

FOREIGN PERIODICAL LITERATURE

EDITED BY HERBERT W. KALE II¹

At the recent A.O.U. meetings in Oklahoma your editors discussed at length with the council the future of this periodical literature section, which has more than doubled in length in the last decade. As the cost per page of producing *Auk* has also doubled in the same period, the section has become an expensive luxury. Various measures of paring it down to reasonable size were proposed, including the suggestions that we list titles only, or delete it and devote the space entirely to new research. The section's principal value has been to save researchers the trouble of going through periodicals for material of concern to them published since the last *Aves* volume of the *Zoological Record*, which is perennially 5 or 6 years behind time—also those in *Biological Abstracts* and *Wildlife Review*, which are only slightly more current. It has long been our policy to list articles from *Condor* and *Wilson Bulletin* by title only, on the grounds that American ornithologists have ready access to them. We long ago stopped listing individual entries in the annual or 10-year indexes, which greatly reduces the section's efficiency and usefulness, but is simply too costly for us.

The section that follows is frankly a compromise and an experiment—deleting all American publications, which most researchers should have readily available and are covered by the other abstracting services or listed in *Current Contents*. While we are well aware that occasionally fine papers are published in minor state or local journals that the main compiling agencies overlook (we will try to note the appearance of new periodicals and abstract such important exceptions as Forsythe, p. 197), we feel we are doing the majority of our readers the greatest possible service within our means by listing and abstracting only the foreign periodicals. We welcome comments, criticisms, and suggestions from our readers for keeping this section as useful as possible within our financial resources.—Eds.

A NEW PERIODICAL

PACIFIC SEABIRD GROUP BULL. vol. 1. No. 1. January 1974—"The Pacific Seabird Group's primary function is to increase the flow of information among persons interested in Pacific seabirds . . . The Group will provide coordination and stimulation of the field activities of its members rather than initiating any field programs of its own. For the time being, at least, the Group will be primarily concerned with the west coast of North America and adjacent areas of the Pacific." At present, working committees are concerned with coordination of activities in colony censusing, beached bird surveys and disasters, and pelagic observations and sea-watches. Regional reports (from Alaska to Mexico) list a surprising number of studies under way: Alaska 19, British Columbia 22, Washington 8, Oregon 7, California 35, Hawaii 2. Conservation policy statements concern seabird conservation in the Gulf of California, and Alaska oil and seabirds. A book review, sundry news items, and a membership list, with research topics of the 152 charter members complete this issue. The bulletin is planned to be issued semiannually, in January and September, by the Secretary, GEORGE J. DIVOKY, U.S. Fish and Wildlife Service, 1412 Airport Way, Fairbanks, Alaska 99701.

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BEHAVIOR

- ALOCK, J. 1973. Cues used in searching for food by Red-winged Blackbirds (*Agelaius phoeniceus*). Behaviour 46: 174-188.—Food maze experiments with hand-reared birds indicate that they are sensitive to both locational and visual cues and learn to use them while foraging. Discusses results in the context of Tinbergen's search image hypothesis.—F.E.L.
- BAKER, M. C. 1973. Stochastic properties of the foraging behavior of six species of migratory shorebirds. Behaviour 45: 242-270.—A statistical description of the temporal and sequential organization of foraging behaviour based on analysis of movies of *Calidris minutilla*, *C. pusilla*, *C. alpina*, *Limnodromus griseus*, *Tringa flavipes*, and *Charadrius semipalmatus* made on the breeding and wintering grounds. (Author's summary.)—F.E.L.
- BATESON, P. P. G., AND G. SEABURNE-MAY. 1973. Effects of prior exposure to light on chicks' behaviour in the imprinting situation. Anim. Behav. 21: 720-725.
- BATESON, P. P. G., AND A. A. P. WAINWRIGHT. 1972. The effects of prior exposure to light on the imprinting process in domestic chicks. Behaviour 42: 279-290.—Chicks exposed to constant light showed a preference for flashing light whereas dark control chicks did not.—F.E.L.
- BJARVALL, A. 1973. Nest site selection by year-old female Mallards, *Anas platyrhynchos*, in relation to the locality of their hatching. Intern. Zoo Yearbook 13: 23-27.
- BRAUD, W. G., AND H. G. GINSBURG. 1973. Immobility reactions in domestic fowl (*Gallus gallus*) less than seven days old: Resolution of a paradox. Anim. Behav. 21: 104-108.—Previous failures to observe immobility reactions in young chicks were due to inappropriate test conditions. (Author's abstract.)—F.E.L.
- BROWN, J. L. 1972. Communal feeding of nestlings in the Mexican Jay (*Aphelocoma ultramarina*): interflock comparisons. Anim. Behav. 20: 395-403.—Based on color-banded birds, helpers accounted for 46-68% of feeding at five nests, and at some nests certain individuals brought more food more frequently than did the parents.—F.E.L.
- BRUEN, K., AND D. W. DUNHAM. 1973. Effects of social stimuli on nest building in the Zebra Finch (*Poephila guttata*). Anim. Behav. 21: 183-190.—The sight and sound of a conspecific is conducive to nest building in domestic males but sounds from unseen nearby conspecifics seem to block this stimulating effect by evoking a flocking tendency that increases general activity and reduces nest building.—F.E.L.
- BUCKLEY, P. A., AND F. G. BUCKLEY. 1972. Individual egg and chick recognition by adult Royal Terns (*Sterna maxima maxima*). Anim. Behav. 20: 457-462.—Incubating adults consistently recognized their own eggs when placed in an adjacent nest and 3 of 4 chicks were unrecognized by their parents until the silent chicks vocalized.—F.E.L.
- CATCHPOLE, C. K. 1973. The functions of advertising song in the Sedge Warbler (*Acrocephalus schoenbaenus*) and the Reed Warbler (*A. scirpaceus*). Behaviour 46: 300-320.—Results of observation and playback experiments indicate that the main function of persistent song in unpaired males is sexual attraction of females, and that intermittent song from paired males functions in territorial defense. (Author's summary.)—F.E.L.
- CAWTE, K. G. 1973. Moorhen attempts to drown Ringed Plover. Brit. Birds 66: 78.—*Gallinula chloropus* with chicks held a *Charadrius hiaticula* under water.—J.J.D.

