PERIODICAL LITERATURE

EDITED BY GLEN E. WOOLFENDEN

A New Journal

NEMOURIA. Occasional Papers of the Delaware Museum of Natural History (Kennett Pike, Greenville, Delaware 19807.)—This museum was established in 1957 and is devoted largely to the study of birds, mammals, and mollusks. Numbers one and two of the irregularly appearing journal are abstracted below under Amadon and duPont, and Hubbard. The name Nemouria is taken from part of the family name of the founders of the museum, duPont de Nemours, and is a contraction of the medieval French word meaning "woodland" or "of the forest."—G.E.W.

Anatomy and Embryology

ALLEN, J. P., J. H. HAMON, AND R. W. MCFARLANE. 1968. Some studies of the spermatozoa of certain species of Icteridae (blackbirds). Proc. Indiana Acad. Sci., 77: 434–441.—Morphologically the sperm of 12 forms (9 species) of blackbirds appeared similar and could not be distinguished. An analysis of variance based on the means of measurements of parts of the sperm provided a method to distinguish between most of the blackbirds studied.—J.J.D.

BURTON, P. J. K. 1971. Some observations on the splenius capitis muscle of birds. Ibis, 113: 19–28.—Describes the modification called "cruciform origin," best developed in the Apodiformes, in simpler form in Aegothelidae and Turnicidae, with similar tendencies in most orders. Suggests the modification allows increased capacity for rapid and extensive head turning, also discusses evolution and possible taxonomic significance.—R.W.S.

PAYNTER, R. A., JR. 1971. Nasal glands in *Cinclodes nigrofumosus*, a maritime passerine. Bull. Brit. Ornithol. Club, 91: 11–12.—Contrary to expectations, nasal glands are not enlarged.—F.B.G.

Behavior

BORROR, D. J. 1971. Songs of *Aimophila* sparrows occurring in the United States. Wilson Bull., 83: 132–151.

COOPER, J., AND B. E. MARSHALL. 1970. Observations on the nestlings of the Goliath Heron, *Ardea goliath*, in Rhodesia. Bull. Brit. Ornithol. Club, 90: 148–152.—Considers changes in aggressive displays of young herons with age.—F.B.G.

EDMAN, J. D., AND H. W. KALE II. 1971. Host behavior: its influence on feeding success of mosquitoes. Ann. Entomol. Soc. Amer., 64: 513–516.—Based on observations of captive herons and White Ibises, the authors conclude that host behavior is important in determining the blood sources of mosquitoes.—G.E.W.

ENGLAND, M. D. 1970. Fight to the death and communal nesting by Carrion Crows. Brit. Birds, 63: 385–387.

GOLDMAN, P. 1971. Herring Gull predation on common water snake in Lake Erie. Wilson Bull., 83: 196–197.

GRIER, J. W. 1971. Pre-attack posture of the Red-tailed Hawk. Wilson Bull., 83: 115–123.

HAFFT, J. H. 1971. Herring Gull attacks Eared Grebe. Condor, 73: 253.

HARLOW, R. A. 1971. Birds feeding on an ant mating swarm in Maine. Wilson Bull., 83: 201–202.

HEISE, G. 1970. Zur Brutbiologie des Seggenrohrsängers (*Acrocephalus paludicola*).

J. Ornithol., 111: 54–67.—Males and females of the Aquatic Warbler hold separate territories. The territory of an individual may overlap those of several individuals of the other sex. Females attempt to drive males away from the immediate vicinity of nests. No aggressive encounters between males were observed. Presents many details on the life history of this little-known bird. (English summary.) —H.C.M.

IMPEKOVEN, M. 1971. Calls of very young Black-headed Gull chicks under different motivational states. Ibis, 113: 81–96.—The motivational states of the *Larus ridibundus* chicks tested were: "hungry and warm," "hungry and cold," "satiated and warm," and "satiated and cold."—R.W.S.

KIKKAWA, J. 1968. Social hierarchy in winter flocks of the Grey-breasted Silvereye *Zosterops lateralis* (Latham). Japanese J. Ecol., 18: 235–246.—Social relations of silvereyes of a local and a migratory race (distinguishable by plumage) were studied at a feeding table in 1961 and in cages in 1961 and 1962. Hierarchies derived from aggressive encounters were linear both in the field and in captivity. Even when changed under experimental conditions, the hierarchies remained linear. Migrants tended to dominate locals and males dominated females. Territorial aggressiveness was elicited in experiments but hierarchy rather than territory determined the dominance rank. Dominance and aggressiveness are interpreted as different aspects of behavior.—S.C.W.

KILHAM, L. 1971. Reproductive behavior of Yellow-bellied Sapsuckers. I. Preference for nesting in *Fomes*-infected aspens and nest hole interrelations with flying squirrels, raccoons, and other animals. Wilson Bull., 83: 159–171.

MEANLEY, B. 1971. Additional notes on pre-nesting and nesting behavior of the Swainson's Warbler. Wilson Bull., 83: 194.

MILLIGAN, M. M., AND J. VERNER. 1971. Inter-populational song dialect discrimination in the White-crowned Sparrow. Condor, 73: 208–213.

NEHLS, H. 1969. Beobachtungen zur Aufzucht einer Schwarzkopfmöwe (*Larus melanocephalus*) durch Sturmmöwen (*Larus canus*) und zum Fütterungs-und Drohverhalten der Schwarzkopfmöwe. Vogelwarte, 25: 130–134.—An egg from a Mediterranean Gull was placed in a Common Gull's nest. In spite of considerable differences in appearance and behavior of the two species, the young fledged successfully. The young *L. melanocephalus* begged for food from its foster parents even though they lacked the red bill; it fed successfully even though *L. canus* regurgitates food onto the ground instead of allowing young to feed out of its throat. Threat and appeasement postures also differ in the two species. The young *melanocephalus* learned to discriminate between its foster parents and other individual *canus*.—H.C.M.

PRESCOTT, K. W. 1971. Unusual activity of Starlings at Yellow-shafted Flicker nest. Wilson Bull., 83: 195–196.

ROBINSON, F. N., AND A. H. ROBINSON. 1970. Regional variation in the visual and acoustic signals of the male Musk Duck, *Biziura lobata*. CSIRO Wildl. Res., 15: 73–78.—Differences of calls in southeastern and southwestern Australia correlate with differences in visual signals. The two populations probably have been separated a long time. (From authors' summary.)—B.A.H.

RYDÉN, O. 1970. On the behaviour in an alarm-evoking, constant stimulus situation in a "natural experiment."—Observations on a pair of Herring Gulls (*Larus argentatus*) and Common Terns (*Sterna hirundo*) breeding on the same islet. J. Ornithol., 111: 48–53.—The two terns attacked the gulls when the latter approached or left the island. The attacks continued with undiminished intensity throughout the breeding period.—H.C.M.

SHARLAND, R. E. 1969. Cuckoo calls. Nigerian Ornithol. Soc. Bull., 6: 122–123.—Brief descriptions of the vocalizations of 11 African species.—M.H.C.

SNOW, D. W. 1971. Display of the Pompadour Cotinga *Xipholena punicea*. Ibis, 113: 102–104.—Groups of males performed ritualized chasing in the tree tops in southern Guyana.—R.W.S.

WOLF, L. L. 1971. Predatory behavior in Montezuma Oropendola. Wilson Bull., 83: 197–198.

DISEASES AND PARASITES

AMERSON, A. B., JR. 1968. Tick distribution in the Central Pacific as influenced by sea bird movement. J. Med. Entomol., 5: 332–339.—The distribution of the four tick species known from the Central Pacific is similar to that of the seabirds they parasitize. One species is known only from the southern Line and Phoenix Island areas and two only from the northern Hawaiian Island area. Although the fourth is found throughout the Central Pacific, it is suggested that little interchange occurs between its northern and southern populations. The seabird hosts have similar population patterns with little interchange between the northern and southern islands.—J.J.D.

ASHFORD, R. W. 1971. Blood parasites and migratory fat at Lake Chad. Ibis, 113: 100–101.—*Haemoproteus* infection of *Motacilla flava* and *Sylvia communis* is not correlated with fat condition. The author concludes that the parasites probably are harmless.—R.W.S.

BORG, K., K. ERNE, E. HANKO, AND H. WANNTORP. 1970. Experimental secondary methyl mercury poisoning in the Goshawk (*Accipiter g. gentilis L.*). Environmental Pollution, 1: 91–104.—Chickens raised on mercury-dressed wheat (av. mercury content 8 ppm) were then fed to a Goshawk. Mercury in chicken muscle and liver averaged 10 and 40 ppm. All hawks fed mercury-treated chickens died within 30 to 47 days. The major symptoms were failure to eat after about 10 days, muscular weakness, and loss of weight. Most of the mercury in the hawk was present as methyl mercury and it reached levels as high as 286 ppm in the testes. J.J.D.

PRESTT, I., D. J. JEFFERIES, AND N. W. MOORE. 1970. Polychlorinated biphenyls in wild birds in Britain and their avian toxicity. Environmental Pollution, 1: 3–26.—A total of 196 livers (from 33 species) and 363 eggs (28 species) were analyzed for PCB. Most of the birds were raptors and fish-eating seabirds. PCB was found in samples from most regions of Britain, the highest concentration being 900 ppm in the liver of a heron. The level of PCB was similar to that of p,p'-DDT. The toxicity of PCB is about $\frac{1}{13}$ that of DDT and thus it is unlikely that PCB has caused widespread mortality in predatory birds although it may cause breeding failures in some species.—J.J.D.

