RECENT LITERATURE

EDITED BY FRANK McKINNEY

ANATOMY AND EMBRYOLOGY

EBER, G. 1956. Vergleichende Untersuchungen über die Ernährung einiger Finkenvögel. Biol. Abhandl., **13/14**: 1–60.—Comparative studies on the feeding of eight well-known European finches, treating habitat, food niches, food and anatomy. The drawings of tongue, bill, ceratobronchials, and intestines of the various species will interest anatomists and anatomical systematists.—E. E.

SETTY, L. R. 1958. The cutaneous muscles of the Adelie Penguin *(Pygosceles adeliae)*. Journ. Wash. Acad. Sci., **48**: 387–388.

BEHAVIOR

BACKEN, E. P. 1958. Courtship behaviour of the Sharp-tailed Sandpiper *(Erolia acuminata)*. Emu, **58**: 267–270.

BORROR, D. J. 1959. Variation in the songs of the Rufous-sided Towhee. Wilson Bull., **71**: 54–72.—The songs of *Pipilo erythrophthalmus*, analyzed with audiospectrographs, possessed different introductor notes and trills, which were combined in 93 different song patterns.—J. T. T.

BRADLEY, E., and J. BRADLEY. 1958. Notes on the behaviour and plumage of colour-ringed Blue Wrens. Emu, **58**: 313–326.—A year's study of color-banded Superb Blue Wrens *(Malurus cyaneus)* in Sydney, Australia revealed that the birds lived in groups consisting of one female and four or five full-plumaged males, all of which cared for the young.—E. E.

COOPER, R. P. 1958. Pallid Cuckoo feeding young. Emu, **58**: 67–68.—A stub-tailed fledgling of the Australian parasitic cuckoo, *Cuculus pallidus*, was observed being fed mistletoe by about ten individual birds, including two species of honeyeaters *(Meliphagidae)* and an adult of its own species. Over the protests of the honeyeaters, the adult cuckoo fed the young bird six times. Apparently the food call and open mouth of the young bird, which stimulated so many birds of other species to feed it, also attracted the adult cuckoo.—E. E.

DAVIS, D. E. 1959. Observations on territorial behavior of Least Flycatchers. Wilson Bull., **71**: 73–85.—The territorial behavior of *Empidonax minimus* resembles that of other members of the genus. Nesting in southwestern Virginia is described, and song and call notes are described with their apparent function. —J. T. T.

DILGER, W. C., and P. A. JOHNSGARD. 1959. Comments on "species recognition" with special reference to the Wood Duck and the Mandarin Duck. Wilson Bull., **71**: 46–53.—A general discussion of the problem.—J. T. T.

GILLIARD, E. T. 1959. The courtship behavior of Sanford's Bowerbird *(Archboldia sanfordi)*. Amer. Mus. Novit., **1935**: 18 pp.—First observations of an occupied bower of this species, which Gilliard discovered on Mt. Hagen, New Guinea, in 1950. Most of the paper consists of a minute-by-minute verbatim transcript of field notes covering *all* avian activity seen or heard from a blind at 8520 feet on Mt. Hagen, between 6:32 and 10:05 A.M., July 14, 1956. The bower is a mat of ferns and vines adorned with snail shells, bamboo strands, and other objects When the female comes to the bower, the male assumes a prostrate, "infantile" attitude, crawling toward the female while chewing on a piece of vine and fluttering the wings. This "female-dominant" behavior appears to be unique in

the family. The golden crest of the male plays little or no part in the display: it is absent in the related *A. papuensis,* the courtship behavior of which is unknown.—K. C. P.

GILLIARD, E. T. 1959. A comparative analysis of courtship movements in closely allied bowerbirds of the genus *Chlamydera.* Amer. Mus. Novit., **1936**: 8 pp.—Evidence offered in support of the author's "transferral effect" theory that elaborately decorated bowers have replaced bright plumage in displays of certain dull-colored species. Males of *C. nuchalis* possess an irridescent erectile crest which is lacking in the sexually monomorphic *C. cerviniventris.* The latter possesses in vestigial form the awkward crest-displaying courtship motions typical of crested species, but objects held in the bill of the male play an augmented role in the display of the crestless *C. cerviniventris.* The sequence of the evolution of the display movements and of the bright crest is postulated.—K. C. P.

MAINARDI, D. 1958. L'insorgenza dell'istinto parentale in un ibrido sterile fra *Columba livia* e *Columba albitorques.* Zoo, **4** (3): 60–64. Boll. Giardini Zoologici di Milano-Torino-Varallo.—Hybrids between Rock and Ring Doves are fertile if males, completely sterile (not even able to lay eggs) if females. A pair of such hybrids which had copulated without producing eggs, was supplied with an artificial nest and two eggs of a domestic pigeon. Both hybrids incubated and when one egg hatched (the other proving infertile) both fed the young with "pigeon milk" secreted in the crop, and later with grain—demonstrating that incubation behavior, feeding of young and production of pigeon milk are independent of egg laying. Comparison is made with the behavior of hybrids between *C. livia* and *C. guinea,* and of *Phasianus and Gallus.* (In Italian; English summary).—E. E.

MCBRIDE, G. 1958. Relationship between aggressiveness and egg production in the domestic hen. Nature, **181**: 858.

MORRIS, D. 1958. The comparative ethology of grassfinches (Erythrurae) and mannikins (Amadinae). Proc. Zool. Soc. London, **131**: 389–439.—A taxonomic study, based chiefly on behavior in captivity, of two tribes of Estrildinae. The estrildines "form a very natural and distinct subfamily of the Ploceidae, from the point of view of their behavior." Delacour's arrangement is in most respects confirmed by ethological studies; the major changes: the Red-browed Finch of Australia *"Estrilda" temporalis* is considered not a waxbill but a grassfinch and is removed to *Zonaeginthus,* and certain genera submerged are resurrected as genera or subgenera.—E. E.

