

## PERIODICAL LITERATURE

EDITED BY GLEN E. WOOLFENDEN

### ANATOMY AND EMBRYOLOGY

- BARLOW, J. C. 1967. A bill deformity in a European Tree Sparrow, *Passer montanus*. Canadian J. Zool., **45**: 889-890.—A specimen with an abnormally developed bill collected near Roadhouse, Illinois in 1965 is considered noteworthy primarily because so little is known about the North American population (estimated less than 5,000) of this species.—H.W.K.
- HAMLET, M. P., AND H. I. FISHER. 1967. Air sacs of respiratory origin in some procellariiform birds. Condor, **69**: 586-595.
- KURODA, N. 1967. A note on the asymmetric ears in *Asio flammeus*. Misc. Repts. Yamashina Inst. Orn., **5**: 106-109.—Photographs of external ear openings and drawings of the skull of a Short-eared Owl, illustrating the asymmetry. (In Japanese; English captions and summary.)—K.C.P.
- OHMART, R. D. 1967. Comparative molt and pterylography in the quail genera *Callipepla* and *Lophortyx*. Condor, **69**: 535-548.
- SCHODORF, R. 1967. A study of two plumage aberrations in the male Red-winged Blackbird (*Agelaius phoeniceus*). Ohio J. Sci., **67**: 240-241.—A white spot at the base of the rectrices (88 per cent of all males) and breast-banding (5 per cent of adult males) were analyzed in 627 specimens.—H.C.S.
- SEALY, S. 1967. Record of white wing-barring in Common Crow. Blue Jay, **25**: 121.

### BEHAVIOR

- BOOTH, C. G. 1967. Robin and Redstart sharing nest. Brit. Birds, **60**: 420.
- BORROR, D. J. 1967. Songs of the Yellowthroat. Living Bird, **6**: 141-161.—Analysis of variation of the recorded songs of 411 *Geothlypis trichas* representing 10 North American subspecies. The song comprises 2 to 5 repetitions of a sequence of notes, each note consisting of 1 to 5 slurred elements. Songs of individuals varied little except in length. Geographic variation included number of notes per sequence, complexity of both, and length of sequence. Data on atypical songs, and species-specific features of the songs are included.—G.E.W.
- BUCKLEY, P. A. 1966. Foot-paddling in four American gulls, with comments on its possible function and stimulation. Zeits. f. Tierpsych., **23**: 395-402.—A discussion of the role of foot paddling in food getting. Out-of-context foot paddling is also discussed. Evidence is presented that foot paddling is probably not learned.—M.S.F.
- DUNHAM, D. 1966. Territorial and sexual behavior in the Rose-breasted Grosbeak, *Phœucticus ludovicianus* (L.). Zeits. f. Tierpsych., **23**: 438-451.—Describes and discusses visual and vocal agonistic and sexual displays.—M.S.F.
- DYER, M. I. 1967. An analysis of blackbird flock feeding behavior. Canadian J. Zool., **45**: 765-772.—An examination of field- and sweet-corn crop damage caused by Red-winged Blackbirds in Ontario in 1964. High corn damage occurred near marsh roosts. Flocks tend to return to an established feeding site.—H.W.K.
- FRANCIS, W. J. 1967. Confused behavior of gulls in relation to weather conditions. Condor, **69**: 609.

- FRISCH, O. v. 1966. Beitrag zur Ethologie der Blauracke (*Coracias garrulus*). Zeits. f. Tierpsych., **23**: 44-50.—A description of the behavior of the Roller in the field and of their hand-raised young. Courtship is described. There is some evidence for sexual imprinting of captives to humans.—M.S.F.
- FRISCH, O. v. 1966. Wiesenweihe (*Circus pygargus*) trägt Junge ein. Zeits. f. Tierpsych., **23**: 581-583.—A study of the retrieval of young in Montagu's Harrier, including illustrations.—M.S.F.
- GERSDORF, E. 1966. Beobachtungen über das Verhalten von Vogel schwärmen. Zeits. f. Tierpsych., **23**: 37-43.—A study of the behavior of Starling flocks, especially in reference to avian predators. Flocks will attack a predator and in several cases have been observed to drive predators into water with resulting death by drowning.—M.S.F.
- GIBBON, R. S. 1966. Observations on the behavior of nesting Three-toed Woodpeckers, *Picoides tridactylus*, in central New Brunswick. Canadian Field-Nat., **80**: 223-226.
- GOODWIN, D. 1967. Some possible functions of sun-bathing in birds. Brit. Birds, **60**: 363-364.
- GUYOMARCHÉ, J.-C. 1966. Les émissions sonores du Poussin domestique, leur place dans le comportement normal. Zeits. f. Tierpsych., **23**: 141-160.—A detailed study of sounds emitted by newly hatched chicks, including spectrographs.—M.S.F.
- GWINNER, E. 1966. Über einige Bewegungsspiele des Kollkraben (*Corvus corax*) L. Zeits. f. Tierpsych., **23**: 28-36.—Studies of play in 18 hand-raised ravens show the most complex repertoire of any avian species studied to date. Play involves innate motor elements with some learned sequences.—M.S.F.
- HJORT, I. 1967. Reproductive behavior in the Tetraonidae. Vår Fågelvärld, **26**: 193-243.—Part of a fine comparative study dealing with the agonistic-courtship behavior in the males of 10 species. Three preliminary stages, advertizing, ritualized threat, and high intensity threat, are recognized, alike in encounters with either sex. Sex recognition usually follows and leads either to copulation or fight. (In Swedish; English summary.)—L.deK.L.
- HOSONO, T. 1967. A study of the life history of Blue Magpie. 2. Roosting behavior (1). Misc. Repts. Yamashina Inst. Orn., **5**: 34-47.—Roosts of *Cyanopica cyana* are classified in several ways (by season, location, and type of use). Roosting areas are analyzed by physical factors (kind and size of trees, amount of nearby traffic, snow cover, etc.). Roosting behavior and the influencing environmental factors are described. (In Japanese; English tables and captions and brief summary.)—K.C.P.
- JOHNSGARD, P. A. 1967. Observations on the behaviour and relationships of the White-backed Duck and the stiff-tailed ducks. Wildfowl Trust 18th Annual Report, pp. 98-107.—A summary of display and other behavior patterns indicates that *Thalassornis* should be transferred to the Dendrocygini.—P.A.J.
- KEAR, J. 1967. Experiments with young nidifugous birds on a visual cliff. Wildfowl Trust 18th Annual Report, pp. 122-124.—Tree-nesting and ground-nesting species respond differentially to a visual cliff.—P.A.J.
- KONERMANN, G. 1966. Monokulare Dressur von Hausgänsen, z. T. mit entgegengesetzter Merkmalsbedeutung für beide Augen. Zeits. f. Tierpsych., **23**: 555-580.—A study of the cooperation of the brain hemispheres of geese during monocular training. The brain half that was directly trained was dominant.—M.S.F.