DISTRIBUTION AND ANNOTATED LISTS

AMADON, D., AND J. E. DUPONT. 1970. Notes on Philippine birds. Nemouria, 1: 1–14.—Specimens from the Dalton Pass area, only 180 miles northeast of Manila, include several interesting records. A series of *Turnix worcesteri*, hitherto known from only five specimens, all destroyed during World War II, reestablishes the validity of the bird as distinct from *T. sylvatica*. A color plate illustrates both sexes of the two aforementioned button-quail. Twelve additional specimens of the recently described *Rallus mirificus* make the total about 20. A new subspecies, *Muscicapa latirostris randi*, the first Luzon specimens of *Zoothera andromedae*, and a

series of *Z. cinerea*, previously known on Luzon from but one specimen, complete the notabilities.—G.E.W.

ANDREW, J. O. 1969. Notes on some Palaeartic migrants in The Gambia, spring 1969. Nigerian Ornithol. Soc. Bull., 6: 94–98.—Annotated list of 39 species in a year when unusual numbers of Palaearctic migrants were present in The Gambia and many departed very late.—M.H.C.

ASHFORD, R. W. 1969. Two species new to Ibadan, and associated records. Nigerian Ornithol. Soc. Bull., 6: 30–31.—*Acrocephalus schoenobaenus* and *Cyanosylvia svecica*; also lists 15 additional species mist-netted on overgrown farmland 16 December through 21 January 1969 with distributional notes.—M.H.C.

AUSTIN, G. T. 1970. Migration of warblers in Southern Nevada. Southwestern Naturalist, 15: 231–237.—In spring most migrating warblers stay in the lowlands with a peak of migration in early May. In fall migrating warblers are found in both the lowlands and the mountains with the migration peak earlier in the mountains. The birds may migrate in the mountains to avoid the extreme heat of early fall in the lowlands.—J.J.D.

BAILEY, R. S. 1971. Sea-bird observations off Somalia. Ibis, 113: 29–41.—Oceanographic data for Arabian Sea, from equator to 10° N and 45° to 53° E, are related to bird sightings during July-September 1964. Birds were scarce.—R.W.S.

BEESLEY, J. S. S. 1971. Some notes from the Arusha National Park. Bull. Brit. Ornithol. Club, 91: 8–9.—Distributional records and observations of nesting of 11 bird species.—F.B.G.

BENSON, C. W. 1970. The Cambridge collection from the Malagasy Region. Bull. Brit. Ornithol. Club, 90: 168–172; 91: 1–9.—A summary of specimens of particular taxonomic and distributional interest.—F.B.G.

BROOKE, R. K. 1970. The White-headed Barbet in Angola. Bull. Brit. Ornithol. Club, 90: 161–162.—Discusses a series of specimens of *Lybius leucocephalus leucogaster* in the collections of the Instituto de Investigacao Cientifica de Angola at Sa da Bandeira that shows the race is a highland form like the other races and breeds in September and October.—F.B.G.

CONKLIN, K. 1970. Post-Columbian birds from Abaco Island, Bahamas. Quart. J. Florida Acad. Sci., 33: 237–240.—Bird bones associated with *Rattus* in a cave deposit include 2 pigeons, 2 cuckoos, 1 woodpecker, and 14 passerines, all existing species.—G.E.W.

DEVILLERS, P., G. MCCASKIE, AND J. R. JEHL, JR. 1971. The distribution of certain large gulls (*Larus*) in southern California and Baja California. California Birds, 2: 11–26.—Data on the distribution and migration of Glaucous, Thayer's, Mew, Glaucous-winged, and Western (including *L. o. livens*) Gulls. Some early records of Glaucous Gull in California are based on misidentified specimens.—J.R.J.

DICKERMAN, R. W. 1971. Further notes on Costa Rican birds. Condor, 73: 252–253.

DOWSETT, R. J. 1969. Migrants at Malam'fatori, Lake Chad, autumn 1968. Nigerian Ornithol. Soc. Bull., 6: 39–45.—Observations on 77 species of Palaearctic and 22 species of Ethiopian migrants; reports on recoveries of six passerines ringed at Malam'fatori.—M.H.C.

DOWSETT, R. J. 1969. Bird notes from the central Cameroons. Nigerian Ornithol. Soc. Bull., 6: 103–105.—Notes on 59 species seen during a week in June at Campement des Cobas (about 8° N, 13° 13′ E).—M.H.C.

DOWSETT, R. J., AND A. J. HOPSON. 1969. Additions and amendments to the list of birds of Malam'fatori, Lake Chad. Nigerian Ornithol. Soc. Bull., 6: 53–55.—

Adds records of 43 species to Hopson's earlier list for the area (published in the same journal); the total number recorded now stands at 330.—M.H.C.

ERARD, C., AND R. D. ETCHÉCOPAR. 1970. Some notes on the birds of Angola. Bull. Brit. Ornithol. Club, 90: 158–161.—Observations of noteworthy species.—F.B.G.

ERARD, C., AND J. PRÉVOST. 1970. New facts on the distribution of *Tauraco ruspolii* Salvadori. Bull. Brit. Ornithol. Club, 90: 157.—This rare turaco was found in montane forest 80 km north of Neghelli (Sidamo), where it occurs in juniper. The closely related *T. leucotis* occurs in broad-leafed forests.—F.B.G.

FLEGG, J. J. M. 1971. Birds in Ireland during 1966–69. Brit. Birds, 64: 4–19.—Significant records of the period, summarized seasonally.—H.B.

FORD, J. 1971. Distribution and taxonomy of southern birds in the Great Victoria Desert. Emu, 71: 27–36.—Ten species of southern Australian birds associated with mallee and sclerophyllous woodlands, previously thought to be separated into southwestern and southeastern populations by the Nullarbor Plain barrier, were found to have a continuous distribution from west to east through the Great Victoria Desert north of Nullarbor Plain. The habitat providing the connection is a mosaic of marble gum, mallee, and mulga vegetation. The author feels that none of these species differs racially between the east and west edges of Nullarbor Plain. The species are : *Glossopsitta porphyrocephala, Neophema splendida, Cinclosoma castanotum, Myiagra inquieta, Microeca leucophaea, Pachycephala inornata, Climacteris rufa, Pardalotus xanthopygius, Strepera versicolor,* and *Gymnorhina tibicen.*—L.L.S.

GOERTZ, J. W., AND E. E. MOWBRAY. 1970. Nesting records for three species of Louisiana birds. Southwestern Naturalist, 15: 265–266.—Extension of the nesting ranges of *Geococcyx californicus, Muscivora forficata,* and *Hirundo rustica.*—J.J.D.

GUTIERREZ, R. 1970. Birds of the Upper Sand Creek drainage, Sangre de Cristo Mountains, Colorado. Colorado Field Ornithol., 8: 11–16.

HEIGHAM, J. B. 1969. Birds observed on Victoria Island, Lagos. Nigerian Ornithol. Soc. Bull., 6: 109–119.—Detailed notes on the birds of this area in southwest Nigeria; graph of frequency of occurrence of 147 species.—M.H.C.

HIBBARD, E. A. 1971. Nesting of Bell's Vireo in North Dakota. Wilson Bull., 83: 202–203.

JANES, D. W. 1969. Some unusual early records of birds from Pueblo County. Colorado Field Ornithol., 6: 15–17.—Interesting records from 1888–1932, in Colorado.—M.A.J.

JANY, G., AND F. LARIGANDERIE. *Saxicola torquata* (Linnaeus) breeding in Senegal. Bull. Brit. Ornithol. Club, 91: 32.—Specimens are needed to determine race of stonechats observed.—F.B.G.

JOHNSON, A. R., AND J. C. BARLOW. 1971. Notes on the nesting of the Black-bellied Tree Duck near Phoenix, Arizona. Southwestern Naturalist, 15: 394–395.—A nest found in 1969 is the first for Arizona. The pair apparently was double-brooded, another first for the species.—J.J.D.

JONES, L. 1971. The Whip-poor-will in California. California Birds, 2: 33–36.—*C. v. arizonae* first recorded in 1968 in Riverside County; subsequent records for 1969 and 1970.—J.R.J.

KAZAMA, T. 1969. Passage of *Erithaus* [*sic*] *sibilaus* [*sic*] and observations of *Fregata ariel.* Tori, 19: 126–128.—*Erithacus sibilans,* Swinhoe's Bush-Robin, a rare straggler to Japan, was collected 18 May 1969 at Riyoutsu City [= Ryozu], Niigata Prefecture, Sado Island (Austin and Kuroda, Bull. Mus. Comp. Zool., 109: 540, 1953 list previous records from Honshu and Shikoku, and doubted a published record from Cape Kashiwa on the Honshu mainland opposite Sado). A Lesser Frigatebird (for which Austin and Kuroda list six previous Japanese records) was

seen on 24 May 1969 at Kashiwazaki, Niigata Prefecture, Honshu. (In Japanese; English summary.)—K.C.P.

KIKKAWA, J., AND K. PEARSE. 1969. Geographical distribution of land birds in Australia—a numerical analysis. Australian J. Zool., 17: 821–840.—Divisive information analysis was used for hierarchical classification of faunal areas and faunal elements of Australia from the distribution of 464 species of land birds at 121 localities. The derived faunal areas produced concentric zonations showing remarkable resemblances to the faunal subdivisions proposed by earlier workers who used intuitive methods of zoogeography.—G.E.W.

KING, W. B. 1970. The trade wind zone oceanography pilot study. Part VII: observations of sea birds March 1964 to June 1965. U. S. Dept. Int., Bureau Commercial Fisheries, Spec. Sci. Rept., Fisheries No. 586, pp. i-vi + 136.—Analyzes central Pacific seabird distribution based on 15 monthly at-sea surveys along a 8,264 km grid east, north, and south of the Hawaiian Islands. Data for species are analyzed for seasonal abundance and distribution. Further analysis includes total monthly bird densities, seasonal composition of birds using the study area (breeding, wintering, migrating), abundance relative to proximity of land, seasonal directional movements, daily activity cycles, environmental influences, and flock analysis (seasonality, distribution, species composition, flocking tendencies). The paper is profusely illustrated with maps, graphs, and tables and includes an appendix giving daily data summaries.—B.A.H.