PIIPARINEN, T., and L. TOIVARI. 1958. Über die Tagesrhythmik im Gesang des Sprossers *(Luscinia luscinia).* Orn. Fen., **35**: 65–70.—The daily rhythm of the Sprosser or Thrush Nightingale in Finland at 61° 4′ N. between May 21 and June 26 was elaborately studied. The peak of song intensity was between 1:00–2:00 A.M., though birds sang very steadily from midnight to 4:00 A.M., and could be heard intermittently throughout the day, particularly after 5:00 P.M. (In German; Finnish summary).—E. E.

PREUSS, N. O. 1959. [The distribution of the Dipper *(Cinclus cinclus* (L.)) in Denmark, with remarks about its behaviour in the winter quarters.] Dansk Ornith. Foren. Tidssk., **53**: 1–19.—Maintains a winter territory. Threat postures are illustrated. (In Danish; English summary).—E. E.

THORPE, W. H. 1958. Further studies on the process of song learning in the chaffinch *(Fringilla coelebs gengleri).* Nature, **182**: 554–57.—Young, acoustically

isolated birds will sing a more complicated song if together than if isolated. This mutual stimulation may lead to songs as complex as, although quite different from, the adults. Hand-reared isolates can be tutored to sing songs unlike any produced by wild birds. Song pattern can be learned only during first 13 months.—H. C. S.

VON HAARTMAN, L. 1958. The incubation rhythm of the female Pied Flycatcher *(Ficedula hypoleuca)* in the presence and absence of the male. Orn. Fen., **35**: 71–76.—There seems to be a correlation between the time spent on the nest by an incubating female and the frequency with which she is fed by the male. Field observations were confirmed by removal of a male. The duration of sessions both on and off the nest increased, but the total amount of time on the nest decreased as did the female's weight.—E. E.

DISEASES AND PARASITES

CLAY, T. 1958. Revision of the Mallophaga genus *Degeeriella* from the Falconiformes. Bull. Brit. Mus. (Nat. Hist.). Entomology, **7**, no. 4: 5–208. Price, 30s.—The tabular review and discussion of the raptors that are hosts to various species of this mallophagan genus may throw light on hawk taxonomy. Significantly, the genus *Gampsonyx,* here listed under Falconidae (following Peters), unlike any falcon, carries a *Degeeriella* of the same species group as *Elanus.* This supports the relationship indicated by recent anatomical and molt studies (see Auk, **76**: 360–36, 1959).—E. E.

EICHLER, W. 1958. Bird lice: a biological test for ornithologists. Emu, **58**: 1–4.—A general account of the behavior of feather-eating bird lice (Mallophaga) and the generalizations that have been drawn: Fahrenholz's rule—related birds have related bird lice in common; Szidat's rule—the more highly-organized birds have correspondingly highly-organized parasites; Eichler's rule—the bird genera with fewer species harbor a smaller variety of bird lice.—E. E.

DISTRIBUTION AND ANNOTATED LISTS

ALVAREZ DEL TORO, M. 1958. Lista de las especies de aves que habitan en Chiapas. Endemicas, emigrantes y de paso. Rev. Soc. Mex. Hist. Nat., **19**, nos. 1–4: 73–113.—The species and subspecies recorded from the Mexican state of Chiapas (624 forms) are listed, indicating whether the bird is a winter visitant or passage migrant, the part of the state where each occurs (exact localities in the case of the less known birds), and often habitat. Apparently for the first time the Ocellated Turkey, *Agriocharis ocellata,* is reported for Chiapas and the Pacific slope. This list has a special value because it is based on unrivalled personal field experience, as well as available literature. The reviewer notes the inadvertent omission of *Cyanerpes lucidus* (see Berlioz, Bull. Mus. Hist. Nat. Paris, ser. 2, **11**: 375, 1939).—E. E.

ARNHEM, R. 1959. Le Fuligule Morillon, *Aythya fuligula* (L.), nicheur en Belgique. Gerfault, **49**: 43–51.—Discusses the increase in the breeding range of the Tufted Duck since 1900. (The similar spectacular spread of the allied New World Ring-necked Duck, *A. collaris,* suggests a common cause.) (In French.) —E. E.

BEHLE, W. H., J. B. BUSHMAN, C. M. GREENHALGH. 1958. Birds of the Kanab area and adjacent high plateaus of southern Utah. Univ. Utah Biol. Ser., **11**, no. 7: 1–92.—The area covered includes Bryce Canyon National Park and Cedar Breaks

National Monument, though no collecting was done within these reservations. The list contains breeding information and some taxonomic discussion. Ecological information is particularly full, and is given in convenient tabular form for the permanent and summer residents.—E. E.

