PERIODICAL LITERATURE

EDITED BY GLEN E. WOOLFENDEN

Anatomy and Embryology

Burton, P. J. K. 1969. An abnormality of the hyoid apparatus in a Lapwing (*Vanellus vanellus*). Bull. Brit. Ornithol. Club, 89: 134–137.—Left epibranchial horn of hyoid apparatus had been broken, doubled back, and then attached to remainder of horn through cartilaginous fusion and connective tissue binding. Cause of breakage unknown.—F.B.G.

McKean, J. L. 1969. The brush tongue of Artamidae. Bull. Brit. Ornithol. Club, 89: 129–130.—*Artamus leucorhynchus*, *superciliosus*, *cinereus*, and *cyanopterus* have brush-tipped tongues (illustrated) that superficially resemble tongues of the Zosteropidae.—F.B.G.

Olyphant, Jr., M. 1969. A most unusual and unique Sparrow Hawk. Loon, 41: 4–7.—A well-feathered immature female found in Minnesota in June 1968 had double flight elements on both wings, including primaries, secondaries, alulae, and underwing coverts.—R.W.N.

Behavior

Brackbill, H. 1969. A Carolina Wren shadow-boxing. Wilson Bull., 81: 470.

Clark, A. 1969. The behaviour of the White-backed Duck. Wildfowl, 20: 71–74.—Limited behavioral observations of the poorly known *Thalassornis leuconotus*, including resting, feeding, flight, voice, comfort movements, threat, and copulation.—G.E.W.

Curry, J. R. 1969. Red-bellied Woodpecker feeds Tufted Titmouse. Wilson Bull., 81: 470.

Davis, W. F. 1969. Robin kills snake. Wilson Bull., 81: 470–471.

Drost, R. 1968. Dressur von Silbermöwen, *Larus argentatus*, auf akustiche Signale. Vogelwarte, 24: 185–187.—Free-living Herring Gulls were fed pieces of bread when a whistle was sounded. The birds learned to respond rapidly, coming to the whistle even when the experimenter was hidden, and responded quickly even after several months interruption of testing.—H.C.M.

Focke, E. 1968. Zum Verhalten junger Silbermöwen (*Larus argentatus*) bei Bedrohung durch adulte Artgenossen. Vogelwarte, 24: 262–266.—Herring Gulls 5 to 8 weeks old "freeze" in a hunched posture with bill directed down to make a 45-degree angle to the ground when threatened by strange adult conspecifics. The behavior may be an appeasement display.—H.C.M.

Gibson, R. J. 1969. Interesting behaviour of a Great Blue Heron. Blue Jay, 27: 141–143.—The heron apparently did not recognize a swimming observer wearing a black rubber "wet" suit and headpiece as a human. Even when photographed from directly underneath, the bird did not fly.—R.W.N.

Harrison, C. J. O. 1970. Food-carrying and the transport of nest material. Ibis, 112: 105–106.

Heckenlively, D. B. 1970. Song in a population of Black-throated Sparrows. Condor, 72: 24–36.

HORN, H. S. 1970. Social behavior of nesting Brewer's Blackbirds. Condor, 72: 15–23.

LIEFF, B. C. 1969. Eider hatching goose egg. Wilson Bull., 81: 465–466.

NETTING, M. G. 1969. Does the Robin eat DeKay's snake? Wilson Bull., 81: 471.

NILSSON, L. 1969. The behavior of the Goldeneye *Bucephala clangula* in the winter. Vår Fågelvärld, 28: 199–210.—Analysis of diving depth and time and how the male and the female correlate in this activity, the characteristics and functions of the displays, pair formation, copulation, and aggressive and territorial behavior. (Detailed English summary.)—L.DEK.L.

PAYNE, R. B. 1969. Nest parasitism and display of Chestnut Sparrows in a colony of Grey-capped Social Weavers. Ibis, 111: 300–307.—In southern Kenya, *Passer eminibey* the only obligate nest parasite, aggressively usurps *Pseudonigrita arnaudi* nests. Male *eminibey* restrict their display to a newly constructed nest, and frequently chase intruding males and females other than their mates. Males often enter the nest after a wing-quiver display and thus stimulate the attending female to solicit copulation. The distribution of *P. eminibey* coincides with *Pseudonigrita arnaudi* and *P. cabanisi*, which build similar nests, suggesting host specificity.—F.E.L.

PULICH, W. M. 1969. Unusual feeding behavior of three species of birds. Wilson Bull., 81: 472.

SKUTCH, A. F. 1970. The display of the Yellow-billed Cotinga, *Carpodectes antoniae*. Ibis, 112: 115–116.—The courtship display of this all-white cotinga is silent and consists mainly of conspicuous perching interspersed with a deep looping flight to another dead branch in the same tree top. The male then flies to another tree and repeats his performance. Intraspecific defense of widely scattered display trees occurs. —F.E.L.

WARD, W. V. 1969. Kermadec Islands Expedition reports/bio-acoustics on the expedition. Notornis, 16: 163–171.—Vocalizations of 16 species and techniques.—G.D.S.

WILLIS, E. O. 1969. On the behavior of five species of *Rhegmatorhina*, ant-following antbirds of the Amazon Basin. Wilson Bull., 81: 363–395.

WITTENBERG, J. 1969. Über das Flügellahmstellen der Ringeltaube (*Columba palumbus*) am Nest. J. Ornithol., 110: 30–38.—The flight distance of brooding Wood Pigeons in response to the approach of man depends largely on the local relationships between them and only slightly on the stage of the breeding cycle. Occurrence of injury-feigning after taking flight was 10 times greater in eastern Lower Saxony than in Britain. (English summary.)—H.C.M.

DISEASES AND PARASITES

BORRETT, R. P. 1969. New bird host records for *Icosta minor* (Bigot) (*Diptera*: *Hippoboscidae*) from Rhodesia. Bull. Brit. Ornithol. Club, 89: 165.—First record on *Anthus novaeseelandiae* and *Acrocephalus arundinaceus* in Salisbury.—F.B.G.

CORNELIUS, L. W. 1969. Field notes on Salmonella infections in Green-finches and House Sparrows. Bull. Wildl. Dis. Assoc., 5: 142–143.—Heavy mortality of these two species during the winter months near London, England, was caused by *Salmonella typhimurium*. *Parus caeruteus* and *Sturnus vulgaris* were not infected although they fed with *Passer domesticus* and *Carduelis chloris*.—J.S.M.

DARDIRI, A. H., AND P. GAILINUAS. 1969. Response of pekin and Mallard ducks and Canada Geese to experimental infection with duck plague virus. Bull. Wildl. Dis. Assoc., 5: 235–247.—A detailed account demonstrating this virus elicits comparable clinical and pathologic responses, although Mallards are more resistant.—J.S.M.

DONAHUE, J. M., AND L. D. OLSON. 1969. Survey of wild ducks and geese for *Pasteurella* spp. Bull. Wildl. Dis. Assoc., 5: 201–205.—A sample of 400 birds from Missouri and Illinois, including Canada and Blue Geese, revealed a Snow Goose and a Mallard with antibodies for *Pasteurella multocida*, and 4 Canada Geese harboring *P. anapestifer*.—J.S.M.

FLEISCHMAN, R. ET AL. 1968. Malaria (*Plasmodium elongatum*) in captive African Penguins (*Spheniscus demersus*). J. Amer. Vet. Med. Assoc., 153: 928–935.

FRIEND, M., AND D. O. TRAINER. 1969. Aspergillosis in captive Herring Gulls. Bull. Wildl. Dis. Assoc., 5: 271–275.—*Aspergillus fumigatus* caused the death of 32 of 140 birds. Stresses of capture, transportation, confinement, and a nutritional deficiency allowed subclinical levels of the fungus, naturally present in the gulls, to produce overt disease.—J.S.M.

KIRMSE, P. 1969. Host specificity and pathogenicity of pox viruses from wild birds. Bull. Wildl. Dis. Assoc., 5: 376–386.—Pox strains from *Colaptes auratus*, *Certhia familiaris*, *Hylocichla ustulata*, *H. minima*, *H. mustelina*, *Junco hyemalis*, *Spizella pusilla*, and *Melospiza melodia* were experimentally transmitted to a variety of domestic and wild birds. Domestic bird pox strains were experimentally transmitted to a variety of wild passerine birds, rabbits, and mice. Results are tabulated and discussed. "The susceptibility of wild and domestic birds to different avian pox strains varied greatly from species to species."—J.S.M.

KNUDTSON, W. U. ET AL. 1969. Isolation of *Trichophyton mentagrophytes* from favus in a grouse. Bull. Wildl. Dis. Assoc., 5: 141.—The etiological agent of ringworm disease in man was found on five *Pedioecetes phasianellus* from South Dakota.—J.S.M.

LEIBOVITS, L. 1969. Natural occurrence and experimental study of pox and *Haemoproteus* infections in a Mute Swan (*Cygnus olor*). Bull. Wildl. Dis. Assoc., 5: 130–136.—White emden geese, but not pekin ducklings, chickens, or domestic pigeons, were susceptible to experimental infection. Pox killed the cygnet, also infected by *Haemoproteus* sp.—J.S.M.

MAWSON, P. M. 1968. Habronematinae (Nematoda: Spiruridae) from Australian birds. Parasitology, 58: 745–767.

MCLAUGHLIN, E. 1968. Blood parasites of the cowbird, grackle, redwing, and Starling in New Jersey. Bird-Banding, 39: 193–199.—Of birds examined 29.4 per cent were infected.—J.S.M.

PEARSON, G. L. 1969. Aspergillosis in wintering Mallards. Bull. Wildl. Dis. Assoc., 5: 404–405.—Moldy corn appeared to be the source of infection for 177 birds that died at a North Dakota banding site.—J.S.M.

ROSEN, M. N. 1969. Species susceptibility to avian cholera. Bull. Wildl. Dis. Assoc., 5: 195–200.—Gives comparative mortality data in California for 1961 through 1969 for the White-fronted, Snow, and Canada Geese, Mallard, Pintail, American Widgeon, Shoveller, Ruddy Duck, Green-winged Teal, Cinnamon Teal, and Coot. "The relation between population size of the individual waterfowl species and the respective mortality rates was not statistically significant."—J.S.M.

SILEO, L., JR., AND E. L. FITZHUGH. 1969. Incidence of trichomoniasis in the Band-tailed Pigeons of Southern Arizona. Bull. Wildl. Dis. Assoc., 5: 146.—Of 156 birds, 8 of both sexes and different ages were infected with the flagellate, *Trichomonas gallinae*.—J.S.M.

STABLER, R. M. ET AL. 1969. Hematozoa from Montana Blue Grouse. J. Parasitol., 55: 830–832.—*Dendragapus obscurus* first became infected by *Trypanosoma* (3 weeks) then *Leucocytozoon* (5), *Haemoproteus* (8), and microfilaria (11); 88 per

cent of 274 birds were infected. A single infection of *Plasmodium* is a new host record.—J.S.M.

STONE, W. B., AND D. E. JANES. 1969. Trichomoniasis in captive Sparrow Hawks. Bull. Wildl. Dis. Assoc., 5: 147.—*T. gallinae* was found in throat and esophagous lesions of a male captured near Syracuse, New York, that died in captivity; a female cagemate had died earlier, probably from same disease.—J.S.M.

THRELFALL, W. 1968. The helminth parasites of three species of gulls in Newfoundland. Canadian J. Zool., 46: 827–830.—Sixteen species of helminths were recovered from 32 *Larus marinus*, 1 *L. hyperboreus*, and 72 *Rissa tridactyla*. Neither annual nor seasonal differences in parasite burden, nor significant differences in burden between chicks and adults, males and females were noted.—J.S.M.