- COLLIAS, E. C., AND N. E. COLLIAS. 1973. Further studies on development of nest-building behaviour in a weaverbird (*Ploceus cucullatus*). *Anim. Behav.* 21: 371-382.—Complete deprivation of nest material for the first year significantly retarded development of weaving ability in yearling males. Partial deprivation had some retarding effect. Practice is necessary for successful nest weaving. Once nest-weaving proficiency is achieved it is not affected by prolonged deprivation of nest material during adult life.—F.E.L.
- CURTIS, H. S. 1972. The Albert Lyrebird in display. *Emu* 72: 81-84.
- DELIUS, J. D. 1973. Agonistic behaviour of juvenile gulls, a neuroethological study. *Anim. Behav.* 21: 236-246.—The results of an exploration of the brain of juvenile *Larus argentatus* and *L. fuscus* with electrical stimulation are compared with normal agonistic behaviour. Proposes that the secretion of "liquormones" is responsible for the changes in mood that followed stimulation of the neuroventricular interface area of the brain. (Author's abstract.)—F.E.L.
- DUNCAN, I. J. H., AND D. G. M. WOOD-GUSH. 1972. An analysis of displacement preening in the domestic fowl. *Anim. Behav.* 20: 68-70.—The frantic appearance of displacement preening is probably a result of movements of shorter duration than during normal preening.—F.E.L.
- EMLEN, S. T. 1972. An experimental analysis of the parameters of bird song eliciting species recognition. *Behaviour* 41: 130-171.—Results of playback experiments with male *Passerina cyanea* using normal and artificially modified vocalizations are compared with similar studies on four other passerines.—F.E.L.
- ERICKSON, C. J., AND R. L. MORRIS. 1972. Effects of mate familiarity on the courtship and reproductive success of the Ring Dove (*Streptopelia risoria*). *Anim. Behav.* 20: 341-344.—Experience counts in hatching eggs but not in number of eggs laid, or success of raising squabs.—F.E.L.
- ERSKINE, A. J. 1971. Parental carrying of young by Goosanders. *Wildfowl* 22: 60.
- ETIENNE, A. S. 1973. Searching behaviour towards a disappearing prey in the domestic chick as affected by preliminary experience. *Anim. Behav.* 21: 749-761.—They all learned rapidly to look in the right place for the disappearing worms.—F.E.L.
- EVANS, S. M. 1972. Specific distinctiveness in the calls of Cordon Bleus (*Uraeginthus* spp., Estrildidae). *Anim. Behav.* 20: 571-579.—In each of three species of *Uraeginthus* finches the contact and flight calls are similar in structure, but differ between the species. The alarm calls are similar among the three species but different from the contact and alarm calls. Playback experiments showed that responses to calls tended to be species-specific.—F.E.L.
- FEKES, F. 1972. "Irrelevant" ground pecking in agonistic situations in Burmese Red Junglefowl (*Gallus gallus spadiceus*). *Behaviour* 43: 186-326.—A detailed analysis of an experimental study.—F.E.L.
- FICKEN, M. S., AND R. W. FICKEN. 1973. Effect of number, kind, and order of song elements on playback responses of the Golden-Winged Warbler. *Behaviour* 46: 114-127.
- GALLUP, G. G., JR., W. H. CUMMINGS, AND R. F. NASH. 1972. The experimenter as an independent variable in studies of animal hypnosis in chickens (*Gallus gallus*). *Anim. Behav.* 20: 166-169.
- GOETHE, F. 1973. "Pfahlstellung" bei jungen Drosseln. *Vogelwelt* 94: 27-28.—The "freezing" posture, with the bill pointing upward and the neck drawn out as we know it in bitterns, also occurs in newly fledged *Turdus viscivorus*, *T. philomelos*,

- and *T. pilaris*. The apparent convergence in neck coloration and posture is striking.—N.A.M.V.
- GOODWIN, D. 1971. Anting by Red-cheeked and Blue-headed Cordon-Bleus (*Uraeginthus bengalus* and *U. cyanocephalus*). *Avicult. Mag.* 77: 88–93.
- GOODWIN, D. 1973. Mating ceremony of the Mountain Imperial Pigeon. *Avicult. Mag.* 79: 42–44.
- GREEN, C. 1972. Use of tool by Orange-winged Sittella. *Emu* 72: 185–186.—*Neositta chrysoptera* used twigs to probe holes for grubs.—L.L.S.
- HARRISON, C. J. O. 1971. The sunbathing of the Roadrunner. *Avicult. Mag.* 77: 128–129.
- HARRISON, C. J. O. 1973. Brief notes on display and postures of some larger fruit pigeons in captivity. *Avicult. Mag.* 79: 39–42.
- HARRISON, C. J. O. 1973. Apparent sexual dimorphism in the call of the Brown Fish-Owl (*Ketupa zeylonensis*). *Avicult. Mag.* 79: 140–141.
- HARRISON, C. J. O. 1973. The threat postures of the Robin [*Erithacus rubecola*]. *Brit. Birds* 66: 225–227.
- HEATON, M. B. 1972. Prenatal auditory discrimination in the Wood Duck (*Aix sponsa*). *Anim. Behav.* 20: 421–424.—Although the embryos responded to Wood Duck maternal calls with increased bill clapping, the postnatal response to the same calls was inconsistent.—F.E.L.
- HEINZ, G. 1973. Response of Ring-necked Pheasant chick (*Phasianus colchicus*) to conspecific calls. *Anim. Behav.* 21: 1–9.—Conspecific calls appear to be important to the survival of young pheasant chicks in the dense cover the birds inhabit.—F.E.L.
- HINDE, R. A., AND E. STEEL. 1972. Reinforcing events in the integration of canary nest-building. *Anim. Behav.* 20: 514–525.
- HOLYOAK, D. M., AND D. T. HOLYOAK. 1972. Notes on the behavior of African parrots of the genus *Poicephalus*. *Avicult. Mag.* 78: 88–96.
- HUGHES, B. O., AND D. G. M. WOOD-GUSH. 1972. An increase in activity of domestic fowls produced by nutritional deficiency. *Anim. Behav.* 21: 10–17.—Birds deprived of calcium or sodium developed aberrant “air pecking.”—F.E.L.
- IMPEKOVEN, M. 1973. Response-contingent prenatal experience of maternal calls in the Pekin Duck (*Anas platyrhynchos*). *Anim. Behav.* 21: 164–168.—The response of duck embryos exposed to maternal calls as a result of their own motor activity was greater than that of inactive embryos exposed to maternal calls. Chicken maternal calls got less of a response in each group.—F.E.L.
- IMPEKOVEN, M. 1973. The response of incubating Laughing Gulls (*Larus atricilla* L.) to calls of hatching chicks. *Behaviour* 46: 95–113.—Playback experiments in the field reveal that responsiveness of adults increases as a function of progressing incubation.—F.E.L.
- INGOLD, P. 1973. Zur lautlichen Beziehung des Elters zu seinem kucken bei Tordalken (*Alca torda*). *Behaviour* 45: 154–190.—Adult Razorbills are able to find their own chicks when the young leave the breeding ledges for the sea because they have learned the chicks’ leap-call by the time the chicks are 10 days old. (English summary.)—F.E.L.
- KENYON, R. F. 1972. Polygyny among Superb Lyrebirds in Sherbrooke Forest Park, Kallista, Victoria. *Emu* 72: 70–76.—The male of *Menura novaeollandiae* maintains a territory containing the territories of several females, copulating with them at a favored central site that is outside their territories.—L.L.S.