KINGERY, H. E. 1969. Faculty ranch birds. Colorado Field Ornithol., 6: 1–13.—Bird notes from 14 years in a valley in Boulder County, Colorado, now flooded by a reservoir.—M.A.J.

KNORR, B. 1971. Returns of transient shorebirds. EBBA News, 34: 9–19.—Methods, frustrations, and partial results of banding on the New Jersey coast from 1960 to 1970.—B.A.H.

KURODA, N. M. 1969. Distribution of the anserine birds found in the Japanese islands. Tori, 19: Part III, 93–108; Part IV, 109–125.—Japanese locality records for 25 species of ducks, including the first Japanese record of *Netta rufina* (male observed in Fukui Prefecture, Honshu, 19 December 1968 to 1 January 1969). (In Japanese; English "summary" merely lists species covered.)—K.C.P.

LAMBERT, K. 1969. Schwalbenmöwen (*Xema sabini*) im April und Mai 1968 vor Südwest- und Südafrika. Vogelwarte, 25: 49–52.—Observations of Sabine's Gull in spring in the eastern Atlantic off the coasts of south and southwest Africa.—H.C.M.

LOCKHART, P. S. 1970. House Martins nesting at Somerset West, Cape. Ostrich, 41: 254–255.—The European House Martin *Delichon urbica* nested, apparently successfully, in South Africa. The nest was begun in August, long before wintering European birds arrive.—M.A.T.

MARSH, T. G. 1968. A history of the first records of all the birds reported to have been seen within the present boundaries of the state of Colorado prior to settlement. Colorado Field Ornithol., 3: 12–21.

MENGEL, R. M. 1970. Black Skimmer in Douglas County, Kansas. Kansas Ornithol. Soc. Bull., 21: 15.—*Rynchops nigra* taken 24 May 1968 represents the first Kansas specimen and the most inland occurrence of the species.—M.A.J.

MOUNTFORT, G. 1971. Occurrence of the Chaffinch *Fringilla coelebs* in Gilgit. Ibis, 113: 109.—A 300-mile eastward range extension into Pakistan.—R.W.S.

OGASAWARA, K. 1969. *Monticola gularis* obtained in Akita City; new to Japan. Misc. Repts. Yamashina Inst. Ornithol., 5: 684–685.—First Japanese specimen of Forest Rock-Thrush, collected in northern Honshu 24 May 1969. The species breeds in

eastern mainland Asia and winters in the Indochinese countries. Photograph of the mounted bird, maps, and measurement table. (In English.)—K.C.P.

PARKER, J. W. 1970. A summer record of the Red Crossbill in Meade County, Kansas, with comments on variation in Red Crossbills. Kansas Ornithol. Soc. Bull., 21: 22–24.—Reports on the first summer (1 August 1969) specimen of *Loxia curvirostra* and demonstrates the difficulties of assigning individuals of this species to the currently recognized subspecies.—M.A.J.

PARKS, G. H., AND MRS. G. H. PARKS. 1971. Evening Grosbeaks in New Brunswick–chapter VI. EBBA News, 34: 33–38.

PARMELEE, D. F., M. D. SCHWILLING, AND H. A. STEPHENS. 1970. Gruiform birds of Cheyenne Bottoms. Kansas Ornithol. Soc. Bull., 21: 25–27.—Comments on occurrence and breeding records of eight species at a waterfowl management area in Barton County, Kansas.—M.A.J.

SCHWARTZ, A. 1969. Land birds of Isla Saona, Republica Dominicana. Quart. J. Florida Acad. Sci., 32: 291.—An annotated list of the land birds of Isla Saona, and comparison of its avifauna with that of other island satellites of Hispaniola.—G.E.W.

SCOTT, J. M., J. BUTLER, W. G. PEARCY, AND G. A. BERTRAND. 1971. Occurrence of the Xantus' Murrelet off the Oregon coast. Condor, 73: 254.

SICK, H. 1971. Blackpoll Warbler on winter quarters in Rio de Janeiro, Brazil. Wilson Bull., 83: 198–200.

ULFSTRAND, S. 1970. Die neuzeitliche Überwinterung des Rotmilans *Milvus milvus* in Südschweden. J. Ornithol., 111: 85–93.—Between 20 and 40 Red Kites now winter in southern Sweden, a phenomenon unknown before the late 1950s. (English summary.)—H.C.M.

URBAN, E. K., L. H. BROWN, C. E. BUER, AND G. D. PLAGE. 1970. Four descriptions of nesting, previously undescribed, from Ethiopia. Bull. Brit. Ornithol. Club, 90: 162–164.—First nest records of *Vanellus melanocephalus*, *Tockus hemprichii*, *Parophasma galinieri*, and *Onychognathus salvadorii* in Ethiopia.—F.B.G.

URBAN, E. K., AND T. HAKANSON. 1971. An African Pitta, *Pitta angolensis longipennis*, from Ethiopia. Bull. Brit. Ornithol. Club, 91: 9–10.—First Ethiopian specimen extends nonbreeding range 900 km northward.—F.B.G.

VIERKE, J. 1970. Die Besiedlung Südafrikas durch den Haussperling (*Passer domesticus*). J. Ornithol., 111: 94–103.—Documents the spread of the House Sparrow (mainly *P. d. indicus*) in South Africa. Spread was slow for the first 50 years, and then a rapid extension of range took place. (English summary.)—H.C.M.

WALLACE, D. I. M. 1969. Palaearctic migrants in West Lagos: November 1968 to May 1969. Nigerian Ornithol. Soc. Bull., 6: 45–49.—Notes on 56 species, mostly water birds, wintering in northwestern Nigeria, includes records of three Roseate Terns banded in southwest Ireland.—M.H.C.

WELLS, D., AND F. WALSH. 1969. Birds of northern and central Borgu (in three parts). Nigerian Ornithol. Soc. Bull., 6: 1–25, 63–77, 78–93.—Annotated list from field work, September 1965 through June 1969 on the Niger River and its western catchment area from Bajibo (9° 22′ N) to Rofia (10° 55′ N). Lists over 360 species by status (resident, intra-African migrants, Palaearctic migrants), habitat preferences, frequency of occurrence, and breeding records, often with detailed notes. Maps.—M.H.C.

WINTERBOTTOM, J. M., (ED.). 1969. Checklist of the birds of South Africa. South African Ornithol. Soc., List Committee, 338 pp.—The first "official" list of South African birds, South Africa being defined as that part of Africa south of the Cunene and Zambesi Rivers. It is essentially conservative in its treatment of genera and species, and, as noted by the editor, owes a great debt to Clancey's Catalogue of birds

of the South African sub-region (Durban Mus. Novitates, 7: 201–633, 1965–66). As an official list, it forms a useful base for the nomenclature of South African birds. —M.A.T.

Ecology and Population

Braun, C. E., and G. E. Rogers. 1967. Ecology of the White-tailed Ptarmigan in Colorado: a preliminary report. Colorado Field Ornithol., 2: 6–9.—Notes on *Lagopus leucurus*.—M.A.J.

Bub, H. 1969. Nahrungspflanzen des Berghänflings (*Carduelis fl. flavirostris*). Vogelwarte, 25: 134–141.—Lists more than 90 food plants the Twite uses during breeding, migration, and wintering.—H.C.M.

Churchill, D. M., and P. Christensen. 1970. Observations on pollen harvesting by Brush-tongued Lorikeets. Australian J. Zool., 18: 427–437.—The staple diet of *Glossopsitta porphyrocephala* is pollen that the bird removes from the anthers of various *Eucalyptus* species with its brushlike tongue. Nectar supplements the bird's diet when available but is not the major food as previously thought.—J.J.D.

Dean, A. 1971. Notes on *Spiziapteryx circumcinctus*. Ibis, 113: 101–102.—First published notes on nesting of the Spot-winged Falconet.—R.W.S.

DeHaven, R. W., and J. L. Guarino. 1970. Breeding of Starlings using next [sic]-boxes at Denver, Colorado. Colorado Field Ornithol., 8: 1–10.—Gives clutch size, nesting success, and causes of nest mortality (primarily from a blood-sucking mite) for *Sturnus vulgaris* using 50 nest boxes.—M.A.J.

Erwin, R. M. 1971. The breeding success of two sympatric gulls, the Herring Gull and the Great Black-backed Gull. Wilson Bull., 83: 152–158.

Everett, M. J. 1971. The Golden Eagle survey in Scotland in 1964–68. Brit. Birds, 64: 49–56.—In seven areas covering all but one of the main habitats the mean rate of success during the period was 0.58 young reared per breeding pair, exactly the same as that for all pairs recorded outside the survey. "It is tentatively suggested that 0.50 young per pair may be adequate to maintain a viable adult population and that the species is currently holding its own in Scotland."—H.B.

Francis, W. J. 1971. An evaluation of reported reproductive success in Red-winged Blackbirds. Wilson Bull., 83: 178–185.

Fretwell, S. D. 1970. On territorial behavior and other factors influencing habitat distribution in birds. III. Breeding success in a local population of Field Sparrows (*Spizella pusilla* Wils.). Acta Biotheoretica, 19: 45–52.—Using breeding success as the measure, habitat suitability did not correlate with density. Thus it was concluded that territorial behavior only spaces individuals of this species.—J.J.D.

Fretwell, S. D., and J. S. Calver. 1970. On territorial behavior and other factors influencing habitat distribution in birds. II. Sex ratio variation in the Dickcissel (*Spiza americana* Gmel). Acta Biotheoretica, 19: 37–44.—Sex ratios are considered a measure of suitability of habitat for Dickcissels. Variation in the sex ratios correlates positively with variation in density. Using the models developed in the paper cited below, the authors conclude that males' territorial behavior limits their density.—J.J.D.