THRELFALL, W. 1968. Helminth parasites of some birds in Newfoundland. Canadian J. Zool., 46: 909–913.—Twenty-seven species identified from 132 birds of 33 species. —J.S.M.

VERMEER, K. 1969. Endoparasitic variation between California Gulls and Ring-billed Gulls *Larus californicus* and *L. delawarensis*. Ibis, 111: 393–395.—Eggs were exchanged between the two gull species, and 4 weeks after hatching 15 foster and 15 "natural" chicks of each species were collected. Variation of infection by five helminth species resulted from variation in food habits rather than from differences in susceptibility to infection.—S.C.W.

WALLACH, J. D. 1969. Common diseases and recommended treatments for waterfowl and game birds. Mod. Game Breeding, 5: 18–25.—Describes symptoms of diseases and suggests preventative and curative treatments.—J.S.M.

DISTRIBUTION AND ANNOTATED LISTS

ABLE, K. P. 1968. Lesser Black-backed Gull in Kentucky. Kentucky Warbler, 44: 31–32.

AMERSON, A. B., JR. 1969. Ornithology of the Marshall and Gilbert Islands. Atoll Res. Bull., No. 127: viii + 348 pp.—Accounts of the birds of 50 individual islands and atolls of these two Central Pacific island groups make up the bulk of this exhaustive compilation. Each summary includes a map; geographical data; notes on soil, vegetation, climate, and human population; a history of scientific visits; a bird checklist; a tabulation of known specimens; and, for islands intensively studied by the Smithsonian's Pacific Ocean Biological Survey Program, an annotated list of birds. The known avifauna is 79 species (37 seabirds) of which POBSP work added 20. The report concludes with a brief account of ecological and cultural factors that affect bird occurrence; a general list of birds; banding records; native names for birds; and a 125-title bibliography.—W.B.R.

ANDREW, I. G. 1968. Occurrence of Great Knot in New Zealand. Notornis, 15: 207–210.—Sight records from Wellington west coast estuaries and description of *Calidris tenuirostris*.—G.D.S.

ANDRLE, R. F., AND H. H. AXTELL. 1969. Mew Gulls in Ontario. Wilson Bull., 81: 211–213.

AUSTIN, G. T. 1969. A record of the Tufted Duck for Connecticut. Wilson Bull., 81: 332.

BACKHURST, G. C. 1969. A record of *Gallinago stenura* from Kenya. Bull. Brit. Ornithol. Club, 89: 95–96.—Second African record of this snipe, which was ringed and released.—F.B.G.

BANKS, R. C., AND D. E. LEWIS. 1969. Bird records from Nevada. Condor, 71: 439–441.

BANNERMAN, D. A. 1969. Some further records from the North Atlantic Islands. Bull. Brit. Ornithol. Club, 89: 110.—Reports confirmation of *Falco peregrina* subsp. and a record of *Podilymbus podiceps* from Azores.—F.B.G.

BARLOW, J. C., AND R. R. JOHNSON. 1969. The Gray Vireo, *Vireo vicinior*, in the Sierra del Carmin, Coahuila, Mexico. Canadian J. Zool., 47: 151–152.—First collected specimens and first breeding record of this species in Coahuila.—H.W.K.

BARLOW, M. 1969. Dusky Moorhen on Lake Hayes. Notornis, 16: 81–84.—Photograph of *Gallinula tenebrosa* in New Zealand.—G.D.S.

CAMPBELL, R. W. 1969. Occurrence and nesting of Wilson's Phalaropes at Vancouver, British Columbia. Condor, 71: 434.

CHANCE, G. R. 1969. A new bird for New Zealand—Australian Little Grebe, at Arrowtown. Notornis, 16: 3–4.—A good photograph of *Podiceps novaehollandiae*.—G.D.S.

CHAPMAN, E. A. 1969. Gambian observations, winter 1946–47. Bull. Brit. Ornithol. Club, 89: 96.—Records of *Hagedashia hagedash*, *Falco chiquera*, *Leucopolius marginatus*, *Hirundo smithii*.—F.B.G.

CLANCEY, P. A., W. J. LAWSON, AND M. P. STUART IRWIN. 1969. The Mascarene Martin *Phedina borbonica* (Gmelin) in Moçambique: a new species to the South African list. Ostrich, 40: 5–8.—Large numbers were found wintering in the Manica e Sofala district in June and July 1968; only the second record for the African mainland.—M.A.T.

DACIUK, J. 1968–1969. La fauna del Parque Nacional Laguna Blanca. (Estudio zoo-ecologico preliminar). Anal. Parques Nacionales Adm. Nac. Parques Nac., Buenos Aires, Argentina. 11(2a): 225–302.—Devoted entirely to the Laguna Blanca National Park in Neuquen, Argentina, this issue contains preliminary data on the avifauna, particularly Anseriformes and other water birds.—E.E.

EDGAR, A. T. 1968. Oriental Dotterel in Northland. Notornis, 15: 211–212.—Sight record of *Charadrius veredus* in New Zealand.—G.D.S.

ELY, C. A., AND L. W. ANTHONY. 1968. Scott's Oriole—an addition to the Kansas avifauna. Kansas Ornithol. Soc. Bull., 19: 19.—A female *Icterus parisorum* collected in Morton County on 16 April 1967.—M.A.J.

ELY, C. A., AND R. W. WILEY. 1968. Vermilion Flycatcher in Kansas. Kansas Ornithol. Soc. Bull., 19: 23–24.—A female *Pyrocephalus rubinus* taken in Morton County 15 April 1967 is first Kansas specimen.—M.A.J.

ERIKSSON, K. 1969. On the occurrence of the Great Reed Warbler (*Acrocephalus arundinaceus*) in Finland. Ornis Fennica, 46: 80–84.—Discusses 91 records during 14 years of this newly immigrated species and presents interesting details about the dynamics of colonization.—M.D.F.U.

FIELD, G. D., AND D. F. OWEN. 1969. Little Gull in Sierra Leone. Bull. Brit. Ornithol. Club, 89: 94.—First record for West Africa.—F.B.G.

FORBES-WATSON, A. D. 1969. Notes on birds observed in the Comoros on behalf of the Smithsonian Institution. Atoll Res. Bull., No. 128: 23 pp.—Comments from a 2-week visit to the four major islands in October 1965 include notes on breeding of about 20 species and reports of four species new to the area.—W.B.R.

GENELLY, R. E. 1969. Birds of the Mole Game Reserve, Ghana. Nigerian Field, 34: 171–182.—Briefly annotated list of about 100 species seen July–October 1966, in the Guinea savanna of northern Ghana.—W.B.R.

GOCHFELD, M. 1969. Status of the Lincoln's Sparrow in Jamaica, West Indies. Wilson Bull., 81: 219–220.

HALL, G. A. 1969. The present status of the West Virginia bird list. Redstart, 36: 62–65.—The corrected total number of species known from West Virginia prior to 1944 is 283 (Brook, 1944). Since then 9 additional species have been collected and 6 satisfactorily observed; the list now stands at 298 full species.—G.E.W.

HALL, G. A. 1969. Breeding range expansion of the Brown Creeper in the Middle Atlantic States. Redstart, 36: 98–103.

HARRISON, J. 1969. Schioler's Dunlin in Eire. Bull. Brit. Ornithol. Club, 89: 104–105.—First specimen of *Calidris alpina arctica* from Ireland.—F.B.G.

HARROW, G. 1968. Marsh Sandpiper at Orawaiti Lagoon/Westport. Notornis, 15: 213.—New Zealand sight record of *Tringa stagnatilis*.—G.D.S.

HOLNESS, P. R. ET AL. 1969. Little Crake *Porzana parva* (Scopoli) breeding in north-eastern Greece. Bull. Brit. Ornithol. Club, 89: 116.

HOWARD, P. J. 1968. A New Zealand record of the Northern Shoveller. Notornis, 15: 253.—Specimen of *Anas clypeata*.—G.D.S.

HUBBARD, J. P. 1969. *Phylloscopus fuscatus* (Blyth) in Cyprus. Bull. Brit. Ornithol. Club, 89: 116.—First record from Cyprus.—F.B.G.

IMBER, M. J., AND B. W. BOESON. 1969. Seabirds found dead in New Zealand in 1964. Notornis, 16: 50–56.—Patrol of 988 miles of coast yielded 1,236 dead birds of 44 species. *Pachyptila tutur* and *Puffinus griseus* were the most common. Unusual species included *Fulmarus glacialoides*, *Pterodroma hypoleuca*, *Sterna fuscata*, and *Numenius minutus*.—G.D.S.

JACOBSSON, S., AND K. WALLIN. 1969. First record of Great Spotted Cuckoo *Clamator glandarius* in Sweden. Vår Fågelvärld, 28: 102–106.—A bird in immature plumage. (English summary.)—L.DEK.L.

JENKINS, J. 1968. Does the Greater Shearwater reach the Southwest Pacific? Notornis, 15: 214–215.—Concludes that several shearwater sightings north of New Zealand are of *Puffinus gravis*.—G.D.S.

JENKINSON, M. A. 1968. Early records of the Chuck-will's-widow at Manhattan, Kansas. Kansas Ornithol. Soc. Bull., 19: 17–18.—Previously overlooked records of *Caprimulgus carolinensis*.—M.A.J.

KALE, H. W., M. H. HUNDLEY, AND J. A. TUCKER. 1969. Tower-killed specimens and observations of migrant birds from Grand Bahama Island. Wilson Bull., 81: 258–263.

KANIA, W. 1968. [Birds of the south-eastern part of the Niepolomice Forest.] Acta Ornithol., 11: 61–86.—Observations on 104 species of a pine forest in the province of Krakow.—M.A.J.

KEITH, G. S., AND C. J. VERNON. 1969. Bird notes from northern and eastern Zambia. Puku, 5: 131–139.—First sound recordings made for many of the birds listed here, including such rarities as *Chloropeta gracilirostris* and *Sarothrura* spp.—M.A.T.

MANIKOWSKI, S. 1968. [Observations on the occurrence and distribution of birds in the Baltic near the Hel Peninsula.] Acta Ornithol., 11: 45–60.—Data on 32 species of seabirds regularly present in the area.—M.A.J.

MCKENZIE, H. R. 1968. Suspected Upland Plover (*Bartramia longicauda*) in Manukau Harbour. Notornis, 15: 216–218.—Sight record of *Bartramia longicauda* in New Zealand.—G.D.S.

MCLEAN, D. D. 1969. Some additional records of birds in California. Condor, 71: 433–434.

MEDWAY, D. G. 1968. Records of the Ituia, North Island Thrush, and North Island

Kokako from the diaries of Joseph Robert Annabell (1857–1924). Notornis, 15: 177–192.—Summary of bird records from Annabell's diaries of 1878 to 1885 and 1887. *Heteralocha acutirostris*, *Turnagra capensis tanagra*, and *Callaeas cinerea wilsoni* are treated in some detail.—G.D.S.

MILLIMAN, J. D. 1969. Four southwestern Caribbean atolls: Courtown Cays, Albuquerque Cays, Roncador Bank and Serrana Bank. Atoll Res. Bull. No. 129: 26 pp. —These islets are almost unknown ornithologically. This survey, primarily oceanographic in May–June 1966 found large colonies of "boobies and terns" on Roncador Cay and Southwest Cay, Serrana Bank, and a few frigatebird nests on East Cay, Courtown Cays.—W.B.R.

MONROE, B. L., JR. 1969. Summary of occurrence of birds of Kentucky. Kentucky Warbler, 45: 47–56.—Presented in bar graph form.—K.P.A.