- KLING, J. W., AND J. STEVENSON-HINDE. 1972. Reinforcement, extinction and spontaneous recovery of key pecking in Chaffinches. *Anim. Behav.* 20: 425-429.
- LANGFORD, A., AND J. A. HOGAN. 1973. Effects of chick vocalizations on ongoing behaviour. *Anim. Behav.* 21: 160-163. Playback of some unexpected sounds (feeding twitters) did not inhibit pecking rate but other sounds (shrill calls and high intensity tones) did.—F.E.L.
- LAZARUS, J., AND J. H. CROOK. 1973. The effects of luteinizing hormone, oestrogen and ovariectomy on the agonistic behaviour of female *Quelea quelea*. *Anim. Behav.* 21: 49-60.—Oestrogen inhibits luteinizing hormone-mediated aggressiveness.—F.E.L.
- LEMON, R. E., AND C. CHATFIELD. 1973. Organization of song of Rose-breasted Grosbeaks. *Anim. Behav.* 21: 28-44.—Analyzes sequence of syllables and time intervals in song of *Pheucticus ludovicianus* and discusses significance of analyses for models of neural control.—F.E.L.
- LIMPUS, C. J. 1973. Avian predators of sea turtles in south-east Queensland rookeries. *Sunbird* 4: 45-51.—Diurnal predation by gulls and sea eagles on hatchling turtles is insignificant, exerting little selective pressure for the turtles to emerge at night.—M.H.C.
- MACDONALD, M. A. 1973. Bigamy in [the European] Kestrel. *Brit. Birds* 66: 77-78.—One male *Falco tinnunculus* appeared paired with two nesting females.—J.J.D.
- MARLER, P., P. MUNDINGER, M. S. WASER, AND A. LUTJEN. 1972. Effects of acoustic stimulation and deprivation on song development in Red-winged Blackbirds (*Agelaius phoeniceus*). *Anim. Behav.* 20: 586-606.—Isolated males develop abnormal songs. Playback of conspecific and *Icterus galbula* song to isolated males results in unselective imitation. Grouped males are more selective. Males deafened early in life produce song with some discernible structure.—F.E.L.
- MARTINEZ-VARGAS, M. C., AND C. J. ERICKSON. 1973. Some social and hormonal determinants of nest-building behaviour in the Ring Dove (*Streptopelia risoria*). *Behaviour* 45: 12-37.
- MCLANNAHAN, H. M. C. 1973. Some aspects of the ontogeny of cliff nesting behaviour in the Kittiwake (*Rissa iridactyla*) and the Herring Gull (*Larus argentatus*). *Behaviour* 44: 36-88.—The Kittiwake chicks' adaptive cliff responses are independent of experience, whereas the differences between cliff- and ground-nesting Herring Gull chicks are due to their upbringing. (Author's summary.)—F.E.L.
- MILLIKAN, G. C. 1972. The development of filial behaviour in ducklings. *Behaviour* 43: 13-47.—Experimental study of factors responsible for the decline of the following response in young Pekin Ducks.—F.E.L.
- MILSTEIN, P. LE S. 1974. Nest-sitting in Kalahari Scrubrobin. *Ostrich* 45: 32.—*Erythroptgia paenia* nest "exactly next to a last season's nest."—R.B.P.
- MOBBS, A. J. 1971. Notes on the Reddish Hermit Hummingbird. *Avicult. Mag.* 77: 160-163.—Notes on behavior and display in captivity.—I.L.B.
- MOBBS, A. J. 1972. Observations on the pre-mating behaviour in the Andean Emerald and Golden-Tailed Sapphire Hummingbirds. *Avicult. Mag.* 78: 173-177.
- MONTEVECCHI, W. A., G. G. GALLUP, JR., AND W. P. DUNLAP. 1973. The peep vocalization in group reared chicks (*Gallus domesticus*): Its relation to fear. *Anim. Behav.* 21: 116-123.
- MORGAN, P. A., AND P. E. HOWSE. 1973. Avoidance conditioning of Jackdaws (*Corvus monedula*) to distress calls. *Anim. Behav.* 21: 481-491.

