

RECENT LITERATURE

EDITED BY JOHN WILLIAM HARDY

ANATOMY AND EMBRYOLOGY

- BRECKENRIDGE, W. J. 1959. The Kako Morita painting of the Yellow-headed Blackbird. *Flicker*, **31**: 46-47.—Detailed illustration of first prebasic molt.—R.W.D.
- CHILINGARYAN, A. A., AND Y. A. MAGAKYAN. 1963. [A comparative study of early developmental stages in the Pekin and Muscovy ducks and their hybrids.] *Zh. Obsh. Biol.*, **24**: 43-49.—F₁ hybrids showed peculiarities in embryological development, and in F₂ hybrids development ceased at an early stage. (In Russian; English summary.)—E.E.
- SELANDER, R. K., AND L. L. KUICH. 1963. Hormonal control and development of the incubation patch in icterids, with notes on behavior of cowbirds. *Condor*, **65**: 73-90.—A combined field and laboratory study. In Red-winged Blackbirds and grackles both in nature and in hormone-treated females, the thickening and edema preceded loss of feathers. Estradiol benzoate along or with prolactin or progesterone resulted in incubation patches in male and female Red-wings. No hormone treatment completely duplicated the natural incubation patch. Brown-headed Cowbirds showed no gross or histological response to these treatments.—R.E.P.

BEHAVIOR

- ALDERTON, C. C. 1963. The breeding behavior of the Blue-black Grassquit. *Condor*, **65**: 154-162.—Life history and breeding data on a population in the Panama Canal Zone.—R.E.P.
- BLUME, D. 1962. Morgendliche und abendliche Beobachtungen in Spechtrevieren. *Ornith. Mitteil.*, **14**: 181-187.—Observations on the early morning and late evening activities in the territories of *Dendrocopos major*, *D. medius*, and *Picus viridus* in a single woodlot of 50 ha. size. Utilization of various nesting boxes and natural cavities as sleeping holes, time of entering sleeping holes in the evening and leaving in the morning, and general behavior when arising and before retiring are described.—W.J.B.
- BLUME, D. 1962. Zum Begriff "Erregungsflug." *J. f. Orn.*, **103**: 140-149.—The problem of conflict (excited) flight is discussed within the framework of normal locomotor flight, conflict flight, and ceremony flight. Flight in conflict flight differs from normal flight, but the form varies. Conflict flight may be considered as the first step or beginning of ceremony flight in which the pattern of flight has been ritualized.—W.J.B.
- BROWN, J. L. 1963. Social organization and behavior of the Mexican Jay. *Condor*, **65**: 127-153.—Color-banded flocks of jays were studied in Arizona. Their behavior is similar to that of the Scrub Jay, but the lesser aggressiveness of the Mexican Jays is associated with greater flocking activity. Flock composition is described.—R.E.P.
- BURGER, J. 1963. Comparative behavior of the Killdeer and the Spotted Sandpiper. *Kingbird*, **13**: 14-17.—Behavior of adults and downies at nearby nests of each compared.—E.E.
- CADE, T. J. 1962. Wing movements, hunting, and displays of the Northern Shrike. *Wilson Bull.*, **74**: 386-408.—Behavior of *Lanius excubitor* is described, especially that including special wing movements made in hunting. These movements are analogous to those made by *Mimus polyglottos*.—J.T.T.

- DAVIES, S. J. J. F., AND R. CARRICK. 1962. On the ability of crested terns *Sterna bergii* to recognize their own chicks. Australian J. Zool., **10**: 171-177.—Exchange experiments between nests of Crested Terns indicate that while the parents do not recognize their own eggs or newly hatched chicks individually, they have learned to recognize their own chicks by the time they are two days old—before the chicks begin to wander from the nest. Recognition may be by the calls of the chicks, but the data were insufficient to prove this point.—W.J.B.
- EDDY, J. 1961. Nesting habits of the Black Tern. Flicker, **33**: 3-4.
- FARKAS, T. 1962. Zur Biologie und Ethologie der sudafrikanischen Arten der Gattung *Monticola* (Boie). Die Vogelwelt, **83**: 97-115.—The biotope behavior (territory and courtship), development of behavior, and calls of *M. brevipes* are described, based on observations of free-living and captive birds. This species is similar in many features to *M. saxatilis*. *M. brevipes* lives in the western semi-dry areas of South Africa in stony, sparsely brushy land which is somewhat parklike. It is a permanent resident although some of the first-year birds undertake a short migration in a southeast direction during the dry winter months of May to August.—W.J.B.
- GOEHRING, H. H. 1959. Wood Duck nest in St. Cloud, Minnesota. Flicker, **31**: 2-3.—Account of young leaving nest.—R.W.D.
- GOTTLIEB, G. 1963. "Imprinting" in nature. Science, **139**: 497-498.—The auditory element has been underestimated in studies of initiation of following-response ("imprinting") in ducklings. Hatchling Wood Ducks (*Aix sponsa*), assumed to be innately responsive to the exodus call of the hen, are exposed to the hen's call constantly from at least the early pipping stage of hatching until exodus 20-36 hours later, and thus have opportunity to associate this call with the presence of the hen. Limited data suggest that hens of ground-nesting waterfowl also vocalize during and after hatching of the young. Auditory stimulation is thus thought to be a typical and important component of the stimulative complex initiating imprinting in ducklings.—K.C.P.
- GOTTLIEB, G. 1963. Following-response initiation in ducklings: age and sensory stimulation. Science, **140**: 399-400.—"On the basis of visual stimulation alone, younger ducklings are much less apt than older ducklings to follow a moving model. When the model emits both visual and auditory stimulation, the following-response of the ducklings is greatly enhanced at all ages." (Author's abstract.)
- JAMES, H., AND C. BINKS. 1963. Escape and avoidance learning in newly hatched domestic chicks. Science, **139**: 1293-1294.—Chicks failed to learn either to escape or to avoid shock on the day of hatching. Chicks trained at the age of one day quickly learned to escape but not to avoid shock. Avoidance learning first appeared in chicks trained at the age of two days, and by four days most chicks learned to avoid shock. (Adapted from authors' summary.)—K.C.P.
- LANYON, W. E. 1963. Experiments on species discrimination in *Myiarchus* flycatchers. Amer. Mus. Novitates, no. 2126: 1-16.—In a pilot experiment in New York, a territorial pair of *M. crinitus* exposed to playback tapes of vocalizations of five species of *Myiarchus* reacted only to *crinitus* recordings. Further experiments in Arizona, where *M. tyrannulus*, *M. cinerascens*, and *M. tuberculifer* are common and sympatric, indicate clearly that differences in vocalizations function as the basis for species discrimination in this group. Presented with various combinations of recordings with mounted specimens (both of *Myiarchus* spp. and of unrelated dissimilar birds), each species reacted only to playbacks of its own vocal repertoire. Experimental birds did not discriminate visually among mounts of *Myiarchus* spp.,