MONROE, B. L., JR., AND K. P. ABLE. 1968. Recent additions to the avifauna of Kentucky. Kentucky Warbler, 44: 55–57.— Specimen records of nine species new to the state, including Laughing Gull, Black-legged Kittiwake, and Thayer's Gull. The latter is the southeasternmost record in North America.—K.P.A.

ORIANS, G. H., AND D. R. PAULSON. 1969. Notes on Costa Rican birds. Condor, 71: 426–431.

PARKER, J. W., AND J. A. JACKSON. 1969. Mid-winter bird count for 1968. Kansas Ornithol. Soc. Bull., 20: 1–6.

PARMALEE, D. F., M. D. SCHWILLING, AND H. A. STEVENS. 1969. Charadriiform birds of Cheyenne Bottoms, Parts 1 and 2. Kansas Ornithol. Soc. Bull., 20: 9–13, 17–24.— An extensively annotated checklist.—M.A.J.

PINTO, A. A. DA ROSA. 1966. Notas sobre as colecções ornitológicas recolhidas em Angola nas expedições efectuadas pelo Instituto de Investigação Científica de Angola de 1959 a 1961. Bol. Inst. Invest. cient. Ang. (Luanda), 3: 149–236.—Taxonomic and field notes on the nonpasserine species collected on two major expeditions and locally around Luanda. (In Portuguese.)—M.A.T.

RISING, J. D., AND D. M. NILES. 1969. Comments on the status of the Yellow-throated Warbler (*Dendroica dominica*) in Kansas. Kansas Ornithol. Soc. Bull., 20: 7–8.—Two males taken in Cherokee County, 18 May 1968, represent first Kansas specimens. Local breeding is suggested.—M.A.J.

SCARLETT, R. J. 1969. The occurrence of the Musk Duck, *Biziura lobata* (Shaw), in New Zealand. Notornis, 16: 57–59.—Describes two skeletal elements found in New Zealand.—G.D.S.

SCHELL, E. H. 1968. A first Ohio record of the White Ibis, *Eudocimus albus*. Ohio J. Sci., 68: 17–18.

SCHWILLING, M. D., AND D. L. KERR. 1968. Green-winged Teal nesting in Kansas. Kansas Ornithol. Soc. Bull., 19: 23.—Three nests and one brood of *Anas carolinensis* in 1968 at a waterfowl management area represent first Kansas records.—M.A.J.

SHORT, L. L., AND J. J. MORONY, JR. 1969. Notes on some birds of central Peru. Bull. Brit. Ornithol. Club, 89: 112–115.—Field notes on several species including *Xenodacnis parina*.—F.B.G.

SIBSON, R. B. 1968. Giant Petrels as migrants to northern New Zealand. Notornis, 16: 45–50.—Summary of sight and specimen records of *Macronectes giganteus*.— G.D.S.

SIBSON, R. B. 1968. Red-necked Stints in New Zealand. Notornis, 15: 241–243.— New Zealand records of *Calidris ruficollis*.—G.D.S.

SIPE, J. P. 1968. Rare birds collected at Lake Saint Marys, Ohio. Ohio J. Sci., 68: 334.—Franklin's Gull and Black-legged Kittiwake.—H.C.S.

TAYLOR, J. W. 1969. Sharp-tailed Sandpiper and Palm Warbler in Alaska. Wilson Bull., 81: 337–338.

TRAUTMAN, M. B., AND M. A. TRAUTMAN. 1968. Annotated list of the birds of Ohio. Ohio J. Sci., 68: 257–332.—Actually composed of five lists: 1) bird species usually occurring annually in Ohio, 2) accidentals or very irregular visitors, 3) exotics, 4) extirpated and extinct species, 5) hybrids and intergrades. Breeding and migratory status are given for list 1, the reference and authentication for lists 2–5. Includes an extensive bibliography. A sine qua non for Ohio ornithologists.—H.C.S.

TREE, A. J. 1969. The status of Ethiopian waders in Zambia. Puku, 5: 181–205.—Distribution, breeding, and movements, with range maps.—M.A.T.

TUNNICLIFFE, G. A. 1968. Distribution and breeding records of the Welcome Swallow from the South Island, New Zealand, 1955–1968. Notornis, 15: 228–223.—Many sight and nesting records of *Hirundo neoxena* show the species is spreading. It now occurs in all South Island provinces except Westland.—G.D.S.

VENTURA, A. K. 1969. Birds of Caymanas Estates, Jamaica. Their collection and habits. Caribbean J. Sci., 9: 39–52.—While containing some useful information, the use of such misleading vernaculars as "Blackbird" for Smooth-billed Ani, and "Nightingale" for the Mockingbird is surprising in a scientific article.—E.E.

WATSON, G. E. 1969. The status of the Black Noddy in the Tristan da Cunha Group. Bull. Brit. Ornithol. Club, 89: 105–107.—A fledged juvenile *Anous tenuirostris* reportedly collected by the Challenger Expedition on Inaccessible Island is considered a mislabeled specimen that came instead from St. Paul's Rocks.—F.B.G.

WAUER, R. H. 1969. Recent bird records from the Virgin River Valley of Utah, Arizona, and Nevada. Condor, 71: 331–335.

WESTERSKOV, K. E. 1968. Australian Brolga (*Grus rubicunda*) recorded in New Zealand. Notornis, 15: 248–253.—First sight record, supported by photograph, 8 January 1968, for New Zealand.—G.D.S.

WORTH, C. B. 1969. Hooded Warbler in Trinidad, West Indies. Wilson Bull., 81: 215.

ZIMMERMAN, J. L. 1969. Kansas breeding bird survey for 1968. Kansas Ornithol. Soc. Bull., 20: 13–16.

ECOLOGY AND POPULATION

ANDERSON, B. W., AND R. J. OEHLENSCHLAGER. 1968. A study of wintering Horned Larks in southwestern Minnesota. Loon, 40: 93–97.—Analysis of wintering populations revealed two groups, a dark-colored form referrable to *Eremophila alpestris hoyti* and a smaller, lighter form allied to the *E. a. enthymia–leucolaema* group.—R.W.N.

BERNDT, R., AND H. STERNBERG. 1969. Alters- und Geschlechtsunterschiede in der Dispersion des Trauerschnäppers (*Ficedula hypoleuca*). J. Ornithol., 110: 22–26.—Pied Flycatchers apparently settle in different places in successive years. Older birds settle much closer to their birthplace than do yearlings. Old males exhibit a considerably greater fidelity to the birthplace than do old females. This paper indicates that the extensive previous experimental studies of Ortstreue in this species did not go far enough. The existence of Ortstreue in this well-studied species suggests it would be worthwhile to look for the phenomenon in all other species. (English summary.)—H.C.M.

BOYD, H., AND M. A. OGILVIE. 1969. Changes in the British-wintering population of the Pink-footed Goose from 1950 to 1975. Wildfowl, 20: 33–46.—Nearly complete

censuses of *Anser brachyrhynchus* wintering in Britain show an increase in total population from about 30,000 in 1950 to 76,000 in 1966, and a decrease to 65,000 in 1968. Mean brood size decreased from 2.96 to 1.35 during the same interim. In the breeding range the climate is becoming more severe and a hydroelectric project in Iceland threatens the home of half the breeding population.—G.E.W.

BROWN, R. G. B. 1970. Fulmar distribution: A Canadian perspective. Ibis, 112: 44–51.—Refutes the hypothesis that the distribution of *Fulmarus glacialis* in the North Atlantic is controlled by availability of offal from the fishing industry. Water temperature and other oceanic factors provide better control mechanisms; work is needed on the "normal" feeding ecology.—R.W.S.

BULL, P. C., AND D. G. DAWSON. 1969. Mortality and survival of birds during an unseasonable snow-storm in South Canterbury, November 1967. Notornis, 16: 172–179.—Of 810 birds of 13 species found dead, nearly all were introduced passerines. Wild ducklings and goslings also experienced severe mortality.—G.D.S.

BURTT, H. E., AND M. L. GILTZ. 1969. A stability index for bird populations. Inland Bird Banding News, 41: 43–45.—A method for determining local stability of a population, using a modification of the Lincoln Index.—E.E.

CLINE, D. R., AND E. DORNFELD. 1968. The Agassiz Refuge cormorant colony. Loon, 40: 68–72.—A colony that earlier nested in remnant trees of a flooded spruce–tamarack bog gradually adapted to nesting on floating marsh vegetation. Deterioration of the colony was halted by providing elevated artificial nest platforms. Successful results indicate the value of this technique.—R.W.N.

DIAMOND, J. M. 1969. Avifaunal equilibria and species turnover rates on the Channel Islands of California. Proc. Natl. Acad. Sci., 64: 57–63.—A comparison of breeding birds found in 1968 with those in 1917 indicates present equilibrium in total number of species, but on the different islands from 17 to 62 per cent of those recorded in 1917 had been replaced in 1968 by an approximately equal number of additional forms. The 53 additions include 6 game birds introduced by man, leaving 47 immigrants that have become established otherwise.

DUNSTAN, T. C. 1968. Breeding success of Osprey in Minnesota from 1963 to 1968. Loon, 40: 109–112.—Factors causing a decrease in productivity are destruction of nests by strong winds, chilling or overheating of eggs, and death of adult birds by shooting. The significance of pesticides as a mortality factor is yet unknown. [See Mathisen, J. E., 1969, below.]—R.W.N.

EBBELS, D. L. 1969. Pollination of *Puya chilensis* by *Turdus merula* in the Isles of Scilly. Ibis, 111: 615.—The chief pollinator of *Puya chilensis* (Bromeliaceae) in its native Andean range is the icterid *Curaeus curaeus*, similar in size and bill length to *T. merula*. Puya first flowered on Scilly in 1862, but *T. merula* did not begin to visit the flowers until about 1952.—F.E.L.

ELLIOTT, C. C. H. 1970. Additional note on the sea-birds of Gough Island. Ibis, 112: 112–114.—Describes nesting zonation of 4 species of petrels and shearwaters and includes miscellaneous notes on 8 Procellariiformes, *Catharacta skua hamiltoni*, and the two endemic land birds *Rowettia goughensis* and *Porphyriornis nesiotis*.—F.E.L.

ENEMAR, A. 1969. The Corn-crake *Crex crex* in Sweden in 1968. Vår Fågelvärld, 28: 194–198.—Changes in the population density during the past decade were minimal and with considerable local variations. The most significant increase occurred on the Baltic islands of Gotland and Öland. Suggests that most Corn Crakes arriving in Sweden in spring by means of prolonged migration are year-old birds from the continental mainlands to the south and east. (English summary.)—L.DEK.L.

ENEMAR, A. 1969. On the Redpoll *Carduelis flammea* in the Ammarnäs area, Swedish Lapland, in 1968. Vår Fågelvärld, 28: 230–235.—A remarkable increase in the breeding population was thought to be in response to the unusually abundant crop of birch seeds. Average clutch size was 5.3, but the average number of nestlings per nest was only 4.0. (English summary.)—L.DEK.L.

FAHEY, P. L. 1968. Great Blue Herons. Loon, 40: 37–40.—Account of Itasca State Park heronry established in 1966 and studied in 1967.—R.W.N.

FLEMING, C. A. 1969. Rats and moa extinction. Notornis, 16: 210–211.— Observations by Kepler (Auk, 84: 427–30, 1967) of rat predation on albatrosses suggests that since *Rattus exulans* are potential predators on large sluggish birds, they may have been a factor in the reduction or extermination of moas and ground nesting carinates such as *Aptornis*, *Notornis*, and *Cnemiornis*.—G.D.S.