- KÖRNER, H. K. 1966. Zur Eirollbewegung der Küstenseeschwalbe (*Sterna macrura* Naum.). Zeits. f. Tierpsych., **23**: 315-323.—Distance from nest for which egg will elicit egg rolling depends on motivation and whether one egg is already in the nest.—M.S.F.
- KUNKEL, P. 1966. Bemerkungen zu einigen Verhaltensweisen des Rebhuhnastrilds, *Ortygospiza atricollis atricollis* (Viellot). Zeits. f. Tierpsych., **23**: 136-140.—A study of behavior of 2 captive pairs. All behavior patterns differed markedly from those of other estrildines and seemed to be adapted to ground living.—M.S.F.
- LEHRMAN, D. S., AND P. W. ROCHELLE. 1967. Breeding experience and breeding efficiency in the Ring Dove. Anim. Behav., **15**: 223-228.—Breeding efficiency was tested in four groups (both members of the pair experienced, neither experienced, one of pair experienced) of *Streptopelia risoria*. All birds were of similar age and physiological condition. Experienced pairs were superior to inexperienced pairs with regard to all criteria. In general, the experience of both male and female contributes equally, except experienced females are initially more responsive to the male. After an initial cycle, performances of all birds were essentially similar.—A.S.G.
- LEMON, R. E. 1966. Geographic variation in the song of Cardinals. Canadian J. Zool., **44**: 413-428.—An analysis by sonograph of songs from 95 Cardinals in Ontario recorded on tape and compared with songs from other regions of North America.—H.W.K.
- LEMON, R. E., AND D. M. SCOTT. 1966. On the development of song in young Cardinals. Canadian J. Zool., **44**: 191-197.—Groups of hand-reared Cardinals isolated from wild adults developed simple sounds, but not the full songs. Most learning occurs during a Cardinal's first summer. (From authors' abstract.)—H.W.K.
- McKINNEY, F. 1967. Breeding behaviour of captive Shovelers. Wildfowl Trust 18th Annual Report, pp. 108-121.—A summary of quantitative observations on 31 pairs studied in flight pens containing 3 or 4 pairs per pen.—P.A.J.
- McLEOD, MRS. C. L. 1967. Mockingbird carries dead companion. Florida Nat., **40**: 153.—Picked up in claws and dropped after flying a foot or two.—E.E.
- MILLIKAN, G. C., AND R. I. BOWMAN. 1967. Observations on Galápagos tool-using finches in captivity. Living Bird, **6**: 23-41.—Alternative movements and individual styles characterize the use of twigs for obtaining insects by *Cactospiza pallida*. The species uses tools more frequently when deprived of food and for foraging as well as capturing. It is suggested that ecological factors, not genetic factors, best explain twig-probing by certain Galápagos finches.—G.E.W.
- RADFORD, A. P. 1967. Ground-pecking reaction of Robin to stuffed bird. Brit. Birds, **60**: 374.
- SICK, H. 1967. Courtship behavior in the manakins (Pipridae): a review. Living Bird, **6**: 5-22.—Patterns of courtship in more than 20 of the 52 species of manakins are compared, based primarily on observations made by the author. Evolutionary peaks are reached with the acoustical display of *Manacus*, the instrumental equipment of *Machaeropterus*, and the fully synchronized performances of *Chiroxiphia*. Knowledge of the behavior of females and young males and of interspecific interactions leads to better understanding of manakin displays.—G.E.W.
- SIMPSON, J. E. 1967. Swifts in sea-breeze fronts. Brit. Birds, **60**: 225-239.—*Apus apus* seen soaring at 800 to 3,000 feet, apparently feeding on insects concentrated in a convergence zone.—H.B.

- SMITH, W. J. 1967. Displays of the Vermillion Flycatcher (*Pyrocephalus rubinus*). Condor, **69**: 601-605.
- STIMSON, L. A. 1967. Cattle Egret swimming. Florida Nat., **40**: 152.
- TEAGER, C. W. 1967. Birds sun-bathing. Brit. Birds, **60**: 361-363.—Includes 11 fine photos.—H.B.
- TRAPP, J. 1967. Observations at a Cerulean Warbler nest during early incubation. Jack-Pine Warbler, **45**: 42-49.—Attentive periods averaged 12.2 minutes, inattentive periods, 6.8 minutes. The female's departure from the nest was by an abrupt downward drop into a clump of underbrush. The male did not approach the nest during incubation; once when he came within 10 feet, the female gave chase.—R.B.
- TRUSLOW, F. K. 1967. Egg-carrying by the Pileated Woodpecker. Living Bird, **6**: 227-236.—A female *Dryocopus pileatus* removed her clutch of three eggs from the nest cavity shortly after the dead nest tree broke off at the hole. She flew off carrying one egg at a time in her bill, narrow end forward. Unfortunately the author was unable to determine the fate of the eggs.—G.E.W.
- URQUHART, L. A. 1967. Courtship displays between Smews and Goldeneyes. Brit. Birds, **60**: 215-217.
- WILSON, J. 1967. Trigamy in Lapwing. Brit. Birds, **60**: 217.
- ZETTER, H. 1966. Über sequentielles Lernen bei Tauben, mit spezieller Berücksichtigung des "Zahl"-Verhaltens. Zeits. f. Tierpsych., **23**: 161-189.—Instrumental conditioning in pigeons showed counting ability.—M.S.F.

## DISEASES AND PARASITES

- BYRD, E. E., A. K. PRESTWOOD, F. E. KELLOG, AND R. W. HEARD. 1967. New hosts and locality records for the large liver fluke, *Athesmia heterolecithodes* (Braun, 1899) Looss, 1899 (Dicrocoeliidae of birds and mammals). J. Parasit., **53**: 1116-1117.—This liver fluke was recovered from bile ducts and gall bladders of Wild Turkey, Ruffed Grouse, and Clapper Rail from southern U.S., and Spotted Tinamou and Pale-spotted Tinamou from Argentina.—H.W.K.
- KNISLEY, J. O., JR., AND C. M. HERMAN. 1967. *Haemoproteus*, a blood parasite, in domestic pigeons and Mourning Doves in Maryland. Chesapeake Sci., **8**: 200-202.—Found in some pigeons but in no Maryland doves examined. All of 10 Mourning Doves from Florida were infected, but none of 60 nestlings from Texas and Mississippi and none of 358 nestling White-winged Doves from Texas.—H.B.
- MACDONALD, J. W., D. A. McMARTIN, K. G. WALKER, M. CARINS, AND R. H. DENNIS. 1967. Puffinosis in Fulmars in Orkney and Shetland. Brit. Birds, **60**: 356-360.—Evidence suggests the virus may overwinter in Fulmars and *Larus spp.*, providing foci of infection for annual epidemics in some Manx Shearwater colonies.—H.B.
- SHELL, S. C. 1967. New species of Trematodes from birds in the Pacific Northwest. J. Parasit., **53**: 1000-1004.—Four new species of trematodes, representing 4 families, are described as parasites of the Mallard, Water Ouzel, dowitcher, and Little Brown Crane. Includes keys to the species of each genus concerned.—H.W.K.

## DISTRIBUTION AND ANNOTATED LISTS

- BAGG, A. M. ET AL. 1967. The changing seasons—Spring 1967: a season of paradox. Aud. Field Notes, **21**: 482-542.—A good summary, illustrated by temperature and precipitation maps, of the spring migration. In addition to the usual complement of accidentals and casuals (e.g. both European species of godwits), notable increases