Fretwell, S. D., and H. L. Lucas, Jr. 1970. On territorial behavior and other factors influencing habitat distribution in birds. I. Theoretical development. Acta Biotheoretica, 19: 16–36.—Develops models for testing the role of territorial behavior in habitat distribution in birds, based on comparing density and suitability in various habitats. The hypotheses considered for the role of territorial behavior are that it is a density assessment mechanism, that it limits density, or that it spaces individuals.—J.J.D.

GADD, S. 1969. "Boreal year" in the Pike's Peak region. Colorado Field Ornithol., 5: 12.—Large numbers of montane and northern birds were present at low elevations.—M.A.J.

HECKENROTH, H. 1969. Der Weisstorch-Bestand von Nordwest-Griechenland 1968. Vogelwarte 25: 19–23.—A 1968 survey of western Macedonia revealed 169 breeding pairs of White Storks, a population much higher than suggested by previous, fragmentary information. Further surveys are needed in Greece (English summary.)—H.C.M.

HECKENROTH, H. 1969. Der Weisstorch-Bestand 1965 im westlichen Mitteleuropa. Vogelwarte, 25: 27–46.—A comprehensive survey of the status of the White Stork in 1965 in West Germany, Denmark, and Netherlands; maps and tables show nest locations and nesting success.—H.C.M.

HESPENHEIDE, H. A. 1971. Food preference and the extent of overlap in some insectivorous birds, with species reference to the Tyrannidae. Ibis, 113: 59–72.—Reanalysis of data collected by the Biological Survey in the early 1900s in light of recent discussions on character displacement. Large birds eat larger food items but the habitat in which the birds feed determines feeding differences.—R.W.S.

HOLLYER, J. N. 1970. The invasion of Nutcrackers in autumn 1968. Brit. Birds, 63: 353–373.—About 315 *Nucifraga caryocatactes* were reported in Britain, apparently of the race *macrorhynchus* of northeast Russia and Siberia and apparently chiefly adults; all previous records totaled only about 56. Subnormal temperatures in the area from Murmansk to Central Europe and weather unusually favorable for crossing the North Sea believed factors. Details records, summarizes occurrences in European countries, and gives notes on food and behavior.—H.B.

HORNBY, H. E. 1970. Further notes on the Whitewinged Widowbird. Ostrich, 41: 225–231.—Breeding ecology of *Euplectes albonotatus*, and its dependence on different species of grasses at different stages of the breeding cycle.—M.A.T.

HUBBARD, J. P. 1971. The summer birds of the Gila Valley, New Mexico. Nemouria, 2: 1–35.—The Gila River flows for 55 miles through southwestern New Mexico before crossing into Arizona and eventually emptying into the Colorado. A gallery woodland and other riparian habitats characterize the study area. A description of of the valley and its habitats precedes an annotated list. The discussion includes remarks on occurrence of breeding species and their utilization of habitat, biogeographic affinities, and changes in historic times.—G.E.W.

HUCKRIEDE, B. 1969. Zur Tannenhäher-Invasion 1954 in Deutschland. Vogelwarte, 25: 23–25.—Notes on the 1954 invasion of the Nutcracker (*Nucifraga caryocatactes*) into Germany.—H.C.M.

KENNEDY, R. J. 1970. Direct effects of rain on birds: a review. Brit. Birds, 63: 401–414.

KLEMM, W. 1969. Der Weisstorch-Bestand im Gebiet von Sibiu (Hermannstadt) in Siebenbürgen 1963 and 1967. Vogelwarte, 25: 25–26.—White Storks decreased between 1963 and 1967 on the north slope of the Transylvanian Alps in Rumania. Extremely cold weather may have been a factor.—H.C.M.

KLOCKENHOFF, H., AND G. MADEL. 1970. Über die Flamingos (*Phoenicopterus ruber roseus*) der Dasht-e-Nawar in Afghanistan. J. Ornithol., 111: 78–84.—Reports on a second breeding population of the Greater Flamingo in Afghanistan. About 6,000 individuals nested on the Ab-e-Nawar in 1969. Avocets, Redshanks, and Common Terns also nested on this lake, which lies 3,100 m above sea level. (English summary.)—H.C.M.

KUMERLOEVE, H. 1969. Die Silbermöwe, *Larus argentatus*, als Binnenland—Brut-

vogel im östlichen Kleinasien. Vogelwarte, 25: 47–49.—A survey of inland breeding populations of the Herring Gull in the Middle-East.—H.C.M.

LEOPOLD, A. S., AND T. O. WOLFE. 1970. Food habits of nesting Wedge-tailed Eagles, *Aquila audax*, in south-eastern Australia. CSIRO Wildl. Res., 15: 1–17.—An economically stimulated study suggests adult sheep and lambs comprise small portions of diet; over 90 percent of food is small to medium size mammals (mostly rabbits), birds, and lizards. Virtually no snakes were recorded as food. Persuasive data indicate adult eagles are not significant predators of livestock, but additional study of subadult feeding is urged. Historically the creation of sheep pasture and introduction of lagomorphs probably have favored increased populations of *Aquila*.—B.A.H.

LONG, C. F. 1971. Common Grackles prey on big brown bat. Wilson Bull., 83: 196.

LYON, D. L., AND C. CHADEK. 1971. Exploitation of nectar resources by hummingbirds, bees (*Bombus*), and *Diglossa baritula* and its role in the evolution of *Penstemon kunthii*. Condor, 73: 246–248.

MARTI, C. D. 1968. Double broods of the Barn Owl in Colorado. Colorado Field Ornithol., 3: 7–8.—Two instances of double broods for *Tyto alba*.—M.A.J.

MATHIASSON, S. 1970. Numbers and distribution of Long-tailed wintering Ducks in northern Europe. Brit. Birds, 63: 414–424.—(Words in title no doubt accidentally transposed.) Assesses main wintering areas of *Clangula hyemalis* and discusses timing of migration, winter movements, flock size, sex ratios, habitat, and food.—H.B.

NEHLS, H. W. 1969. Zur Umsiedlung, Brutortstreue und Brutreife der Brandseeschwalbe (*Sterna sandvicensis*) nach Ringfunden auf Langenwerder. Vogelwarte, 25: 52–57.—An analysis of the capture of banded Sandwich Terns on the island of Langenwerder on the Baltic coast of West Germany. Recruits to the colony come from as far as western England and southern Sweden. Established breeders return year after year, and earlier in the season than newcomers to the colony.—H.C.M.

OLSSON, V. 1969. Die Expansion des Girlitzes (*Serinus serinus*) in Nordeuropa in den letzten Jahrzehnten. Vogelwarte, 25: 147–156.—Documents the changes in the range of the Serin in Europe since 1926. Static phases and even a retreat in the 1940s have occurred, but the species continues to spread northward and eastward.—H.C.M.

POLEY, B. E. 1969. Seasonal movements of Sage Grouse in Colorado. Colorado Field Ornithol., 5: 1–4.—Preliminary results of tracking *Centrocercus urophasianus* fitted with radio transmitters.—M.A.J.

RHEINWALD, G., AND H. GUTSCHER. 1969. Das Alter der Mehlschwalbe (*Delichon urbica*) in Riet. Vogelwarte, 25: 141–147.—House Martins were banded as nestlings and recaptured as breeding adults in southwestern Germany. The data indicate that breeding adults have a mean life expectancy of 2.5 ± 0.9 years, unusually high for a passerine. (English summary.)—H.C.M.

RIDPATH, M. G. 1969. The Wedge-tailed Eagle. Australian Nat. Hist., 16: 209–212.—This popular account indicates that rabbits are the principal prey item, with other small mammals and crow-sized birds frequently taken. Densities are as high as one pair per 16 sq. mi.—B.A.H.

ROBINS, J. D. 1970. The relationship of food supply to the timing of breeding in aerial foragers. Kansas Ornithol. Soc. Bull., 21: 9–15.—Discusses the breeding cycles and postnuptial molt of 22 species of aerial foragers in Kansas in relation to the abundance of aerial insects.—M.A.J.

SMYTH, M., AND H. N. COULOMBE. 1971. Notes on the use of desert springs by birds in California. Condor, 73: 240–243.

STOLLMANN, A. 1969. Populationsuntersuchungen am Weisstorch (*C. ciconia*) in der

Slowakei 1968. Vogelwarte, 25: 65–66.—An investigation into the 1968 populations of the White Stork in Czechoslovakia.—H.C.M.

TAYLOR, R. J., AND E. D. MICHAEL. 1971. Predation on an inland heronry in eastern Texas. Wilson Bull., 83: 172–177.

THOMAS, D. G., AND A. J. DARTNALL. 1971. Ecological aspects of the feeding behaviour of two calidritine sandpipers wintering in south-eastern Tasmania. Emu, 71: 20–26.—Wintering *Calidris ferruginea* and *C. ruficollis* were found to utilize similar (both by size, and by species) food items, but they were segregated largely by habitat. *C. ferruginea* usually forages within the water upon invertebrates beneath the surface; the shorter-legged, shorter-billed *ruficollis* generally forages above or at the water's edge.—L.L.S.

WALSH, F. 1969. Village Weavers causing severe damage to maize. Nigerian Ornithol. Soc. Bull., 6: 106–107.—Depredations by *Plesiositagra (Ploceus) cucullatus* on *Zea mays*.—M.H.C.

WOLF, L. L., AND F. G. STILES. 1970. Evolution of pair cooperation in a tropical hummingbird. Evolution, 24: 759–773.—Studies of *Panterpe insignis* indicate males defend suitable territories in which one or more females are allowed to feed and nest. No evidence exists to suggest that males participate directly in nesting, but their mates and, presumably their young, are allowed to feed without aggression by the males. Such a system frees the females from attacks by other males (or females), and by permitting the female free access to flowers on its mate's territory, insures the greatest reproductive success of the female. Females generally lay but two eggs, and, as they are capable of raising two young birds without the aid of the male, it appears more advantageous for a male to mate with more than one female than to participate in nesting with one female.—L.L.S.