- but *Myiarchus* mounts appeared to have more stimulus value than non-*Myiarchus* mounts.—K.C.P.
- LINDMEIER, J. P. 1960. Plover, rail, and godwit nesting on a study area in Mahanomen County, Minnesota. *Flicker*, **32**: 5-9.—Upland Plover, Virginia Rail, Marbled Godwit nesting.—R.W.D.
- LÖHRL, H. 1962. Paarbildung und Polygamie der Rauchschnalbe. *Die Vogelwelt*, **83**: 98-122.—The formation of the pair bond in *Hirundo rustica* is described. The male flies around over the chosen nest site until a female appears, then he flies down to the nest site and displays. When the female becomes interested, the male sings the usual song. Pairing is complete when the female remains overnight with the male in the area of the nest site. One male was initially interested in three females and formed pair bonds with two of them.—W.J.B.
- PEETERS, H. J. 1962. Nuptial behavior of the Band-tailed Pigeon in the San Francisco Bay area. *Condor*, **64**: 445-470.—A wintering flock and a group of permanent residents were studied. Two major vocalization types were cooing and excitement calls. Cooing was most frequent late in the afternoon. Male pre- and post-copulatory displays are described. The display flight of the male seems to be territorial, and intruding males were chased. Both sexes incubate, the female by night. A comparison of the behavior with that of the Wood Pigeon shows significant differences, and might form a basis for generic distinction.—R.E.P.
- SENK, R. 1962. Beobachtungen zur Brutbiologie des Hausrotschwanzes. *Die Vogelwelt*, **8**: 122-127.—Males sought their last year's territories. One formed pair bonds with two females. Two banded males bred in the gray first-year plumage. They molted into a dark second-year plumage with weak wing spectrum, which became lighter after the following annual molt.—W.J.B.
- SKEAD, C. J. 1962. Peter's Finfoot *Podica senegalensis* (Vieillot) at the nest. *Ostrich*, **33**: 31-33.—Behavior of adults and young, with photograph of nest.—M.A.T.
- SNOW, D. W. 1963. The display of the Orange-headed Manakin. *Condor*, **65**: 44-48.—Males in Surinam occupied limited display areas with several singing perches and one or two cleared display perches. Displays and calls are described.—R.E.P.
- THÖNEN, W. 1962. Stimmgeographische, ökologische und verbreitungsgeschichtliche Studien über die Mönchsmeise (*Parus montanus* Conrad). *Ornith. Beob.*, **59**: 103-172.—The territorial songs of the alpine population of the Willow Tit differ markedly from the songs of the species elsewhere in Europe; in fact in audiospectrograms the song of the latter seems more like that of the sympatric Marsh Tit (*P. palustris*) than like that of the alpine birds. The voice of the alpine birds seems closer to that of the American *P. atricapillus*, although (unlike the chickadee's song) it consists of a series of 5-10 short notes, all on the same pitch. Ordinarily the alpine birds do not react to the typical Willow Tit song, but there is a narrow border area where they do reply and where birds sing both kinds of song interchangeably. This appears to be a zone of hybridization, reflected also in morphological characters. (In German; very full English summary.)—E.E.

DISEASES AND PARASITES

- ERICKSON, A. B. 1959. An avian tumor. *Flicker*, **31**: 25.—Large chondrosarcoma tumor on leg of Mallard or Black Duck.—R.W.D.
- GAMBOA, C. J. 1963. Comprobación de *Rhodnius prolixus* extradomiciliario en Venezuela. *Boletín de la Oficina Sanitaria Panamericana*, **54**: 18-25.—Vector of Chagas disease found in nests of Jabiru. Nests described. (In Spanish, English summary.)—R.W.D.

DISTRIBUTION AND ANNOTATED LISTS

- ANON. 1959. Great Blue Heron and Common Egret colonies in Minnesota. Map. Flicker, **31**(2): (inside back cover).—R.W.D.
- BENSON, C. W. 1962. Some additions and corrections to a *Check List of the Birds of Northern Rhodesia*. No. 4. Occ. Pap. Nat. Mus. So. Rhodesia, **26B**: 631-652.—Additional locality records for some 87 species. The subspecies *Quelea q. aethiopica* is recorded from the territory for the first time.—M.A.T.
- BENSON, C. W., AND C. R. S. PITMAN. 1963. Further breeding records from Northern Rhodesia (No. 3). Bull. Brit. Orn. Club, **83**: 32-36.—Useful data on a number of species.—E.E.
- BENSON, C. W., AND C. M. N. WHITE. 1962. Discontinuous distributions (Aves). Proc. First Fed. Sci. Cong., Salisbury, S. Rhodesia, 1960: 195-216.—Discontinuous distributions of African birds are discussed in relation to habitat. Present discontinuities are usually the result of the breakup of a once continuous habitat, but in some cases they are the result of competition with a more successful species, and in others there is no apparent reason why suitable habitat is not occupied.—M.A.T.
- BRECKENRIDGE, W. J. 1960. Western Sandpiper taken in Minnesota. Flicker, **32**: 125.
- BURCHAK-ABRAMOVICH, M. I. 1961. [Nesting of *Falco biarmicus feldeggi* Schlegel in Azerbaijan-Kobystan.] Przeglad Zoologiczny, **5**: 231-237.—A nest of *F. b. feldeggi* was found in 1949 in eastern Azerbaijan (Kobystan), about 100 km SW of Baku. A new breeding species for the USSR. Some ecological and osteological data are given. Data on other birds are given, among which the following is of interest: the Chough (*P. pyrrhocorax*) is a permanent resident on hills between 100 and 400 m., a. s. l. (In Polish, from Russian; English summary.)—F.J.T.
- CLANCEY, P. A. 1962. The White-throated Bee-eater *Merops albicollis* Vieillot in Northern Rhodesia. Ostrich, **33**: 38.—Records a specimen from Kafue in the Coryndon Museum, the first record from Northern Rhodesia.—M.A.T.
- DICKERMAN, R. W. 1959. The jaegers of Minnesota. Flicker, **31**: 30-32.—Specimen reidentification and A.O.U. Check-list range corrections.—R.W.D.
- EISENMANN, E., AND D. L. SERVENTY. 1962. An erroneous Panama record of *Puffinus tenuirostris* and other misidentifications of *P. griseus*. Emu, **62**: 199-201.—A specimen recorded as *P. tenuirostris* (*Auk*, **41**: 306, 1924, record repeated as recently as the 1957 A. O. U. Check-list), proves on reexamination to be *P. griseus*. Other similarly misidentified specimens mentioned.—E.E.
- FARNES, R. F., A. B. ERICKSON, AND M. A. STENLUND. 1960. Nesting distribution of the Greater Prairie Chicken and Sharp-tailed Grouse in Minnesota. Map. Flicker, **32**: (inside back cover No. 2).—R.W.D.
- GASSEL, R. A. 1959. Wintering Virginia Rails in Minnesota. Flicker, **31**: 23.
- HUBER, R. L. 1961. The spring season [Minnesota]. Flicker, **33**: 38-44.—First state specimen of Kentucky Warbler.—R.W.D.
- HUBER, R. L. 1961. Minnesota's second Cattle Egret. Flicker, **33**: 58-59.
- HUBER, R. L. 1961. Breeding range extension of the Eared and Western grebes. Flicker, **33**: 93-94.
- HUNDLEY, M. H., AND F. HAMES. 1962. Birdlife of the Lower Florida Keys. Florida Nat., **35**: 123, 128.—Completes a useful annotated list, published in serial fashion over a period of several years, and, unfortunately, broken into many small pieces.—E.E.
- JOUANIN, C. 1962. Inventaire des oiseaux éteints ou en voie d'extinction conservés au Museum de Paris. La Terre et la Vie, **3**: 257-301.—An extremely useful list of