- MUELLER, H. C. 1973. The relationship of hunger to predatory behavior in hawks (*Falco sparverius* and *Buteo platypterus*). *Anim. Behav.* 21: 513-520.—A laboratory study of hand-reared and wild-trapped birds. The two species exhibited different circadian rhythms of hunger and killing tendency. Suggests that there is no predatory instinct that operates independently of hunger.—F.E.L.
- NYSTROM, M. 1973. Extinction, disinhibition, and spontaneous recovery of the pecking response in young Herring Gulls. *Behaviour* 45: 271-281.—Based on experiments with naive captive-reared *Larus argentatus*.—F.E.L.
- OLLASON, J. C., AND P. J. B. SLATER. 1973. Changes in the behaviour of the male Zebra Finch during a 12-hour day. *Anim. Behav.* 21: 191-196.
- OPPENHEIM, R. W. 1972. Prehatching and hatching behaviour in birds. A comparative study of altricial and precocial species. *Anim. Behav.* 20: 644-655.—A remarkable similarity in the sequence, character, and quantitative aspects of prehatching and hatching behavior exists in all 11 species including 3 oscine passers, *Columba livia*, *Larus atricilla*, 4 Galliformes, and domestic and wild *Anas platyrhynchos*. (Author's abstract).—F.E.L.
- PARRY, V. 1973. The auxiliary social system and its effect on territory and breeding in Kookaburras. *Emu* 73: 81-100.—Kookaburras live in pairs, or in family groups that include auxiliary (= helper) members. Fully one-third of the adult population is composed of these "auxiliaries," which are nonbreeding progeny of previous years that associate with their parents, assisting in territorial defense and attending the young. Territories of groups are larger than those of pairs, effectively reducing the breeding potential of the population by one-third. Nests with auxiliaries produced more fledglings (2.3 against 1.2 for a pair without auxiliaries), and juveniles from nests attended by auxiliaries showed less mortality than those of pairs. Because auxiliaries contributed up to a third of nest attendance time, and brought up to 60% of food to the young, pairs of such "families" have considerable free time and are able to rear a second brood in good years. Discusses population regulatory functions.—L.L.S.
- PAYNE, R. P. 1973. Vocal mimicry of the Paradise Whydahs (*Vidua*) and response of female whydahs to the songs of their hosts (*Pytilia*) and their mimics. *Anim. Behav.* 21: 762-771.—The approach response of isolated, photostimulated female whydahs to the recorded songs of various *Pytilia* species was strongly specific to the correct host species and the mimetic male whydah song. Author suggests that mimetic songs of males and the responses of females are behavioral isolating mechanisms among whydah species.—F.E.L.
- PEEK, F. W. 1972. An experimental study of the territorial function of vocal and visual display in the male Red-winged Blackbird (*Agelaius phoeniceus*). *Anim. Behav.* 20: 112-118.—Territorial males that were either muted surgically or had their epaulets altered were less successful than normals in maintaining territory. The ability of experimentals to maintain their territories differed seasonally. Author proposes a three-level territorial defense system based on advertising song, display, and finally, chase and attack.—F.E.L.
- PEEK, F. W. 1972. The effect of tranquilization upon territory maintenance in the male Red-winged Blackbird (*Agelaius phoeniceus*). *Anim. Behav.* 20: 119-122.—As the four tranquilized males gave fewer vocal and visual displays and spent less time on their territories the rate of trespass on their territories increased.—F.E.L.
- PHILLIPS, R. E. 1972. Sexual and agonistic behaviour in the Killdeer (*Charadrius vociferus*). *Anim. Behav.* 20: 1-9.—Based on wild and captive birds. Includes comparisons with six other members of the genus.—F.E.L.

- PHILLIPS, R. E., O. M. YOUNGREN, AND F. W. PEEK. 1972. Repetitive vocalizations evoked by local electrical stimulation of avian brains. 1. Awake chickens (*Gallus gallus*). Anim. Behav. 20: 689-705.—Results suggest a single set of neural mechanisms control repetitive vocalizations. (Authors' abstract.)—F.E.L.
- PORTER, R. H., C. FULLERTON, AND J. C. BERRYMAN. 1972. Cliff descents as a measure of attachment strength in chicks. Anim. Behav. 20: 221-227.
- POTASH, L. M. 1972. A signal detection problem and possible solution in Japanese Quail (*Coturnix coturnix japonica*). Anim. Behav. 20: 192-195.—The frequency and duration of separation crowing of males was affected by ambient noise.—F.E.L.
- RECHER, H. F. 1972. Territorial and agonistic behaviour of the Reef Heron. Emu 72: 126-130.
- RECHER, H. F., AND J. A. RECHER. 1972. The foraging behaviour of the Reef Heron. Emu 72: 85-90.
- REED, A. 1971. Pre-dusk rafting flights of wintering Goldeneyes and other diving ducks in the Province of Quebec. Wildfowl 22: 61-62.
- REESE, R. A., AND E. BALFOUR. 1973. Food piracy between Kestrels and Short-eared Owls. Brit. Birds 66: 227-228.—Separate records of *Asio flammeus* stealing food from a *Falco tinnunculus* and vice versa.—J.J.D.
- ROLLS, J. C. 1973. Prolonged mobbing of Common Tern by Swallows and Jackdaws. Brit. Birds 66: 169.—Flocks of *Hirundo rustica* and *Corvus monedula* mobbing a *Sterna hirundo*.—J.J.D.
- RYALL, R. H. 1973. Spotted Crakes taking food from anglers. Brit. Birds 66: 118-119.—*Porzana porzana* taking worms.—J.J.D.
- SCHEIN, M. W., AND C. S. CARTER. 1972. Sexual behaviour and novel stimuli in male Japanese Quail (*Coturnix coturnix japonica*). Anim. Behav. 20: 383-385.—Novelty was not important in sexual performance.—F.E.L.
- SCHIEN, M. W., M. DIAMOND, AND C. S. CARTER. 1972. Sexual performance levels of male Japanese Quail (*Coturnix coturnix japonica*). Anim. Behav. 20: 61-67.—Experience increases efficiency and female behavior is important in performance levels of males.—F.E.L.
- SHETTLEWORTH, S. J. 1972. The role of novelty in learned avoidance of unpalatable "prey" by domestic chicks (*Gallus gallus*). Anim. Behav. 20: 29-35.
- STEGEL, P. B. 1972. Genetic analysis of male mating behaviour in chickens (*Gallus domesticus*). 1. Artificial selection. Anim. Behav. 20: 564-570.—Reports the results of eleven generations of mass selection for high and low cumulative number of completed matings. (Author's abstract.)—F.E.L.
- SLATER, P. J. B., AND J. C. OLLASON. 1972. The temporal patterns of behaviour in isolated male Zebra Finches: Transitional analysis. Behaviour 42: 248-269.—Male captive *Taeniopygia guttata* show cycles of behavior having active and inactive phases. Certain pairs of behavior occur frequently in sequence. Most behavior triplets are of the form A-B-A.—F.E.L.
- SMITH, D. G. 1972. The role of the epaulets in the Red-winged Blackbird, (*Agelaius phoeniceus*) social system. Behaviour 41: 251-268.—Epaulets of territorial males were dyed black. Results indicate that epaulets communicate threat between rival males but have little role in intersexual encounters.—F.E.L.
- SMITH, G. A. 1971. The use of the foot in feeding, with especial reference to parrots. Avicult. Mag. 77: 93-101.
- SMITH, S. M. 1972. The ontogeny of impaling behavior in the Loggerhead Shrike, *Lanius ludovicianus* L. Behaviour 42: 232-247.—Ontogeny of impaling by