BOETTICHER, H. VON. 1958. Die Möwen der Erde und ihre geographische Verbreitung. Der Falke, **6**: 13–17, 48–54.—This paper represents von Boetticher's final views as to the classification and distribution of the gulls of the world. He recognizes three genera: *Pagophila* for the Ivory Gull, *Leucophaeus* for the Dolphin Gull, and *Larus* for all the rest. The maps give a useful general picture of gull distribution, but they are not up-to-date for the breeding ranges of many New World forms. As a result, von Boetticher designates as allopatric subspecies a number of gulls now known to be sympatric. Thus, following Stegmann (1934), he lumps in the species *L. fuscus* the Herring, Lesser Black-backed, California and Iceland gulls (including their subspecies); yet the Herring Gull nests in localities where the other three are breeding. He includes the Ring-billed Gull as a subspecies of the Mew Gull, *L. canus,* overlooking the fact that in western Canada the former is sympatric with *L. c. brachyrhynchus.* The Glaucous-winged Gull is regarded as a subspecies of the Glaucous Gull, *L. hyperboreus,* although recent information indicates they occur together as breeders in Alaska. The Western Gull, *occidentalis,* the Siberian *schistisagus,* and the Southern Hemisphere *dominicanus* are considered conspecies of the rather sedentary North Atlantic Great Black-backed Gull, *L. marinus.* Similarly, the South American *maculipennis* is lumped as a race of the Palearctic *L. ridibundus.* In the last two cases the forms are certainly allopatric—the ranges of the supposed conspecies are separated by thousands of miles—but it is hard to find basis for any assumption that they would freely interbreed (were their ranges to meet), when other allied gulls apparently resembling each other as much in morphology and behavior, maintain reproductive isolation in the zone of overlap. It is interesting to map presumed zoogeographic representatives, but such relationship can be shown by calling the group a superspecies, without confusing this concept with that of the biologic species.—E. E.

GUIGUET, S. J. 1958. The birds of British Columbia (6) Waterfowl. Brit. Col. Prov. Mus., Handbook no. **15**: 1–84. Price 25 cents.—A good popular account of the local Anseriformes, designed for amateurs and hunters, with each species illustrated attractively by Frank L. Beebe.—E. E.

HELMINEN, M. 1958. Occurrence of the Red-flanked Bluetail *(Tarsiger cyanurus)* in Finland and some remarks concerning its expansion to the west. Orn. Fen., **35**: 51–64.—Since 1949 this typical representative of the Siberian taiga zone has been noted annually in eastern Finland—evidence of a recent westward invasion. —E. E.

KNORR, O. A. 1959. The birds of El Paso County, Colorado. Univ. Colo. Stud., Ser. Biol., **5**: 1–48. Price, $1.—Annotated list for the Colorado Springs–Pike's Peak area; with interesting comparison of the changes since Aiken and Warren's 1914 list.—E. E.

MCCANDLESS, J. B. 1958. A Field Guide to the Birds of Puerto Rico. A supplement to Roger Tory Peterson's Field Guide to the Birds. viii + 68 pp. Price, $2. (Order from Dr. J. B. McCandless, Box 1079, Mayaguez, Puerto Rico.)—This useful booklet lists (without illustrations) the 190 species known to occur in Puerto Rico, giving English, Puerto Rican, and scientific names, and indicating

local status. Field-marks are described for the 53 species not included in Peterson's continental guide, with page references to that book for the others. The work is introduced by a very helpful chapter on bird finding in Puerto Rico and is concluded by a supplemental list of extirpated species and those threatened with extirpation, a "problematical list", a short bibliography, and indexes.—E. E.

MERTENS, R. 1958. Quer durch Australia. Biologische Aufzeichnungen über eine Forschungsreise. 200 pp., 8 col. photos., 40 figs. Verlag Waldemar Kramer, Frankfurt am Main, Germany.—A discursive account of the 1957 Senckenberg expedition across Australia. Included are pictures of the landscape, attractive drawings of and brief comments on many animals (including some birds). The index lists the generic names of the plants and animals mentioned. (In German.)—E. E.

PATERSON, J. M. 1958. Check list of birds of the Eastern Cape Province. 71 pp. Eastern Cape Wild Bird Society, c/o Museum, Port Elizabeth, South Africa.—An annotated list of 445 forms, plus an appendix of an additional 53 that are rare or doubtful.—E.E.

RIPLEY, S. D., and D. S. 1958. Notes on a collection of birds from Mindoro Island, Philippines. Peabody Mus. Nat. Hist. Yale Univ., Bull., **13**: 1–81.—Report on 122 forms collected in 1954, with notes on taxonomy, habitat, etc. —E. E.

RUSCHI, A. 1953. Os trochilideos: *Agyrtrina lactea lactea* (Lesson); *Heliomaster squamosus* (Temminck); *Lophornis chalybeus* (Temminck); *Discosura longicauda* (Gmelin); e *Chrysolampis mosquitus* (Linnaeus) novos para o Estado do Espírito Santo e as causas do seu recente aparecimento. Bol. Mus. Biol. Prof. Mello-Leitão. Biologia, no. **16**: 1–11. Santa Teresa, Espírito Santo, Brasil.—Hummingbirds new to the Brazilian state of Espírito Santo and the causes of their recent appearance. (In Portuguese.)—E. E.

SUMMERS, L. 1958. Bird life of Grand Forks County, North Dakota. Proc. N. D. Acad. Sci., **12**: 69–73.—An analysis of the avifauna of a prairie area in the Red River Valley.—E. E.

WOOD, M. 1958. Birds of Central Pennsylvania. Penna. Agr. Exper. St. Bull., **632**: 1–46.—A check-list, giving status of the 260 species recorded within 15 miles of University Park, site of Pennsylvania State University.—E. E.

ECOLOGY AND POPULATION

HOFFMANN, L. 1959. Esquisse ecologique de la Camargue à l'intention des ornithologistes. La Terre et la Vie, 1959: 26–60.—The ecology of the Camargue, southern France, from the ornithologists' viewpoint. (In French.)—E. E.

HOFFMANN, L. 1959. La nidification des Flamants en 1957. La Terre et la Vie, 1959: 74–76.—Between 4000–4500 pairs of flamingos nested in the Camargue in 1957, rearing successfully 2200–2500 young. The Herring Gull, which has been increasing, is a predator on the young.—E. E.