FREDRICKSON, L. H. 1969. Mortality of Coots during severe spring weather. Wilson Bull., 81: 450–453.

FRETWELL, S. D. 1969. The adjustment of birth rate to mortality in birds. Ibis, 111: 624–627.—Resolves differences between Lack's contention that adults produce as many young as possible with mortality adjusted to birth rate, and Skutch's suggestion that in tropics more young are not raised because of low adult mortality. Assuming resources are limited and hierarchies or territoriality regulate exploitation, young of subdominant adults from late clutches or hatched last in a clutch may suffer high mortality related to their subdominance within the hierarchy. Deferred maturity, reduced number of clutches, and reduced clutch size thus may be adaptive if young that could have been produced were not sufficiently successful to offset cost of breeding.—C.F.S.

GOSS-CUSTARD, J. D. 1969. The winter feeding ecology of the Redshank *Tringa totanus*. Ibis, 111: 338–356.—Daily routine, feeding rate, and prey taken were compared for winter and spring months in Ythan Estuary, Aberdeenshire, to determine how the Redshank alters its feeding with the short winter daylength. The birds feed at night and in adjacent fields during high water in winter, but not in spring. The author considers mud temperature to affect diet and ingestion rate greatly in winter. —S.C.W.

HADLEY, N. F. 1969. Microenvironmental factors influencing the nesting sites of some subalpine fringillid birds in Colorado. Arctic and Alpine Res., 1: 121–126.—Nests of Gray-headed Junco, Lincoln's Sparrow, and White-crowned Sparrow were studied to see how various environmental factors affected nest temperature and how nest temperature was related to air temperature.—J.J.D.

HALL, J. R. 1970. Synchrony and social stimulation in colonies of the Black-headed Weaver *Ploceus cucullatus* and Vieillot's Black Weaver *Melanopteryx nigerrimus*. Ibis, 112: 93–103.—Uniform responses to rain and strong social stimulation maintain the close synchronization of breeding activities by individuals within a colony. The main breeding seasons correspond with the two rainy seasons per year.—R.W.S.

HARENGERD, M., AND W. PRÜNTE. 1968. Einige Bermerkungen zu: "Methoden und allgemeine Ergebnisse der Limikolenzählung in Westfalen." Vogelwarte, 24: 243–246. —Comments on a previous paper on quantitative counts and relative abundance of various species of shorebirds in Westphalia.—H.C.M.

HILDEN, O. 1968. Die Invasion der Lapplandmeise, *Parus cinctus*, in Finnland 1963/64. Vogelwarte, 24: 189–198.—Details the movements, migrations, and invasions of the Siberian Tit in Finland and questions its status as a permanent resident. Southward invasions were correlated with high population.—H.C.M.

HORSTKOTTE, E. 1969. Studien über Zeit, Zahl und Grösse von Bruten der Nachtigall (*Luscinia megarhynchos* Brehm). J. Ornithol., 110: 62–70.—A careful survey of clutch size, etc. in 49 broods of the Nightingale. Of five renestings after broken nests, two involved previously unpaired males, and only one second brood was by a previously mated pair. (English summary.)—H.C.M.

JOST, O. 1969. Über die bedeutung der Wasserscheiden beim Ortswechsel der Wasseramsel (*Cinclus cinclus aquaticus*). J. Ornithol., 110: 71–78.—Banding reveals that some young Dippers cross mountain divides into other watersheds. (English summary.)—H.C.M.

KREBS, J. R. 1970. The efficiency of courtship feeding in the Blue Tit *Parus caeruleus*. Ibis, 112: 108–110.—The rate at which the female gets food items from the male during "courtship feeding" is 2.5 times the mean rate during normal foraging. Such feeding is probably necessary to meet the energy requirements of the female during the egg-laying period.—S.C.W.

KURODA, N. H. 1968. A winter hill bird census at southwest skirts of Tokyo: An example of census analysis. Misc. Repts. Yamashina Inst. Ornithol., 5: 337–350.—In January 1968, nine bird censuses by random line transects were made through five different habitats; 14 different methods of analyzing the resulting data are demonstrated. In Japanese, including tables and captions; English summary.)—K.C.P.

KURODA, N. H. 1968. A short note on ecological distribution of tits and goldcrest in Mt. Fuji area in November. Misc. Repts. Yamashina Inst. Ornithol., 5: 420–425.—Analyzes census data on *Parus ater*, *montanus*, *major*, and *varius*, and *Aegithalos caudatus* and *Regulus regulus* for 3 days in November. Methods of showing 1) relative abundance among species in each habitat and 2) relative abundance of a species in various habitats are presented by using circle graphs. The feeding or moving loci of each species and the specific differences are shown by observing forest layers and tree portions divided into 16 items. (In Japanese; English summary.)—K.C.P.

LONGCORE, J. R., AND R. E. JONES. 1969. Reproductive success of the Wood Thrush in a Delaware woodlot. Wilson Bull., 81: 396–406.

MACARTHUR, R. 1969. Species packing, and what interspecies competition minimizes. Proc. Natl. Acad. Sci., 64: 1369–1371.—Species competing exclusively for renewing resources are shown to obey simultaneous differential equations equivalent to the conditions for minimizing a certain quadratic form. In this sense competition acts to select species abundance. Seasonality and number of resources become the main factors limiting the number of coexisting species. (From author's abstract.)

MARTI, C. D. 1969. Some comparisons of the feeding ecology of four owls in north-central Colorado. Southwestern Naturalist, 14: 163–170.—Analysis of pellets of Great Horned, Barn, Burrowing, and Long-eared Owls indicates mammals make up 92 per cent of their food and small birds and insects the rest. Each species seems to concentrate on slightly different sized prey.—J.J.D.

MATHISEN, J. E. 1969. Bald Eagle–Osprey status report, 1969. Loon, 41: 84–87.—Of 117 Bald Eagle nests observed from the air in the Chippewa National Forest, 60, or 51 per cent, were active; 29, or 48 per cent, reared young. This was the lowest nesting success record since 1964. Death of an eagle in 1967 was due to pesticide accumulation in the brain (9.5 ppm dieldrin). Osprey nesting success was considerably higher than previously, 23 of 49 active nests rearing young.—R.W.N.

MIERS, K. H., AND M. WILLIAMS. 1969. Nesting of the Black Swan at Lake Ellesmere, New Zealand. Wildfowl, 20: 23–32.—Observations of 2,298 nests of *Cygnus atratus* during the 1960 and 1961 breeding seasons revealed a schedule of occupation of the

nesting area in late July, egg-laying in August–early September, and re-laying in early October. Clutch size averaged 5.4; all eggs hatched within 2 days of each other; nesting success was 78 per cent. Predation by gulls and flooding were the main causes of failure.—G.E.W.

MILLS, J. A. 1969. The distribution of breeding Red-billed Gull colonies in New Zealand in relation to areas of plankton enrichment. Notornis, 16: 180–185.—In New Zealand 82 colonies of *Larus novaehollandiae* are known; its main food appears to be the planktonic euphausiid *Nyctiphanes australis*. Colony distribution is related to offshore hydrological features that could result in plankton enrichment.—G.D.S.

MODHA, M. L., AND M. J. COE. 1969. Notes on the breeding of the African Skimmer *Rynchops flavirostris* on Central Island, Lake Rudolf. Ibis, 111: 593–598.—A breeding study of two small colonies on an east African Lake during portions of two seasons; includes prenesting behavior, egg-laying, chick development, and predation.—B.A.H.

MUNRO, M. 1969. Welcome Swallows in Whangarei County, 1962/68. Notornis, 16: 198–201.—Discusses nest site and construction and multiple nesting for about 150 breeding pairs during the 1968–69 season.—G.D.S.

NAKAMURA, T., S. YAMAGUCHI, K. IIJIMA, AND T. KAGAWA. 1968. A comparative study on the habitat preference and home range of four species of the genus *Emberiza* on peat grassland. Misc. Repts. Yamashina Inst. Ornithol., 5: 313–336.—*E. schoeniclus*, *aureola*, *fucata*, and *spodocephala* (in decreasing order of density) studied in Hokkaido in mid-June. *E. schoeniclus* had the widest habitat tolerance, the other three species tending to be more restricted. No information on *spodocephala* is given in the English summary beyond its preference for bushy habitat. *E. schoeniclus* tends to form loose nesting colonies at concentrations of preferred habitat. *E. aureola* and *fucata* are more widely dispersed and show evidence of interspecific competition with each other but not with *schoeniclus*. (In Japanese; English summary, tables, and captions.)—K.C.P.

NICHOLLS, T. H. 1968. Minnesota's 1966–67 Snowy Owl invasion. Loon, 40: 90–92.—An analysis of habitats, perches, and activities for 92 owls reported from November through May.—R.W.N.

OGASAWARA, K. 1968. Winter habitats and food habits of the Green and Copper Pheasants. Misc. Repts. Yamashina Inst. Ornithol., 5: 351–362.—A study in two areas of northern Honshu island of *Phasianus colchicus* (*versicolor*) and *P.* (*Syrmaticus*) *soemmerringii*. In one study area the Green Pheasant was widely distributed ecologically, while the Copper was restricted to forest interior. In the other area the Copper was widespread, the Green restricted to a river valley. Food, almost entirely vegetable, was similar in the two species. (In Japanese; English summary, tables, and captions.)—K.C.P.

OGILVIE, M. A. 1969. The status of the Canada Goose in Britain 1967–69. Wildfowl, 20: 79–85.—*Branta canadensis* populations were estimated at 2,200–4,000 birds in 1953. Moving birds from one locality to another because of complaints of crop damage was ineffective control and led to rapid increase in total numbers. Censuses made in July 1967 and 1968 reveal 10,500 birds.—G.E.W.

OTTOW, J. 1969. Zur Lebensweise der Kuckucke von Flores. J. Ornithol., 110: 27–29.—Distribution, host preferences, and habits of five species of cuckoos on the island of Flores in Indonesia. (English summary.)—H.C.M.

PAKULAK, A. J., AND C. D. LITTLEFIELD. 1969. Breeding status of Whistling Swans near Churchill, Manitoba. Wilson Bull., 81: 464–465.

PITELKA, F. A. 1969. Ecological studies on the Alaskan arctic slope. Arctic, 22: 333–340.

SHORT, L. L., JR. 1969. Foraging association of Green-barred Flickers and Campo Flickers in Argentina. Wilson Bull., 81: 468–470.

SJÖBORG, K. 1969. Birdlife in water-filled clay pits in the Uppsala area, central Sweden. Vår Fågelvärld, 28: 177–193.—An interesting study including breeding population, regular and accidental visitors, and stop-over migrants at eight clay quarries. (English summary.)—L.DEK.L.

SVENSSON, S. 1969. Studies on the breeding biology of the Sand Martin *Riparia riparis* in a colony in southern Lapland 1968. Vår Fågelvärld, 28: 236–240.—Adults were color-marked and nests inspected by means of an electrically lighted mirror mounted on a long shaft. Incubation periods averaged 16–17 days, clutch size 4.8 eggs, and the mean hatching date was 5 July. (English summary.)—L.DEK.L.

TURBOTT, E. G. 1969. Roof-nesting Black-headed Gulls. Notornis, 16: 187–189.—*Larus dominicanus* at six different points in Auckland.—G.D.S.

TURČEK, F. J. 1968. Ecological distribution of birds and mammals of Europe and some consequences. Misc. Repts. Yamashina Inst. Ornithol., 5: 305–312.—An analysis of the "topic" and "trophic" ecological distribution, within seven major biotic formations, of 391 bird and 162 mammal species of Europe, with special reference to degree of movement between formations. Heavily loaded with undefined terms.—K.C.P.