- are reported for the Mississippi Kite in the southern Great Plains, and new records for such expanding species as Cattle Egret, Glossy Ibis, Boat-tailed Grackle, and House Finch. Exceptional numbers of White-faced Ibis are also reported, but in certain areas separation of the two forms of *Plegadis* in the field is difficult.—E.E.
- BARLOW, J. C. 1966. Status of the Wood Ibis, the Fulvous Tree Duck and the Wheatear in Ontario. *Canadian Field-Nat.*, **80**: 183-186.—“These species are better regarded as rare, but irregular, non-breeding visitants rather than as vagrants in Ontario.”—R.W.N.
- BARLOW, J. C. 1967. Rufous Hummingbird in Ontario. *Canadian Field-Nat.*, **81**: 148-149.—First record of occurrence of this species in Ontario based on a specimen from the shore of Hudson Bay.—R.W.N.
- BARLOW, J. C. 1967. Nesting of the Black-capped Vireo in the Chisos Mountains, Texas. *Condor*, **69**: 605-608.
- BELCHER, M. 1966. After 50 years, the Eastern Bluebird nests again at Regina. *Blue Jay*, **24**: 187-189.—A review of the status of this species in Saskatchewan together with data on a recent nesting.—R.W.N.
- BENGTSON, S. A. 1967. Bearded Tit in Scania 1965-66, new species for Sweden. *Vår Fågelvärld*, **26**: 244-248.—A breeding pair with nest containing 2 young and 3 eggs found in 1966 in the same place where the species was first sighted in 1965.—L.DEK.L.
- BROWNE, P. 1967. Status of birds, Lake St. John region, Quebec. *Canadian Field-Nat.*, **81**: 50-62.—A 7-year study with a monthly index, i.e. number of birds identified per hour of observation time, for each of 199 species.—R.W.N.
- COHEN, R. R., AND M. REVER. 1966. Northern record: Lark Bunting nesting colony near Saskatoon, 1966. *Blue Jay*, **24**: 132-133.—Northernmost breeding locality for this plains species.—R.W.N.
- DAVENPORT, D. L., L. J. DAVENPORT, AND C. E. WHEELER. 1967. Pallas's Sandgrouse in Kent. *Brit. Birds*, **60**: 416-419.—First record of this Asian species since 1909.—H.B.
- DOBSON, F. W. 1966. Sighting of a Hudsonian Godwit (*Limosa haemastica*) near Vancouver, B. C. *Canadian Field-Nat.*, **80**: 180-181.
- DZUBIN, A., AND N. HOOK. 1966. Black Brant records from western Saskatchewan. *Blue Jay*, **24**: 124-126.
- ERSKINE, A. J. 1967. Range extensions of Willets in eastern Canada. *Canadian Field-Nat.*, **81**: 147-148.—A first breeding record for New Brunswick and additional records of range expansion in Nova Scotia.—R.W.N.
- FOWKE, S. C. 1967. Scarlet Tanager, a surprise visitor at Norway House, Manitoba. *Blue Jay*, **25**: 122-123.
- GILLIARD, E. T., AND M. LECROY. 1967. Annotated list of birds of the Adelbert Mountains, New Guinea. Results of the 1959 Gilliard expedition. *Bull. Amer. Mus. Nat. Hist.*, **138**: 51-82.—Another of the expedition reports partly written by Gilliard before his death in 1965, and completed by his former assistant. The chief mission of the 1959 trip to the mountains of northeastern New Guinea was the successful search for the bower bird *Sericulus bakeri*, known previously only from Beck's 1928 collection with imprecise locality data. The annotations to species accounts include some weights, soft-part colors, and stomach contents. Breeding data are given for 2 megapodes, a pitta, and a flowerpecker. Included is a long account of social behavior in *Artamus maximus*. Taxonomic notes are provided

- for several species, and *Phonygamus keraudrenii adelberti* is described as new. Accounts of birds of paradise and bower birds are relatively brief; details will appear in a book in press on these groups by Gilliard, which includes six plates of half-tone reproductions of water-colors of birds, made in the field by Mrs. Gilliard.—K.C.P.
- GODFREY, W. E. 1966. A Summer Tanager in Manitoba. *Canadian Field-Nat.*, **80**: 254.—First valid record in Canada west of southern Ontario.—R.W.N.
- GODFREY, W. E. 1966. Clay-colored Sparrow nesting at Ottawa, Ontario. *Canadian Field-Nat.*, **80**: 255-256.
- GRANT, J. 1966. A Black Swift nest in British Columbia. *Canadian Field-Nat.*, **80**: 60-61.—Second nest known for the province.—R.W.N.
- GRASS, A. L. 1967. The birds of Crescent Beach, North Surrey, B. C. *Blue Jay*, **25**: 126-130.
- GROSZ, T., AND M. DOLE. 1967. A record of the Cattle Egret in Humboldt County, California. *Condor*, **69**: 608-609.
- HALLIDAY, I. R. 1966. Long-tailed Jaeger in Alberta. *Blue Jay*, **24**: 141.
- HARRIS, S. W., AND C. F. YOCOM. 1967. A record of the Cattle Egret in Humboldt County, California. *Condor*, **69**: 608.
- JONES, E. T. 1966. Barred Owl nest record for Alberta. *Blue Jay*, **24**: 140.
- JONES, E. T. 1966. A Bay-breasted Warbler nest record for Alberta. *Blue Jay*, **24**: 140.
- KELSALL, J. P. 1966. Additional bird observations at Bathurst Inlet, N.W.T. *Canadian Field-Nat.*, **80**: 178-179.
- KUYT, E. 1967. Mourning Dove near Fort Smith, N.W.T. *Blue Jay*, **25**: 25.
- LADHAMS, D. E., R. J. PRYTHERCH, AND K. E. L. SIMMONS. 1967. Pied-billed Grebe in Somerset. *Brit. Birds*, **60**: 295-299.—From 17 August to 23 October 1965 and 15 May to 2 November 1966.—H.B.
- MAC COUBREY, H. W. 1966. Mockingbirds in New Brunswick. *Canadian Field-Nat.*, **80**: 252-253.
- MAC COUBREY, H. W. 1966. Seaside Sparrows in New Brunswick. *Canadian Field-Nat.*, **80**: 253.
- MANN, S. A. 1967. Mountain Chickadee in southwestern Saskatchewan. *Blue Jay*, **25**: 76.—First provincial report, a sight record.—R.W.N.
- MATHER, J. R. 1967. Pied-billed Grebe in Yorkshire. *Brit. Birds*, **60**: 290-295.—From 9 June to 24 November 1965.—H.B.
- MCLAREN, I. A. 1966. Short-eared Owl in southern Baffin Island. *Canadian Field-Nat.*, **80**: 61-62.
- MCNICHOLL, M. 1966. Recent observations of the Field Sparrow in Manitoba. *Blue Jay*, **24**: 134-135.
- MOISAN, G., AND R. W. FYFE. 1967. Ninth census of non-passerine birds in the sanctuaries of the north shore of the Gulf of St. Lawrence. *Canadian Field-Nat.*, **81**: 67-70.
- MUNRO, W. T. 1967. Occurrence of the Fulvous Tree Duck in Canada. *Canadian Field-Nat.*, **81**: 151-152.—Records are cited or presented for British Columbia, Ontario, Quebec, and New Brunswick.—R.W.N.

- NERO, R. W. 1967. Additional bird notes for Little Gull Lake, Saskatchewan. *Blue Jay*, **25**: 76.
- NICHOLS, W. F. 1967. Cattle Egrets in Ventura County, California. *Condor*, **69**: 608.
- NICKELL, W. P. 1967. Baltimore Oriole winters in southern Michigan. *Jack-Pine Warbler*, **45**: 49.
- PANTELIDES, MRS. N. 1967. Dovekie at Ft. Pierce [Florida]. *Florida Nat.*, **40**: 152.—Three *Plautus alle* picked up on beach 16–18 December 1966. Earlier records at same locality, 1936, 1939, 1950, all in December.—E.E.
- PANTELIDES, MRS. N. 1967. White-winged Dove at Ft. Pierce [Florida]. *Florida Nat.*, **40**: 152.—Observed 19 May 1967.—E.E.
- PEARCE, P. A. 1967. Buff-breasted Sandpiper in New Brunswick. *Canadian Field-Nat.*, **81**: 152.—First known occurrence for this province; photographed.—R.W.N.
- PITT, R. G. 1967. Savi's Warblers breeding in Kent. *Brit. Birds*, **60**: 349–355.
- REED, A. 1966. Breeding records of the Ring-necked Duck (*Aythya collaris*) in Rivière-du-Loup and Rimouski Counties, Quebec. *Canadian Field-Nat.*, **80**: 182.
- SCHNELL, G. D. 1967. Additional notes on the birds of Wilderness State Park. *Jack-Pine Warbler*, **45**: 66–67.
- SEALY, S. G. 1967. Range extension of the Harris' Sparrow. *Canadian Field-Nat.*, **81**: 152–153.
- SIFE, J. P. 1967. Rare birds at Lake Saint Marys, Ohio. *Ohio J. Sci.*, **67**: 191.—Willet, Buff-breasted Sandpiper, Wilson Phalarope, Northern Phalarope, and Peregrine Falcon.—H.C.S.
- SMITH, F. R., AND THE RARITIES COMMITTEE. 1967. Report on rare birds in Great Britain in 1966. *Brit. Birds*, **60**: 309–338.—Records of almost 30 American species, including first Laughing Gull and many shorebirds.—H.B.
- SMITH, H., AND J. SMITH. 1966. A breeding bird survey on uncultivated grassland at Regina. *Blue Jay*, **24**: 129–131.
- SMITH, W. 1967. Third record of Glaucous Gull in Alberta. *Blue Jay*, **25**: 122.
- SMITH, W., AND R. KLAUKE. 1967. A sight record of the Red Phalarope in Alberta. *Blue Jay*, **25**: 25.
- STEFFEE, N. D., C. R. MASON *ET AL.* 1967. Field notes and observations from tropical America. *Florida Nat.*, **40**: 155–156.—This journal is providing a publication outlet for short notes from the American tropics. The included notes are chiefly of neotropical species from French Guiana, but include a sighting of Eastern Kingbird from Surinam and Magnolia Warbler in spring plumage on Tobago (J. C. Ogden).—E.E.
- STIRLING, D. 1966. Summer birds wintering on southern Vancouver Island. *Canadian Field-Nat.*, **80**: 45–47.
- STIRLING, D. 1967. Sight record of Glaucous-winged Gull for Alberta. *Blue Jay*, **25**: 131.
- STIRLING, D. 1967. Noteworthy bird records from the Porcupine River drainage, Yukon. *Canadian Field-Nat.*, **81**: 78.
- TAKEMARU, T., AND K. OGASAWARA. 1967. Winter bird survey of Lakes Izu and Uchi, Miyagi, with special reference to the waterfowl. *Misc. Repts. Yamashina Inst. Orn.*, **5**: 85–91.—Observations on Honshu, Japan, January to March 1965

