S. DAVIDSON. 1967. Influence of spraying with carbaryl on nesting success in a sample of bird-boxes on Cape Cod in 1965. Bird-Banding, **38:** 66–72.—Of 71 eggs laid (mostly of *Iridoprocne bicolor* and *Sialia sialis*) five nestlings, the only young present in the week of spraying, were killed by the pesticide (carcasses analyzed). Otherwise nesting success was similar to that recorded in 5 previous years.—M.A.J.

BESSER, J. F., W. C. ROYALL, JR., AND J. W. DEGRAZIO. 1967. Baiting Starlings with DRC-1339 at a cattle feed lot. J. Wildl. Mgmt., **31:** 48–51.—A Starling population was reduced by 75 per cent within 48 hours after feeding on treated pellets.—J.P.R.

BURGER, G. V., AND J. P. LINDUSKA. 1967. Habitat management related to Bobwhite populations at Remington Farms. J. Wildl. Mgmt., **31:** 1–12.—Describes the soil, water, and wildlife conservation practices that increased Bobwhite coveys from 5 to 38 in 8 years on a 3,000-acre experimental farm.—J.P.R.

FRANKS, E. C. 1967. Mortality of bled birds as indicated by recapture rate. Bird-Banding, **38:** 125–130.—Rates of recapture of bled (0.2 cc) and nonbled birds were compared for 15 species. Bleeding caused no significant change in recapture rate for any single species, but the recapture of fringillids considered collectively was significantly lower for bled birds.—M.A.J.

LABISKY, R. F., AND R. W. LUTZ. 1967. Responses of wild pheasants to solid-block applications of aldrin. J. Wildl. Mgmt., **31:** 13–24.—Farmland pheasant populations decimated by insecticide treatments can recover within 2 to 3 years if adjacent areas are well populated and treatment blocks are not too large.—J.P.R.

LAMB, D. W., R. L. LINDER, AND Y. A. GREICHUS. 1967. Dieldrin residues in eggs and fat of penned pheasant hens. J. Wildl. Mgmt., **31:** 24–27.—The egg yolks of laying hens contained 19–37 per cent of the total dieldrin fed, and additional high residues were present in body fat after laying ceased.—J.P.R.

MIGRATION AND ORIENTATION

ANDERSON, K. S., AND H. K. MAXFIELD. 1967. Warbler returns from southeastern Massachusetts. Bird-Banding, **38:** 218–233.—Analyzes the returns of 75 parulids of 7 species banded over the years 1960–66.—M.A.J.

BUSSJAEGER, L. J., C. C. CARPENTER, H. L. CLEVELAND, AND D. L. MARCELLINI. 1967. Turkey Vulture migration in Veracruz, Mexico. Condor, **69:** 425–426.

COHEN, D. 1967. Optimization of seasonal migratory behavior. Amer. Nat., **101:** 5–17.—Considers the theoretical aspects of optimal migration and dispersal behavior. The paper presents two models for optimal migration, discusses predictions resulting from these, and compares them to natural patterns of migration and dispersal.—G.D.S.

DENNIS, J. V. 1967. Fall departure of the Yellow-breasted Chat (*Icteria virens*) in eastern North America. Bird-Banding, **38:** 130–135.—Various data suggest that chats wander after the breeding season before migration. Some, probably immatures, appear to wander far northeast of the breeding range.—M.A.J.

HUSSELL, D. J. T., T. DAVIS, AND R. D. MONTGOMERIE. 1967. Differential fall migration of adult and immature Least Flycatchers. Bird-Banding, **38:** 61–66.—Most adult *Empidonax minimus* migrated through Long Point, Ontario, from mid-July to mid-August, 1965, most immatures from the second week of August to late September. Conclusions are based on 182 aged birds.—M.A.J.

KUYT, E. 1967. Two banding returns for Golden Eagle and Peregrine Falcon. Bird-Banding, **38:** 78–79.—Most notably, *Falco peregrinus* banded at Thelon River, N.W.T., Canada, was killed in Argentina, four months after probable fledging date. —M.A.J.

LOFTIN, H., G. I. CHILDS, AND S. BONGIORNO. 1967. Returns in 1965–1966 of North American migrant birds banded in Panama. Bird-Banding, **38:** 151–152.—Noteworthy records on *Vireo flavoviridis*, six parulids, and *Passerina cyanea*.—M.A.J.