KEAST, A. 1958. The influence of ecology on variation in the Mistletoe-bird *(Dicaeum hirundinaceum)*. Emu, **58**: 195–206.—The Australian flower-pecker is an exceptional case of a small passerine that occurs with almost no geographic variation throughout the continent. This is presumably the result of nomadic habits. This bird is a major factor in dispersing mistletoe, for the gizzard is adapted to enable the berries to pass to the intestine with only the gelatinous capsules removed and with the seeds intact and sticky.—E. E.

REUTER, M. 1958. Tierphänologische Beobachtungen in Finland 1951–1955.

Utgifna af Finska Vetenskaps-Societeten, **100**, no. 2: 1–56.—Animal phenological observations in Finland, consisting chiefly of arrival and departure dates for a large number of bird species from some seventy-eight localities. There are also dates of nest building by the Hooded Crow, and of display by the Capercaillie and Black Cock, as well as some data on a few other conspicuously seasonal non-avian animals. (In German.)—E. E.

ROOTH, J., and F. M. BRUIJNS. 1959. [The Sandwich Tern (*Sterna s. sandvicensis* Lath.) as a breeding bird in the Netherlands.] Limosa, **32**: 13–22.—Total population fluctuated between 2500–4000 pairs in 1954–57; number of pairs in each colony fluctuates much more. (In Dutch; English summary.)—E. E.

SALOMONSEN, F. 1958. The present status of the Brent Goose (*Branta bernicla* (L.)) in Europe. Vidensk Medd. Dansk. Naturh. Foren., **120**: 43–80. Reprinted by International Wildfowl Research Bureau, Publ. no. 4.—Data on distribution, migration, and population. The Western European population seems in danger of extirpation. Protective measures are suggested.—E. E.

EVOLUTION

DANFORTH, C. H. 1958. *Gallus sonnerati* and the Domestic Fowl. Journ. Heredity, **49** (4): 167–169.—Crossings in captivity of Gray Junglefowl with Red Junglefowl and domestic fowl suggest that the Gray Junglefowl might have contributed to the production of certain domestic breeds.—E. E.

GILLIARD, E. T. 1959. The ecology of hybridization in New Guinea honeyeaters (Aves). Amer. Mus. Novit., 1937: 26 pp.—Continuation, with new material, of a study initiated by Mayr and Gilliard (Condor, **54**: 325–337, 1952) on hybrid swarms of *Melidectes*. Contrary to previous treatment, *M. belfordi* and *M. rufocrissalis* are considered to be species, which hybridize where man has created new "edge" habitats by cutting forests. The history of the genus in New Guinea is postulated. Two named forms, *griseirostris* and *stresemanni*, are recognized as subspecies of *belfordi* on the grounds of morphological resemblance, although a good case is made for these two populations being isolated and stabilized derivatives of hybrid swarms.—K. C. P.

MOREAU, R. E. 1958. The *Malimbus* spp. as an evolutionary problem. Rev. Zool. et Botan. Afr., **57** (3–4): 241–255.—Study of 8 closely allied African Ploceidae, almost all of which are known to overlap, though having a similar ecology.—E. E.

MOREAU, R. E., and H. N. SOUTHERN. 1958. Geographical variation and polymorphism in *Chlorophoneus* shrikes. Proc. Zool. Soc. Lond., **130**, pt. 3: 301–328.—A taxonomic and distributional study of what is probably the most remarkable case of multiple polymorphism in birds.—E. E.

SAMMALISTO, L. 1958. Interracial hybridization as an adaptation mechanism in the Fennoscandian Yellow Wagtail (*Motacilla flava* L.) population. Ann. Acad. Scient. Fennicae. Ser. A. LV Biologica **41**: 1–46.—In Finland the nominate form and the eastern race *thunbergi* meet and freely interbreed forming various intermediates that closely resemble other races. The author believes that adaptively hybrid males are superior to the parental forms on treeless bogs and marshes; but females show no superiority. A sex-linked heterosis seems to be involved.—E. E.

GENERAL BIOLOGY

CURIO, E. 1959. Verhaltensstudien am Trauerschnäpper. Beiträge zur Ethologie und Ökologie von *Muscicapa h. hypoleuca* Pallas. Paul Parey, Berlin, SW 61,

Lindenstrasse, Berlin, Germany. Z. Tierpsychol. No. **3**: 1–118. Price, DM 25.—A most elaborate five-year study of the life history, ethology, and ecology of the Pied Flycatcher, based on color banding a population of 258 adults and 710 nestlings in the wild, and work with 8 nestlings reared in captivity for almost three years. There are numerous photographs, drawings, tables and graphs. The paper is admirably organized for convenience of reference. (In German; unusually full English summary.)—E. E.

DOWNES, W. 1959. Epidemiology Report. Ornithology. *In* 1958 Annual report of the Trinidad Regional Virus Laboratory. Five Year Summary: 42–58.—Data on virus isolation and inoculations in Trinidad birds, and tables on nesting season and duration of nesting period. Although among land birds the main nesting season is from April to July, with the peak in April (the beginning of the rainy season), among the non-passerine marsh birds the four months with most nesting species are June through October, with the peak in August. Information on migration is also of interest.—E. E.

HENSLEY, M. M. 1959. Notes on the nesting of selected species of birds of the Sonoran desert. Wilson Bull., **71**: 86–92.—On 16 species in the Organ Pipe Cactus National Monument, Arizona.—J. T. T.

HERROELEN, P. 1957–1959. [On the breeding biology of the Barn Swallow, *Hirundo rustica* L.] Gerfault, **47**: 115–126, 265–278, **49**: 11–30.—A five year study of *H. r. rustica* in Belgium. (In Flemish; French summary.)—E. E.