YAMAGISHI, S., T. NAKAMURA, S. SUYAMA, K. IIJIMA, H. USHIYAMA, AND T. KAGAWA. 1969. A comparative study on the wintering ecology of five species of *Emberiza*. Misc. Repts. Yamashina Inst. Ornithol., 5: 585–601.—Habitat and foraging methods of *E. spodocephala*, *E. cioides*, *E. fucata* (found only once), *E. rustica*, and *E. schoeniclus*, with emphasis on last two, which utilize moorlands. *E. schoeniclus* is adapted for perching on vertical stems. It feeds in grasses above or beside water and roosts in small groups in reeds. *E. rustica* feeds in large flocks, chiefly on the ground, moving about over a large wintering area. (In Japanese; excellent English illustration captions and summary.)—K.C.P.

ZAHAVI, A. 1971. The function of pre-roost gatherings and communal roosts. Ibis, 113: 106–109.—Suggests that communal roosting facilitates food finding and that antipredator adaptations have evolved consequent to the night assemblages.—R.W.S.

EVOLUTION AND GENETICS

BOCK, W. J. 1970. Microevolutionary sequences as a fundamental concept in macroevolutionary models. Evolution, 24: 704–722.—Using the historically recent radiation of the drepaniid subfamily Psittirostrinae as a model, the author convincingly shows that macroevolutionary changes are a consequence of speciation. Reasonably accurate, if inferred, phylogenetic sequences are a necessary prerequisite to analysis of microevolutionary mechanisms. The sequences documented are explainable on the basis of these mechanisms, namely geographic variation, speciation in allopatry, and secondary contact with resulting competition and character displacement.—L.L.S.

ERARD, C., AND J. PREVOST. 1971. Notes on some Ethiopian birds. Bull. Brit. Ornithol. Club, 91: 21–25.—Especially interesting is a discussion of the evolutionary history of the races of *Tauraco leucotis*.—F.B.G.

HARRISON, J. M., AND J. G. HARRISON. 1971. Notes on a further Pintail × Teal hybrid. Bull. Brit. Ornithol. Club, 91: 28–32.—Discusses possible revisionary significance of aberrant characters in five hybrid *A. acuta* × *A. crecca* in relation to evolution of the Anatidae. (From authors' summary.)—F.B.G.

HERRE, W., AND M. ROHRS. 1970. Experimentelle Beiträge zur Stammesgeschichte der Vögel. J. Ornithol., 111: 1–18.—Studies of the effects of domestication show that remarkable changes can occur in the form, appearance, behavior, and abilities of animals, although no distinct species have arisen. The author cautions against the use of form or appearance as species characteristics. (English summary.)—H.C.M.

JEHL, J. R., JR. 1971. A hybrid Glaucous Herring Gull from San Diego, California Birds, 2: 27–32.—An adult hybrid collected in March 1969 documented by photographs and a drawing of primary pattern.—J.R.J.

JENSEN, R. A. C., AND C. J. VERNON. 1970. On the biology of the Didric Cuckoo in southern Africa. Ostrich, 41: 237–246.—*Chrysococcyx caprius* forms species-specific gentes in South Africa, similar to those of *Cuculus cuculus* in Europe. —M.A.T.

JOHNSTON, R. F., AND R. K. SELANDER. 1971. Evolution in the House Sparrow. II. Adaptive differentiation in North American populations. Evolution, 25: 1–28.—In a study employing only skeletal characters the authors demonstrate incipient geographic variation in the introduced North American House Sparrow (*Passer domesticus*). The order of magnitude of the variation expressed after a little over one century approaches the level encountered between the consubspecific British and German populations. The incipient variation is adaptive and tends to follow the ecogeographic rules. It is hoped that the study will be placed in proper perspective by future comparisons among tropical (Burmese, Indian) and temperate populations of several of the many races of *Passer domesticus* (only western European populations of one race have been studied so far), and comparison with other avian species. —L.L.S.

MISHIMA, T. 1969. An example of *Parus varius* × *P. atricapillus* and a pale phase of *Emberiza spodocephala*. Misc. Repts. Yamashina Inst. Ornithol., 5: 676–678.—A hybrid between the Varied Tit and the Willow Tit (= *Parus montanus*, no longer considered conspecific with *P. atricapillus*), illustrated with a poor photograph, was captured in Yamagata, northern Honshu, in September 1966 and kept alive until May 1969. Plumage was intermediate; voice resembled *varius*. This is the sixth report of this hybrid combination in Japan. A pale *Emberiza spodocephala* captured in Tokyo in November 1964 and kept alive until December 1967 may have been a variant of Japanese *personata* or a stray of some northern population. (In Japanese, brief English summary.)—K.C.P.

MURTON, R. K. 1971. Polymorphism in Ardeidae. Ibis, 113: 97–99.—Relates color to feeding method; with exceptions, dark forms are active feeders in wetland habitat and light forms use the wait and surprise method in open situations.—R.W.S.

PARKIN, D. T., AND R. K. MURTON. 1970. Melanism in Rock Doves. Brit. Birds, 63: 389–393.

SCHOENER, T. W. 1971. Large-billed insectivorous birds: a precipitous diversity gradient. Condor, 73: 154–161.

SHAUGHNESSY, P. D. 1970. The genetics of plumage phase dimorphism of the Southern Giant Petrel *Macronectes giganteus*. Heredity, 25: 501–506.—Field studies of *Macronectes giganteus* provide data consistent with the hypothesis that the dark-white phase polymorphism in this species is under the control of two autosomal allelic genes, with the white phase dominant. Random mating occurs, and no evidence was found for differential mortality of young.—L.L.S.

SHORT, L. L. 1971. Hybridization and introgression in flickers. EBBA News, 34: 4–8.—Discusses distinction between clinal introgressant characters and hybrid characters in Red and Yellow-shafted Flickers.—B.A.H.

TAVERNER, J. H. 1970. A presumed hybrid Mediterranean × Black-headed Gull in Hampshire. Brit. Birds, 63: 380–382.

WILLIAMS, L. E., JR. 1969. A pale mutant wild Turkey in juvenal plumage. Quart. J. Florida Acad. Sci., 32: 236–238.—Specimens or photographs document 11 pale mutants from Florida, Virginia, Alabama, and Mississippi. In some instances at least, the mutants are far removed from the generation in which alleged domestic × wild crossing occurred.—G.E.W.

GENERAL BIOLOGY

BECK, J. R., AND D. W. BROWN. 1971. The breeding biology of the Black-bellied Storm-Petrel *Fregetta tropica*. Ibis, 113: 73–90.—A good study based on three breeding seasons at Signy Island, South Orkney Islands. Describes nesting habitat, population size, general behavior, and detailed information on all aspects of the breeding biology. Includes measurements of various populations.—R.W.S.

BEESLEY, J. S. S. 1971. Further notes on the Spike-heeled Lark *Chersomanes albifasciator* in East Africa. Bull. Brit. Ornithol. Club, 91: 10–11.—Details of habitat and nesting of this highly localized species.—F.B.G.

BUB, H., AND S. KOLAR-PLICKA. 1969. Die Hollenlänge beim Kiebitz (*Vanellus vanellus*). Vogelwarte, 25: 2–6.—Measurements of the longest feather in Lapwing crests yielded a range of 74–125 mm for 32 males and 49–85 mm for 230 females. The feathers varied in length from year to year with perhaps a tendency toward reduction in length with increasing age.—H.C.M.

BUCHANAN, O. M. 1971. The Mottled Owl *Ciccaba virgata* in Trinidad. Ibis, 113: 105–106.—Notes on specimens and captive young with details on calls.—R.W.S.

CORKHILL, P. 1971. Cannibalistic Great Black-backed Gull. Brit. Birds, 64: 30–32.

COULOMBE, H. N. 1971. Behavior and population ecology of the Burrowing Owl, *Speotyto cunicularia*, in the Imperial Valley of California. Condor, 73: 162–176.

CULBERTSON, J. L., L. L. CADWELL, AND I. O. BUSS. 1971. Nesting and movements of Canada Geese on the Snake River in Washington. Condor, 73: 230–236.

DAVIS, J. 1971. Breeding and molt schedules of the Rufous-collared Sparrow in coastal Peru. Condor, 73: 127–146.

DOWSETT, R. J. 1969. Breeding biology of the Olivaceous Warbler *Hippolias pallida laeneni*. Nigerian Ornithol. Soc. Bull., 6: 107–108.—A clutch of two hatched in 13 days 22 hours ± 21 hours; the nestlings were fed by both parents and fledged in 13–14 days.—M.H.C.

DROST, R. 1969. Grundsätzliches zur Altersbestimmung lebender Sperlingsvögel. Vogelwarte, 25: 6–13.—Some young Yellowhammers (*Emberiza citrinella*) have almost completely pneumatized skulls in October; others are incompletely pneumatized as late as May. Determination of age of buntings by the "skulling" technique of bird banders therefore is not recommended. (English summary.)—H.C.M.

ERSKINE, A. J. 1971. Growth, and annual cycles in weights, plumages and reproductive organs of Goosanders in Eastern Canada. Ibis, 113: 42–58.—Based on 325 *Mergus merganser* handled during banding and 465 collected by the Fisheries Research Board in the Margaree River system on Cape Breton Island, Nova Scotia.—R.W.S.

FEDUCCIA, J. A. 1971. *Turdus grayi* feeding on snake. Wilson Bull., 83: 197.