MCCLURE, H. E. 1967. Migratory animal pathology survey. Annual Report, U. S. Army Research and Development Group, Far East, APO San Francisco 96343. 298 pp.—Progress report for 1966 gives details of the ringing of 200,000 birds of 571 species at numerous localities in the Far East. Recoveries total over 500, with long distance records now available for more than 40 species. Over 50 maps show the travels of as many species, a convenient feature for those not familiar with the localities. Blood films and ectoparasites obtained are reported on.—G.E.W.

NETTLESHIP, D. N. 1967. Banded turnstone recovered at Lake Hazen, Ellesmere Island, N.W.T. Bird-Banding, **38:** 236.—A male *Arenaria interpres* banded in Holland in September 1964 was recovered in breeding condition on Ellesmere in June 1966.—M.A.J.

NISBET, I. C. T., AND W. H. DRURY, JR. 1967. Orientation of spring migrants studied by radar. Bird-Banding, **38:** 173–186.—Analyzes the main northeastward orientation of migrating birds at Cape Cod. Directions of migration are less diverse than in the autumn. Mean direction is shifted 7° in the middle of the night. Cross winds produce a small deviation in mean direction, too small to be accounted for by passive drift; thus, the authors suggest, most birds orienting against the wind stop migrating, and that those orienting otherwise compensate for the drift.—M.A.J.

RAVELING, D. G., AND E. A. LEFEBVRE. 1967. Energy metabolism and theoretical flight range of birds. Bird-Banding, **38:** 97–113.—Energy requirements for sustained flight can be estimated for many species as 12 times the standard metabolism rate (which, in turn, can be estimated from the bird's weight by the "King–Farner Equation"). Available empirical data are compared with the estimates. A hypothetical pattern of migration for one population is proposed from data obtained from 49 *Vermivora peregrina* and analyzed by the proposed method.—M.A.J.

STODDARD, H. L., SR., AND R. A. NORRIS. 1967. Bird casualties at a Leon County, Florida TV tower: an eleven-year study. Bull. Tall Timbers Res. Sta. no. 8, pp. 1–104.—Summarizes data obtained on 29,451 casualties representing 170 species. Included are sections on techniques, weather, effects of heavy losses, predation, and an annotated list giving numbers and dates of kills. An important compendium for students of migration or of bird distribution in southeastern United States.—G.E.W.

MISCELLANEOUS

BAGG, A. M. 1967. The education of a regional editor. Aud. Field Notes, **21:** 434–437.—Useful comments by one of the very best.—E.E.

FRIEDMANN, H. 1967. Evolutionary terms for parasitic species. Syst. Zool., **16:** 175.—Author proposes two terms; alloxenia to describe situations where two or more different species of parasites make use of different species of hosts, and homoxenia to cover the situation where two or more different species of parasites make use of the same species of hosts.—G.D.S.

FOTHERINGHAM, A. C. 1928. *Eoörnis pterovelox gobiensis.* 34 pp. London, The Buighleigh Press.—The outstanding classic in its field, once again available. (See *The Bulletin Board*, Condor, **69:** 434 for details.)—G.E.W.

GREENLAW, J. S., AND J. SWINEBROAD. 1967. A method for constructing and erecting aerial-nets in a forest. Bird-Banding, **38:** 114–119.

HEWITT, O. H. 1967. A road-count index to breeding populations of Red-winged Blackbirds. J. Wildl. Mgmt., **31:** 39–47.—Males were "marked" by tape-recording descriptions of their territories and surroundings; the census route was run again immediately with the tape playing, and "marked" and "unmarked" birds were counted.—J.P.R.

HEYLAND, J. D., AND W. T. MUNRO. 1967. The use of helicopters in hunting waterfowl nests. J. Wildl. Mgmt., **31:** 200–201.—The helicopter proved cheaper and more efficient than a ground search.—J.P.R.

JACKSON, H. H. T. 1967. Published writings of Arthur Holmes Howell (1872–1940). Univ. of Kansas, Mus. Nat. Hist. Misc. Publ. No. 47, pp. 1–15.

KING, W. B., G. E. WATSON, AND P. J. GOULD. 1967. An application of automatic data processing to the study of seabirds, I. Proc. United States Natl. Mus., **123:** 1–29.

MARTIN, E. W. 1967. An improved cage design for experimentation with passeriform birds. Wilson Bull., **79:** 335–338.

MAYFIELD, H. 1966. Hearing loss and bird song. Living Bird, **5:** 167–175.—The effect that the normal loss of sensitivity by human ears has on one's ability to hear bird songs. As bird songs typically include a variety of frequencies and intensities, an older human's perception of the song is affected noticeably before the song becomes totally inaudible.—G.E.W.