HOOGERS, B. J., and H. N. KLUIJVER. 1959. [A breeding colony of Black-crowned Night Herons (*Nycticorax nycticorax* L.) in the vicinity of Wageningen, Netherlands.] Limosa, **32**: 8–13. (In Dutch; English summary.)

KURODA, N. 1955–1957. Field studies on the Grey Starling, *Sturnus cineraceus* Temminck. Misc. Rep. Yamashina Inst. Orn. and Zool., No. **7** (1955): 7–19 [277–289]; No. **8** (1956): 8–18 [318–328]; No. **9** (1956): 27–38 [375–386]; No. **10** (1957): 27–40 [413–426].—An important and detailed study. The first two parts cover mostly roosting and feeding behavior, the last two breeding biology. (In Japanese; most tables and a good summary in English.)—K. C. P.

LEBRET, T. 1959. [The distances between feeding grounds and nocturnal roosts of geese in the Netherlands.] Limosa, **32**: 23–30.—Observations on five forms of wild geese. (In Dutch; English summary and captions to table.)—E. E.

MEANLEY, B., and A. G. MEANLEY. 1959. Observations on the Fulvous Tree Duck in Louisiana. Wilson Bull., **71**: 33–45.—*Dendrocygna bicolor* feeds and nests in rice fields in southwestern Louisiana. Annual movements, breeding habits, and development of young are described. Some damage to rice has occurred.—J. T. T.

PADGETT, C. A., and W. D. IVEY. 1959. Coturnix Quail [*Coturnix coturnix japonica*] as a laboratory research animal. Science, **129**: 267–268.—The Japanese race of the common Eurasian quail reproduces when six weeks old; a few lay at 38 days old and fertility may be as high as 90 per cent at 50 days. In an incubator at 100° F. eggs hatch in 16 days ± 8 hours. 60–70 per cent of fertile eggs hatch. Laying occurs from April through September.—E. E.

RUSCHI, A. 1953. Ninhos, ovos e algumas observações sôbre os Trochilideos: *Psilomycter theresiae theresiae* (Da Silva Maia); *Lophornis vereauxii* Bourcier; *Lophornis gouldii* (Lesson); *Phaethornis nattereri* (Berlepsch); *Chrysuronia oenone josephinae* (Bourcier & Mulsant); *Gouldomyia langsdorffi melanosternon* (Gould) e *Anthracothorax viridigula* (Boddaert). Bol. Mus. Biol. Prof. Mello-Leitão. Biologia, no. 15: 1–13. Santa Teresa, Espírito Santo, Brasil.—Nesting

data of certain Brazilian hummingbirds, and notes on behavior and nestling plumages. (In Portuguese.)—E. E.

SKUTCH, A. F. 1959. Life history of the Black-throated Trogon. Wilson Bull., **71**: 5–18. Color plate by D. R. Eckelberry.—*Trogon rufus* inhabits heavy forests in Central and South America. Its habits and behavior are compared with other trogons and its nesting is described in detail.—J. T. T.

WARHAM, J. 1958. The nesting of the Australian Gannet [*Sula serrator*]. Emu, **58**: 339–369.—Data on courtship display and reproductive activities; with many fine photos.—E. E.

WESTERSKOV, K. 1958. Incubation period in the pheasant. Emu, **58**: 139–151.—For *Phasianus c. colchicus* and *P. c. torquatus* the incubation period in a still-air incubator ranged between 22 days and 23 days 22 hours (mean, 23 days 3 hours). Birds naturally incubated are likely to require a few hours longer, because of cooling during the periods of non-attendance by the hen. If a hen pheasant is forced to stay away longer than usual, it is still possible for eggs to hatch, though the incubation period may be 2–4 days longer than normal. If eggs are addled or replaced a hen may sit for much longer than the usual period; one hen sat 47 days until a replaced clutch finally hatched. Eggs of the Mongolian race, *P. c. mongolicus,* when placed in the same incubator with those of the two commoner forms were found to hatch about 24 hours later, between 24–25 days. —E. E.

WILLING, R. L. 1958. Feeding habits of Emperor Penguins. Nature, **182**: 194–195.—Use is made of tide cracks and seal holes for feeding and for access to the sea.—H. C. S.

MANAGEMENT AND CONSERVATION

BRUNS, H. 1959. Das Problem der verwilderten Haustauben in den Städten. Biol. Abhandl., **17**: 1–36.—The problem of the feral Domestic Pigeon in cities, and methods of handling it.—E. E.

DEMENTIEV, G. P. 1958. The protection of fauna in the U.S.S.R. Atl. Nat., **14** (1): 11–21.

ELDER, W. H. 1958. A research report on the Hawaiian Goose or Nene. Pan-American Sect., Int. Comm. Bird Pres., Research Rept. no. **3**: 1–8.—Probably the rarest of living waterfowl, the Nene is now believed to number only about 35 in the wild and a somewhat larger number in captivity. Suggestions are made for protection and artificial rearing.—E. E.

INTERNATIONAL COMMITTEE FOR BIRD PRESERVATION. 1958. VII Bulletin of the International Committee for Bird Preservation. 250 pp., 16 photo pls. Price, $2.10, at N. Y. Zool. Soc., Bronx Park, New York 60, N. Y.; or 15s., at Brit. Mus. (Nat. Hist.) Cromwell Road, London S.W. 7, England.—Report of international conferences, 1952–1957, and of bird protection status in various countries having national sections affiliated with the Committee. Articles by different authors on a variety of conservation problems: oil pollution, establishment of refuges on migration routes, need for protection of birds of prey, effect of pesticides on wildlife, gulls as a menace to other species, decrease of the White Stork, and status of various very rare or almost extinct birds, Hawaiian Goose, Laysan Teal, Japanese Crane, Steller's (Short-tailed) Albatross, Cuban Ivory-billed Woodpecker, and certain species in the U.S. Virgin Islands.—E. E.