VERMEER, K. 1969. The present status of Double-crested Cormorant colonies in Manitoba. Blue Jay, 27: 217–220.—A total breeding population of 10,000 was estimated in 1969. Human disturbance is suggested as the cause for a population reduction of one-third in one of the major areas. Gives locations and numbers of nests for 37 colonies.—R.W.N.

VERMEER, K. 1969. Great Blue Heron colonies in Alberta. Canadian Field-Naturalist, 83: 237–242.—This study, part of a Canadian Wildlife Service program to protect endangered birds, gives nesting data on 27 colonies, of 1 to 55 nests, active in 1967; causes the loss of 8 additional colonies (decay of nesting trees and vandalism); and location and size of active and extinct colonies.—R.W.N.

WHITE, C. M., AND D. G. ROSENEAU. 1970. Observations on food, nesting, and winter populations of large North American falcons. Condor, 72: 113–115.

WOLF, L. L. 1970. The impact of seasonal flowering on the biology of some tropical hummingbirds. Condor, 72: 1–14.

WON, P. O., H. C. WOO, K. W. HAM, AND M. Z. CHUN. 1968. Chick food analysis of some Korean birds (III). Misc. Repts. Yamashina Inst. Ornithol., 5: 363–369.—Food samples collected from nestlings May to July 1968, using the collar method (except for *Ninox*). Species studied, with preferred food, were: *Dendrocopos major* (insect larvae), *Parus major* (insect larvae), *Streptopelia orientalis* (red pepper seeds), *Emberiza elegans* (insect larvae), *Eurystomus orientalis* (adult beetles), *Zoothera dauma* (earthworms), and *Ninox scutulata* (mice and cicadas). Details (including scientific names of prey) are given in text and tables. (In Japanese; English summary, tables, and captions.)—K.C.P.

YARROW, R. M. 1969. Recurrent use of territories by individual American Redstarts. Wilson Bull., 81: 471.

EVOLUTION AND GENETICS

BÉDARD, J. 1969. Adaptive radiation in alcidae. Ibis, 111: 189–198.—Drawings of bill, palate, and tongue illustrate the feeding radiation. Plankton-feeders (*Aethia*, *Plautus*,

Ptycoramphus) have a wide beak and a broad palate with numerous irregularly arranged denticles on the anterior portion. A broad, fleshy tongue facilitates food manipulation and allows the development of a sublingual diverticulum. Fish-feeders (*Uria, Alca, Cepphus*) have a narrow bill with a reduced palate often marked with grooves and ridges. A slender tongue enclosed in a rigid, horny shield wedges large prey items against the few sharp, regularly arranged palatal denticles. Those that feed on fish and plankton (*Cyclorrhynchus, Fratercula, Lunda, Cerorhinca*) have intermediate characteristics. Based on a relation between body size and the bill-width/gape ratio, the author discusses adaptive trends in feeding, ecological diversification within a trophic level, and character differences in sympatric species pairs. Especially intriguing are the murrelets *Endomychura* and *Synthliboramphus*. Morphologically (bill, palate, tongue) they are fish-feeders, yet they are so small it is doubtful that they feed much on fish or carry fish to the nestling. Lacking the sublingual diverticulum of plankton feeders, they "have instead greatly shortened the nestling stage to one or two days when, so far as is known, the chick is not fed."—F.E.L.

BUTTON, P. L. 1969. Some records of albinism in East Africa. Bull. Brit. Ornithol. Club, 89: 169–171.—Nine records in 28,000 Kenya specimens. *Pycnonotus barbatus* shows the greatest frequency of albinism, about 0.8 per cent.—F.B.G.

DAVIS, L. I., AND F. S. WEBSTER, JR. 1970. An intergeneric hybrid flycatcher (*Tyrannus* × *Muscivora*). Condor, 72: 37–42.

FRY, C. H. 1969. The evolution and systematics of the bee-eaters (Meropidae). Ibis, 111: 557–592.—Based on a 4-year ecological study in Africa of 12 of the 24 bee-eaters, and on analysis of the distribution (many maps included), general behavior, and external characters of the family. *Nyctyornis* of Southeast Asia and Indonesia is considered the most primitive genus. *Meropogon* of the Celebes is retained, and remaining genera are merged into *Merops*. Tail shape, formerly used as a generic criterion, is considered unreliable. Suggests bee-eaters originated in southeastern Asian forest and spread via former forest to Africa, where they adapted to savanna habitat during the Pleistocene and speciated rapidly in two main directions—small, sedentary, sortie feeding forms and larger, migratory forms that feed in sailing flight. Representatives of both types returned to Asia via open country.—C.F.S.

JOHNSGARD, P. A. 1970. A summary of intergeneric New World quail hybrids, and a new intergeneric hybrid combination. Condor, 72: 85–88.

MISHIMA, T. 1968. A hybrid specimen, *Lonchura punctulata* × *L. atricapilla*. Misc. Repts. Yamashina Inst. Ornithol., 5: 426–428.—Photographs in dorsal and ventral view of this hybrid, found "among 100 birds of *L. atricapilla* and *L. malacca*," presumably a shipment of cagebirds. *L. atricapilla* and *malacca* are quite differently colored, but are currently considered conspecific; the same shipment contained some intergrading specimens. (In Japanese; brief English summary.)—K.C.P.

POWER, D. M. 1969. Evolutionary implications of wing and size variation in the Red-winged Blackbird in relation to geographic and climatic factors: a multiple regression analysis. Syst. Zool., 18: 363–373.—Discusses uses of trend surface and multiple regression analysis for illustrating patterns of geographic variation and relating such variation to climatic factors. Presents data on wing length and body mass for 54 samples of male and 38 samples of female *Agelaius phoeniceus* from central North America and discusses eight geographic and climatic factors.—J.R.

STOREY, G. W., AND J. M. HARRISON. 1969. Comments on an intersexual bulbul. Bull. Brit. Ornithol. Club, 89: 160–162.—The left wing of a gynandromorphic *Pycnonotus*

barbatus superior is 3 mm shorter than the right wing. The left gonad is an ovary, the right gonad a testis. Describes histology of the gonads.—F.B.G.

VUILLEUMIER, F. 1969. Systematics and evolution in *Diglossa* (Aves, Coerebidae). Amer. Mus. Novitates, No. 2381: 44 pp.—Reviews available evidence on the relationships of *Diglossa* and tables the question. From 10 to 17 species have been recognized in the past. The author recognizes 16, but combines 10 of these into 4 superspecies, and the species and superspecies into 4 species-groups. Discusses speciation within these groups, with special emphasis on Andean forms. Sympatry is extensive in the Andes, an area that has been (and still is) a center of active speciation for the genus, and perhaps its center of origin. This well-organized and well-illustrated paper is the second of a projected series of speciation studies (Vuilleumier has already published on the *Asthenes flammulata* superspecies). Full discussion of Andean speciation phenomena, including correlation with Pleistocene glacial events, is postponed to a forthcoming comprehensive paper.—K.C.P.

GENERAL BIOLOGY

ANDERSON, R. A. 1968. Notes on the Snares Island Snipe. Notornis, 15: 223–227.—Brief observations of *Coenocorypha aucklandica huegeli* made from 2 January to 9 February 1967, which include feeding (insects in diet), nesting and breeding, sex differences, juveniles (including measurements), and general habits.—G.D.S.

APPERT, O. 1968. Beobachtungen an *Monias benschi* in Südwest-Madagaskar. J. Ornithol., 109: 402–417.—Observations of behavior, songs, and breeding. (French summary.)—H.C.M.

ASKEMO, C. 1969. Spruce-seed as food for Wood-pigeon *Columba palumbus* and Hawfinch *Coccothraustes coccothraustes*. Vår Fågelvärld, 28: 7–8.—Eaten in spring when the cones open and fall to the ground. (English summary.)—L.DEK.L.

AVITABILE, A. 1969. Egg transportation by a female Mallard. Wilson Bull., 81: 331–332.

BAPTISTA, L. F. 1969. An unusual nest site of the Starling. Wilson Bull., 81: 335–336.

BARROS VALENZUELA, R. 1967. El pato corta corrientes, *Merganetta armata* Gould. Anal. Acad. Chilena Ciencias Nat., 30: 121–125. (Rev. Universitaria, Unic. Catolica de Chile, 12).—Torrent Duck information; clutches seem small, and rarely is a female accompanied by more than five ducklings. (In Spanish.)—E.E.

BARTONEK, J. C., AND J. J. HICKEY. 1969. Food habits of Canvasbacks, Redheads, and Lesser Scaup in Manitoba. Condor, 71: 280–290.

BÉDARD, J. 1969. The nesting of the Crested, Least, and Parakeet Auklets on St. Lawrence Island, Alaska. Condor, 71: 386–398.

BERGER, A. J. 1969. The nest, eggs, and young of the Elepaio. Wilson Bull., 81: 333–335.

BORROR, D. J. 1968. Unusual songs in passerine birds. Ohio J. Sci., 68: 129–138.—Discusses five categories of unusual songs, each illustrated with sonograms.—H.C.S.

BORROR, D. J., AND K. C. HALAFOFF. 1969. Notes on song structure in Townsend's Solitaire. Wilson Bull., 81: 163–168.

BRITTON, P. L., AND R. J. DOWSETT. 1969. More weights of the Carmine Bee-eater. Bull. Brit. Ornithol. Club, 89: 85–86.—Weights of 105 breeding individuals from the Luangwa Valley, Zambia, taken in October showed birds were significantly lighter than expected on the basis of September weights. In addition, mean weights were less on 15 October than on 1 October ($P < 0.01$). Theorizes that progressively increasing pressures of feeding young in the dry season causes these weight reductions.—K.P.A.

BROEKHUYSEN, G. J. 1968. Nesting behavior of the Black-necked Grebe *Podiceps nigricollis* in southern Africa. II: laying, clutch size, egg size, incubation and nesting success. Ostrich, 39: 242–252.

BROOKE, R. K. 1969. Age characters in swifts. Bull. Brit. Ornithol. Club, 89: 78–81.—White edges to feathers are not always a sign of juvenility in swifts, but white tipping or edging of four outer primaries in *Chaetura* indicates juvenal plumage. In adults the edging of all primaries is paler when fresh, but outermost are not white. In *Apus*, *Cypsiurus*, *Nephoecaetes*, and *Streptoprocne* the rectrices and four outermost primaries have pale edgings only in juveniles.—E.E.

BROOKER, M. G. 1969. The nesting of the Chestnut-breasted Quail-Thrush in southwestern Queensland. Emu, 69: 47.

CARROLL, A. L. K. 1969. The Pukeko (*Porphyrio melanotus*) in New Zealand. Notornis, 16: 101–120.—Historical account, banding results, and information on predators. Material from numerous sources used to obtain estimate of abundance from 1960–68.—G.D.S.

CVITANIĆ, A., AND P. NOVAK. 1968. Beitrag zur Kenntnis der Vogelnahrung in Mittel-Dalmatien. Larus, 20: 80–100.—Analysis of 252 stomach-contents of 6 or 7 specimens of many species is discussed according to habitat, ecological group, and migratory status. (In Serbo-Croatian; German summary.)—M.D.F.U.

DAVIS, J. A. 1968. The postjuvenal wing and tail molt of the Ruffed Grouse (*Bonasa umbellus monticola*) in Ohio. Ohio J. Sci., 68: 305–312.—Progression of wing molt is 1 to 1½ weeks slower than that of New York grouse and tail molt occurs about 4 weeks later. Adjusted aging key for chicks 1 to 18 weeks are provided.—H.C.S.