- the extinct and rare birds in the Paris Museum. Many of the specimens are from the early French expeditions; all were mounts rather than study skins, and apparently have been kept in that condition. For example three of four Whooping Cranes, seven of nine Eskimo Curlews, and three of three California Condors are mounts! Clearly something should be done before expert taxidermists become as scarce as some of the extinct birds here listed. An Eskimo Curlew taken as late as 1930 is listed, locality not stated; and a Passenger Pigeon in 1957 (alas, read 1857). Up-to-the-minute notations on present status of the rare birds are a valuable feature of this list.—D.A.
- KALE, H. W., II. 1963. Occurrence of the Greater Shearwater along the southern Atlantic and Gulf coasts of the U.S. *Oriole*, **28**: 1-4.
- LAND, H. C. 1963. A collection of birds from the Caribbean lowlands of Guatemala. *Condor*, **65**: 49-65.—An annotated list.
- NORTHUP, D. 1962. Lapwing in Palm Beach County [Florida]. *Florida Nat.*, **35**: 134.—Sight report of South American *Belonopterus chilensis*, 1 June 1962. [An escaped or liberated bird?].—E.E.
- PETERSON, M. L. 1959. American Avocets nesting in Minnesota. *Flicker*, **31**: 99. A. O. U. Check-list range extension.—R.W.D.
- VAN DER PLAAT, A. 1961. Lys van wilde voëls vir die Oranje-Vrystaat. *So. African Avifauna Ser.*, Percy FitzPatrick Inst. African Orn., no. 2: 69, R1.00.—A list of the birds of the Orange Free State. Introduction and list in both English and Afrikaans.—M.A.T.
- VAZ-FERREIRA, R., AND E. GERZENSTEIN. 1961. Aves nuevas o poco conocidas en la republica oriental del Uruguay. *Com. Zool. Mus. Hist. Nat. Montevideo*, **5**(92): 1-73.—Notes on birds hitherto unrecorded or almost unknown in Uruguay, indicating specimens, dates and localities, measurements and brief descriptions, with notes on habitat and status. (In Spanish; exceptionally full English summary).—E.E.
- WINTERBOTTOM, J. M., AND M. COURTNEY-LATIMER. 1961. A list of the birds of Little Namaqualand. *So. African Avifauna Ser.*, Percy FitzPatrick Inst. African Orn., no. 1: 46 pp. 20 c. (So. Afr.).—Little Namaqualand is divided into four regions, three of which fall into the "Little Namaqualand" of McLachlan and Liveridge, the fourth being Bushmanland. Distributions are listed by regions, with precise localities for each.—M.A.T.

ECOLOGY AND POPULATION

- ANDERSON, A. H., AND A. ANDERSON. 1963. Life history of the Cactus Wren. Part VI: Competition and survival. *Condor*, **65**: 29-43.—The concluding part of this study with data on mortality and longevity.—R.E.P.
- ANDERSON, K. S., AND H. K. MAXFIELD. 1962. Sampling passerine birds in a wooded swamp in southeastern Massachusetts. *Wilson Bull.*, **74**: 381-385.—Data were obtained on the species, their abundance, and the changes in the age composition of the populations, by mist-netting.—J.T.T.
- BRECKENRIDGE, W. J. 1960. A bird bath count as an indicator of populations. *Flicker*, **32**: 2-4.
- BREWER, R. 1963. Stability in bird populations. *Occas. Papers Adams Center for Ecol. Studies*, no. 7: 1-12.—Population size is least variable in vegetation optimal for each species. This is in accord with the view that a combination of community selection and intolerance to crowding (especially territoriality) is important in regulating density.—R.B.

- HARRIS, S. W., M. A. MORSE, AND W. H. LONGLEY. 1963. Nesting and production of the Mourning Dove in Minnesota. *Amer. Midl. Nat.*, **69**: 150-172.—A detailed study of nesting in an area of Minnesota from 1957-1959. Nesting period extended from early April through October, the nesting pairs on the study area varying from 65 to 100. Renesting, reproductive rate, and predation are all discussed.—D.W.J.
- HASHIMOTO, T. 1962. Ecological study of the Tree Sparrow *Passer montanus*. 1. Age and sex identification. *Tori*, **17**: 163-171.—From April through July, young [= juveniles] can be separated from adults by bill color and color of throat patch. In August and September adults attain pale-based bills and cannot be distinguished externally from young once the latter have replaced the juvenal throat feathers. From October through March bill color "can again be an age criterion" but English summary does not state how. Sexes cannot be distinguished other than by gonad examination. (In Japanese; English summary.)—K.C.P.
- HUNTER, W. F., AND P. H. BALDWIN. 1962. Nesting of the Black Swift in Montana. *Wilson Bull.*, **74**: 409-416.—A colony of *Cypseloides niger* in the Mission Range is described and comparisons are made with Colorado records.—J.T.T.
- KEITH, G. S., AND M. YOSHII. 1962. A short survey of winter birdlife in eastern Hokkaido. *Tori*, **17**: 54-65.—Report of a visit, 8-17 December 1958, to a remote, little-known corner of Japan. A number of species observed were not previously known to winter in eastern Hokkaido. Details given for 16 species; all birds seen listed in tabular form, by locality. In English.—K.C.P.
- MITCHELL, M. J. 1961. Breeding bird populations in relation to grassland succession on the Anoka Sand Plain. [Minnesota.] *Flicker*, **33**: 102-108.
- ROBINSON, T. S. 1963. Illumination preference of Bobwhites. *Occas. Papers Adams Center for Ecol. Studies*, no. 8: 1-10.—In an experimental chamber, nonbreeding males and both breeding and nonbreeding females chose low light intensities, whereas males in breeding condition chose much higher light intensities (mode about 1,800 ft.-candles). Daily pattern of activity and community selection are based on response to light.—R.B.
- ROWAN, M. K., AND G. J. BROEKHUYSEN. 1962. A study of the Karoo Prinia. *Ostrich*, **33**: 6-30.—A detailed life history study of *Prinia maculosa*.—M.A.T.
- SKEAD, C. J. 1962. A study of the Crowned Guinea Fowl *Numida meleagris coronata* Gurney. *Ostrich*, **33**: 51-65.—A life history study of the Guinea Fowl of the eastern Cape, with particular emphasis on food habits. Of interest was the wide variation in crop contents among birds shot from the same flock at the same time of day.—M.A.T.
- WARNER, R. E. 1963. Recent history and ecology of the Laysan Duck. *Condor*, **65**: 3-23.—The completely nonmigratory, primarily terrestrial Laysan Duck was reduced to less than 25 individuals in 1909 but recovered to 688 in 1961. Captives are now being bred in nine locations in America and England. Descriptions of ecology and behavior are included.—R.E.P.
- WINTERBOTTOM, J. M. 1962. The zoo-geographical affinities of the avifauna of the northern and eastern Transvaal. *Ostrich*, **33**: 34-37.—The northern Transvaal, east to Potgietersrust, is a transition zone between the Southwest Arid and Rhodesian Highland districts, but nearer the latter. The lowveld of eastern Transvaal and Swaziland is of northern affinities.—M.A.T.
- WINTERBOTTOM, J. M., AND C. J. SKEAD. 1962. A preliminary classification of bird habitats for the Cape Province south of the Orange River. *So. African Avifauna*

Ser., Percy FitzPatrick Inst. African Orn., no. 3: 8 pp., 10c. (So. Afr.).—Nine major divisions are recognized, with numerous subdivisions in each.—M.A.T.

- YOSHIDA, N. 1962. Breeding ecology of the Streaked Shearwater at Kamurijima I., Maizuru in Kyoto. *Tori*, **17**: 83–108.—A total population of 30,000–36,000 *Calonectris leucomelas* on a small island in the Japan Sea off Honshu was studied for 42 days. Breeding birds are estimated at 12,000 pairs. Reproductive activity begins in late February. A single egg is laid in middle or late June. Incubation period “more than 51 days”; hatching dates between 10 and 20 August. The chick is fed once nightly and grows at ca. 20 gm per day from hatching weight of 50–70 gm to a maximum of 990 gm in mid-October. Parental feeding decreases in October. Adults leave the island first; young leave in late October and November, some still bearing down, and weighing under 500 gm. (In Japanese; English summary.)—K.C.P.