- wild and hand-raised captives was identical. Initial behaviors begin soon after fledging, and a trial-and-error period ensues before impaling is perfected. Observational learning is not involved. The personal experience with impaling devices must occur within a "critical period," roughly 20-70 days after hatching.—F.E.L.
- SMITH, S. M. 1973. A study of prey-attack behaviour in young Loggerhead Shrikes, *Lanius ludovicianus* L. Behaviour 44: 114-141.—Describes the ontogeny of prey attack behavior of wild and hand-reared young birds. Experiments with the naive captives show that experience is not important in development of prey attack behavior, that motion is the most important cue directing attack behavior, and that shrikes may have an innate recognition of "mouse."—F.E.L.
- SPENCER, R., AND G. H. GUSH. 1973. Siskins feeding in gardens. Brit. Birds 66: 91-99.—A survey of the spread of this habit of *Carduelis spinus*, suggesting it is a learned habit.—J.J.D.
- STADDON, J. E. R. 1972. A note on the analysis of behavioural sequences in *Columba livia*. Anim. Behav. 20: 284-292.
- STEVENSON-HINDE, J. 1972. Effects of early experience and testosterone on song as a reinforcer. Anim. Behav. 20: 430-435.—Experiments with hand-reared and wild-caught male *Fringilla coelebs* show that both conditions increase the reinforcement effect of song on song development.—F.E.L.
- SUMMERS, G. 1973. Lesser Whitethroat [*Sylvia curruca*] singing in October. Brit. Birds 66: 169.
- TAYLOR, R. H. 1974. The use of floodlights by Red-winged Starlings [*Onychognathus morio*] for catching insects after dark. Ostrich 45: 32-33.
- TILLERY, F. R. 1969. Notes on nesting and hatching behavior of Trumpeter Swans, *Cygnus c. buccinator* at Great Bend Zoo. Intern. Zoo Yearbook 9: 122-124.
- TRÖTSCHHEL, P. 1973. Kopulation eines Schleiereulen-Paares (*Tyto alba*) während der Jungenaufzucht. Vogelwelt 94: 64-65.—Copulation of the Barn Owl while rearing young 5-6 weeks old. Copulation always occurred after the male had given prey to the female. No mention of a second nest.—N.A.M.V.
- VAN RHIJN, J. C. 1973. Behavioural dimorphism in male Ruffs, *Philomachus pugnax* (L.). Behaviour 47: 153-229.—Discusses the factors promoting the balanced polymorphism of resident (dark, aggressive, sometimes territorial) and satellite (white, nonaggressive, nonterritorial) males.—F.E.L.
- WALTER, M. J. 1973. Effect of parental colouration on the mate preference of offspring in the Zebra Finch *Taeniopygia guttata castanotis* Gould. Behaviour 46: 154-173.—Results of experiments in which young were raised by normal colored, white, or mixed pairs, show that male Zebra Finches select mates similar to their parental plumage type, whereas females, regardless of parental plumage type, invite normal colored males to court.—F.E.L.
- WEBBER, L. A., AND J. D. EDMAN. 1972. Anti-mosquito behaviour of Ciconiiform birds. Anim. Behav. 20: 228-232.—The five species of herons that engaged in frequent foot-slapping and foot-pecking and effectively prevented mosquitoes from taking blood are also the more active foragers.—F.E.L.
- WILDE, N. A. J. 1973. Nuthatch assuming camouflage posture. Brit. Birds 66: 230-231.—*Sitta europaea* "froze" upside down with tail away from tree to escape a Sparrowhawk (*Accipiter nisus*).—J.J.D.
- WILEY, R. H. 1973. The strut display of male Sage Grouse: a "fixed" action pattern. Behaviour 47: 129-152.—Inter- and intrapopulation analysis of the display during which *Centrocercus urophasianus* produces sounds from its two esophageal sacs.—F.E.L.

- WILLIAMS, W. T., J. KIKKAWA, AND D. K. MORRIS. 1972. A numerical study of agonistic behaviour in the Grey-backed Silveryeye (*Zosterops lateralis*). Anim. Behav. 20: 155-165.—Analysis of a captive flock of 10 individuals during the nonbreeding season, based on Kikkawa's (1968) behavior types, suggests that the synchronous or contagious behaviors are largely initiated by a single aggressive individual, and that the social hierarchy is a two-level system among and within groups of birds.—F.E.L.
- WILSON, M. I., AND G. BERMANT. 1972. An analysis of social interaction in Japanese Quail (*Coturnix coturnix japonica*). Anim. Behav. 20: 252-258.—The probability that completion of the mating sequence was greater in heterosexual than in homosexual contacts appeared to be due to the behavior of the mounted, not the mounting, bird.—F.E.L.
- WOOD-GUSH, D. G. M., AND A. B. GILBERT. 1973. Some hormones involved in the nesting behaviour of hens. Anim. Behav. 21: 98-103.—Experiments with the injection of oestrogen and progesterone in chickens of two breeds.—F.E.L.
- YOUNG, J. G. 1973. Social nesting and polygamy in Kestrels and Sparrowhawks. Brit. Birds 66: 32-3.—Suggests polygamy in *Falco tinnunculus* because of close proximity of four nests. Author says polygamy proved for two nests of *Accipiter nisus* but gives no details.—J.J.D.