DEXTER, R. W. 1968. Thirteen-year breeding history of a Chimney Swift. Ohio J. Sci., 68: 273–276.—A detailed record for a single male from 1947 to 1959 which includes his 5 different mates and various companions.—H.C.S.

DICKERMAN, R. W., AND K. C. PARKES. 1969. Juvenal plumage of the Spotted Rail (*Rallus maculatus*). Wilson Bull., 81: 207–209.

[EDS.] 1969. Geese in the belfry. Bokmakierie, 21: 16.—A pair of Egyptian Geese, *Alopochen aegiptiacus* nested in the spire of a cathedral in Grahamstown, South Africa, a hundred feet above the street. The goslings jumped from a window above the nest site and landed in the street uninjured. How the downies reached the window sill 18 inches above the nest is unknown.—E.E.

ELLIOTT, B. G. 1969. Life history of the Red Warbler. Wilson Bull., 81: 184–195.

ENGLAND, M. D. 1969. Female shrikes impaling prey. Brit. Birds, 62: 289.—*Lanius schach* and *L. excubitor*, while feeding young in aviaries.—H.B.

EVANS, P. R. 1969. Ecological aspects of migration, and pre-migratory fat deposition in the Lesser Redpoll, *Carduelis flammea cabaret*. Condor, 71: 316–330.

FARKAS, T. 1969. Notes on the biology and ethology of the Natal Robin *Cossypha natalensis*. Ibis, 111: 281–292.—Describes habitat, territoriality, breeding behavior, molt, ontogeny of behavior, and vocalizations of young.—M.S.F.

FISHER, H. I. 1969. Eggs and egg-laying in the Laysan Albatross, *Diomedea immutabilis*. Condor, 71: 102–112.

FLEGG, J. J. M., AND C. J. COX. 1968. Winter food of Long-eared Owls in Kent. Bird Study, 15: 163–164.—Short-tailed voles, *Microtus agrestis*, were the most common component of nearly 100 pellets produced by eight *Asio otus*. *Passer domesticus* was the most common of eight species of small passerines.—J.D.R.

FLOWER, W. U. 1969. Over 60 Wrens roosting together in one nest box. Brit. Birds, 62: 157–158.—*Troglodytes troglodytes*.—H.B.

FRANKS, E. C., AND J. E. WARNOCK. 1969. Great Horned Owl nesting in a populated area. Wilson Bull., 81: 332–333.

GELUSO, K. N. 1969. Food and survival problems of Oklahoma Roadrunners in winter. Bull. Oklahoma Ornithol. Soc., 2: 5–6.

GODDARD, S. V. 1969. Fall and winter food habits of Red-winged Blackbirds and Brown-headed Cowbirds in western Oklahoma. Wilson Bull., 81: 336–337.

GRAY, R. W. 1969. Breeding biology of Rifleman at Dunedin. Notornis, 16: 5–22.—Two to five territories of *Acanthisitta chloris* studied for three nesting seasons near Dunedin, New Zealand. Detailed nesting records show incubation lasted 20–21 days, the nesting period 24 days; two to four eggs were laid 48 hours apart; some pairs were double brooded.—G.D.S.

HANCOCK, M. 1969. House Martins mating on the wing. Brit. Birds, 62: 285.

HARDY, J. W. 1969. Habits and habitats of certain South American jays. Los Angeles County Mus. Contrib. Sci., No. 165: 16 pp.—Discusses habits of two races of *Aphelocoma viridicyana* and seven species of *Cyanocorax*, based on observations during the summer of 1965 in selected forest and savannah areas of Venezuela, Brazil, and Peru. Scientific names used are in keeping with a taxonomic revision of the New World jays in preparation by the author; *Aphelocoma* includes *Cyanolyca*, and *Cyanocorax* includes *Psilorhinus*.—H.H.

HARRIS, M. P., AND P. H. JONES. 1969. Sexual differences in measurements of Herring and Lesser Black-backed Gulls. Brit. Birds, 62: 129–133.—Sexing by length and depth of bill found possible; table presented.—H.B.

HAUKIOJA, E. 1969. Weights of Reed Buntings (*Emberiza schoeniclus*) during summer. Ornis Fennica, 46: 13–21.—Weights of adult and juvenile buntings taken between 06:00 and 10:00 indicate incubating females are heavier than feeding ones and those feeding a second brood are lightest. Juveniles are heaviest between 40 and 80 or 95 days of age, which coincides with postjuvenal molt. The latter peak is less distinct in males than in females, correlated with a shorter postjuvenal molt in females. In second brood young, the peak weight period is shorter (so is the postjuvenal molt). Each period of the weight cycle may show a different minimum weight, a very sharp lower limit. Underweight birds do not occur, probably because they die quickly.—M.D.F.U.

HELMS, C. W., AND R. B. SMYTHE. 1969. Variation in major body components of the Tree Sparrow (*Spizella arborea*) sampled within the winter range. Wilson Bull., 81: 280–292.

HEYWORTH, H. I. 1968. Song Thrush nesting successes, 1964–1967. Bird Study, 15: 161–163.—Nesting success of 11 nests of *Turdus philomelos*.—J.D.R.

HÖGLUND, N. H. 1966. Über die Ernährung des Uhus *Bubo bubo* Lin. in Schweden während der Brutzeit. Viltrevy, 4: 43–80.—Food remains and pellets of the Eagle Owl collected in central and northern Sweden during 8 years contained 1,214 prey animals: about 51% voles and rats, 7% other mammals, 24% birds (8% ducks, 7% grouse), and 17% frogs. The seven nest sites showed considerable local differences, depending on the habitat and its fauna. Local preferences of the owls are discussed. (Swedish summary.)—M.D.F.U.

HOLCOMB, L. C. 1968. Further observation on Ring-necked Pheasant nesting. Bird-Banding, 39: 133.—Data on success of 31 nests of *Phasianus colchicus*. From 445 eggs laid, 105 (24 per cent) chicks fledged.—M.A.J.

HOLCOMB, L. C., AND G. TWIEST. 1968. Red-winged Blackbird nestling growth compared to adult size and differential development of structures. Ohio J. Sci., 68: 277–

284.—All mean body weights and measurements increased in size from hatching until day 10 except gape width which reached its maximum on day 6. Those body parts used during nest life developed in first 5 days and those required after fledging developed in the last 5.—H.C.S.

HOLYOAK, D. 1968. A comparative study of the food of some British Corvidae. Bird Study, 15: 147–153.—The contents of gizzards collected through the year for 74 *Garrulus glandarius*, 77 *Pica pica*, 222 *Corvus monedula*, 264 *C. frugilegus*, and 234 *C. corone*.—J.D.R.

HOWARD, D. V. 1968. Criteria for aging and sexing Bay-breasted Warblers in the fall. Bird-Banding, 39: 132.—Plumage, winglength, and skull characteristics of *Dendroica castanea*.—M.A.J.

HOY, G. 1968. Über Brutbiologie und Eier einiger Vögel aus Nordwest-Argentinien. J. Ornithol., 109: 425–433.—Notes on the breeding biology and eggs of a motmot, a trogon, a toucan, several parrots, a puffbird, two woodpeckers, an ovenbird, and two saltators.—H.C.M.

JOHNSTON, D. W. 1969. The thrushes of Grand Cayman Island, B.W.I. Condor, 71: 120–128.

KELLEY, A., AND N. KELLEY. 1969. Porcupine quills found in foot of Sharp-shinned Hawk. Wilson Bull., 81: 209–210.

KULCZYCKI, A., AND M. MAZUR-GIERASIŃSKA. 1968. Nesting of House Sparrow *Passer domesticus* (Linnaeus, 1758). Acta Zool. Cracoviensia, 13: 231–250.—A study of nest sites and structure of 271 nests from rural, suburban, and urban environments in southern Poland, with diagrams and photographs. (In English; Polish summary.) —E.E.

LANE, S. G. 1968. Age/plumage relationship of Rufous Whistler. Australian Bird Bander, 6: 75–77.—*Pachycephala rufiventris* males may breed in "female" plumage. —E.E.

LAVERY, H. J., D. SETON, AND J. A. BRAVERY. 1968. Breeding seasons of birds in North-Eastern Australia. Emu, 68: 133–147.—A report of 232 species breeding north of the Tropic of Capricorn. Although some species bred throughout the year, most, land birds and water birds, bred during the warm rainy season. Several raptors bred during the cooler dry season.—R.G.W.

LECK, C. F. 1969. Observations of birds exploiting a Central American fruit tree. Wilson Bull., 81: 264–269.

LIND, E. A. 1969. The structure of feeding fields of tetraonid birds. Suomen Riista, 21: 40–48.—*Tetrao urogallus* feeds on small field enclosures surrounded by dense old coniferous forests with no seasonal change. *Lyrurus tetrix* feeds on similar fields during the summer, but from fall it frequents larger fields and feeds in large flocks. These changes are explained by changes in social structure and behavior of the Black Grouse; the family flocks that during summer hide in the dense forest and move during twilight change during the autumn into large flocks that move during daylight and seek shelter in wide open places. (In Finnish; English summary.)—M.D.F.U.

LOWE-MCCONNELL, R. H. 1967. Biology of the immigrant Cattle Egret *Ardeola ibis*, in Guyana, South America. Ibis, 109: 168–179.—By 1959 Cattle Egrets made up 90 per cent of the heronry in the Georgetown Botanic Gardens where they were first known to nest in 1950. They are able to occupy established heronries because they respond more quickly than other herons to the onset of rains, so obtaining better nest sites, and because, alone among local herons, they regularly breed during the short winter rains as well as in the main summer rainy season. A buildup of the Guyanan

Cattle Egret population during very wet years of the early 1950's may have triggered the species' explosive spread in the New World. Clearing of forests has promoted increase and spread of Cattle Egrets in Guyana. The species may have been unable to establish itself until man's activities had created open country habitat in the potential landfall areas of northeastern South America.—W.B.R.

MAKATSCH, W. 1969. Studies of less familiar birds: Audouin's Gull. Brit. Birds, 62: 230–232.—A summary paper with excellent photos.—H.B.

MATHISEN, J. E. 1969. Use of man-made islands as nesting sites of the Common Loon. Wilson Bull., 81: 331.

MCNEIL, R. 1969. On the occurrence of two ovaries in the Willet. Ibis, 111: 92–93.—Three from northeastern Venezuela (winter plumage, not fat, not molting) had well-developed ova in both ovaries but lacked right oviducts.—W.B.R.

MERTENS, J. A. L. 1969. The influence of brood size on the energy metabolism and water loss of nesting Great Tits *Parus major major*. Ibis, 111: 11–16.—At 12°C a brood of one died, but broods of 2–12 produced heat and lost weight in proportions correlating to brood size. Water loss, as calculated from brood weights, had a linear relationship to weight loss at 12°C, but increased at 18°C in broods of more than six. Heat production at 18°C did not correlate with brood size.—B.A.H.

MOILANEN, P. 1968. On the nest site selection of the partridge (*Perdix perdix*) in Southern Finland. Suomen Riista, 20: 105–111.—Temperatures in 8 partridge and 4 pheasant nests. No appreciable egg losses occurred in those nests that were sheltered from the sun and where the maximum nest temperature did not exceed 17°C. In one partridge and one pheasant nest, both poorly sheltered, high temperature was 18.5 and 18°C respectively, and the total failure of the partridge clutch, and the failure of 6 out of 8 pheasant eggs is ascribed to temperature fluctuations and highs. (In Finnish; English summary.)—M.D.F.U.