MCNEIL, R. 1967. Modifications of the use of the Japanese mist nets. Bird-Banding, **38:** 149–151.—Recommends using wire for horizontal strings when using nets in tropical rain forest or for bats.—M.A.J.

PENNY, R. L., AND W. J. L. SLADEN. 1966. The use of teflon for banding penguins. J. Wildl. Mgmt., **30:** 847–850.—Teflon flipper-bands, tested for one year in Antarctica, appear to overcome the problems of plumage wear and band loss associated with metal bands.—J.P.R.

TAYLOR, W. R. 1967. An enzyme method of clearing and staining small vertebrates. Proc. United States Natl. Mus., **122:** 1–17.

THOMPSON, M. C., AND R. L. DELONG. 1967. The use of cannon and rocket-projected nets for trapping shorebirds. Bird-Banding, **38:** 214–218.—A very successful technique—an average of over 300 Ruddy Turnstones being netted per day in one year.—M.A.J.

ZWICKEL, F. C., AND J. F. BENDELL. 1967. A snare for capturing Blue Grouse. J. Wildl. Mgmt., **31:** 202–204.—Over 1,200 grouse were caught with a sliding noose on the end of a 10–20 foot pole.—J.P.R.

PHYSIOLOGY

BRENNER, F. J. 1967. Seasonal correlations of reserve energy of the Red-winged Blackbird. Bird-Banding, **38:** 195–211.—Body weights of male and female *Agelaius phoeniceus* decrease during the breeding season. A rapid decrease of fat in deposits may be related to testicular development. Discusses the relationships between temperature, the reproductive cycle, and reserve energy.—M.A.J.

CALDER, W. A., JR., AND K. SCHMIDT-NIELSEN. 1966. Evaporative cooling and respiratory alkalosis in the pigeon. Proc. Natl. Acad. Sci., **55:** 750–756.—Contrary to assumptions that increased respiratory volume in birds need not involve gas exchange in the lungs, examination of the acid-base balance of the blood of *Columba livia* revealed that at temperatures above 45°C they sustain a severe alkalosis due to excess loss of CO_2 in increased respiratory ventilation. The decrease in P_{CO_2} of the blood indicates a threefold increase in the passage of air over the gas exchange surfaces of the lungs.—C.F.S.

CROIZIER, G. 1966. Polymorphismes Biochemiques de la Poule Domestique. Ann. Biol. Anim. Biochem. Biophys., **6:** 379–388.—Examination by starch gel electrophoresis of egg white proteins of 12 breeds of domestic chicken revealed polymorphisms in ovalbumin, ovoglobulins and, conalbumins. These polymorphisms were assumed to be the results of a polyallelic series of genes. Gene frequencies differed with various breeds.—A.H.B.

HICKS, D. L. 1967. Adipose tissue composition and cell size in fall migratory thrushes (Turdidae). Condor, **69:** 387–399.

PAYNE, R. B. 1966. The post-ovulatory follicles of blackbirds (*Agelaius*). J. Morphol., **118:** 331–351.—By 2 days after ovulation postovulatory follicles of *Agelaius tricolor* and *A. phoeniceus* regress from 6.0 to 3.0 mm and remain less than 3.0 during incubation. The follicles of females feeding young average less than 1.0 mm. Distinct postovulatory follicles remain up to 25 days after ovulation. The rapid regression, histological evidence of degenerative tissues, and the invasion of cells characteristic of inflammatory response suggest that ovulated follicles are degenerative rather than segretory organs. (From author's abstract.)—G.E.W.

TAXONOMY AND PALEONTOLOGY

ERICKSON, B. R. 1967. Fossil bird tracks from Utah. Mus. Observer, Sci. Mus. Saint Paul (Minnesota), **5:** 6–12, 1 pl., 2 figs.—Description of a series of six closely spaced footprints collected in the Green River Eocene, 20 miles south of Provo, Utah, in the collections of Brigham Young University. The three anterior toes are joined by broad webs, the tip of the hallux is lightly impressed, and along the track, alternately on either side, is an irregular line of closely spaced marks interpreted as possibly made by dabbling with the bill as the bird moved forward. In form the footprints resemble those of an anseriform the size of a small goose, but they are peculiar in that the marks are closely spaced and more directly in line than usual in this order. They are suggestive thus of a species with longer legs, possibly of more flamingolike form.—G.E.W.

FEDUCCIA, J. A. 1967. A new swallow from the Fox Canyon local fauna (Upper Pliocene) of Kansas. Condor, **69:** 526–527.