- and November 1965 to March 1966. Observed were 28 resident species, 36 winter visitants, 3 wanderers, and 3 transients. Most abundant were *Anser albifrons* (up to 1,500 individuals). *Haliaeetus albicilla* was "often observed." Rarities seen include *Anser* ("Chen") *caerulescens*, *Anser erythropus*, *Circus cyaneus*, and *Anser albifrons gambeli* (said to have been identified by photograph, but this photograph not among those reproduced). (In Japanese; English summary.)—K.C.P.
- TENAZA, R. R. 1967. Recent records of land birds from South Farallon Island, California. *Condor*, **69**: 579-585.
- VAN VELZEN, W. T. 1967. First observed Brown Creeper nest in Maryland. *Maryland Birdlife*, **23**: 68-69.—In Shad Landing State Park, Worcester County.—H.B.
- WALKER, D. I. M. 1967. Birds in Ireland during 1963-65. *Brit. Birds*, **60**: 205-213.—Summary of status changes and rarities, with records of about 55 individuals from America, including first Least Sandpiper and second Western Sandpiper.—H.B.
- WALLER, S. 1967. Some interesting bird records from The Pas, Manitoba. *Blue Jay*, **25**: 120.
- ZAZALENCHUK, S. 1967. Black-throated Blue Warbler reaches Belcher Islands, N.W.T. *Blue Jay*, **25**: 75.

#### ECOLOGY AND POPULATION

- BENDELL, J. F. 1966. An unusual number of dead Ring-billed Gulls. *Canadian Field-Nat.*, **80**: 62.—Twenty-seven dead gulls, mostly this species, were found along 1.5 miles of beach on Lake Ontario on 13 and 14 August 1964.—R.W.N.
- CADE, T. J. 1967. Ecological and behavioral aspects of predation by the Northern Shrike. *Living Bird*, **6**: 43-86.—Food and feeding habits of *Lanius excubitor* based on observations around 20 nests in northern Alaska, 200 carcasses hung in larders, 500 pellets, and winter observations of wild and trained shrikes around Syracuse, New York. Hunting is performed by watching from a high perch, from which they swoop down upon the quarry, and by foraging actively through vegetation or on the ground. Birds are usually caught in the feet; rodents are always struck and killed with the bill. Killing results from a series of bites on the neck which sever the vertebrae and/or damage the nerve cord. Prey consists of microtines, small birds, and flying insects, the percentages varying with localities. Composition by biomass is determined for certain localities in Alaska. About 9,000 g of food are used by 2 adult and 7 young shrikes during the 60 days from arrival for breeding to independence of the young. Breeding pairs are widely spaced, hunting over about half a square mile. Most bumblebees and 14 per cent of the prebreeding rodents would be removed from the hunting area, as well as all the small birds of a breeding population occupying 200 to 300 acres in an area such as around Lake Peters, Alaska. The main factor limiting breeding populations of shrikes in this region is probably winter food supply. Individuals, mainly birds of the year, are forced south when microtine populations crash and/or are protected by snow cover.—G.E.W.
- CARPENTER, M. L., AND M. W. FALL. 1967. The Barn Owl as a Red-winged Black-bird predator in northeastern Ohio. *Ohio J. Sci.*, **67**: 317-318.—Red-wing remains were present in 37 per cent of the pellets.—H.C.S.
- GODFREY, W. E. 1967. Some winter aspects of the Great Gray Owl. *Canadian Field-Nat.*, **81**: 99-101.—Brief notes on habitat, feeding behavior and territory following an irruption into southern Ontario and southwestern Quebec in the winter of 1965-66.—R.W.N.



- GRANT, P. R. 1966. The density of land birds on the Tres Marias Islands in Mexico. Part I. Numbers and biomass. *Canadian J. Zool.*, **44**: 391-400.—Comparisons of land birds on an island with those on the adjacent mainland in terms of density and standing crop biomass. Part II. Distributions of abundance in the community. *Canadian J. Zool.*, **44**: 1023-1030.—Considers the distribution of species abundances in the communities of the two regions. Census data are applied to MacArthur's 1957 model which is supposed to predict abundance of bird species. The mainland data fit the model, the island data do not.—H.W.K.
- LACK, D. 1967. The significance of clutch-size in waterfowl. *Wildfowl Trust 18th Annual Report*, pp. 125-128.—A general inverse relationship exists between average clutch-size and relative egg-size, and the former appears to be related to food availability for the female.—P.A.J.
- MCGILVREY, F. B. 1967. Food habits of sea ducks from the north-eastern United States. *Wildfowl Trust 18th Annual Report*, pp. 142-145.—Animal materials, none from economically important species, were the abundant food in 274 gizzards of five species.—P.A.J.
- MITCHELL, G. J. 1967. The Upland Plover and its status in relation to environmental conditions and situations, past and present. *Blue Jay*, **25**: 58-63.
- PIGOT, B. C. 1967. Notes on the gull colonies of Prince Edward Island. *Canadian Field-Nat.*, **81**: 150-151.—"An effort was made to locate and examine all gull colonies."—R.W.N.
- SEALY, S. G. 1967. Spring bird phenology on St. Lawrence Island, Alaska. *Blue Jay*, **25**: 23-24.
- SIMMONS, K. E. L. 1967. Ecological adaptations in the life history of the Brown Booby at Ascension Island. *Living Bird*, **6**: 187-212.—The functional significance of the coloration of adults and young, and the feeding behavior near Ascension and in the open sea of *Sula leucogaster*. Average mortality is low for adults and high for eggs and chicks. An irregularly fluctuating food supply accounts for most nesting losses and also has altered significantly many other phases of the breeding cycle. The second half of the paper deals with social behavior in the species. Brown Boobies occupy a permanent nest site which they protect vigorously. These sites are widely spaced compared with those of its congeners, and the spacing has resulted in emphasis of aerial activity. Behavior and displays of the pair at the nest, including copulation, are discussed.—G.E.W.
- TUBBS, C. R. 1967. Population study of Buzzards in the New Forest during 1962-66. *Brit. Birds*, **60**: 381-395.—"The output of young was low with failure to hatch and egg-breaking common" but "ten addled eggs analyzed for organo-chlorine insecticide residues revealed only very small quantities."—H.B.
- WESTERSKOV, K. 1966. Winter food and feeding habits of the partridge (*Perdix perdix*) in the Canadian prairie. *Canadian J. Zool.*, **44**: 303-322.—Diet studies of the introduced (Hungarian) partridge based on crops and gizzards collected by the author and the late W. Rowan, and feeding behavior observations made by the author. Includes some daily food intake estimates.—H.W.K.
- YOUNG, C. M. 1967. Overland migration of duck broods in a drought-free area. *Canadian J. Zool.*, **45**: 249-251.—Four cases are recorded of duck broods in Ontario moving overland from deep, permanent lakes to shallow beaver ponds. (From author's abstract.)—H.W.K.