EVOLUTION AND GENETICS

- BOCK, W. J. 1963. Relationships between the birds of paradise and the bower birds. *Condor*, **65**: 91–125.—Three major groups of these birds are characterized by skull morphology: Ptilonorhynchidae, Paradisaeinae, and Cnemophilinae. Jaw muscles in each group parallel the skull structure. Structures are discussed in light of their probable functions. Cranial evidence supports a close relationship between Paradisaeidae and Ptilonorhynchidae, but two subfamilies are described within the latter.—R.E.P.
- BROWN, J. L. 1963. Ecogeographic variation and introgression in an avian visual signal: the crest of the Steller's Jay, *Cyanocitta stelleri*. *Evolution*, **17**: 23–39.—Geographic variation in Steller's Jay is analyzed, with special reference to crest length, frontal streak length, and superciliary length (all expressed relative to wing length, although ratios given for superciliary length range up to 130). Evidence is presented for a secondary contact and subsequent introgression between a northern black-crested and a southern blue-crested type in central Mexico; the two types were therefore analyzed separately. A negative correlation between “crest specialization” and moisture of the environment is explained by relating forest density to humidity; in less humid, more open environments, it is postulated, there is (because of increased visibility) “an increased frequency of aggressive encounters, resulting in increased usefulness of the crest. Correspondingly, there are greater selective pressures for a more highly developed crest in these environments.” Other factors affecting frequency of aggressive encounters are mentioned.—K.C.P.

GENERAL BIOLOGY

- ANDERSON, A. H., AND A. ANDERSON. 1962. Life history of the Cactus Wren. Part V: Fledging to independence. *Condor*, **64**: 199–212.—Young Cactus Wrens reached adult weight at about 38 days of age, were led to roosting nests by adults at night until about 50–70 days old, when they sought separate nests. Subsong sometimes developed at about 30 days, before some of the call notes. By day 32 nest material was picked up and nests were started between three and four months of age.—R.E.P.
- BAKER, J. K. 1962. The manner and efficiency of raptor depredations on bats. *Condor*, **64**: 500–504.
- CONNELL, R. 1962. Stomach contents of Great Horned Owls. *Blue Jay*, **20**: 56–58.—Various mice, pocket gophers, and crows were the chief food items of 36 owls trapped at a game farm.—R.W.N.

- CUTHBERT, N. L. 1962. The Michigan Audubon Society Phoebe study (Part II). Jack-pine Warbler, **40**: 68-83.—Information on 100 nestings includes nest construction, egg laying, incubation, hatching, parental care of young, taking flight, and cowbird parasitism. Three distinct, but diminishing "waves" of reproductive activity exist, spaced about 30 days apart. An exemplary cooperative study.—R.B.
- DE SCHAUNSEE, R. M. 1962. Notes on Venezuelan birds, with a history of the rail, *Coturnicops notata*. Notul. Nat., no. 357: 1-8.—Notes chiefly on rails (nine species) taken on a rice plantation in northeastern Portuguesa, Venezuela. Soft parts of specimens are given. The very rare *C. notata* is discussed. A few non-rail species new to the area are also mentioned.—E.E.
- DIXON, K. L. 1962. Notes on the molt schedule of the Plain Titmouse. Condor, **64**: 134-139.
- DORST, J. 1962. Nouvelles recherches biologiques sur les trochilidés des hautes Andes péruviennes (*Oreotrochilus estella*). L'Oiseau, **32**: 95-126.—One of the fullest accounts of the biology of any hummingbird, a species of the high Andes (4,000 meters) in Peru, which attaches its nests most frequently below a rock ledge, often within a dark cave, the glue being a sugary liquid. Daily rhythm, food, territory, reproductive behavior, incubation, development of young, nocturnal torpidity are all described, with photographs, drawings, and graphs. Although the relationship between the sexes is the one usual in hummingbirds (no pair bond), one aspect is surprising: the male is fed by the female (rather than the reverse) just before copulation. (In French; English summary.)—E.E.
- ENG, R. L., AND G. W. GULLION. 1962. The predation of Goshawks upon Ruffed Grouse on the Cloquet Forest Research Center, Minnesota. Wilson Bull., **74**: 227-242.—Thirty per cent of the known losses of *Bonasa umbellus* resulted from predation by a pair of *Accipiter gentilis*. Losses were heaviest in early spring and near the hawk's nest site. Drumming grouse were most vulnerable.—J.T.T.
- FISLER, G. F. 1962. Variation in the morning awakening time of some birds in south-central Michigan. Condor, **64**: 184-198.—Throughout the year awakening time was closely related to sunrise and civil twilight, but in spring many birds tended to awake earlier than usual relative both to sunrise and civil twilight. The order of awakening of different species varied through the year.—R.E.P.
- GATES, J. M. 1962. Breeding biology of the Gadwall in northern Utah. Wilson Bull., **74**: 43-67.—Included in this study of *Anas strepera* are time of nesting, behavior of breeding pairs, nesting success, renesting, and related subjects.—J.T.T.
- GAVRILOV, E. I. 1962. A contribution to the biology of the Spanish Sparrow *Passer hispaniolensis transcaspicus*. Ibis, **104**: 416-417.—Some aspects of the postbreeding biology of this colonial ploceid are presented. Included are notes on flocking and feeding of fledglings, migratory departure of adults earlier than young, the fact that migrating flocks of young birds tended to be sexually segregated, and that birds do not begin molting until after departure on migration. In colonies studied in Kazakhstan, males predominated, which disparity was statistically significant among fledglings and adult birds.—G.C.
- GÉROUDET, P. 1962. La saison de nidification en 1961. Nos Oiseaux, **26**: 247-253.—Summary of nesting success of birds in Switzerland; includes non-nesting summer species.—M.D.A.
- HAMILTON, T. H. 1962. Species relationships and adaptations for sympatry in the avian genus *Vireo*. Condor, **64**: 40-68.—Separates genus into subgenus *Vireo* with eye-rings, wing-bars, and thicket foraging, and subgenus *Vireosylva* lacking eye-rings and wing-bars and having arboreal habits. Allohiemic migration seems to fa-