DISTRIBUTION AND ANNOTATED LISTS

- ALERSTAM, T. 1974. [Red-flanked Bluetail *Tarsiger cyanurus* found in Sweden.] Vår Fågelvärld 33: 44-48.—This eastern bird was seen on 27 and 29 December 1965. Since then three other individuals have been observed. (English summary.)—L.DE.K.L.
- BAUER, W., H. J. BÖHR, U. MATTERN, AND G. MÜLLER. 1973. 2. Nachtrag zum "Catalogus Faunae Graeciae; Pars Aves." Vogelwelt 94: 1-21.—Report on the status of our present knowledge of the birds of Greece. Includes an annotated list of the birds of the northern Greek mountain ranges, and some of the wetlands and agricultural areas. (English summary.)—N.A.M.V.
- BROOKE, R. K. 1974. The Spotted Crake *Porzana porzana* (Aves: Rallidae) in south-central and southern Africa. Durban Mus. Novitates 10 (3): 43-52.—Molt, habitat, and distribution of Palearctic species wintering in Africa.—R.B.P.
- CLANCEY, P. A. 1974. The Indian House Crow in Natal. Ostrich 45: 31-32.—*Corvus splendens* seen at Old Fort, Durban.—R.B.P.
- DOWSETT, R. J., AND R. STJERNSTEDT. 1973. The birds of the Mafinga Mountains. Puku 7: 107-123.—Description of habitat and an annotated list of birds of Mafingas in northeastern Zambia and Malawi. *Phyllastrephus placidus* and *Seicercus ruficapilla* are recorded for first time from Zambia.—R.B.F.
- MARTIN, J. E., AND R. MARTIN. 1974. Booted Eagle breeding in the south-western Cape Province. Bokmakierie 26: 21-22.—*Aquila pennata*, usually a migrant to southern Africa from the Palearctic where it breeds, nested successfully and has been seen regularly from August to October in South Africa. Several nest sites are known.—R.B.P.
- MWENYA, A. N. 1973. Ornithological notes from south east of Lake Bangweulu. Puku 7: 151-161.—Breeding records for cormorants and herons, including the world's largest known breeding population of *Ardeola rufiventris*.—R.B.P.
- OSBORNE, T. O. 1973. Additional notes on the birds of the Kafue Flats. Puku 7: 163-166.—Includes seasonal fluctuations for waterfowl.—R.B.P.

- SCHLENKER, R. 1973. Über Brutvorkommen und Schutz der Schwarzkopfmöwe (*Larus melanocephalus*) in Deutschland. *Vogelwelt* 94: 182-188.—Since 1965 the Mediterranean Gull has bred in six different places in Germany. Presents breeding attempts and sight records in several other European countries and a suggestion for protection of the species. Extensive bibliography. (English summary.)—N.A.M.V.
- SHARROCK, J. T. R. 1973. Scarce migrants in Britain and Ireland during 1958-67. Part 9. Aquatic Warbler, Barred Warbler, and Red-breasted Flycatcher. *Brit. Birds* 66: 46-64.—A summary of the seasonal and annual occurrence and location of *Acrocephalus paludicola*, *Sylvia nisoria*, and *Ficedula parva*.—J.J.D.
- SHARROCK, J. T. R., T. Q. GREEN, AND K. PRESTON. 1973. Olive-backed Thrush in Co. Cork. *Brit. Birds* 66: 35-36.—Second record of *Catharus ustulata* in Ireland.—J.J.D.
- SHARROCK, J. T. R., K. PRESTON, AND T. Q. GREEN. 1973. American Redstart in Co. Cork. *Brit. Birds* 66: 36-38.—First Irish and third European record of *Setophaga ruticilla*.—J. J. D.
- SINFELD, B. 1972. Rare birds of the Seychelles. *Avicult. Mag.* 78: 101-106.
- STRICKLAND, M. J. 1974. Masira Island: Doubts on the Black-shouldered Kite. *Ibis* 116: 94.—Rejects Green's claim (1949, *Ibis* 91: 459-464) of 10 pairs of kites, and concludes that instead Egyptian Vultures were misidentified.—R.W.S.
- THYSELIUS, B. 1974. [The occurrence of waterfowl at Oset's Bird Sanctuary, central Sweden, 1958-1967. Rept. No. 21 Kvismare Bird Station.] *Vår Fågelvärld* 33: 28-43.—A description of the area and a list of 29 species, including the now well established Canada Goose *Branta canadensis*. (English summary.)—L.DE.K.L.
- TREE, A. J. 1973. Yellowlegged *Sterna bergii* at Cape Recife. *Ostrich* 44: 265.
- UYS, C. J. 1974. Notes on cuckoos in the western Cape. *Bokmakierie* 26: 12-13.—Seasonal occurrence in South Africa.—R.B.P.
- VAUK, G. 1973. Seltene Gäste, Irrgäste und Bemerkungen zu den Brutvögeln Helgolands, 1972. *Vogelwelt* 94: 146-154.—Annotated list of rare and accidental species of birds banded on Heligoland in 1972. Despite heavy tourism and oil pollution the populations of species breeding there (with one exception—*Uria aalge*) are increasing (*Fulmarus glacialis*, *Gallinula chloropus*, *Rissa tridactyla*, *Haematopus ostralegus*, *Charadrius hiaticula*).—N.A.M.V.

ECOLOGY AND POPULATION

- BATTEN, L. A. 1973. The colonization of England by the Firecrest. *Brit. Birds* 66: 159-166.—A summary of sightings and nesting records of *Regulus ignicapillus*. J.J.D.
- BERGER, M., AND A. G. BEDNAREK. 1973. Statistische Auswertung der Siedlungsdichte von Feldlerchen. *Vogelwelt* 94: 21-26.—Questions how representative are breeding densities reported in the literature and how large an area one should sample to reduce the variance. For the Skylark, *Alauda arvensis*, the area should be large enough to include at least 35-50 pairs (0.7-1.0 km²) on moist habitats and 30 pairs (0.5 km²) on drier sites. (English summary.)—N.A.M.V.
- BIRKHEAD, T. R. 1973. A winter roost of Grey Herons. *Brit. Birds* 66: 147-156.—Records number of roosting *Ardea cinerea*, their times of arrival and departure, and behavior.—J.J.D.
- BROWN, L. H., AND J. B. D. HOPCRAFT. 1973. Population structure and dynamics in the African Fish Eagle (*Haliaeetus vocifer*) (Daudin) at Lake Naivasha, Kenya. *East African Wildl. J.* 11: 255-269.