GEORG, P. V., AND MOHAMMED AL-RAWY. 1970. Growth studies on nestlings of Common Swallow *Hirundo rustica rustica*. Bull. Iraq. Nat. Hist. Mus., 4: 3–20.—

Gives weights and traces growth of the wing, first and second primaries, outer tail feathers, tarsus, and bill of 29 young from 9 nests.—J.J.D.

GRANT, P. J., R. E. SCOTT, AND D. I. M. WALLACE. 1971. Further notes on the 'portlandica' plumage phase of terns. Brit. Birds, 64: 19–22.—Found in *Sterna maxima, S. sandvicensis, S. balaenura,* and *Chlidonias niger,* as well as *S. hirundo, S. dougallii,* and *S. paradisaea.* "This plumage phase is probably the normal dress of these terns during their period of immaturity and is thus broadly comparable with the well-known immature plumages of gulls."—H.B.

HADLEY, N. 1969. Breeding biology of the Gray-headed Junco, *Junco caniceps* (Woodhouse) in the Colorado Front Range. Colorado Field Ornithol., 5: 15–21.

HANEDA, K., AND T. SHINODA. 1969. A study of breeding biology of the Japanese Wagtail. Misc. Repts. Yamashina Inst. Ornithol., 5: 602–622.—A two-season study of the endemic Japanese *Motacilla grandis,* covering time from nest site selection through fledging of young. Contribution of males: nest building, 0 percent; incubation, 27.9 percent; brooding, 0 percent; feeding of young, 53.8 percent. Family groups remained in or near territory for 25 days after young left nest. Mean clutch size 5.25; hatching rate 47.1 percent; fledging rate of eggs hatched 52.6 percent, of eggs laid 23.8 percent. High predation on young attributed to presence nearby of roost of *Corvus corone.* (In Japanese; English summary and captions.)—K.C.P.

HARRISON, C. J. O., AND M. P. WALTERS. 1971. Some errors concerning eggs of Somalia birds. Bull. Brit. Ornithol. Club, 91: 12–14.—Possible misidentifications. —F.B.G.

HARTWIG, E., AND G. VAUK. 1969. Zug, Rast und Nahrung der auf Helgoland durchziehenden Waldohreulen (*Asio otus*). Vogelwarte, 25: 13–19.—In the years 1958–1967, the annual count of migrant Long-eared Owls on Helgoland varied from 16 to 57. Band recoveries include those from the Soviet Union, Finland, and Sweden. Birds comprised over 86 percent of the prey items taken by the owls on Helgoland. —H.C.M.

HAVERSCHMIDT, F. 1971. Variations in plumage of male and female White-crowned Manakins (*Pipra pipra*). Bull. Brit. Ornithol. Club, 91: 18.—Records adult females with black feathers, and sexually mature males in female plumage.—F.B.G.

HAVERSCHMIDT, F. 1971. Notes on the life history of the Rusty-margined Flycatcher in Surinam. Wilson Bull., 83: 124–128.

HOSONO, T. 1969. A study of the life history of Blue Magpie 6. Distribution and movements in Nagano area 1. Misc. Repts. Yamashina Inst. Ornithol., 5: 659–675.—Local flock distribution of *Cyanopica cyana* in the Nagano-Ueda area of central Honshu was plotted on a 1:50,000 map with information from 83 correspondents. Habitats included towns and farms, orchards, and both coniferous and broad-leafed woods, with a preference for orchards or woods near human habitation. Distribution ranged from 310 m altitude in bottomland to 1,600 m on plateau, with no apparent correlation with local temperature or precipitation conditions, even in areas experiencing 3 m of snowfall. (In Japanese; with brief English summary, no English captions.)—K.C.P.

KAHL, M. P. 1971. Observations on the Jabiru and Maguari Storks in Argentina. 1969. Condor, 73: 220–229.

KLEMM, W. 1970. Der Mornellenregenpfeifer, *Eudromias morinellus,* in Siebenbürgen. J. Ornithol., 111: 68–77.—The Dotterel breeds at four localities in the Transylvanian Alps in Rumania. Details of breeding, food, and behavior. (English summary.)—H.C.M.

KREIG, D. C. 1971. The behavioral patterns of the Eastern Bluebird (*Sialia sialis*).

New York State Mus. Sci. Serv. Bull., 415: 1–139.—Observations cover 5 years in western New York state and include color-banded wild birds and birds raised in captivity. Also, behavior of wintering birds was studied at Tallahassee, Florida. Describes behavioral patterns associated with maintenance activities, agonistic behavior, territory defense, pair formation, and courtship. Discusses functions and derivations of the behavior patterns and compares them with those of other birds, especially thrushes.—S.C.W.

KURODA, N. H. 1969. Post-fledging family behavior in the Jungle Crow. Misc. Repts. Yamashina Inst. Ornithol., 5: 640–658, 4 plates.—Observations at a nest of *Corvus levaillanti* [= *macrorhynchus* of Peters' Check-list] *japonensis* near the author's home in Tokyo. For the first few days after leaving the nest, the young remained in higher branches of the nest tree. For 19 days young flew and roosted only within trees immediately adjacent to nest. While young were still in nest, parents joined communal flock roost at night, but when young began roosting in nest tree, parents remained nearby at first. Later, if young had been well-fed and settled down early to roost, parents went to communal roost; if young were still restless and hungry at evening, parents remained. Two young joined parents at communal roost after day 19, and never returned to parental territory after first night. A third, hatched a day later, "commuted" with parents (with gradually increasing independence) until day 94 after hatching (75 days after leaving nest-site roost for first time). Many additional behavioral details. (In Japanese; long English summary. English captions on photograph plates but not on text figures.)—K.C.P.

LANG, J. R. 1969. A Spotted Eagle Owl's nest. Nigerian Ornithol. Soc. Bull., 6: 101–103.—Description of the nesting activities of a pair of *Bubo africanus* in Nigeria.—M.H.C.

LANG, J. R. 1969. The nest and eggs of the Moho or Oriole Babbler *Hypergerus atriceps*. Nigerian Ornithol. Soc. Bull., 6: 127–128.—Described for the first time. —M.H.C.

LEFFLER, S. R. 1971. The junco as a food item for the Rough-legged Hawk in Alaska. Wilson Bull., 83: 196.

LIGON, J. D. 1971. Late summer-autumnal breeding of the Piñon Jay in New Mexico. Condor, 73: 147–153.

LIGON, J. D. 1971. Notes on the breeding of the Sulphur-bellied Flycatcher in Arizona. Condor, 73: 250–252.

MATSUYAMA, S., AND T. IIMURA. 1969. On the measurements of five external characters of the adult Japanese Tree-Sparrow, *Passer montanus saturatus* Stejneger. Tori, 19: 79–86.—Measurements of length of wing, tail, tarsus and culmen, and weights, taken of 415 individuals captured at one Tokyo locality throughout 1965, mostly January–May. Correlation coefficients against wing length showed high correlation only with tail length. Wing length range was 61–73 mm, mean 67.66 ± 0.25 mm. Only ranges are given in summary for other measurements. No seasonal comparisons appear to have been made, and only 10 individuals were sexed! (In Japanese; brief English summary.)—K.C.P.

MOTT, D. F. 1970. Ageing House Finches by wing covert wear. Western Bird Bander, 45: 36–37.—Distinguishing between adult and hatching-year finches in Oregon from the fledging season through the fall molt. Ageing by wing coverts is faster than by skull ossification when handling large numbers of birds.—M.H.C.

MULLER, K. A. 1971. Physical and behavioral development of a Roadrunner raised at the National Zoological Park. Wilson Bull., 83: 186–193.

NAKAMURA, H. 1969. A study of annual cycle of population size, habitat selection

and activity in Japanese *Chloris sinica*. Misc. Repts. Yamashina Inst. Ornithol., 5: 623–639.—Population size of Oriental Greenfinch in study area in Nagano Prefecture northwest of Tokyo, has two seasonal peaks; postbreeding (June–September), and after addition of northern wintering birds (November–March). In early fall family groups begin to coalesce into local flocks, which later combine into "molting flocks" of up to 150 in areas where grass seed production is high. When molting is complete and local food exhausted, smaller, wide-ranging foraging flocks form, part of the breeding population moves south, and migrants arrive from north. In early winter most feeding is along riversides, but flocks enter farms and villages in severe months of February and March. In April flocks begin to break up by day, but still gather together in evening; shortly afterward pair formation begins. (In Japanese; English summary and captions.)—K.C.P.

OATLEY, T. B. 1970. Robin hosts of the Redchested Cuckoo in Natal. Ostrich, 41: 232–236.—Brood parasitism by *Cuculus solitarius*, with discussion of the timing of egg laying in relation to the host's clutch.—M.A.T.

RITTINGHAUS, H. 1969. Ein Beitrag zur Ökologie und zum Verhalten des Goldregenpfeifers, *Pluvialis apricarius*, zu Beginn der Brutzeit. Vogelwarte, 25: 57–65.—Ecological and behavioral observations of the European Golden Plover on the island of Öland in Sweden.—H.C.M.

ROWLEY, I. 1970. The genus *Corvus* (Aves: Corvidae) in Australia. CSIRO Wildl. Res., 15: 27–71.—A taxonomic reassessment and impressive ecological study of the five species (four endemic to Australia) with a historical review. Concludes that one race of *C. coronoides* Vigors and Horsfield, *C. mellori* Mathews, *C. orru* Bonaparte, and *C. bennetii* North and two races of *C. tasmanicus* (*C. t. tasmanicus* Mathews and *C. t. boreus*, subsp. nov.) occur in Australia. Also discusses interspecific competition.—B.A.H.

SKINNER, N. J. 1969. Notes on the breeding of the Pygmy Long-tailed Sunbird *Hedydipna platura* at Zaria. Nigerian Ornithol. Soc. Bull., 6: 124–126.—Observations on eight nests in north central Nigeria; the species is unusual in that it breeds during the dry season and constructs a domed nest firmly attached to the main stem of a bush, not pendent as in some other sunbirds.—M.H.C.