ZWICKEL, F. C., AND J. F. BENDELL. 1967. Early mortality and the regulation of numbers in Blue Grouse. *Canadian J. Zool.*, **45**: 817-851.—A series of field and aviary studies on early mortality of chicks on, or from, two areas of Vancouver Island that were in different stages of succession following logging and burning. Early mortality varies between years, not sites, and influences autumn numbers but not spring numbers. (From authors' abstract.)—H.W.K.

## EVOLUTION AND GENETICS

BAKER, C. M. A., AND C. MANWELL. 1967. Molecular genetics of avian proteins—VIII. Egg white protein of the migratory Quail, *Coturnix coturnix*—New concepts of "hybrid vigor." *Comp. Biochem. Physiol.*, **23**: 21-42.—Electrophoresis on starch gel of the egg white of various populations of *Coturnix coturnix* revealed complex phenotypic and genetic variation of at least 6 different protein systems. The problem of the selective advantages and evolution of such variation and the problem of molecular "hybrid vigor" are discussed.—A.H.B.

GRANT, P. R. 1967. Bill length variability in birds of the Tres Marias Island, Mexico. *Canadian J. Zool.*, **45**: 805-815.—Variability of bill length is compared between populations of species present on islands and on the nearby mainland. Variability exists in some species, not in others. No clear trend is revealed.—H.W.K.

HAFFER, J. 1967. Speciation in Colombian forest birds west of the Andes. *Amer. Mus. Novit.*, no. 2294: 57 pp.—The alternation of dry and wet climatic periods during Pleistocene and post-Pleistocene times resulted in reductions and expansions of tropical lowland forests in Central America and northwestern South America. Avifaunal exchange was possible during periods of continuous forest; during dry periods forest birds were confined to several "refuges." Differentiation in such refuges took place at varying rates. Endemism in the Pacific lowlands of Colombia is high. In some cases, Central American, Chocó (Pacific), and Amazonian representatives have come into secondary contact, with varying results. Detailed studies are given of the superspecies *Manacus manacus* and *Pteroglossus pluricinctus*, and of the species groups *Columba vinacea*, *Tangara schrankii*, and *Trogon melanurus*. The avifauna of the Chocó region is analyzed with respect to probable areas of origin. A brief abstract cannot begin to suggest the wealth of thought-provoking material in this important paper.—K.C.P.

LANYON, W. E. 1967. Revision and probable evolution of the *Myiarchus* flycatchers of the West Indies. *Bull. Amer. Mus. Nat. Hist.*, **136**: 329-370.—Grouping of 12 populations of Antillean *Myiarchus* into 7 species, based in part on traditional morphological characters but principally on the results of playback experiments with recorded vocalizations. The chief character by which *M. barbirostris* of Jamaica is adjudged not to be conspecific with *M. tuberculifer* of the mainland, for example, is the absence in the former of a diagnostic whistled note in its daytime repertoire, although such a note is present in the "dawn song." Males of each of the two forms showed little or no response to playback of the vocal repertoire of the other. Probable invasion routes into the West Indies of several *Myiarchus* stocks are discussed and mapped; sound spectrograms of vocal repertoires are also given.—K.C.P.

MAYR, E., AND W. H. PHELPS, JR. 1967. The origin of the bird fauna of the South Venezuelan highlands. *Bull. Amer. Mus. Nat. Hist.*, **136**: 269-328.—Erosion of a vast sandstone tableland has left a series of remarkable mesa-like mountains with summits about 1,000 to 3,000 m high in southeastern Venezuela and extending into

adjacent Brazil and Guiana. This area, christened Pantepui, has an avifauna with a high proportion of endemism. The component elements of Pantepui are described and their avifauna compared. Each of the 96 bird species is analyzed as to degree of endemism, nearest relatives, and probable area of origin. It is concluded that at least half of the species reached Pantepui by "hopping"—colonizing by long-distance travel across unsuitable lowlands, much as in island birds. Most of the rest seem to be subtropical altitudinal derivatives of elements that are tropical elsewhere.—K.C.P.

- SZIJJ, L. 1966. Hybridization and the nature of the isolating mechanism in sympatric populations of meadowlarks (*Sturnella*) in Ontario. *Zeits. f. Tierpsych.*, **23**: 677-690.—The incidence of hybridization between *S. magna* and *S. neglecta* in Ontario is low. Hybridization occurs on range periphery where the availability of a conspecific mate is limiting. The most effective isolating mechanism is the highly specific response of the female to male call notes (shown experimentally). The author suggests hybrids are less viable and are being selected against.—M.S.F.

#### GENERAL BIOLOGY

- BELL, B. D. 1967. Polygamy in the Reed Bunting. *Brit. Birds*, **60**: 218-219.
- DEGROOT, E. B. 1967. A record of nest parasitism of the Oregon Junco by the Brown-headed Cowbird in southern California. *Condor*, **69**: 609.
- EDWARDS, E. P. 1967. Nests of the Common Bush-Tanager and Scaled Antpitta. *Condor*, **69**: 605.
- FRENCH, R. P. 1967. The Dickcissel on its wintering grounds in Trinidad. *Living Bird*, **6**: 123-140.—*Spiza americana* have been recorded wintering in Trinidad for 100 years, but possibly not consistently; they did winter regularly from 1959-1966. Almost 2,900 birds were banded and observations were made of feeding, roosting, and migration. Dickcissels reach Trinidad apparently via Central America and Venezuela and are present from December through mid-April. The principal food is rice, but includes wild grass seeds. The birds feed in the rice-growing districts and roost in sugarcane fields. Data on arrival and departure from the roost and behavior at the roost are given. *Falco columbarius* and *Tyto alba* are the chief predators at the roosts. Males outnumbered females two to one; male wing lengths average 82.8 mm; females 74.7 mm. Weights were constant until three weeks before migration when a 50 per cent increase occurred. Prenuptial molt, heaviest in February, is described.—G.E.W.
- GOTZMAN, J. 1967. Remarks on ethology of the Red-backed Shrike, *Lanius collurio* L.—nest defense and nest desertion. *Acta Orn.*, **10**: 83-96.—Direct (e.g. manipulation of eggs) and indirect (e.g. removal of nearby twigs) stimuli were presented at 47 nests at different times in the nesting sequence. For both stimuli, desertion decreased and defense increased as nesting progressed. Discusses the relationships of energy required to renest after desertion and that already used and required for completing the first nesting.—M.A.J.
- HALLMAN, R. C. 1967. Notes on Florida Barred Owl (*Strix varia georgica*) nests from St. Johns County, Florida. *Florida Nat.*, **40**: 153.—Nests in hollow of cut tree trunk, cut 3 to 4 feet above ground (photographs).—E.E.
- HANEDA, K., AND T. KOBAYASHI. 1967. Life history of the Brown-eared Bulbul. 1. Breeding biology. *Misc. Repts. Yamashina Inst. Orn.*, **5**: 61-71.—Data from two seasons of observations of *Hypsipetes amaurotis*. Discussed are nest site, clutch size,