MEHNER, J. F., and G. F. WALLACE. 1958. Robin populations and insecticides.

Atl. Nat., **14** (1): 4–9.—The heavy use of insecticides to control Dutch Elm disease has caused the almost total destruction of *Turdus migratorius*, and a great reduction in other birds, on the Michigan State University campus and two other areas intensively studied. Robins are poisoned by eating earthworms in which DDT has concentrated by feeding on leaf litter.—E. E.

RIDLEY, M. W., and L. PERCY. 1958. The exploitation of sea birds in Seychelles. Colonial Research Studies, no. 25: 1–78, maps, 34 photo. pls. Price, 12s 6d. Her Majesty's Stationery Office, London W.C. 2, England.—The Seychelles, a group of small islands in the Indian Ocean north of Madagascar, provide nesting sites for many sea birds. About 2,000,000 tern eggs, chiefly of Sooty Terns, are collected and shipped for food, but there has been a steady decline in egg production since 1890 when over 7,000,000 eggs were collected. In 1955, on Desnoeufs Island (of 97 acres) 1,210,000 pairs of Sooties and 18,300 pairs of Common Noddies were estimated to breed. Sooties nest in the dry season after the inception of the southeast monsoon winds. The report contains much life history data on the Sooty and Noddy Terns and some information on the boobies, shearwaters and other birds found on these islands. Experiments indicated that only a proportion, probably not over half, of the Sooties laid a second egg when the first was removed, and that an even smaller number laid a third if the second were taken.—E. E.

MIGRATION AND ORIENTATION

CURRY-LINDAHL, K. 1958. Internal timer and spring migration in an equatorial migrant, the Yellow Wagtail (*Motacilla flava*). Ark. för Zool., **11**, no. 33: 541–557.—Five races of the *M. flava* complex were found wintering in mixed flocks in the Belgian Congo, near the equator, where light conditions were almost constant. Though subject to the same environmental conditions on the wintering grounds, the various races showed a different timing with respect to molt, fat deposition, gonadal development, and departure on the northern migration. The southern breeding races leave first, the northern last. The internal rhythm seems to be correlated with the climate of the breeding grounds.—E. E.

DORST, J. 1958. Observations ornithologiques à bord des navires météorologiques français dans l'Atlantique nord. L'Oiseau, **28**: 309–323.—Observations of birds from stationary meteorological ships at three points in the North Atlantic.—E. E.

EKLUND, C. R. 1958. A distribution study of the South-Polar Skua. Emu, **58**: 98–100.—In connection with the International Geophysical Year *Catharacta skua maccormicki* has been banded at various Antarctic localities with bands of different colors or combinations of colors. Reports should be sent to the author, USNC IGY, Regional Programs Office, Washington 25, D. C.—E. E.

HINDWOOD, K. A. 1958. The Arctic Tern in Australia. Emu, **58**: 259–263.—Specimens taken in Australia included one banded as a juvenile almost a year before on the White Sea in northwestern Russia.—E. E.

HOFFMAN, K. 1958. Repetition of an experiment on bird orientation. Nature, **181**: 1435–1437.—Matthews' experiment was repeated with opposite results, thus offering no support to sun navigation hypothesis.—H. C. S.

LACK, D. 1958. Migrational drift of birds plotted by radar. Nature, **182**: 221–223.—Course taken by migrants from England to the northeast was a resultant between a constant heading and the wind at the time. Migrational drift must be commonplace since it occurred almost every day and night.—H. C. S.

STORR, G. M. 1958. Migration routes of the Arctic Tern. Emu, **58**: 59–62.—Recent records demonstrate that *Sterna macroura* winters regularly in the zone of Antarctic pack-ice. Occurrences in the southern Indian Ocean and southwest Pacific (the species is not a migrant in the northwest Pacific) probably involve birds carried eastwards from the South Atlantic by the strong winds of the "roaring forties".—E. E.

VOOUS, K. H. 1959. [High flight of migrating duck.] Limosa, **32**: 70.—A duck, apparently a male Mallard, crashed against an airplane at an elevation of 2700 m., on April 2, 1958 at 21.20 h. 40 km. ssw of Frankfort, Germany. (In Dutch; English summary.)—E. E.

WODZICKI, K., and P. STEIN. 1958. Migration and dispersal of New Zealand Gannets. Emu, **58**: 289–312.—The New Zealand bred Australasian Gannet, *Sula bassana serrator,* in its first year migrates westward towards warmer Australian waters, sometimes as much as 4,000 miles. Older birds migrate less, and adults do not seem to be migratory. The North Atlantic Gannet, nominate *bassana,* and the Cape Gannet, *capensis,* also show the longest migrations in first year birds, which respectively go south and north into tropical waters.—E. E.

PHYSIOLOGY

BEAUMARIAGE, M. L. 1958. Inability of epinephrine to protect Rhode Island chicks against the lethal action of X-rays. Nature, **182**: 803–804.

DATTA, R., J. GHOSH, and B. C. GUHA. 1958. Electrophoretic behaviour of avian haemoglobins. Nature, **181**: 1204–1205.—Five haemoglobins were detected from 32 species of 13 orders.—H. C. S.

GLICK, B. 1959. The experimental production of the stress picture with cortisone and the effect of penicillin in young chickens. Ohio Journ. Sci., **59**: 81–86.—Penicillin did not prevent production of stress symptoms.—H. C. S.