MOLL, K. 1968. Unter Adlern und Kranichen am Grossen Sea. Wittenberg-Luther-stadt, East Germany, A. Ziemsen. 152 pp., 157 photos.—Valuable photographic essays on the White-tailed Sea-eagle, Common Crane, and five other species.—D.A.

MORTON, M. L., J. R. KING, AND D. S. FARNER. 1969. Postnuptial and postjuvenal molt in White-crowned Sparrows in central Alaska. Condor, 71: 376–385.

NICOLAI, J. 1968. Die isolierte Fruhmauser der Farbmerkmale des Kopfgefieders bei *Uraeginthus granatinus* (L.) and *U. ianthinogaster* Reichw. (Estrildidae). Z. Tierpsychol., 25: 854–861.—Young acquire adult head feather patterns between 24–35 days after hatching, while still dependent on parents. At the same time young form stable pair bonds. As the complete molt of juvenal feathers occurs several weeks later, it is suggested that retention of juvenal body plumage prevents pairing between adults and young.—M.S.F.

NILSSON, L. 1969. Food consumption of diving ducks wintering at the coast of South Sweden in relation to food resources. Oikos, 20: 128–135.—Food of 24 *Aythya marila*, 63 *A. fuligula*, and 1 *Bucephala clangula* collected in the nonbreeding season in shallow water (below 3 m) with *Zostera* meadows and muddy bottom was determined by analyzing gizzard and esophagus contents. Some quantitative samples of the bottom fauna were taken at several sites in autumn and spring and field observations were made to determine flock feeding areas of day-active and night-active species. By the use of few samples, insufficient detail, and numerous assumptions, the author makes a brave attempt to show the harvesting effect by the ducks on the standing crop of the bottom macrofauna from autumn to spring.—H.W.K.

NORMAN, F. I. 1969. A note on the copulation of the Tasmanian Muttonbird. Emu, 69: 47–49.

PARMELEE, D. F. Early nesting of the House Finch in Oklahoma. Bull. Oklahoma Ornithol. Soc., 2: 16.—Nests with four eggs found at Kenton 25 April 1968.—E.E.

PAYNE, R. B. 1969. Overlap of breeding and molting schedules in a collection of African birds. Condor, 71: 140–145.

PEREZ, G. S. A. 1968. Notes on the breeding season of Guam Rails (*Rallus owstoni*). Micronesica, 4: 133–135.

PIRKOLA, M. K. 1968. [Sex and age determination in Finnish Mallards (*Anas p. platyrhynchos*) from wing and tail feathers.] Suomen Riista, 20: 125–135.—Age determination from tail feathers gave too high a proportion of adults. Carney & Geis's method of using wings for aging (juvenile/adult) and sexing proved suitable. Time of sampling may bias the result, as juveniles may be more vulnerable to shooting and possibly begin migration later. (In Finnish; English summary.)—M.D.F.U.

PULLIAINEN, E. 1969. Sex and age ratios in the bag of Willow grouse and Rock Ptarmigan in Northern Finland in the years 1966/67 and 1967/68. Suomen Riista, 21: 108–115.

PYNNÖNEN, A. 1969. [On the former abundance of tetraonid birds in the Konnevesi area, Central Finland.] Suomen Riista, 21: 16–21. (In Finnish; English summary.)

REDHEAD, R. E. 1968. An analysis of pellets cast by harrier hawks. Notornis, 15: 244–247.—The time between food ingestion and pellet casting was measured in two captive *Circus approximans gouldi*. Also 20 pellets and stomach contents of wild birds from Drummond area in New Zealand were analyzed.—G.D.S.

REED, R. A. 1969. Notes on the Redchested Cuckoo in the Transvaal. Ostrich, 40: 1–4.—An account of the breeding of *Cuculus solitarius* in the Transvaal, including development of the young. Fourteen eggs were found, all in nests of the Cape Robin, *Cossypha caffra*.—M.A.T.

RICE, O. O. 1969. Record of female Cardinals sharing nest. Wilson Bull., 81: 216.

RUCNER, R. 1968. Von unserer endemischen Unterart *Apus pallidus illyricus* Tschusi. Larus, 20: 28–44.—Absent at the type locality, but other breeding colonies were discovered and described, with some useful notes distinguishing *A. pallidus* from *A. apus*. *A. pallidus* was never found breeding on buildings as does *A. apus*. (In Serbo-Croatian; German summary.)—M.D.F.U.

RUSCHI, A. 1968. A distribuiçao geográfica de *Klais guimeti guimeti* (Bourcier) 1843, e algumas observações sobre a sua biologia e ecologia (Trochilidae—Aves). Bol. Mus. Biol. Prof. Mello-Leitão, Zool., No. 33: 1–9.—Notes on the distribution, nesting, and ecology of the Violet-headed Hummingbird. The author says it is a short-distance migrant, but gives no explanatory details. (In Portuguese; English summary.)—E.E.

SACH, G. 1968. Die Mauser des Grossen Brachvogels, *Numenius arquata*. J. Ornithol., 109: 485–511.—A complete study and biological analysis of the molt of the curlew. Includes information on timing, sequence, age differences, movements to molting areas, and comparative flight ability of molting birds. (English summary.)—H.S.M.

SAGE, B. L. 1969. Breeding biology of the Coot. Brit. Birds, 62: 134–143.—An 11-year study showed *Fulica atra* single-brooded with a mean clutch of 5.9, hatching success 33.8 per cent, and total breeding success 20.7 per cent. Flooding is the greatest cause of egg failure.—H.B.

SCAMELL, MRS. K. M. 1969. The Green-and-yellow Chlorophonia (*Chlorophonia flavirostris*). Avicult. Mag., 75: 1–2.—An excellent color photo of an adult male ob-

tained from Ecuador illustrates this little known species, now called Yellow-collared Chlorophonia.—E.E.

SCHUBART, O., A. C. AGUIRRE, AND H. SICK. 1965. [Contribution to the knowledge of the food of Brazilian birds]. Arquivos Zoologia (Dept. Zool., São Paulo), 12: 95–249.—An important contribution to the study of neotropical birds. Stomach contents of about 600 different forms (about 1,900 specimens) are given with locality, date, collector, and often sex and weight. Ornithological nomenclature is slightly dated because Sick (pers. comm.) did not see proofs or manuscript, which was completed in 1959 by the entomologist, Schubart. A somewhat confusing nomenclatural error is the listing of two examples of *Scytalopus novacapitalis* sub. nom. "*Synallaxis nova capitalis*" (p. 192). (In Portuguese; German summary.)—E.E.

SCOTT, R. E., AND P. J. GRANT. 1969. Uncompleted moult in *Sterna* terns and the problem of identification. Brit. Birds, 62: 93–97.

SEALY, S. G. 1969. Color aberrations in some alcids on St. Lawrence Island, Alaska. Wilson Bull., 81: 213–214.

SEEL, D. C. 1969. Food, feeding rates and body temperature in the nestling House Sparrow *Passer domesticus* at Oxford. Ibis, 111: 36–47.—Composition of nestling crop contents varies with availability of food. Adults increase the frequency of feeding visits to young proportionately with brood size for broods of 1–3, but not for larger broods. Visits by the male decrease in later stages of the nest period with the initiation of a display to bring the female into a reproductive state. Temperature control and feathers develop in parallel. Nestlings can maintain body temperature above ambient at 10½ days.—M.S.F.

SHADOWEN, H. E. 1969. The diet of the Starling. Kentucky Warbler, 45: 27–28.—Arthropods make up the bulk of the diet, particularly during the spring and summer. —A.C.V.V.

SHORT, L. L., JR. 1969. Observations on three sympatric species of Tapaculos (Rhinocryptidae) in Argentina. Ibis, 111: 239– 240.—Describes habitats, behavior, and possible intraspecific competition of *Scytalopus magellanicus*, *Scelorchilus rubecula*, and *Pteroptochos tarnii*.—M.S.F.

SHORT, L. L., JR. 1969. Observations of the nuthatch-like White-throated Treerunner (*Pygarrhichas albogularis*) in Argentina. Condor, 71: 438–439.

SKUTCH, A. F. 1969. A study of the Rufous-fronted Thornbird and associated birds. Part 2, Birds which breed in Thornbirds' nests. Wilson Bull., 81: 123–139.

SMITH, G. T. C. 1969. A high altitude hummingbird on the volcano Cotopaxi. Ibis, 111: 17–22.—*Oreotrochiles chimborazo* breeds from 13,000 to 15,000 ft. Nesting limits follow the distribution of the food plant *Chuquiraga acutifolia*. Nests are placed under protective overhangs. Breeding occurs all year. A brief comparison is made with the population breeding in the Guamani Pass where different climate and terrain alter breeding habits.—M.S.F.

SMITH, N. G. 1969. Avian predation of coral snakes. Copeia, 1969: 402–404.—Two instances of puffbird (*Malacoptila panamensis*) predation on coral snakes, probably venomous species of *Micrurus*.—J.J.D.

SNOW, B. K., AND D. W. SNOW. 1969. Observations on the Lava Gull *Larus fuliginosus*. Ibis, 111: 30–35.—This medium-sized, hooded gull of the Galápagos is unique in that it is a solitary nester, has a world population of less than 400, and probably breeds without periodicity in all months of the year. Describes behavior, feeding, breeding, and molt.—B.A.H.

SOPER, M. F. 1969. Kermadec Islands Expedition reports the White-capped Noddy

(*Anous tenuirostris minutus*). Notornis, 16: 71–75.—Life history notes on this species at these New Zealand islands.—G.D.S.

SOPER, M. F. 1969. Kermadec Islands Expedition reports/the Grey Ternlet (*Procelsterna cerulea albivitta*). Notornis, 16: 75–80.—Miscellaneous notes on the habits of this species on Meyer Island in the Kermadecs.—G.D.S.

STAUB, F., AND J. GUEHO. 1968. The Cargados Carajos Shoals or St. Brandon: resources, avifauna and vegetation. Proc. Royal Soc. Arts Sci. Mauritius, 3, part 1: 9–46.—Summarizes knowledge of the avifauna of these islets in the western Indian Ocean; useful data on breeding season and nest sites of certain seabirds.—E.E.

STEINBACHER, J. 1968. Bemerkungen zur Brutbiologie, Morphologie und Anatomie von Kagu-Jungen (*Rhynochetos jubatus* Verreaux and Des Murs). Bonn. Zool. Beitr., 19: 198–205.—Breeding biology of captive Kagus and anatomy of young hatched in the Berlin Zoo.—E.E.

STEWART, P. A. 1968. Hatching of Wood Duck ducklings. Bird-Banding, 39: 130.—The young rotate within the shell while they cut a ring in the shell; their sharp claws may assist in the rotation.—M.A.J.

STRESEMANN, E., AND V. STRESEMANN. 1968. Im Sommer mausernde Populationen der Rauchschwalbe, *Hirundo rustica*. J. Ornithol., 109: 475–484.—Southern populations of the Swallow molt immediately after the breeding season. Northern populations molt after migrating to the distant winter range. (English summary.)—H.C.M.

SULKAVA, S. 1968. A study on the food of the Peregrine, *Falco p. peregrinus* Tunstall, in Finland. Aquilo, Ser. Zool. (Dept. Zool., Univ. of Oulu, Oulu, Finland), 6: 18–31.—Analysis of food samples collected at 70 eyries 1958–1965. Peregrines decreased so rapidly in Finland during the 1950s and 1960s that the species may no longer breed there.—E.E.

SUTTON, G. M. 1969. A Chuck-will's-widow in postnuptial molt. Bull. Oklahoma Ornithol. Soc., 2: 9–11.—An adult female collected 28 July in full molt with even the rictal bristles sheathed (photo). Almost all the molted feathers were found at one spot, suggesting either the bird regularly returned to the same place or molt took place rapidly.—E.E.