- CLARK, A. 1974. The status of the whistling ducks in South Africa. *Ostrich* 45: 1-4.—*Dendrocygna viduata* and *D. bicolor* both appear to be increasing in areas of human sewage effluent and water storage dams.—R.B.P.
- CORKHILL, P. 1973. Manx Shearwaters on Skomer: population and mortality due to gull predation. *Brit. Birds* 66: 136-143.—*Larus marinus* kills less than 2% of the some 95,000 adult *Puffinus puffinus* yearly and apparently this predation has no serious effect on the population.—J.J.D.
- DAVIES, P. W., AND P. E. DAVIS. 1973. The ecology and conservation of the Red Kite in Wales. *Brit. Birds* 66: 183-224, 241-270.—A detailed study of the habitat, distribution, reproduction, and food habits of the remnant population of *Milvus milvus* in Wales.—J.J.D.
- DIERSCHKE, F. 1973. Die Sommervogelbestände nordwestdeutscher Kiefernforsten. *Vogelwelt* 94: 201-225.—A study of summer bird populations in northwestern German pine forests from 1962 to 1971. The author covered 149 study tracts (1044 ha) along a gradient ranging from 1-3 year old pine forests to stands 60-90 years old, with varying amounts of deciduous shrubs and trees. Young pine plantations (1-3 year old) had the lowest density (7 pairs/10 ha), and the highest density was found in old pine forests with a high proportion of broad leaved trees (115 pairs/10 ha). (English summary.)—N.A.M.V.
- DIN, N. A., AND S. K. ELTRINGHAM. 1974. Ecological separation between White and Pink-backed Pelicans in the Ruwenzori National Park, Uganda. *Ibis* 116: 28-43.—Impressive study including data on number of individuals from 1968 through March 1972, distribution within the park, feeding behavior, and food items and amount taken.—R.W.S.
- DOMM, S., AND H. F. RECHER. 1973. The birds of One Tree Island with notes on their yearly cycle and feeding ecology. *Sunbird* 4: 63-86.—Reports 2 years of observations on an important seabird colony (five species of terns and Reef Heron) at the southern end of the Great Barrier Reef, with remarks on the effect of an Australian Museum field station on the previously uninhabited island.—M.H.C.
- DWYER, P. D. 1972. Feature, patch and refuge area: some influences on diversity of bird species. *Emu* 72: 149-156.—Census techniques in northern temperate regions are questioned for use in Australia after studies in Queensland showed augmentation of woodland species wherever special features such as rock outcrops and swamps occurred within contiguous woodland.—L.L.S.
- FORSYTHE, D. M. 1974. An ecological study of gull populations to reduce the bird-aircraft strike hazard at Charleston Air Force Base. Air Force Weapons Lab. Tech. Rept. 73-142.—In this study conducted in coastal South Carolina during July 1971-July 1972, Ring-billed (*Larus delawarensis*), Herring (*L. argentatus*), and Laughing (*L. atricilla*) Gulls were the main species present. Numbers of the former two species had increased since 1957 and were the main aircraft strike hazards. Ring-billed and Herring Gulls fed mainly at eight inland dumps and landfills. They moved inland and up rivers in the mornings from coastal roosts on beaches, islands, and spoil banks, and returned to the roosts in the evening. Laughing Gulls fed mainly along the coast, mostly on refuse from shrimp trawlers. Gulls tended to frequent exposed mudflats and sandbars at low tide, and often rested on wet airfields and pavements during rainy, windy weather. (From author's summary.)—D.M.F.
- GATTER, W. 1973. Rückgang von Durchzugszahlen bei Singvögeln. *Vogelwelt* 94: 60-64.—Notes a strong, continuous decline in numbers of migratory song birds at an observation station in Bavaria from 1970 to 1972.—N.A.M.V.

- GORMAN, M. L. 1974. The significance of habitat selection during nesting of the Eider *Somateria mollissima mollissima*. Ibis 116: 152-154.—Appendix to paper by Milne (see below). Data for 1968 and 1969. Eiders select nest sites offering greatest protection against predation.—R.W.S.
- KERBES, R. H., M. A. OGLIVIE, AND H. BOYD. 1971. Pink-footed Geese of Iceland and Greenland: a population review based on an aerial nesting survey of þjórsárver in June 1970. Wildfowl 22: 5-17.—An estimated 10,700 nests, or about 75% of the Greenland/Iceland population that winters in Britain. Flooding this area, as proposed, will destroy about 85% of the nest sites.—R.D.C.
- KING, J. R. 1974. Notes on geographical variation and the annual cycle in Patagonian populations of the Rufous-collared Sparrow, *Zonotrichia capensis*. Ibis 116: 74-83.
- MACLEAN, G. L. 1973. The Sociable Weaver, part 1. Description, distribution, dispersion and populations. Ostrich 44: 176-190.—*Philetarius socius* nests in colonies of 2 to 500 or more birds. Intensive ringing revealed little intercolony movement. Documents local breeding colonies in Kalahari Gemsbok Park.—R.B.P.
- MARTIN, C., AND M.-C. SAINT GIRONS. 1973. Evolution d'un dortoir hivernal de Hiboux brachyotes, *Asio flammeus* (Pontoppidan, 1783), au cours d'une pullulation de campagnols des champs, *Microtus arvalis* (Pallas, 1779). Oiseau 43: 51-54.—Interesting note on changing densities of Short-eared Owls in a winter (Dec. 1966-Apr. 1967) roost during a year of overpopulation of field voles. Pellets revealed five mammalian species taken as food.—A.C.
- MIKKOLA, H. 1973. The Red-flanked Bluetail and its spread to the west. Brit. Birds 66: 3-12.—Documents spread of *Tarsiger cyamurus* from the Siberian taiga into Finland in recent years, with notes on its behavior and breeding biology.—J.J.D.
- MILNE, H. 1974. Breeding numbers and reproductive rate of eiders at the Sands of Forvie National Nature Reserve, Scotland. Ibis 116: 135-152. Thorough discussion of clutch size, based on 10-year study from 1960-70.—R.W.S.
- MINTON, C. D. T. 1971. Mute Swan flocks. Wildfowl 22: 71-82.—Considers the nature and functions of *Cygnus olor* flocks, particularly size, age structure, and status at different times of the year, and population changes since 1961.—R.D.C.
- MURTON, R. K., N. J. WESTWOOD, AND A. J. ISAACSON. 1974. Factors affecting egg-weight, body weight and moult of the Woodpigeon *Columba palumbus*. Ibis 116: 52-73.—Includes data on weight of eggs and clutches, hatching success, nestling success and chick weight, brood size and chick weight, brood size and postfledging survival, adult weight and egg weight, seasonal changes in weight and fat content of adults and juvenals, molt, and excellent discussion of the interactions of these factors.—R.W.S.
- OLSSON, V. 1974. [Changes within a population of Razorbills *Alca torda* and Black Guillemots *Cepphus grylle* 1954-1973 in the archipelago of Sweden's east coast.] Vår Fågelvärld 33: 3-14.—Comparatively high breeding success and immigration influenced the increases in the Razorbill population. The steady depletion of the Black Guillemots is primarily blamed on the spreading of the mink *Mustela vison* to the breeding islets. As this predation forced a dispersion to the outer skerries, the competition with the Razorbills over nest sites became an additional factor. (English summary.)—L. DEK.L.
- POMEROY, D. E. 1973. The distribution and abundance of Marabou Storks in Uganda. East African Wildl. J. 11: 227-240.—This species seems to have bene-