HOWELL, T. R. 1959. A field study of temperature regulation in young Least Terns and Common Nighthawks. Wilson Bull., **71**: 19–32.—Young Least Terns *(Sterna albifrons)* and Common Nighthawks *(Chordeiles minor)* were subjected to heat and cold stress in field and laboratory. Young terns regulate body temperature less well at low air temperature but better at high air temperature than gulls of similar age. Young terns may be exposed to sun and high temperatures when not being brooded. Young Nighthawks, which are normally brooded all during the day, showed less temperature regulation.—J. T. T.

LORENZ, F. W. 1958. Carbohydrate metabolism of cock spermatozoa. Nature, **182**: 397–398.—Sperm convert glucose and mannose to fructose.—H. C. S.

MORRIS, T. R., and S. FOX. 1958. Light and sexual maturity in the domestic fowl. Nature, **181**: 1453–1454.—Rate at which a pullet approaches sexual maturity is increased by increasing length of day and decreased by decreasing length of day.—H. C. S.

SCOTHORNE, R. J. 1958. Histochemical study of the nasal (supra-orbital) gland of the duck. Nature, **182**: 732.—The gland is neither serous nor mucous. It contains abundance of mitochondria, rich blood supply, some alkaline phosphatase and is reminiscent of mammalian gastric glands and chloride secreting cells of the gills of euryhaline fish.—H. C. S.

THREADGOLD, L. T. 1958. Photoperiodic response of the House Sparrow, *Passer domesticus.* Nature, **182**: 407–408.—Birds on only one hour of light per day gave testicular response after 4 months of the regime. The minimal threshold

is therefore greatly reduced; photoperiod experiments must be conducted for at least 6 months. Birds on 7 hours of light responded 3 months later. Testis cycle theorized to be under 2 separate mechanisms, one stimulating and one inhibitory. —H. C. S.

Taxonomy and Palaeontology

Berger, A. J. 1959. Leg-muscle formulae and systematics. Wilson Bull., **71**: 93–94.—More muscle formulae than previously used are suggested to increase the utility of these characters in avian systematics.—J. T. T.

Blanc, G. A., and A. C. Blanc. 1958. Bones of a vulture among the remains of animals sacrificed on the "burial of Romulus" below the *Niger lapis* in the Roman Forum. Nature, **182**: 66.—Either *Aegyptus monachus* or *Gyps fulvus*. —H. C. S.

Clancy, P. A. 1959. The Cattle Egret of the Ethiopian Region. Bull. Brit. Orn. Club, **79**: 79–80.—States that in *Ardeola (Bubulcus) ibis* of tropical Africa legs and bill do not become red or purplish in the breeding season, and therefore considers it a distinct subspecies, using Bonaparte's name *ruficrista*. Suggests that American birds may be the African form.—E. E.

Harrington, H. J., and I. C. McKellar. 1958. A radiocarbon date for penguin colonization of Cape Hallett, Antarctica. New Zealand Jour. Geol. and Geoph., **1** (3): 571–576.—Age of frozen Adelie Penguin determined 1, 210 ± 70 years. The rookery was probably colonized between 400 and 700 A.D., about the time of the Northern Hemisphere warm period.—E. E.

Hemming, F. ed., 1959. International Commission on Zoological Nomenclature. Opinion 551. Suppression under the Plenary Powers of the specific name *musicus* Linnaeus, 1758, as published in the combination *Turdus musicus*, and validation under the same Powers of a neotype for *Turdus iliacus* Linnaeus, 1758, the Eurasian Redwing (Class Aves). Op. Decl. Int. Com. Zool. Nomen., 20, pt. 18: 199–210, pl. 1.—*Turdus iliacus* restored as the name of the Redwing. Vaurie's new "The Birds of the Palearctic Fauna" uses *iliacus*, so that name should soon regain general currency.—E. E.

Keast, A. 1957. Variation in the Australian Kingfishers (Aves: Alcedinidae). Rec. Aust. Mus., **24**, no. 7: 61–72.—Taxonomy and distribution of the ten Australian species.—E. E.

Keast, A. 1958. Variation and speciation in the Australian flycatchers. (Aves: Muscicapinae). Rec. Aust. Mus., **24**, no. 8: 73–108.—Generic limits are assessed and some changes made. Maps show variation in many species and the relation between subspecies and habitat. A number of isolated forms are considered as having the potential of becoming species.—E. E.

Keast, A. 1958. Seasonal movements and geographic variations in the Australian Wood-Swallows (Artamidae). Emu, **58**: 207–218.—A taxonomic study, with ecological and migration data.—E. E.

Keast, A. 1958. Infraspecific variation in the Australian finches. Emu, **58**: 219–246.—On taxonomy of the Australian Estrildinae, with useful zoogeographic discussion.—E. E.

Keast, A. 1958. The genus *Psophodes* Vigors and Horsfield, and its significance in demonstrating a possible pathway for the origin of Eyrean species from Bassian ones. Emu, **58**: 247–255.—Taxonomy and zoogeography of the Australian whipbirds.—E. E.

STORR, G. M. 1958. On the classification of the Old World Flycatchers. Emu, **58**: 277–283.—The author believes that Muscicapidae are not a monophyletic group either when used in the narrow traditional sense or in the broad inclusive sense of Mayr and Amadon (1951). The "typical" flycatchers, *Muscicapa* and its close allies, as well as the Australian robins, he would place in the Turdidae, without subfamilial or tribal distinctions. The monarchs, fantails, and whistlers he regards as each a natural unit, entitled to family rank (Monarchidae, Rhipiduridae, Pachycephalidae). The resemblances between the groups he considers convergence resulting from similar feeding habits, not an indication of common ancestry.—E. E.