TEST, F. H. 1969. Relation of wing and tail color in the woodpeckers *Colaptes auratus* and *C. cafer* to their food. Condor, 71: 206–211.

THOMAS, D. G. 1969. Breeding biology of the Australian Spur-winged Plover. Emu, 69: 81–102.—*Lobibyx novaehollandiae* were studied in Tasmania where they breed on pastures near water and on tidal flats. The solitary nests may be lined or unlined and egg color is variable. Clutch size (about 4 eggs) varies little from year to year. After hatching the nidifugous chicks are defended rather than the original area. Post-breeding flocking occurs but no evidence of true migration exists. For the 3-year study young produced per 100 pairs were 29, 23, and 17. With increased clearing and improved pasture (fertilized, seeded) numbers have increased.—C.F.S.

TICKELL, W. L. N. 1969. Plumage changes in young albatrosses. Ibis, 111: 102–105.—Seven *Diomedea chrysostoma* and 10 *D. melanophris* of known age collected at South Georgia colonies illustrate the complexity of plumage change and suggest need of more precise terms for the pre-adult stages of long-lived, late maturing birds. Both these species probably attain adult plumage and breed when 7 or 8 years old.—W.B.R.

ULFSTRAND, S., AND H. JOHANSSON. 1969. Wintering of the Kite *Milvus milvus* in Scania, southern Sweden. Vår Fågelvärld, 28: 107–115.—Formerly migratory, the Kite has been reported wintering in southern Scania in increasing numbers during the past decade. (English summary.)—L.DEK.L.

WALLACE, D. I. M. 1969. Observations on Audouin's Gulls in Majorca. Brit. Birds, 62: 223–229.—Includes elaborate notes on field identification.—H.B.

WARD, P. 1969. The continuous recording of birds' nesting visits using radioactive tagging. Ibis, 111: 93–95.—Bits of radioactive wire attached to metal leg bands and monitored by means of a radiation detector-continuous recorder permitted accurate measurement of frequency and duration of visits to nests by *Batis molitor* (an African muscicapid) and *Merops nubicoides* (aabee-eater). Radiation sources of different strength distinguished the two parents, and the radiation seemed to have no ill effects on the birds (see also Nature, 216: 592–593).—W.B.R.

WOLF, L. L. 1969. Breeding and molting periods in a Costa Rican population of the Andean Sparrow. Condor, 71: 212–219.

WOOLLER, R. D., AND G. S. TRIGGS. 1968. Food of the Long-eared Owl in Inverness-shire. Bird Study, 15: 164–166.—Pellets of *Asio otus* were collected in both the spring (93 pellets) and fall (65 pellets). In descending order, the most important prey items were *Microtus agrestis*, *Apodemus sylvaticus*, and *Clethrionomys glareolus*. Longworth trapped in the fall and showed a direct relationship between the number of each prey item found in the pellets and the number trapped.—J.D.R.

MANAGEMENT AND CONSERVATION

ANDERSON, D. W., J. J. HICKEY, R. W. RISEBROUGH, D. F. HUGHES, AND R. E. CHRISTENSEN. 1969. Significance of chlorinated hydrocarbon residues to breeding pelicans and comorants. Canadian Field-Naturalist, 83: 91–112.— Sampling of 11 cormorant and 5 pelican colonies was conducted in summer 1965 on 19 lakes and impoundments in 10 watersheds of the prairie states and provinces. Cormorant and pelican eggs contained higher amounts of residue, especially DDE, than did the fishes that comprised the major food source. Although the residues seem too low to cause acute toxicity a direct correlation exists between diminished eggshell thickness and residue level. A marked population decrease at one colony appeared related to residues and eggshell thickness. Human disturbance is still a major factor affecting pelican populations, especially in Canada, but the shellthinning phenomenon has led to extirpation in other species. Studies of effects upon avian reproduction of other environmental pollutants must be made before the fish-eating birds disappear.—R.W.N.

FYFE, R. W., J. CAMPBELL, B. HAYSON, AND K. HODSON. 1969. Regional population declines and organochlorine insecticides in Canadian Prairie Falcons. Canadian Field-Naturalist, 83: 191–200.—Studies by the Canadian Wildlife Service in Alberta and Saskatchewan from 1966 through 1968 show a 34 per cent reduction in the occupancy of territories known in the previous 10 years, limited to four of six areas studied. Nestling production also was lowest in the areas of reduced occupancy. Pesticide residues were in all egg and tissue samples analyzed; areas with the lowest rate of production of nestling falcons had the highest DDE levels in the eggs. Decrease in shell weight and thickness correlated with increasing DDE levels in the eggs. High heptachlor epoxide levels may have caused the death of four young falcons.—R.W.N.

PRACY, L. T. 1969. Weka liberations in the Palliser Bay region. Notornis, 16: 212–213.—Results of *Gallirallus australis* introductions.—G.D.S.

WELLER, M. W. 1969. Potential dangers of exotic waterfowl introductions. Wildfowl, 20: 55–58.—Many South American anatids are being considered for release (and in this abstracter's experience frequently have been released) in southeastern United States. Serious dangers in such actions include hybridization and competition with native species. Do a few persons have the right to make these decisions?—G.E.W.

WELLER, M. W. 1969. Comments on waterfowl habitat and management problems in Argentina. Wildfowl, 20: 126–130.—Includes a review of habitat and list of species.—G.E.W.

MIGRATION AND ORIENTATION

BERTHOLD, P., AND A. BERTHOLD. 1968. Über den Herbstzug des Zilpzalps (*Phylloscopus collybita*) auf der Schwäbischen Alb (SW-Deutschland). Ein Beispiel zur Darstellung des Zugablaufes mit Hilfe von Fangzahlen. Vogelwarte, 24: 206–211.—Discusses with great exactitude the temporal occurrence of the Chiffchaff in southwest Germany and Switzerland during autumnal migration. (English summary.)—H.C.M.

GOETHE, F. 1968. Ungewöhnliche Wiederfundsorte verpflanzter deutscher Brandgänse (*Tadorna tadorna*). Vogelwarte, 24: 187–189.—Maps unusual movements of Shelducks after displacement to points outside the normal range.—H.C.M.

GWINNER, E. 1969. Untersuchungen zur Jahresperiodik von Laubsängern. J. Ornithol., 110: 1–21.—A comparative study of plumage development, molt, body weight, and migratory restlessness (in cages) of four species of *Phylloscopus*. Most of these phenomena appear to be correlated with the distance each species migrates. (English summary.)—H.C.M.

HECKENROTH, H. 1968. Beobachtungen über die Rechtswendung des wegziehenden Weissstorchs am Golf von Iskenderun. Vogelwarte, 24: 246–262.—Analysis of 3 years' observations of the autumnal migration of the White Stork through the region of the Gulf of Alexandria and the Amanus Mountains in Turkey at the northeast corner of the Mediterranean. Includes counts, routes taken under various wind conditions, and reactions of birds to water and mountain crossings. (English summary.)—H.C.M.

HOUSTON, C. S. 1969. Recoveries of the Common Crow banded in Saskatchewan. Blue Jay, 27: 84–88.—Fifty-nine recoveries, 1924–1965, are confined to a narrow flyway from North Dakota to Texas. Some Alberta birds apparently use the same flyway.—R.W.N.

LAHRMAN, F. W., AND L. SCOTT. 1969. Whooping Crane at Glaslyn, Saskatchewan. Blue Jay, 27: 213.—A flock of 11, 10 adults and 1 juvenile, photographed in west-central Saskatchewan on 15 October 1969, appears to be the largest flock ever photographed during migration. [It may be only a coincidence that a flock of 21 (not verified) was reported on 3 July 1965, only 10 miles west of this locality (Blue Jay, 23: 151).]—R.W.N.

MEDWAY, L., AND D. R. WELLS. 1969. Dark orientation by the Giant Swiftlet, *Collocalia gigas*. Ibis, 111: 609–611.—Second Malay record captured at 03:00 in a mist net at a flood-lit radio station. Flight trials in a darkened room on two consecutive nights failed to reveal echolocation.—F.E.L.

MYHRBERG, H. E. 1969. The ringing activity at Ammarnäs in 1963–1969. Vår Fågelvärld, 28: 245–248.—Banded 6,154 birds of 49 species; 137 recoveries. Five months after banding, one Redpoll *Carduelis flammea* was recovered in Siberia just east of the Ural Mountains. (English summary.)—L.DEK.L.

SCHÜZ, E., AND W. MEISE. 1968. Zum Begriff des Teilziehers. Vogelwarte, 24: 213–217.—Discusses types of "partial migration" in which only part of the population of a species migrates.—H.C.M.

MISCELLANEOUS

ANDERSSON, I., S. FREDRIKSSON, S. JACOBSSON, AND B. SILVERIN. 1969. Population studies on birds by netting and ringing in the Ammarnäs area, Swedish Lapland. Vår

Fågelvärld, 28: 241–244.—A new project involving the nonbreeding bird community in the subalpine birch forest. (English summary.)—L.DEK.L.

BAEGE, L. 1969. Vom ornithologischen Wirken des Wittener Apothekers Friedrich Wilhelm Justus Baedeker (1788–1865). J. Ornithol., 110: 90–100.—A Baedeker to the ornithological works of another Baedeker, this one a pharmacist, ornithologist, and bird artist.—H.C.M.

BURTON, P. J. K. 1969. Two bird specimens probably from Cook's voyages. Ibis, 111: 388–390.—Spirit specimens of *Vestiaria coccinea* and *Creadion carunculatus* now in the British Museum (Natural History) were traced back to Cook's collection. They are in remarkably good condition and may be the oldest bird specimens in spirit (165–190 years old).—S.C.W.

DUNSTAN, T. C. 1968. A camera research apparatus for investigating nests of cavity or canopy nesting birds. Loon, 40: 115–117.

DUNSTAN, T. C. 1969. Tern mortality due to entanglement in nylon monofilament fishline. Loon, 41: 50–51.

ENEMAR, A. 1969. The ornithological research programme at Ammarnäs, Swedish Lapland. Vår Fågelvärld, 28: 227–229.—Reviews ornithological work performed since 1963 by study teams from the Lund and Gothenburg Zoological Institutes, including a list of publications to date. (English summary.)—L.DEK.L.

HAMEL, J. 1969. The future of ornithology in New Zealand. Notornis, 16: 206–209.—Suggestions for interesting and productive ornithological research in New Zealand: (1) life-history studies rather than regional studies, (2) interspecific habitat adaptation studies, (3) concentration on collecting uniform and comparable data, and (4) more discussion of theoretical matters.—G.D.S.

IRVING, L. 1969. Progress of research in zoology through the Naval Arctic Research Laboratory. Arctic, 22: 327–332.

LANYON, W. E., AND V. H. LANYON. 1969. A technique for rearing passerine birds from the egg. Living Bird, 8: 81–93.—Directions for incubating eggs, brooding and feeding young, and preparing diets.—G.E.W.

OELKE, H., AND H. WOLPERS. 1968. Möglichkeiten und Fehlerquellen der Bestimmung der Flughöhen von Zugvögeln unter Zuhilfenahme des Fernglases. Vogelwarte, 24: 201–206.—A method for determining the altitude of a flying bird by measuring the time it takes to cross the field of vision of a binocular. Estimates of bird air speed and wind speed and direction are necessary. There must be an easier way!—H.C.M.

SCHARF, J. A. 1969. Drowning of Lesser Scaup in drain tile. Loon, 41: 56–57.