- incubation, brooding and feeding of young, territory size, and territorial defense. (In Japanese; English summary.)—K.C.P.
- HANEDA, K., AND J. OBUCHI. 1967. Life history of the Japanese Skylark. 1. Breeding biology. Misc. Repts. Yamashina Inst. Orn., **5**: 72-84.—Observations on *Alauda arvensis japonica*.—K.C.P.
- HANEDA, K., AND H. USHIYAMA. 1967. [Life history of the Red-cheeked Myna (*Sturnia philippensis*). II. Breeding season (2).] Japanese J. Ecol., **17**: 49-57.—Males built nests and defended territories; females incubated and brooded; both fed nestlings. The territory was considered both intra- and inter-specific. Intra-specific fighting was most intense during the egg-laying stage. Clutch size averaged five; 45.3 per cent of the eggs produced fledged young. (In Japanese; English summary.)—R.B.
- HEWSON, R. 1967. Territory, behaviour and breeding of the Dipper in Banffshire. Brit. Birds, **60**: 244-252.
- HOOGERWERF, A. 1967. Some notes on the genus *Malacopteron*, with special reference to *M. cinereum rufifrons* from Java. Misc. Repts. Yamashina Inst. Orn., **5**: 92-99.—A critique of a paper by Voous (Sarawak Mus. J., **5**: 300-320, 1950), insofar as it refers to the Red-headed Babbler group. Supposed hybrids between *M. cinereum* and *M. magnum* are based on faulty sexing and individual variation within a given species. Excess of males, postulated by Voous as a stimulating factor in interspecific competition, is present in Java where only one *Malacopteron* exists. Hoogerwerf is skeptical about the alleged presence of five species of *Malacopteron* in Sumatra occurring alongside each other in the same habitat. Although *Malacopteron* superficially resembles *Malacocincla* in museum specimens, these birds are very different in life, and the author rejects the suggestion that they are closely related. Finally, the genus is much less common and less widely distributed in Indonesia than indicated by Voous' map. (In English.)—K.C.P.
- HOUSTON, C. S. 1967. Recoveries of Red-tailed Hawks banded in Saskatchewan. Blue Jay, **25**: 109-111.
- HOUSTON, C. S. 1967. Recoveries of Black-crowned Night Herons banded in Saskatchewan. Blue Jay, **25**: 112-113.
- ISHIZAWA, J., AND S. CHIBA. 1967. Stomach analysis of 12 species of Japanese hawks. Misc. Repts. Yamashina Inst. Orn., **5**: 13-33.—Species and numbers as follows: *Falco peregrinus* (5), *F. columbarius* (6), *F. tinnunculus* (13), *Buteo buteo* (57), *Spizaetus nipalensis* (6), *Circus aeruginosus* (5), *Accipiter gentilis* (14), *A. nisus* (41), *A. vargatus* (23), *Milvus migrans* (15), *Pernis apivorus* (12), and *Butastur indicus* (6). Birds occurred in 60 per cent or more stomachs of 6 of these species, but most were *Passer montanus*, considered a pest to rice crops. (In Japanese; English summary and captions.)—K.C.P.
- JEHL, J. R., JR., AND D. J. T. HUSSELL. 1966. Incubation periods of some sub-arctic birds. Canadian Field-Nat., **80**: 179-180.—Data for 15 species, at least 6 of which had no previously reported incubation periods.—R.W.N.
- KING, W. B., AND P. J. GOULD. 1967. The status of Newell's race of the Manx Shearwater. Living Bird, **6**: 163-186.—Prior to 1954 only 7 specimens of the north-central Pacific Ocean race of *Puffinus puffinus* were known, 4 of which appear to be lost. Recent records show thousands survive at least on Kauai in the Hawaiian Islands, where it is free from predation by the mongoose. Examination of 39 of the 46 specimens known indicates no sexual dimorphism and that the race

- differs from other *P. puffinus* only in an appreciably longer tail. The race is common at sea in the north-central Pacific from March to November, and especially about Kauai and Niihau from May to September. Presumably the egg is laid in early June and young fledge in October. Its rarity in the north-central Pacific from December through February suggests an extensive dispersion or migration.—G.E.W.
- KUYT, E. 1966. Adjoining unusual nest sites of Snow Goose and Peregrine Falcon. *Blue Jay*, **24**: 171.
- MASON, C. R. 1967. Brown Pelican lives to good old age. *Florida Nat.*, **40**: 152.—Bird banded 20 September 1933 found dead 15 November 1964.—E.E.
- MOSELEY, L. H. 1967. Eleven songs of Spotted-breasted Orioles. *Florida Nat.*, **40**: 153.—*Icterus pectoralis* in Florida.—E.E.
- SEALY, S. G. 1966. Notes on the Rough-legged Hawk in the Perry River region, Northwest Territories. *Blue Jay*, **24**: 127–128.
- SEALY, S. G. 1967. Notes on the breeding biology of the Marsh Hawk in Alberta and Saskatchewan. *Blue Jay*, **25**: 63–69.—Based on a study of 32 nests.—R.W.N.
- SHAW, R. K. 1967. Some nest histories of the Black-billed Magpie in southwestern Alberta. *Blue Jay*, **25**: 73–75.—Of 21 nests studied 42 young were raised to flight in 9 completed nests.—R.W.N.
- STIRLING, I., AND C. W. ROBERTS. 1967. Artificial insemination of Blue Grouse. *Canadian J. Zool.*, **45**: 45–47.—Grouse were artificially inseminated successfully by the use of modified techniques developed for domestic fowl. Degree of fertility is less than that found in the field.—H.W.K.
- TAYLOR, R. R. 1966. Summary of the first eight years of the prairie nest records scheme. *Blue Jay*, **24**: 180–181.—A total of 7,221 record cards representing 236 species of birds.—R.W.N.
- TONG, M. 1967. Winter breeding of Shags. *Brit. Birds*, **60**: 214–215.
- WASHINGTON, D. 1967. Complete sex reversal of Pied Wagtail. *Brit. Birds*, **60**: 302–303.—Captive female became a male and fathered two broods.—H.B.
- YAMAMOTO, H. 1967. *Phalacrocorax capillatus* as a breeding bird on Iwate coast, Honshiu. *Misc. Repts. Yamashina Inst. Orn.*, **5**: 48–60, pls. 5–8.—A colony of Temminck's Cormorant was studied, chiefly by analyzing about 1,000 photographs taken at about 100 m using a 750 mm astronomical telescope. Colony site may shift from year to year if disturbed by man; other predators have no such influence. Nests are completed in about 10 days but males add more material until after laying. Change of incubation made after short ceremony initiated by returning bird. Incubation period is approximately 34 days, brood size is 3. On a hot day a parent was seen to disgorge water on chicks, repeating this action 4 times at 5-minute intervals. Young leave the nest at about 40 days. Once young are flying family bonds appear to dissolve. Many photographs, reproduced small but clear and sharp. (In Japanese; English summary, but no English captions on illustrations.)—K.C.P.

#### MANAGEMENT AND CONSERVATION

- CAMPBELL, R. W. 1967. Fishing lures, a hazard to sea birds. *Blue Jay*, **25**: 71–72.
- DAVIS, D. W. 1966. A plea for conservation of the Bald Eagle in Saskatchewan. *Blue Jay*, **24**: 160–167.—Comments on predation by man and recent nest records with hatching success for 21 nests.—R.W.N.

- McLEOD, J. M. 1967. The effect of phosphamidon on bird populations in jack pine stands in Quebec. *Canadian Field-Nat.*, **81**: 102-106.—A "marked effect on bird populations," chiefly pre-migratory flocks, resulted from aerial spraying for sawfly control. Dead and dying birds of eight species were found.—R.W.N.
- VAN TIGHEM, K. 1967. Destruction of the Prairie Falcon at Calgary, Alberta. *Blue Jay*, **25**: 108.