- cilitate race formation, synhiemic migration or continuous breeding distribution retard it. The author concludes that in territorial passerines sympatric development of habitat cooccupancy generally occurs between older and/or more diverged congeners whereas younger and/or less diverged ones tend to develop territorial separation in sympatry.—R.E.P.
- HANSON, H. C. 1962. Characters of age, sex, and sexual maturity in Canada geese. Illinois Natural History Survey Biol. Note no. 49: 1-15.—A key and photographs for distinguishing immature, yearling, and adult males and females in fall and winter for *B. c. interior* in the Mississippi flyway.—R.B.
- HAVERSCHMIDT, F. 1962. Notes on some Surinam breeding birds (II). *Ardea*, **50**: 173-178.—Data on breeding of several species for which little or no published information exists. (In English.)—E.E.
- HAVERSCHMIDT, F. 1962. Notes on the feeding habits and food of some hawks of Surinam. *Condor*, **64**: 154-158.
- HOFFMAN, L. 1962. La nidification des Flamants en 1959. Station Biologique de la Tour du Valat, 6th Rept.: 78-79.—Some 3,650 pairs of Flamingos produced 585 young; major predators were gulls.—M.D.A.
- HOFFMAN, L. 1962. Station de baguage de Camargue. Station Biologique de la Tour du Valat, 6th Rept.: 34-65.—Report of banding operations of migrants and nesting birds for 1959.—M.D.A.
- HOFFMAN, L., AND R. KUNZ. 1962. Sauvetage d'Aigrettes et de Bihoreaux dans une colonie detruite. Station Biologique de la Tour du Valat, 6th Rept., 80-90.—The salvaging of young egrets and night herons is described following the destruction of their colony.—M.D.A.
- KAHL, M. P., JR. 1962. Bioenergetics of growth in nestling Wood Storks. *Condor*, **64**: 169-183.—Measurements of body weights, tarsus, bill and wing lengths, and of food consumption, leading to estimates of feeding efficiency and comparison with chickens and Sandhill Cranes.—R.E.P.
- KENAGA, E. E. 1962. Mourning Dove nesting and banding in central Michigan. Jack-pine Warbler, **40**: 90-93.—Summary of 736 nests as to site and status at last visit. One banded bird recovered in Jalisco, Mexico.—R.B.
- LIVERSIDGE, R. 1962. The breeding biology of the Little Sparrowhawk *Accipiter minullus*. *Ibis*, **104**: 399-406.—A pair was observed during one breeding season in South Africa. Habitat, territoriality, courtship, and nest building are described. Also included are data on incubation, nestling care and development, food, and vocalizations in general. The female tended to assume the major share of the duties of nestbuilding through care of the young, always with some assistance from the male.—G.C.
- LYON, D. L. 1962. Comparative growth and plumage development in *Coturnix* and Bobwhite. *Wilson Bull.*, **74**: 5-27.—Growth, plumage development, and molt of pen-reared *Coturnix coturnix japonica* are described and compared with *Colinus virginianus* reared under the same conditions. Criteria are described for distinguishing the sexes and determining age in *Coturnix*.—J.T.T.
- MAHER, W. J. 1962. Breeding biology of the Snow Petrel near Cape Hallett, Antarctica. *Condor*, **64**: 488-499.—Birds returned to breeding grounds 31 October and seem then to desert cliffs for a period of feeding at sea before egg-laying. There are about 150 days from arrival to fledging. Fledging coincides with the peak of food availability. Molt occurs during the breeding cycle.—R.E.P.
- MANSUETI, R. J. 1961. Waterfowl predation by and records of the Great Black-backed Gull in Chesapeake Bay during winter and spring. *Chesapeake Science*, **2**: 102-104.—*Larus marinus* seen to kill Lesser Scaup, Ruddy Duck, Horned Grebe.

- Of little importance in total duck mortality. This gull increasing.—H.B.
- MAYFIELD, H. 1962. Changes in the natural history of the Toledo region since the coming of white man. Jack-pine Warbler, **40**: 36-52.
- MEANLEY, B. 1962. Feeding behavior of the Red-winged Blackbird [*Agelaius phoeniceus*] in the Dismal Swamp region of Virginia. Wilson Bull., **74**: 91-93.
- NOLAN, V., JR., AND R. SCHNEIDER. 1962. A Catbird [*Dumatella carolinensis*] helper at a House Wren [*Troglodytes aëdon*] nest. Wilson Bull., **74**: 183-184.
- NOLAN, V., JR., AND D. P. WOOLDRIDGE. 1962. Food habits and feeding behavior of the White-eyed Vireo. Wilson Bull., **74**: 68-73.—The stomach contents of 67 *Vireo griseus* consisted mostly of insects, with moderate quantities of seeds present in January and October. The feeding behavior of the species was observed in Indiana.—J.T.T.
- PEÑA, L. E. 1962. Notes on South American flamingos. Postilla, **69**: 1-8.—Data on distribution, migration, and relative abundance of *Phoenicopterus chilensis*, *Phoenicoparrus andinus*, and *P. jamesi*, with discussion of external morphology supplemented by a color diagram.—E.E.
- PENOT, J. 1962. Rapport Ornithologique pour 1959. Station Biologique de la Tour du Valat, 6th Rept.: 66-77.—Report on the nesting success of 49 species, and the occurrence of 32 less commonly observed species.—M.D.A.
- PETTINGILL, O. S., JR. 1962. A hybrid between a King Eider [*Somateria spectabilis*] and Common Eider [*S. mollissima*] observed in Iceland. Wilson Bull., **74**: 100-101.
- ROWLEY, J. S., AND R. T. ORR. 1962. The nesting of the White-naped Swift. Condor, **64**: 361-367.—No nest is built. The eggs are deposited in a depression in dry sand on ledges in caves. The authors feel this species should not be included in the genus *Cypseloides*, without more detailed anatomical studies, because of the nesting habits.—R.E.P.
- SAGE, B. L. 1962. Albinism and melanism in birds. British Birds, **55**: 201-224.—A good general review of the causes of albinism and melanism. Both conditions can be produced by diet (and probably disease and injury) as well as by genetic causes.—E.E.
- SAVILE, D. B. O. 1962. Gliding and flight in the vertebrates. Amer. Zool., **2**: 161-166.—A general paper on flight in vertebrates, mainly birds. Savile stresses the stages leading up to gliding, and from gliding to true flight. He also stresses some of the problems of change in wing size associated with change in body size as discussed recently by T. H. Hamilton. Savile concludes that we should not draw sweeping conclusions about the size and shape of wings without considering the whole natural history of the species.—W.J.B.
- SELANDER, R. K., AND D. J. NICHOLSON. 1962. Autumnal breeding of Boat-tailed Grackle in Florida. Condor, **64**: 81-91.—Observations of successful breeding in city parks in Orlando in November of three years. Apparently a postrefractory period of resumption of gonadal activity is permitted by favorable environment resulting from horticultural practices.—R.E.P.
- SKUTCH, A. F. 1962. Life histories of honeycreepers. Condor, **64**: 92-116.—Notes on Green Honeycreeper, Turquoise Dacnis, Scarlet-thighed Dacnis, Blue Honeycreeper, and Shining Honeycreeper and comments on systematics of the family.—R.E.P.
- SKUTCH, A. F. 1962. Life history of the White-tailed Trogon (*Trogon viridis*). Ibis, **104**: 301-313.—Includes description of voice, food (fruit and some insects caught on the wing), nest-hole excavation (by both sexes in soft wood during the