VERHEYEN, R. 1958. Notes sur la classification des Procellariiformes (Tubinares). Bull. Inst. Roy. Scien. Nat. Belg., **34**, no. 30: 1–22.—A new classification of the Procellariiformes, recognizing three families, Diomedeidae, Procellariidae, and Hydrobatidae, but removing diving-petrels, Pelecanoididae, from this order to form a suborder of Verheyen's Alciformes. *Pelecanoides* has long been regarded as a prime example of convergence—petrels that in adopting similar diving habits have come to resemble auks superficially. Verheyen contends that they *are* auks, that auks, petrels and penguins all derive from a single flightless stock, with the diving-petrels branching off from the alcids before the latter had greatly diverged from the primitive petrels. Unfortunately nowhere in this paper does Verheyen list the characters on which he claims the Pelecanoididae are nearer to auks than to petrels. (In French.)—E. E.

VERHEYEN, R. 1959. Basic systematics and ornithogeography. Gerfault, **49**: 95–101.—Objecting to subjective judgments, Verheyen urges that taxonomic relationships between birds be based on the percentage "of the total of their taxonomic characters" held in common; *e.g.*, 90% or more the same genus, 80% subfamily, 70% family, 60% suborder, 50% order. This method itself depends on the subjective determination as to what is a taxonomic character and as to whether a structural or behavioral complex should be counted as one or as several "characters." Verheyen criticizes the current reluctance to recognize monotypic taxa as reflecting in part the provincialism of northern systematists, who tend to force little-known southern birds into familiar northern groups. He says that such lumping conceals basic differences of zoogeographical and evolutionary significance. (In English.)—E. E.

MISCELLANEOUS

RICE, D. W. 1959. Birds and aircraft on Midway Islands. 1957–58 investigations. Spec. Sci. Rept.: Wildlife, no. 44: 1–45. U. S. Dept. Int., Fish and Wildl. Serv.—35 per cent of the world's breeding population of Laysan Albatrosses is concentrated on Midway Atoll (chiefly on Sand Island). The rest are on a few Hawaiian islets. The U. S. Navy, which maintains an air station on Midway, has been concerned by strikes of aircraft with flying sea-birds. Though no aircraft have crashed, the hazard would be much greater were jet planes to be used. In a previous report the Fish and Wildlife Service recommended ground levelling near the runways to eliminate the updrafts favored by soaring albatrosses (Kenyon, *et. al.*, Spec. Sci. Rept., no. 38, 1958). The Navy authorities insisted, instead, on an "experimental" killing program during the 1957–58 breeding season. Navy personnel clubbed to death over 30,000 adult albatrosses (chiefly Laysan) and some 21,000 Sooty Terns. Almost all birds nesting near the airstrip were destroyed,

but no noticeable reduction resulted in birds soaring over the runways, because non-breeding individuals replaced those killed. The scanty banding data indicate that these albatrosses do not breed until their seventh or eighth year, though birds begin to return to the colony when between four to six years old. Parents that have reared their single chick may not renest the following year. This report concludes that "no large-scale reduction in numbers would be advisable from the standpoint of perpetuation of these [albatross] species" and recommends ground levelling, pointing out that as to jet aircraft the solution may be an engineering one. [Despite this report, the Navy authorities in August, 1959 announced a decision to extirpate entirely the albatrosses of Sand Island, Midway, by killing all over a period of years. Apparently no sea-bird habitat will be left on the other part of Midway Atoll (Eastern Island), for, according to R. E. Warner (Elepaio, **20**: 19, Sept. 1959), the surface is to be completely paved in connection with the erection of a radio station and even then the area was being bulldozed. A world interest exists in the protection of the Laysan and Black-footed Albatrosses, birds of restricted range and slow reproduction. Surely American engineering ingenuity can work out a more creditable way of handling this problem—even though initially it may involve a greater dollar expenditure.]—E. E.

STRINGHAM, E. 1958. Alexander Wilson. A founder of scientific ornithology. 29 pp. Price, 50 cents. Box 986, Kerrville, Texas.

LETTER TO THE EDITOR

Supposed Cannibalism by Short-eared Owls

May I point out that it can be too readily assumed that owlets which disappear from the nests of Short-eared Owls *(Asio flammeus)* have been devoured by their nestmates. It is not unusual for the owlets to crawl out of the nest and secrete themselves some distance away. (See Armstrong and Phillips. 1925. *Notes on the nesting of the Short-eared Owl in Yorkshire.* British Birds, **18**: 226–230). This may be particularly likely to occur when a human being has visited the nest. Cannibalism in this species should not be assumed to be "of frequent occurrence" until better evidence is available than is cited by Mr. Collingwood Ingram in his recent paper (Auk, **76** (2): 222–226, 1959).—EDWARD A. ARMSTRONG, *St. Mark's Vicarage, Cambridge, England.*

NOTES AND NEWS

Notice of Change of Editor

All manuscripts and communications intended for 'The Auk' and books to be reviewed should be sent to the new Editor, who will be responsible for volume 77 (1960): DR. DONALD S. FARNER, *Laboratories of Zoophysiology, Department of Zoology, Washington State University, Pullman, Washington.*

The retiring Editor thanks the numerous ornithologists who helped, whether in appraising manuscripts or in other ways, not least of whom were the authors who showed understanding (or at least forbearance) when pressed with suggestions for change.

International Commission on Zoological Nomenclature

The new address of the International Commission on Zoological Nomenclature is c/o British Museum (Natural History), Cromwell Road, London S.W.7, England. Telephone: KEnsington 6823, Ext. 187.