STONEHOUSE, B. 1971. The Snares Islands Penguin *Eudyptes robustus*. Ibis, 113: 1–7.—Comparison with *E. pachyrhynchus*, reviewing taxonomy and nomenclature and presenting brief notes on breeding biology and mensural characters of adults, immatures, and eggs.—R.W.S.

THOMSEN, L. 1971. Behavior and ecology of Burrowing Owls on the Oakland Municipal Airport. Condor, 73: 177–192.

VERNON, C. J. 1970. Pre-incubation embryonic development and egg "dumping" by the Jacobin Cuckoo. Ostrich, 41: 259–260.—Presents evidence that embryonic development begins while the eggs of *Clamator jacobinus* are in the oviduct. Thus such eggs are more advanced when laid than those of the host, and the young cuckoo hatches first.—M.A.T.

WILLIAMS, L. E., JR., D. H. AUSTIN, N. F. EICHHOLZ, T. E. PEOPLES, AND R. W. PHILLIPS. 1968. A study of nesting Turkeys in southern Florida. Proc. 22nd Ann. Conf. Southeastern Assoc. Game and Fish Commissioners, pp. 16–30.—Radio transmitters fitted on 35 wild hens in March 1968 led to the discovery of 20 nests. Data are given on breeding season, clutch size, preferred nesting cover, movements, behavior of adults, nest characteristics, and predation. A detailed methods section forms a major part of the paper.—S.C.W.

ZINO, P. A. 1971. The breeding of Cory's Shearwater *Calonectris diomedea* on the

Salvage Islands. Ibis, 113: 212–217.—Prelaying behavior, parental attendance of eggs and young, growth and development, and predation. The species appears to have a typical shearwater breeding biology including prelaying exodus, large eggs, long incubation period, long chick development, and synchronous laying.—B.A.H.

Management and Conservation

Rowley, I. 1970. Lamb predation in Australia: incidence, predisposing conditions, and the identification of wounds. CSIRO Wildl. Res., 15: 79–123.—Includes discussion of eagles and crows.—B.A.H.

Rutherford, W. H. 1967. Experimental manipulation of Canada Goose populations in Colorado. Colorado Field Ornithol., 2: 1–5.—Report on the management of *Branta canadensis*.—M.A.J.

Migration and Orientation

Berthold, P., and V. Dorka. 1969. Vergleich und Deutung von Jahreszeitlichen Wegzugs-Zugmustern ausgeprägter und weniger ausgeprägter Zugvögel. Vogelwarte, 25: 121–129.—Data from the trapping and observation of fall-migrant passerines in southwest Germany indicate that long distance migrants exhibit a temporal distribution that is symmetrical or skewed towards a peak late within their migratory period. Short-distance or partial migrants exhibit a temporal distribution skewed toward a peak early in their migration period. These results are interpreted to indicate that the migratory periodicity of long distance migrants is largely determined endogenously while that of other migrants is strongly influenced by proximate factors, mainly weather conditions. (English summary.)—H.C.M.

Forsyth, B. J., and D. James. 1971. Springtime movements of transient nocturnally migrating landbirds in the Gulf coastal bend region of Texas. Condor, 73: 193–207.

Hebrard, J. J. 1971. The nightly initiation of passerine migration in spring: a direct visual study. Ibis, 113: 8–18.—Daily censuses, and nocturnal behavior studied with ceilometer aimed horizontally above the tree tops at Grand Isle, Louisiana.—R.W.S.

Heintzelman, D. S., and R. MacClay. 1971. An extraordinary autumn migration of White-breasted Nuthatches. Wilson Bull., 83: 129–131.

Nakamura, T. 1969. Physiological and ecological studies on bird migration with special reference to body lipids. Tori, 19: 87–92.—Seasonal comparisons of body weight, liver weight, and various characteristics of lipids in *Emberiza rustica latifascia*, *Passer montanus saturatus*, and *Acrocephalus arundinaceus orientalis*. Scientific names appear in the English summary only, and are given with generic and specific names as initials only. No tables appear, and no figures are given in the summary. (In Japanese; English summary.)—K.C.P.

Ralph, C. J. 1971. An age differential of migrants in coastal California. Condor, 73: 243–246.

Ryder, R. A. 1967. Migration and movements of some gulls from Colorado. Colorado Field Ornithol., 2: 16–20.—Reports primarily on *Larus delawarensis* and *L. californicus*.—M.A.J.

Miscellaneous

Binford, L. C. 1971. Identification of Northern and Louisiana Waterthrushes. California Birds, 2: 1–10.—A review of characters by which these species can be distinguished in the field and hand.—J.R.J.

Burt, H. E., and M. L. Giltz. 1971. The decoy trap. EBBA News, 34: 23–30.

COLLISTER, A. 1970. Research through bird banding in Colorado. Colorado Field Ornithol., 7: 26–33.

GEBHARDT, L. 1970. Die Ornithologen Mitteleuropas, Band 2. J. Ornithol. III, Sonderheft.—An addition to the author's 1964 collection of biographies of European ornithologists. The two volumes include information on about 1,500 individuals, all of whom died before 1970.—H.C.M.

HANNEBRINK, E. L., AND J. K. BEADLES. 1971. Abnormality in the beak of a juvenal [sic] Little Blue Heron (*Florida caerulea*). Southwestern Naturalist, 15: 495–496.—A decurved upper bill and vestigial tongue.—J.J.D.

JANES, D. W. 1970. Survey of collections of birds in Colorado. Colorado Field Ornithol., 7: 23–25.

LUPTON, D. W. 1970. Bird clubs in Colorado. Colorado Field Ornithol., 7: 11–15.—Historical account and current list.—M.A.J.

MARSH, T. G. 1970. The founders of Colorado ornithology. Colorado Field Ornithol., 7: 16–18.

SHARLAND, R. E. 1969. Ringing in Nigeria, 1968; eleventh annual report. Nigerian Ornithol. Soc. Bull., 6: 26–29.—Lists 1968 bandings as well as totals for program from its inception: 36,469 individuals of 75 species, including 24,954 Yellow Wagtails since 1958. Details the 1968 recoveries.—M.H.C.

SHARLAND, R. E. 1969. Ethiopian birds ringed in Nigeria and Ghana. Nigerian Ornithol. Soc. Bull., 6: 50–52.—Lists numbers of individuals (total 13,116) of 223 species banded in the area up to the end of 1968; also lists 9 recaptures with dates.—M.H.C.

SHARLAND, R. E. 1969. Mallam Fatori, spring 1969. Nigerian Ornithol. Soc. Bull., 6: 98–101.—Account of banding near Lake Chad, 28 March through 7 April, primarily Palaearctic migrants.—M.H.C.

SPERRY, T. M. 1970. A comparison of mid-winter bird census methods in southeastern Kansas. Kansas Ornithol. Soc. Bull., 21: 17–22.—The author conducted one "Audubon Society" midwinter count and two midwinter counts using methods developed by the Bureau of Sport Fisheries and Wildlife. The Audubon count revealed more species because of intensive coverage of forested areas. The BSFW count produced more information on densities of birds in open fields and pastures. Two breeding bird counts by the BSFW method indicated that the total number of individuals is several times greater in winter than in early June.—M.A.J.

STEWART, P. A. 1971. Persistence of remains of birds killed on motor highways. Wilson Bull., 83: 203–204.

PHYSIOLOGY

ASCHOFF, J., AND H. POHL. 1970. Der Ruheumsatz von Vögeln als Funktion der Tageszeit und der Körpergrösse. J. Ornithol., 111: 38–47.—The "resting" metabolism of starved birds, resting motionless in the dark, is 25 percent higher during normal activity periods than during normal rest periods. (English summary.)—H.C.M.

DÜCKER, G. 1970. Untersuchungen über die hormonale Beeinflussbarkeit der Farbbevorzugung von Feuerwebern (*Euplectes orix franciscanus*). J. Ornithol., 111: 19–29.—A study of the effects of sex hormones on color preferences of a weaverbird. Males preferred red (normal male color) in all seasons and treatments, except when treated with estradiol during the nonbreeding season. Males treated with "testoviron" during the breeding season showed a less strong preference for red than did the untreated controls. Females showed no preference for red at any time

or with any treatment including injection of male hormones. (English summary.) —H.C.M.

GORMAN, M. L., AND H. MILNE. 1971. Seasonal changes in the adrenal steroid tissue of the Common Eider *Somateria molissima* and its relation to organic metabolism in normal and oil-polluted birds. Ibis, 113: 218–228.—Increased interrenal activity reflects production of the glucocorticoids necessary for the breakdown of muscle protein, which provides glycogenic amino acids and thus promotes fat catabolism. Fractional volume of interrenal tissue of healthy female (but not male) eiders increases during incubation, decreases slightly after the eggs hatch, and falls rapidly during the postbreeding molt. Interrenal cell nuclear diameters show the same pattern. Oiled eiders of both sexes show extensive interrenal hyperplasia. Fractional volumes and nuclear diameters are greater than in unoiled birds at any season. Probably the oil did not produce this effect by its toxicity, which was relatively low, but rather by making the birds unable to feed, forcing them to rely first on fat catabolism and later on gluconeogenesis from protein for energy.—B.A.H.

JEFFERIES, D. J., AND M. C. FRENCH. 1971. Hyper- and hypothyroidism in pigeons fed DDT: An explanation for the "thin eggshell phenomenon." Environmental Pollution, 1: 235–242.—Homing pigeons fed p, p'-DDT in dosages ranging from 3 to 54 mg/kg/day had increases in thyroid weight. Body temperature, oxygen consumption, and vitamin A storage showed that birds fed low doses of DDT were in a hyperthyroidal condition while those fed high doses were in a hypothyroidal condition. The reasons for the differences in thyroid activity are unknown but hypothyroidal birds are known to lay thin-shelled eggs, perhaps explaining this phenomenon in birds.—J.J.D.