- dry month of March), egg-laying (from mid-April to August, clutch size of 2-3 white eggs), alternate incubation by both parents (incubation period of 16-17 days), hatching of young and schedule of feeding and brooding by both parents, lack of nest sanitation, and nest departure by the fledged young at the age of 25 days. The young are fledged by 14 days of age, but remain in the nest.—G.C.
- SKUTCH, A. F. 1962. The constancy of incubation. *Wilson Bull.*, **74**: 115-152.—In most species in which only one parent incubates, the eggs are covered from 60 to 80 per cent of the daylight hours. The constancy of incubation is affected by a number of characteristics: whether the young are nidicolous or nidifugous, body size, behavior of the male, type of nest, temperature, etc. Constancy has only a slight effect on the length of the incubation period.—J.T.T.
- SNOW, D. W. 1962. A field study of the Golden-headed Manakin, *Pipra erythrocephala*, in Trinidad, W. I. *Zoologica*, **47**: 183-198.—As indications of the thoroughness of this study, 625 individuals were trapped and banded, and 15 nests found over a period of roughly three years. Taken in connection with Snow's extensive previous papers on manakins, they comprise in several respects the most intensive studies ever made of tropical forest birds.—D.A.
- SNOW, D. W. 1962. The natural history of the Oilbird, *Steatornis caripensis*, in Trinidad, W. I., Part 2, population, breeding, ecology, and food. *Zoologica*, **47**: 199-221.—The concluding portion of Snow's extensive studies of this remarkable species. The only bird known to use echo-location, it now seems that it may be one of the few birds to find some of its food by olfactory clues. An extremely detailed definitive study.—D.A.
- STATION BIOLOGIQUE DE LA TOUR DU VALAT. 1962. Sixième compte rendu d'activité et recueil des travaux. 1959. 13 pp. plus reprints.—Annual report of the biological station in the Camargue, listing the bibliography of papers from 1957 to the end of 1959, and including reprints of some long papers, several of them on birds, notably L. Hoffman's accounts of banding and of the status of the breeding flamingos, P. H. Jones' observations on migration in 1959 and 1960, and J. J. Swift's notes on behavior of the Whiskered Tern. (In French; some reprints in German or English.)—E.E.
- STOTTS, V. D., AND D. E. DAVIS. 1960. The Black Duck in the Chesapeake Bay of Maryland: breeding behavior and biology. *Chesapeake Science*, **1**: 127-154.—Marked birds studied for six years. Eggs early as 9 March; nesting peak 20 April; nest density 0.6 to 15.2 per acre. Clutch declines from 10.9 to 7.5 during season (360 clutches). Young females, slightly smaller clutches. Of 574 nests, 38 per cent hatched at least 1 egg. Estimated 100 females would raise 510 young to flying age.—H.B.
- TARR, H. E. 1962. Observations on the White-breasted Sea-Eagle. *Australian Bird Watcher*, **1**: 194-196.—Data on nesting and hunting of *Haliaeetus leucogaster*.—E.E.
- WATSON, G. E. 1962. Molt, age determination, and annual cycle in the Cuban Bobwhite. *Wilson Bull.*, **74**: 28-42.—From a study of 130 specimens of *Colinus virginianus cubanensis*.—J.T.T.
- WATSON, G. E. 1962. Three sibling species of *Alectoris* partridge. *Ibis*, **104**: 353-367.—The partridge *Alectoris graeca*, formerly considered a polymorphic species in southeastern Europe and western China, is now divided into three separate, sibling species, *A. graeca*, *A. chukar*, and *A. magna*, on the basis of lack of hybridization in overlap areas (southeastern Europe, western China), morphological, ecological, and behavioral differences. Display in this genus emphasizes morphological charac-

ters which may be useful as warning stimuli in prevention of mixed flocks. In the two species in the Balkans, *A. chukar* and *A. graeca*, the present-day altitudinal and, possibly, slight morphological and behavioral differences, act as reproductive isolating mechanisms, although one or both species may have only recently invaded the region.—G.C.

WETHERBEE, D. K. 1962. Breeding of Red-winged Blackbird [*Agelaius phoeniceus*] in captivity. *Wilson Bull.*, **74**: 90.

MIGRATION AND ORIENTATION

ASHMOLE, M. J. 1962. The migration of European thrushes: a comparative study based on ringing recoveries. *Ibis*, **104**: 314–346.—A study of banded and recovered birds of six species of European thrushes in western Europe. Nearly all Scandinavian and German (and more eastern) thrushes migrate south in autumn, while farther west about half of the individuals remain resident. In the Blackbird (*Turdus merula*), some residents remain in all parts of its range except in central Scandinavia. There is an over-all southwesterly trend in European thrush migrations. Scandinavian thrushes tend to winter farther south than German, Belgian, and Dutch birds. The same is true of thrushes from northern Great Britain versus those of southern England. An east–west segregation of winter ranges appears to occur, and there is an overlap between northeastern European and British thrushes. In the Blackbird, there was great variability in migration; some individuals may migrate in one year and not in another, or they may migrate at different times from year to year. To be concluded.—G.C.

BOWBEER, T. A., AND I. F. STEWART. 1962. Thermal convection aiding trans-Saharan migration? *Ibis*, **104**: 424–426.—Small passerine migrants appear to accomplish a great feat of endurance in their crossing of the inhospitable Sahara. Rising thermals may materially aid a bird in maintaining altitude without additional energy expenditure, by supplying upward force exceeding the bird's tendency to fall during gliding, and by allowing the bird to convert this excess upward force into forward thrust in active flight. The calculations are theoretical, as present knowledge of avian fat metabolism is poor. It is suggested that day–night radar measurements could be made on birds to determine if diurnal thermals indeed have any effects.—G.C.

GRABER, R. R., AND S. S. HASSLER. 1962. The effectiveness of aircraft-type (APS) radar in detecting birds. *Wilson Bull.*, **74**: 367–380.—A small radar proved to be very useful in obtaining information on the density and altitude of night migration. Its uses and limitations are discussed.—J.T.T.

HAMILTON, W. J., III. 1962. Celestial orientation in juvenile waterfowl. *Condor*, **64**: 19–33.—Ducklings trained to find water always in one compass direction could do so with only sun or stars for directional cues, but were unable to orient if these were obscured and no other cues were present.—R.E.P.

HAMILTON, W. J., III. 1962. Evidence concerning the function of nocturnal call notes of migratory birds. *Condor*, **64**: 390–401.—The call note of captive Bobolinks when they are most restless at night appears the same as that of migrants, and when a tape of it is played back, increases the restlessness. The function of this call for maintenance of flock orientation is discussed.—R.E.P.

HAMILTON, W. J., III. 1962. Does the Bobolink navigate? *Wilson Bull.*, **74**: 357–366.—A female *Dolichonyx oryzivorus* was captured in North Dakota, shipped to California, and tested there in August for directional activity at night. Her preferred direction shifted from one towards North Dakota on the first night to one

- parallel to the normal fall migration route on the third night. She escaped and was recaptured in North Dakota in the following June.—J.T.T.
- JONES, P. H. 1962. Observations sur la migration à Beauduc, Camargue, aux Printemps 1959 et 1960. Station Biologique de la Tour du Valat, 6th Rept., 16 pp.—Migrants are discussed from the standpoint of height and direction of flight, and the relationship of wind direction. (In French; English summary.)—M.D.A.
- NISHIDA, S. 1962. Migration of *Pernis apivorus* observed in northern Kiushiu. *Tori*, **17**: 201–204.—The only Japanese raptor reported previously as migrating in flocks is *Butastur indicus*. The writer reports September and October flocks of 11, 50, and 1,500 Honey Buzzards, and maps their probable migration route. (In Japanese; English summary.)—K.C.P.

OBITUARIES AND BIOGRAPHIES

- DELACOUR, J. 1962. Memories of Japanese ornithologists. *Tori*, **17**: 9–13.—Reminiscences of Taka-Tsukasa, Hachisuka, Kuroda, and Yamashina.—K.C.P.

MANAGEMENT AND CONSERVATION

- BERNARD, R. F. 1963. Studies of the effects of DDT on birds. Michigan State Univ. Mus. Publ., Biol. Ser., **2**: 155–192.—DDT levels in brain (and breast muscle) of dead Robins and House Sparrows were similar in experimentally poisoned birds and those found dead in areas where DDT spraying for insect control was practiced. Amounts of DDT in other tissues varied greatly. Feeding tests indicated that birds on low DDT diets for long periods or high dosages for short periods are able to eliminate the DDT or store it in tissues, notably fat, where it produces no toxic effects. With rapid usage of fat, however, such as might occur in migration or other times of rapid energy use, the stored DDT appears to be released to sensitive organs (such as the brain) resulting in tremors and death.—R.B.