## MIGRATION AND ORIENTATION

- BAGG, A. M. 1967. Factors affecting the occurrence of the Eurasian Lapwing in eastern North America. *Living Bird*, **6**: 87-122.—During the period 1883-1966 two large flights of *Vanellus vanellus* from Europe to North America, primarily to Newfoundland, occurred—one in December 1927, the other in January 1966. The following events were the primary causative factors: (1) the invasion of western Europe by cold air from the east, (2) the resulting movements of Lapwings westward into and within England and Wales toward Ireland, (3) the development of a large low pressure area extending across the northern Atlantic Ocean, (4) westward migrating Lapwings in the vicinity of Ireland caught in the strong airstream flowing counterclockwise around the depression. All available records of the species in North America and the West Indies are summarized.—G.E.W.
- COCHRAN, W. W., G. G. MONTGOMERY, AND R. R. GRABER. 1967. Migratory flights of *Hylocichla* thrushes in spring: a radiotelemetry study. *Living Bird*, **6**: 213-225.—The tracking by truck and airplane of 21 individuals of 3 species of *Hylocichla* thrushes to which were attached radio transmitters weighing less than 3 g yielded a variety of data on spring migration in north-central United States. The migration is entirely nocturnal, commencing 45 minutes to 2 hours after sunset and ending at dawn. Altitudes of 2,000 to 6,000 feet are used for long flights. At least some individuals are capable of migrating on two successive nights. Air speed varies considerably, but most flights are between 25 and 35 mph. Air speed is usually less than ground speed, suggesting migrants are often aided by wind. Apparently these migrants are able to select a heading at departure under overcast skies based on observations made earlier in the day. Straight flights are maintained for 100 or more miles under overcast. Ground cues, except for the largest of topographical features, are not used. Flights of less than an hour, downwind and at low altitudes, occur. When landing in darkness these birds do not select their diurnal habitat.—G.E.W.
- MATTHEWS, G. V. T. 1967. Some parameters of "nonsense" orientation in Mallard. Wildfowl Trust 18th Annual Report, pp. 88-97.—Initial orientation tendencies of released birds break down within four miles of release, and most birds land within 10 miles or 20 minutes.—P.A.J.

## MISCELLANEOUS

- FAUHL, R. D. 1967. Fifteen-year index to the Bulletin 1950-1964. *Kansas Orn. Soc. Bull.*, **18**: 13-20.
- FLORIDA AUDUBON SOCIETY. 1967. Florida Audubon Society Wildlife Sanctuaries. Operated through ownership, lease, or cooperative agreement. *Florida Nat.*, **40**: 131-135.—Many properties of varying size are listed, the acreage, allocation and character usually being stated. Among the most interesting projects is the Kissimmee Cooperative Bald Eagle Sanctuary constituting a large area owned by numerous individuals. G. and D. Heinzman report that in 1966-1967 over 73 per cent of the

active nests were successful in producing at least one young. The Hialeah Park flamingo sanctuary, within a racetrack, produced 72 young. The 500 or more birds, reared from introduced stock, no longer have their wings clipped, but stay because of artificial feeding, according to E. A. Clay. That these birds nest successfully and do not leave suggests that flamingos can adapt in some degree to human disturbance.—E.E.

- MILLER, R. S. 1966. Bufflehead uses artificial nest box. *Blue Jay*, **24**: 184-185.
- MURRAY, L. H. 1966. Bird sanctuaries in Saskatchewan, 1887-1965. *Blue Jay*, **24**: 110-120.—A comprehensive review of their status and degree of success.—R.W.N.
- SMITH, L. B. 1966. Bird mortality at radio and TV towers near Winnipeg, September 1965. *Blue Jay*, **24**: 172-176.

## PHYSIOLOGY

- BRUSH, A. H. 1967. Pigmentation in the Scarlet Tanager, *Piranga olivacea*. *Condor*, **69**: 549-559.
- CRAWFORD, E. C., JR., AND K. SCHMIDT-NIELSEN. 1967. Temperature regulation and evaporative cooling in the Ostrich. *Amer. J. Physiol.*, **212**: 347-353.—A 100 kg Ostrich maintained a  $T_b = 39.3^\circ\text{C}$  at a  $T_a$  as great as  $51^\circ\text{C}$ . Metabolic rate (455 ml  $\text{O}_2/\text{min.}$ ) was almost unchanged at  $T_a$  from  $20-45^\circ$  and was greater than that predicted by the King-Farner equation. Behavioral responses to heat and physiological responses to water deprivation are described.—A.H.B.
- FARNER, D. S., AND B. K. FOLLETT. 1966. Light and other environmental factors affecting avian reproduction. *J. Anim. Sci.*, **25**: 90-118.—A survey of parameters that control annual reproductive cycles. Primary consideration is given to the White-crowned Sparrow, but information on other nondomestic species is included.—A.H.B.
- FOX, D. L., V. E. SMITH, AND A. A. WOLFSON. 1967. Carotenoid selectivity in blood and feathers of Lesser (African), Chilean and Greater (European) flamingos. *Comp. Biochem. Physiol.*, **23**: 225-232.—Quantitative description of the carotenoid pigments in various tissues of three species. This information is compared with earlier work from the same laboratory, completing the survey of all living species of the Phoenicopteridae. All species deposit canthaxanthin as the predominant feather pigment. Minor elements include other  $\beta$ -carotenes. Canthaxanthin also predominates in blood, but the occurrence and concentrations of other carotenoids is less regular. The problem of the metabolic pathways and their genetic control is all too briefly discussed.—A.H.B.
- FRISCH, O. v. 1966. Versuche über die Herzfrequenzänderung von Jungvögeln bei Fütterungs und Schreckreizen. *Zeits. f. Tierpsych.*, **23**: 52-55.—Electrocardiograms showed an increase in frequency of heartbeat in two species when an enemy was present.—M.S.F.
- HARVEY, J. M. 1967. Excretion of DDT by migratory birds. *Canadian J. Zool.*, **45**: 629-633.—Starlings were fed radioactive DDT for five days and absorbed less than 25 per cent. After 10 days less than 10 per cent of the ingested DDT remained in the birds. Birds with little stored fat and unable to excrete DDT at a rate fast enough to prevent its buildup to 30 ppm in the brain will probably die of its effects.—H.W.K.

- HELMS, C. W., W. H. AUSSIKER, E. B. BOWER, AND S. D. FRETWELL. 1967. A biometric study of major body components of the Slate-colored Junco, *Junco hyemalis*. *Condor*, **69**: 560-578.
- HEMM, R., AND W. W. CARLTON. 1967. Review of duck hematology. *Poultry Sci.*, **46**: 956-962.—A thorough compilation of information on the Anseriformes. Included is information on packed cell volume, erythrocyte numbers and dimensions, hemoglobin levels, reticulocyte and leukocyte numbers, and differential counts. Although the taxonomic variety is surprisingly broad, no adaptive interpretation is given to observed differences.—A.H.B.
- LINDSEY, C. C., AND G. E. E. MOODIE. 1967. The effect of incubation temperature on vertebral count in the chicken. *Canadian J. Zool.*, **45**: 891-892.—Incubation of Leghorn chicks at different temperatures reveals that vertebral number is temperature labile—higher temperatures result in higher total vertebral counts. This has been shown to be true already in the other vertebrate classes.—H.W.K.
- MACMILLEN, R. E., AND C. H. TROST. 1967. Nocturnal hypothermia in the Inca Dove, *Scardafella inca*. *Comp. Biochem. Physiol.*, **23**: 243-253.—Depriving this small (40-50 g) columbiform of either food or water will produce a marked nocturnal hypothermia. Hypothermia is independent of ambient temperature and results in a considerable conservation of both energy and water (80 per cent and 55 per cent of the first day's value, respectively). Body temperature fluctuated on a circadian schedule and appeared to be an exaggeration of the usual nocturnal decrease in  $T_b$  characteristic of diurnal birds. The adaptive significance of these phenomena is discussed.—A.H.B.
- MELAMED, M. D. 1967. Electrophoretic properties of ovomucoid. *Biochem. J.*, **103**: 805-810.—Two major fractions of chicken ovomucoid were separated by starch gel electrophoresis. The fractions differed in sialic acid content as well as charge.—A.H.B.
- MORTON, M. L. 1967. The effects of insolation on the diurnal feeding pattern of White-crowned Sparrows (*Zonotrichia leucophrys gambelii*). *Ecology*, **48**: 690-694.—Field and laboratory data indicate that sunbathing may partly alleviate the energy costs of thermoregulation at environmental temperatures below the zone of thermalneutrality. Rapid adjustment of food intake during periods of insolation suggest a relationship between appetite and peripheral heat reception.—A.H.B.
- PENNYCUICK, C. J. 1967. The strength of the pigeon's wing bones in relation to their function. *J. Exp. Zool.*, **46**: 219-233.—Estimates of ultimate load factors of the humerus and radio-ulna are greater than the forces applied to them by the insertion of the pectoral muscles. Thus muscles would be forcibly extended before the bones would be broken by excessive lift.—A.H.B.
- PENNYCUICK, C. J., AND G. A. PARKER. 1966. Structural limitations on the power output of the pigeon's flight muscles. *J. Exp. Biol.*, **45**: 489-498.—Measurements of the breaking tension of muscle insertion, amplitude of muscle movement and maximum (take off) wing beat frequency set an upper limit of 48 watts on the power that could be transmitted to the wing. Only 9.1 watts is required to account for observed performance. Other measurements on both the pectoralis and supracoracoideus do not imply any unusual mechanical properties for these muscles as compared to other vertebrate muscles.—A.H.B.
- SALT, W. R. 1966. An adaptation to produce large lift forces in small short-winged birds. *Canadian J. Zool.*, **44**: 1037-1040.—In some passerine birds that have short wings with rounded tips the outer web of the primaries is emarginated towards



the tip. This helps the bird to lift large wing loads per gram of pectoralis major muscle at takeoff by enabling the bird to produce a series of slots between the feathers.—H.W.K.