MAYR, I. 1970. Über die Ölkugelverteilung in der Retina männlicher und weiblicher Feuerweber (*Euplectes orix franciscanus*). J. Ornithol., 111: 30–37.—The preference for red shown by males of this species cannot be explained by the frequency or distribution of oil droplets in the retina. (English summary.)—H.C.M.

WARHAM, J. 1971. Body temperatures of petrels. Condor, 73: 214–219.

TAXONOMY AND PALEONTOLOGY

BRODKORB, P. 1969. The generic position of a Cretaceous bird. Quart. J. Florida Acad. Sci., 32: 239–240.—*Cimolopteryx retusus* Marsh becomes *Palintropus retusus* (Marsh) of the family Cimolopterygidae.—G.E.W.

BRODKORB, P. 1970. The paleospecies of woodpeckers. Quart. J. Florida Acad. Sci., 33: 132–136.—Alleged woodpecker fossils from France and Wyoming now assigned to other families. Thus the only paleospecies are four from the Pliocene and Pleistocene of North America, including *Campephilus dalquesti* described herein.—G.E.W.

BROOKE, R. K. 1970. Geographical variation in the swifts *Apus horus* and *Apus caffer* (Aves: Apodidae). Durban Mus. Novitates, 9: 29–38.—Describes *Apus horus fuscobrunneus* subsp. nov. from Moçamedes, Angola.—M.A.T.

BROOKE, R. K. 1971. An aberrant *Lamprotornis mevesii* with comments on the limits of the genus *Lamprotornis*. Bull. Brit. Ornithol. Club, 91: 19–20.—Specimen with aberrant iridescence prompts reevaluation of the starling genera *Lamprotornis*, *Cosmopsarus* and *Spreo*. Recommends merging of *Lamprotornis* and *Cosmopsarus*, but continued distinction of *Spreo*.—F.B.G.

BROOKE, R. K. 1971. Geographical variation and distribution in the swift genus *Schoutedenopus*. Bull. Brit. Ornithol. Club, 91: 25–28.—*S. schoutedeni* is a distinct species and not a peculiar juvenile of *S. myoptilus chapini*, with which it is apparently sympatric. Discusses races of *S. myoptilus*.—F.B.G.

CARRUTHERS, R. K., W. HORTON, AND D. P. VERNON. 1970. Distribution, habits and sexual dimorphism of the Western Grass-wren *Amytornis textilis ballarae* Condon in northwestern Queensland. Memoirs Queensland Mus., 15: 335–341.—Brief accounts of coloration, nesting season (late July to September or October), and habits of this recently discovered subspecies. Suggests several other areas where similar isolated populations of this species may occur.—J.J.D.

CLANCEY, P. A. 1970. Miscellaneous taxonomic notes on African Birds. XXIX. Durban Mus. Novitates, 8: 375–390.—Records *Sterna m. maxima* for the first time from South Africa, describes *Indicator indicator inquisitor* subsp. nov. from southern Moçambique, and reviews the races of *Ploceus cuculatus*.—M.A.T.

CLANCEY, P. A. 1970. On *Smithornis capensis suahelicus* Grote, 1926. Bull. Brit. Ornithol. Club, 90: 164–166.—Discusses validity of this and other East African races.—F.B.G.

CLANCEY, P. A. 1970. Miscellaneous taxonomic notes on African Birds. XXX. Durban Mus. Novitates, 9: 1–11.—Describes *Streptopelia senegalensis divergens* subsp. nov., northeastern Botswana, *Lanioturdus torquatus mesicus* subsp. nov., Huila, Angola, and *Nectarinia fusca inclusa* subsp. nov., Moçamedes, Angola.—M.A.T.

CLANCEY, P. A. 1970. Miscellaneous taxonomic notes on African birds. XXXI. Durban Mus. Novitates, 9: 25–28.—Describes *Nectarinia afra amicorum* subsp. nov., southern Moçambique.—M.A.T.

CONDON, H. T. 1969. A new subspecies of the Western Grass-wren, *Amytornis textilis* (Dumont) in northwestern Queensland. Memoirs Queensland Mus., 15: 205–206.—A new subspecies, *A. t. ballarae* from the Mount Isa district is the first definite record of the genus for Queensland.—J.J.D.

COWLES, G. S. 1970. The original description by H. O. Forbes of the extinct New Zealand Musk Duck *Biziura delautouri*. Bull. Brit. Ornithol. Club, 90: 166–168.—The specific name *Biziura delautouri* should be recognized and incorporated into the synonymy of *B. lobata*.—F.B.G.

CRACRAFT, J. 1971. The humerus of the Early Miocene cracid, *Boreortalis laesslei* Brodkorb. Wilson Bull., 83: 200–201.

FORBES-WATSON, A. D. 1970. A new species of *Melaenornis* (*Muscicapinae*) from Liberia. Bull. Brit. Ornithol. Club, 90: 145–148.—*Melaenornis annamarulae* sp. nov. from the lowland forest at the foot of Mt. Nimba. Included notes on its habits and its resemblance in the field to *Dicrurus ludwigii*.—F.B.G.

HOLT, H. R. 1970. Colorado type bird localities. Colorado Field Ornithol., 7: 18–22.

HOWARD, H. 1971. Quaternary avian remains from Dark Canyon Cave, New Mexico. Condor, 73: 237–240.

JULIAN, P. R. 1967. Harlan's Hawk—a challenging taxonomic and field problem. Colorado Field Ornithol., 1: 1–6.—Reviews taxonomic history of *Buteo harlani*. —M.A.J.

MARTIN, L. D. 1971. An early Pleistocene eagle from Nebraska. Condor, 73: 248–250.

PARKES, K. C. 1970. The races of the Rusty-breasted Nunlet (*Nonnula rubecula*). Bull. Brit. Ornithol. Club, 90: 154–157.—Describes two new forms, *Nonnula rubecula interfluvialis* and *N. r. simulatrix*, from Amazonas, Brazil, and discusses other races of this species.—F.B.G.

PHILLIPS, A. R. 1971. On the types of *Sporophila albitorques* (Sharpe). Bull. Brit. Ornithol. Club, 91: 20.—Selects lectotype.—F.B.G.

SCARLETT, R. J. 1969. On the alleged Queensland Moa, *Dinornis queenslandiae*

DeVis. Memoirs Queensland Mus., 15: 207–212.—The holotype of *D. queenslandiae* apparently was taken from a Maori midden on the South Island of New Zealand rather than on Australia. The fossil is referred to *Pachyornis elephantopus*, and *Dinornis* should be removed from the list of Australian fossil birds.—J.J.D.

SCHWARTZ, A. 1970. Subspecific variation in two species of Antillean birds. Quart. J. Florida Acad. Sci., 33: 221–236.—Gives external mensural and color characteristics for *Columbina passerina* from Cuba and Isla de Pinos and *Geothlypis rostrata* from Cat and Andros in the Bahamas. *G. r. exigua* Ridgway from Andros is resurrected.—G.E.W.

STUART IRWIN, M. P. 1971. The Starred Bush Robin *Pogonocichla stellata* in eastern Rhodesia and adjacent Mozambique. Bull. Brit. Ornithol. Club, 91: 14–18. —Using freshly collected material, *P. s. chiridensis* of Mt. Selinda is found to be a valid form confined to moist evergreen forest at 3,000–4,000 feet. *P. s. hygrica*, a darker form, breeds in montane forest above 4,000 feet but migrates during the off season to lower elevations. (From author's summary.)—F.B.G.

Beginning with the January 1972 issue Dr. Herbert W. Kale II will edit the Periodical Literature. I sincerely appreciate the assistance of those who contributed during the last 7 years, and especially the many individuals who participated throughout the entire period. The service of abstracting the periodical literature always can use additional volunteers; especially needed are persons interested in translating foreign language papers. The following persons contributed abstracts in 1971: Kenneth P. Able, Robert F. Andrle, Oliver L. Austin, Jr., Hervey Brackbill, Alan H. Brush, Mary H. Clench, William D. Courser, James J. Dinsmore, Eugene Eisenmann, Mercedes S. Foster, Abbott S. Gaunt, Frank B. Gill, John W. Hardy, Brian A. Harrington, Hildegarde Howard, Joseph R. Jehl, Marion A. Jenkinson, Herbert W. Kale II, Louise de K. Lawrence, Fred E. Lohrer, Helmut C. Mueller, Storrs L. Olson, Kenneth C. Parkes, William B. Robertson, Gary D. Schnell, Ralph W. Schreiber, Lester L. Short, Henri C. Seibert, Carole F. Sumner, Melvin A. Traylor, Miklos D. F. Udvardy, Alexander Wetmore, and Susan C. White.—G.E.W.

OBITUARIES

PAUL BARTSCH, one of this country's most distinguished students of mollusks, died on April 24, 1960, in his 88th year. For 50 years he was associated with the Division of Mollusks of the United States National Museum, and for 32 years served as curator of the collection. Yet he started his career as an ornithologist and retained a lifelong interest in birds. He was an Elective Member of the A.O.U.

Dr. Bartsch was born in Tuntschendorf, Silesia, Germany (now Poland) on August 14, 1871, the son of Henry and Anna (Klein) Bartsch. When he was 10 years old the family moved to America, settled in Missouri, and later moved to Iowa, where a home was established near Burlington. Roaming the fields and Mississippi River bottoms near his home as a youth, he developed an interest in nature in general and birds in particular. He learned to prepare flat study skins and mounted specimens of birds and in time assembled a sizeable collection. In 1893 he entered the State University at Iowa City where he came in close contact with many distinguished teachers who whetted further interest in biology and provided broad training in its many branches.

The direction of his early career was seemingly determined by chance, because in