PHYSIOLOGY

- BARTHOLOMEW, G. A., J. W. HUDSON, AND T. R. HOWELL. 1962. Body temperature, oxygen consumption, evaporative water loss, and heart rate in the Poor-will. *Condor*, **64**: 117–125.—Body temperature is variable in normally alert birds, ranging from 35–43.5°C. The very low basal metabolic rate (0.8 cc. O₂/gm/hr.) permits tolerance of sustained high temperatures.—R.E.P.
- GRABER, R. R. 1962. Food and oxygen consumption in three species of owls (Strigidae). *Condor*, **64**: 473–487.—Estimates of gross energy requirements for Long-eared, Short-eared, and Saw-whet owls based on pellet analysis and on indirect calorimetry. Standard (basal) rates are comparable to those of other birds of similar weights. Oxygen consumption at basal levels peaked at night and was lowest at midday under aviary conditions. Food habits varied between roosts and through the year.—R.E.P.
- HÖHN, E. O. 1962. A possible endocrine basis of brood parasitism. *Ibis*, **104**: 418–421.—Brood parasitism occurs in quite unrelated groups and is unlikely to involve deficiencies of the same factor in the mechanisms controlling the phases of reproductive behavior affected. In the Brown-headed Cowbird the skin fails to respond to oestrogen and prolactin to form a brood patch; this is at least one of the factors involved in failure to incubate. But in the European Cuckoo, experiments may well show that this bird is deficient in the secretion of prolactin.—G.C.
- HOWELL, T. R., AND G. A. BARTHOLOMEW. 1962. Temperature regulation in the Red-tailed Tropicbird and the Red-footed Booby. *Condor*, **64**: 6–18.—Measurements of egg, chick, juvenile, and adult temperatures. Both species show diurnal

- temperature cycles. Heat loss by panting (tropicbird) and gular flutter (booby) is important and may be augmented by loss from the feet (both species).—R.E.P.
- LORTS, B. 1962. Photoperiod and the refractory period of reproduction in an equatorial bird, *Quelea quelea*. Ibis, **104**: 407-414.—Males of the equatorial Weaver Finch, *Quelea quelea*, in reproductive condition, showed an accelerated internal reproductive rhythm by increase in testes size when exposed to an increased day length of 17 hours. The birds then quickly passed into a premature refractory period, during which the testes did not respond to increased photoperiod. This non-responsive period was about six weeks long, and subsequent short photoperiods did not dissipate it nor did long photoperiods lengthen it. Continued exposures to short days of eight hours resulted in the testes remaining regressed throughout the experiments. It is concluded that this species operates with a semi-autonomous internal reproductive rhythm, and the refractory period is independent of photoperiodic fluctuations.—G.C.
- MORRISON, P. 1962. Modification of body temperature by activity in Brazilian hummingbirds. Condor, **64**: 315-323.—Basal temperatures were 38.4° to 39.3°C. Mild disturbance increased the temperature of resting birds and vigorous flight increased it by 2.2°C. Night level was 1.5°C lower than day level at comparable activity.—R.E.P.
- PHILLIPS, R. E., AND A. VAN TIENHOVEN. 1962. Some physiological correlates of Pintail reproductive behavior. Condor, **64**: 291-299.—Females from courting flocks on the Manitoba breeding grounds had small ovaries and oviducts and inactive thyroids. Nesting females showed much greater activity of all three while laying, but much less activity during incubation.—R.E.P.
- PILLA, A. M. 1962. Su alcuni caratteri delle uova di quaglia giapponese (*Coturnix coturnix japonica* Temminck e Schlegel). Ric. Zool. Appl. Caccia, **35**: 1-23. Univ. Bologna.—Eggs of Japanese Quail laid in captivity by two experimental groups of hens are compared as to length, width, and weight. The first group hatched on 14 March 1961, and began to lay on 14 May; their eggs were measured until 10 July. The birds were kept in Bologna, Italy in batteries without artificial illumination or heat. The second group, daughters of the first group, were laid from October to January, 1962, being provided with some artificial heat and enough illumination to give about 16 hours of light a day. In both groups the size and weight of the eggs increased until standard size was attained between the third to fifth weeks after commencement of laying. The eggs of the first group reached maximum size earlier and at each stage were bigger and heavier. There was significant correlation between eggs of sister hens. (In Italian; English summary.)—E.E.
- POULSON, T. L., AND G. A. BARTHOLOMEW. 1962. Salt utilization in the House Finch. Condor, **64**: 245-252.—Determinations of serum and urine sodium and chloride concentrations from birds given different salt concentrations in their drinking water. With 0.3 M NaCl in the water, House Finches were able to produce urine more than twice as concentrated as the serum. Activity was inversely related to NaCl concentration in water, and only those birds able to reduce activity could survive the highest concentrations.—R.E.P.
- SCHULTZ, V. 1963. Radionuclides and ionizing radiation in ornithology. A selected bibliography on wild and domestic birds. U.S. AEC report TID-17762. 27 pp. [\$0.75 from Office of Technical Services, Dept. of Commerce, Washington 25, D.C.]
- SCHWARZ, D. 1962. Untersuchungen zur biologischen Bedeutung der Salzdrüsen bei freilebenden Sturmmöwen (*Larus canus* L.). J. f. Orn., **103**: 180-186.—The biological significance of the nasal (= salt) gland in gulls was investigated by removal

of the glands. The birds were banded with color bands, released, and observed during the following days. Adults can live during the summer without salt glands. Captive birds with the salt glands removed were injected with NaCl solution in much higher concentrations than experienced in natural conditions. No visible effects were seen. It was concluded that an osmotic problem does not exist during the summer. It is noted that when gulls drink, they seek fresh water. The significance of salt glands during other seasons must still be studied. Two of the birds operated on in 1961 were observed again on 18 April 1962, showing that glandless birds can survive the rest of the year.—W.J.B.

TAXONOMY AND PALEONTOLOGY

- AMADON, D. 1962. A new genus and species of Philippine bird. *Condor*, **64**: 3-5.
- CLANCEY, P. A. 1962. The South African races of the Familiar Chat *Cercomela familiaris* (Stephens). *Ostrich*, **33**: 24-28.—Seven races recognized in southern Africa.—M.A.T.
- CLANCEY, P. A. 1963. Miscellaneous taxonomic notes on African birds. XX. *Durban Mus. Novit.*, **6**: 231-264.—The latest in a series of studies begun by the author in 1952. They deal primarily with birds from the southern third of Africa, and for anyone working in this region they are indispensable. The present paper deals with the following species: *Smithornis capensis*, *Muscicapa striata*, *Rhinopomastus cyanomelas*, *Lybius leucomelas*, *Mirafra apiata*, *Calandrella cinerea*, *C. starki*, *C. magnirostris*, *Motacilla capensis*, *Macronyx capensis*, *Parisoma layardi*, *Eremomela gregalis*, *Cisticola subruficapilla*, *Prinia maculosa*, *Parus afer*, *Serinus flaviventris*, *S. canicollis*, *S. leucopterus*, and *Emberiza capensis*. The following races are described as new: *Smithornis capensis cryptoleucus* and *S. c. conjunctus*, *Macronyx capensis latimerae*, *Parisoma layardi subsolana*, *Prinia maculosa psammophila*, *Parus afer arens*, *Emberiza capensis vivacea*.—M.A.T.
- DICKERMAN, R. W., AND D. W. WARNER. 1962. A new Orchard Oriole from Mexico. *Condor*, **64**: 311-314.
- EISENMANN, E., AND T. R. HOWELL. 1962. The taxonomic status of the hummingbirds *Chalybura melanorrhoea* and *Chalybura urochrysis*. *Condor*, **64**: 300-310.—*Chalybura melanorrhoea* from Central America, whose status has been considered doubtful, appears to interbreed with the adjacent form of western Panama, *C. urochrysis isaurae*, and should be treated as a race of *C. urochrysis*.—R.E.P.
- HOWARD, H. 1962. A comparison of avian assemblages from individual pits at Rancho La Brea, California. *Los Angeles County Mus. Contrib. Sci.*, **58**: 1-24.—Avifaunas of 13 pits at Rancho La Brea are compared on the basis of number of individuals per species. Of 133 species noted, 19 are extinct; no one pit contained all species. Three pits differ markedly from eight others and are considered to be of more recent date of accumulation. Two pits assume an intermediate position. Thirteen species are considered critical markers of a typical Pleistocene pit avifauna. One pit stands out ecologically because of a large representation of water birds.—H.H.
- HOWARD, H. 1962. A fossil bird, Caracara, from Santa Rosa Island (Contributions from the Los Angeles Museum Channel Islands Biological Survey, no. 36). *Bull. So. California Acad. Sci.*, **61**: 227-228.—The extinct *Caracara prelutosus* (Howard) described from the Pleistocene of Rancho La Brea, is recorded from the Pleistocene of Santa Rosa Island, California, on the basis of tarsometatarsus and tibiotarsus.—H.H.