- SALT, W. R. 1967. Loads lifted by homogeneous muscle in flapping flight. Canadian J. Zool., **45**: 73-79.—The relationship between body weight, pectoralis major weight, and wing area is examined in a group of passerine birds in order to determine the amount of muscle required to lift a body into the air. Muscles of adults operate at about half to two-thirds of maximum capacity at takeoff.—H.W.K.
- SHIH, L., AND M. A. GIBSON. 1967. A histological and histochemical study of the development of salivary glands in the chick. Canadian J. Zool., **45**: 607-622.—A study of these glands during the early stages of development.—H.W.K.

#### TAXONOMY AND PALEONTOLOGY

- BOURNS, T. K. R. 1967. Serological relationships among some North American thrushes. Canadian J. Zool., **45**: 97-99.—Precipitin testing of muscle and serum proteins from six species of thrushes revealed greater serological correspondence between the Wood Thrush and American Robin than between the Wood Thrush and any (other) *Hyllocichla* species. This relationship was closer than that seen to exist between any two of the other four species.—H.W.K.
- CORBIN, K. W. 1967. Evolutionary relationships in the avian genus *Columba* as indicated by ovalbumin tryptic peptides. Evolution, **21**: 355-368.—This paper is a unique demonstration of the intra- and interspecific variation with which the biochemical systematists must deal. Corbin presents the first example, using entirely avian material, of the genetic and nongenetic variation present in a single molecule, in this case egg-white ovalbumin. Based on the biochemical information a phenetic arrangement of the species of the genus *Columba* is presented.—A.H.B.
- DICKERMAN, R. W., AND A. R. PHILLIPS. 1967. Botteri's Sparrows of the Atlantic coastal lowlands of México. Condor, **69**: 596-600.
- STREPANYAN, L. S. 1967. *Calandrella cheleensis* Swinhoe a valid species. Acta Orn., **10**: 97-107.—The author agrees with others that the alaudids *Calandrella cheleensis* (= *C. leucophaea*) and *C. rufescens* are specifically distinct and, on the basis of plumage color, recognizes for *C. cheleensis* 6 subspecies: *cheleensis*, *leucophaea*, *kukunoorensis*, *seebohmi*, *beicki*, and *tangutica*.—M.A.J.
- VAURIE, C. 1967. Systematic notes on the bird family Cracidae. No. 7. The genus *Pipile*. Amer. Mus. Novit., no. 2296: 16 pp.—The 6 taxa of *Pipile* admitted by the author are here combined into 3 species, but with species limits differing from those of previous authors. Recognized are *P. pipile* (including *cumanensis* and *grayi*), *P. cujubi* (including *nattereri*), and the distinctive monotypic *P. jacutinga*. Stress is placed on the importance of skin color of the bare throat—blue in *pipile*, mostly red in *cujubi*. The face is naked in all forms except *jacutinga*. All 6 forms constitute a superspecies. The only known areas of overlap are Mato Grosso (*P. p. grayi* and *P. c. nattereri*) and eastern Paraguay (*P. p. grayi* and *P. jacutinga*).—K.C.P.
- VAURIE, C. 1967. Systematic notes on the bird family Cracidae. No. 8. The genera *Aburria*, *Chamaepetes*, and *Penelopina*. Amer. Mus. Novit., no. 2299: 12 pp.—Geographic variation in both color and size exists in *Aburria aburri*, but is not defined clearly enough to warrant recognition of subspecies. *Chamaepetes* has 2 species, *unicolor* (monotypic) from Costa Rica and Panama, and *goudotii*, with 5 subspecies in western South America. Variation in color saturation is assumed to

be correlated with "prevailing humidity." An unsuccessful attempt is made to correlate size and proportions with the altitudes at which examined specimens were collected. Van Rossem's subdivision of *Penelopina nigra* is shown to be based on a series of errors and misconceptions; the species does not vary geographically. In *Penelopina*, unlike other cracids, females average somewhat larger than males.—K.C.P.

VAURIE, C. 1967. Systematic notes on the bird family Cracidae. No. 9. The genus *Crax*. Amer. Mus. Novit., no. 2305: 20 pp.—Seven species are recognized (*alector*, *globulosa*, *blumenbachii*, *daubentonii*, *fasciolata*, *alberti*, and *rubra*), and their distribution, synonymy, and characters discussed. All are monotypic except *fasciolata* and *rubra*. Females of *alberti* and *rubra* have color phases that have been described as separate species. In *rubra* there is a decided tendency toward correlation between distribution and color phases, but overlap is too great to permit taxonomic use of this character.—K.C.P.

VAURIE, C. 1967. Systematic notes on the bird family Cracidae. No. 10. The genera *Mitu* and *Pauxi* and the generic relationships of the Cracini. Amer. Mus. Novit., no. 2307: 20 pp.—Last of this series of notes, all cracid genera except *Oreophasis* having been reviewed. Sclater and Salvin's subdivision of the Cracidae into 3 subfamilies is accepted as a valid indication of relationships, but the subfamilies are reduced to tribes. In the Cracini 4 genera (*Nothocrax*, *Mitu*, *Pauxi*, and *Crax*) are recognized (*contra* Vuilleumier, Bull. Mus. Comp. Zool., **134**: 1-27, 1965) and defined. *Mitu* (3 species) and *Pauxi* (2 species) are discussed in detail, mapped, and figured. Females of *P. pauxi* occur in brown and black-and-white color phases; upon rather slender evidence it is deduced that brown was the "original" color of females and black-and-white a more recent "mutant" that has all but replaced the brown phase in at least the more densely inhabited (by man) parts of Venezuela. An appendix lists corrections for papers 2, 3, and 4 of this series.—K.C.P.

WARREN, R. L. M. 1966. Type-specimens of birds in the British Museum (Natural History). Vol. 1. Non-passerines. Brit. Mus. Publ., no. 651: 1-320. Price £4.—Lists holotypes, syntypes, lectotypes, and neotypes. The arrangement is completely alphabetical under the specific or subspecific name, which is followed by original nomenclatural combination, author, date, original reference, British Museum register number, and other pertinent details about the specimen. The current name of the taxon is not given, but a key number indicates to what order or suborder the specimen belongs, a convenient arrangement that permits elimination of any index. Two criticisms: Although all syntypes have equal nomenclatural status, information is given only for a single selected specimen, and while the existence of other syntypes is mentioned, their numbers are seldom indicated and they are not identified in any way. Thus despite a statement in the introduction that this selection does not operate as the designation of a lectotype, future workers are likely to be misled, and syntypes are likely to disappear. Secondly the "original combination" of names emended in supposed compliance with Art. 32 (c) (i) of the International Code is given with no mention of the original spelling. Correct interpretation of the Code provisions regarding compulsory emendation is not always free of controversy; the article has been amended twice since 1960 and may be amended again. For purposes of permanent reference in a work of this sort, the true original spelling should have been indicated.—E.E.