- JOHNSTON, R. F. 1962. The taxonomy of pigeons. *Condor*, **64**: 69-74.—Agrees with split of arboreal pigeons into "Old World" and "New World" but puts American Band-tailed Pigeons in *Columba*.—R.E.P.
- LANYON, W. E. 1963. Notes on a race of the Ash-throated Flycatcher, *Myiarchus cinerascens pertinax*, of Baja California. *Amer. Mus. Novitates*, no. 2129: 1-7.—A suggestion by L. I. Davis that "a difference in song pattern" between the Baja California population (*pertinax*) of the Ash-throated Flycatcher and the nominate race indicates that the former "may have attained a development sufficiently different from *cinerascens* to be considered specifically "distinct" is completely refuted. Sound spectrograms of *pertinax* vocalizations do not differ from Sonora and Arizona samples of *cinerascens* when homologous vocalizations are compared. Davis' statement that "*pertinax* and *cinerascens* are not found together" is misleading, as the former is the extreme expression of a clinal tendency in a continuous north-south distribution, not a disjunct allopatric population. No vocal or morphological differences between *pertinax* and *cinerascens*, other than size, were found.—K.C.P.
- LAWSON, W. J. 1962. On the geographical variation in the Black-headed Oriole *Oriolus larvatus* Lichtenstein of Africa. *Durban Mus. Novit.*, **6**: 195-201.—Six races are recognized and *Oriolus larvatus tibicen*, Sul do Save, Moçambique, is described as new.—M.A.T.
- LAWSON, W. J. 1962. Systematic notes on African birds. I. *Durban Mus. Novit.*, **6**: 213-230.—Discusses the variation within the southern third of Africa of five species: *Upupa epops africana*, *Stenostira scita*, *Batis fratrum*, *Ploceus ocularis*, *Trochocercus cyanomelas*. Three new races are described: *Stenostira scita saturator*, *Batis fratrum ultima*, *Ploceus ocularis brevior*.—M.A.T.
- LUTTSCHWAGER, J. 1959. Zur systematischen Stellung der ausgestorbenen Drontevogel Gattung *Raphus* (*Didus*) und *Pezophaps*. *Zool. Anz.*, **162**: 129-148.—On the basis of comparative osteology, Luttschwager suggests that the Dodo and Solitaire should not be included in the Columbiformes, but that they should be placed in the Gruiformes near the Rallidae.—W.J.B.
- MAINARDI, D. 1962. Immunological data on the phylogenetic relationships and taxonomic position of flamingoes (Phoenicopteridae). *Ibis*, **104**: 426-428.—Red-cell antigens of the Greater Flamingo, *Phoenicopterus ruber*, are compared with species of Anseriformes and Ciconiiformes. These studies show that the three groups have about the same proportion of common antigens. The author suggests that flamingoes be placed in their own order, with the other two considered as related orders, all three derived from some common ancestor.—G.C.
- MAINARDI, D., AND A. M. TAIBEL. 1962. [Phylogenetics of the Galliformes.] *Istituto Lombardo (Rend. Sc.) B* **96**: 118-130.—Immunological data (red-cell antigens), together with evidence from morphology, hybridization, and paleontology, indicate that gallinaceous birds arose from a cracid-like stock. Available data justify recognition of four families: Cracidae, Megapodidae, Phasianidae (including guinea-fowl and turkeys), and Opisthocomidae. Relationships of various genera are discussed. (In Italian; full English summary.)—E.E.
- MAINARDI, D., AND A. M. TAIBEL. 1962. [Immunogenetic study on the phylogenetic ancestry in the order Galliformes.] *Istituto Lombardo (Rend. Sc.) B* **96**: 131-140.—On the assumption that the possession of common red-cell antigens indicates relationship and different antigens indicate divergence, *Numida* and *Meleagris* are considered true Phasianidae. In the genera studied, *Pavo* is nearer to *Numida* than to true pheasants and *Meleagris* is closer immunologically to the true pheasants than are *Pavo* and *Gallus*. The Cracidae and Megapodidae are quite distinct from

- the Phasianidae. The only megapode studied, *Alectura*, seemed about equally distant immunologically from the Cracidae and Phasianidae, although allied to both. (In Italian; full English summary.)—E.E.
- MARPLES, B. J. 1960. A fossil penguin from the late Tertiary of North Canterbury. Rec. Canterbury Mus., **8**: 185-195, 5 pls., 2 figs.—*Palaeospheniscus novaezealandiae* described from a partial skeleton found lying free on beach at Motunau, North Canterbury; probably of Waitotaran stage, Lower Pliocene.
- MILLER, A. H. 1962. The history and significance of the fossil *Casuarius lydekkeri*. Rec. Australian Mus., **25**: 235-238, 1 fig.—Occurrence of a cassowary in the Pleistocene of New South Wales, Australia, was announced by Lydekker in 1891 from examination of a cast sent to the British Museum from the Australian Museum. Rothschild in 1911 based his description of *Casuarius lydekkeri* on Lydekker's account, but with erroneous allocation to Queensland. The present study is based on the original fragment of a right tarsometatarsus from which the cast was made, and on the cast, both compared with material in London. It is concluded that *C. lydekkeri* is a poorly differentiated Pleistocene representative of the small modern *C. bennetti* group, with the Wellington Valley, New South Wales, as the type locality.
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- RYDZEWSKI, W. 1962. [On the classification of birds.] Przegląd Zoologiczny, **6**: 167-171.—Two systems of classification of birds, that of Wetmore and that of Berndt and Meise, are discussed. Wetmore's system is recommended to be officially accepted by the (Polish) Academy for its publications. (In Polish; English summary.)—F.J.T.
- VAURIE, C. 1961. Systematic notes on Palearctic birds, no. 50. The Pteroclididae. Amer. Mus. Novitates, no. 2071: 1-13.—Reviews of *Pterocles exustus* (six races admitted), *P. orientalis* (two races), *P. coronatus* (five races), and *Syrrhaptes tibetanus* (considered monotypic). The "Barred Sandgrouse complex" consists of four forms, *P. lichtensteinii*, *P. indicus*, *P. bicinctus*, and *P. quadricinctus*, best considered species; *lichtensteinii* is sympatric with *quadricinctus* and probably with *indicus*. The genus *Syrrhaptes* should not be subdivided into two monotypic genera.—K.C.P.

- VAURIE, C. 1962. A systematic study of the Red-backed Hawks of South America. *Condor*, **64**: 277-290.—Study of museum material of *Buteo polyosoma* and *Buteo poecilochrous* supports their specific rank.
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