- fited from human activities in the region, having increased greatly in numbers and shown strong tendencies to utilize urban refuse and slaughterhouse leavings as new food resources.—I.L.B.
- REICHHOLF, J. 1973. [The development of the Mute Swan population and its integration into the reservoir ecosystem of the Inn River.] *Anz. Ornithol. Ges. Bayern* 12: 15-46.—The Mute Swan has increased greatly in Bavaria since the development of the reservoir system on the Inn River. (In German; English summary.)—H.W.K.
- REICHHOLF, J. 1973. [The influence of agricultural land reform ("Flurbereinigung") on stocks of Grey Partridge (*Perdix perdix*).] *Anz. Ornithol. Ges. Bayern* 12: 100-105.—The elimination of edges and reduction in diversity of the agricultural landscape by consolidation of farm strips in southeast Bavaria since 1962 has reduced partridge populations at an alarming rate from an observation frequency of 82% to 10-20% within 10 years. (In German; English summary.)—H.W.K.
- REICHHOLF, J., AND H. UTSCHICK. 1972. [Occurrence and relative abundance of woodpeckers in the deciduous woodlands along the lower Inn River.] *Anz. Ornithol. Ges. Bayern* 11: 254-262.—The Grey-headed Woodpecker, a river woodland inhabitant, has increased significantly since 1961, while the Green Woodpecker, an inhabitant of forests, has shown a corresponding decrease. Relative abundance of Great and Lesser Spotted Woodpeckers (3:1) has remained the same. (In German; English summary.)—H.W.K.
- SIMMS, C. 1973. Kestrels nesting close together. *Brit. Birds* 66: 76-77.—Notes on the number of pairs of *Falco tinnunculus* nesting on three short ridgelines over some 16 years.—J.J.D.
- SKEAD, D. M. 1974. Roadside counts of Black-shouldered Kites in the Central Transvaal. *Ostrich* 45: 5-8.—*Elanus caeruleus* averaged 1 bird per 10-17 km.—R.B.P.
- STEYN, P., AND R. K. BROOKE. 1973. Kurrichane Thrush nests close together. *Ostrich* 44: 266.—*Turdus libonyana* nests 34 × 36 × 22 m from each other.—R.B.P.
- WIEHE, H. 1973. Über die Euswirkungen von Störungen (menschlicher Einfluss) auf den Brutvogelbestand eines Bruchwaldes bei Braunschweig. *Vogelwelt* 94: 161-175.—On 29 acres of marshy forest and adjacent wet meadows near Brunswick, Lower Saxony, a breeding bird census was carried out yearly between 1955 and 1972. Over the years man has altered the forest and reduced the cover from 100% in 1955 to 58% in 1972. The numbers of breeding pairs and species have declined to 41% and 48%, respectively. (English summary.)—N.A.M.V.
- WILLIAMSON, R., AND K. WILLIAMSON. 1973. The bird community of yew woodland at Kingley Vale, Sussex. *Brit. Birds* 66: 12-23.—Breeding bird censuses carried out over 5 years showed an increase in density and diversity with age of the community, though a yew-oak scrub community had the greatest diversity.—J.J.D.
- WINK, M. 1973. Siedlungsdichteuntersuchungen in Heidebiotopen und Lavafeldern Nord-Islands. *Vogelwelt* 94: 41-50.—Breeding densities of 5 nonpasserines and 5 passerines on 4 study areas each in alpine heath and dry lava fields in Iceland. Reports direct correlation between food abundance and bird density. (English summary.)—N.A.M.V.
- YARKER, B., AND G. L. ATKINSON-WILLES. 1971. The numerical distribution of some British breeding ducks. *Wildfowl* 22: 63-70.—Includes maps to show the number of breeding pairs in each 10-km square accompanied by estimates of total populations, and recent changes.—R.D.C.

EVOLUTION AND GENETICS

- CHARNOV, E. L., AND J. R. KREBS. 1974. On clutch-size and fitness. *Ibis* 116: 217-219.
- CLARK, A. 1973. Hybrid *Anas undulata* × *Netta erythrophthalma*. *Ostrich* 44: 265.
- CRACRAFT, J. 1972. Continental drift and Australian avian biogeography. *Emu* 72: 171-174.—Most Australian nonpasserines and all oscines are related to Asian families, and presumably invaded Australia from the north. Gondwanaland evidently did not fragment and disperse until the late Cretaceous or early Cenozoic. Penguins, ratites, megapodes, and suboscines are some groups that appear to have reached Australia through dispersal from Gondwanaland before its breakup.—L.L.S.
- DELACOUR, J. 1972. Hybrid Sugar-Bird × Tanager (*Cyanerpes cyaneus* × *Tangara nigrocincta franciscae*). *Avicult. Mag.* 78: 187-189.—With colored plate.—I.L.B.
- DOW, D. D. 1972. Hybridization in the avian genus *Myzantha*. *Mem. Queensland Mus.* 16: 265-269.—Describes three *Myzantha melanocephala* × *M. flavigula* hybrids near Meandaria, Queensland in 1970. Two of the hybrids were seen being fed by adults of both species of miners.—H.W.K.
- HARPER, R. A. 1972. Hybrid Macaw from a mating of *Ara macao* and *Ara chloroptera* at Newquay Zoo. *Avicult. Mag.* 78: 18-22.
- HARRISON, C. J. O. 1973. The zoogeographical dispersal of the genus *Chrysococcyx*. *Emu* 73: 129-133.—The suggestion of Marchant (1972, *Ibis* 114: 219-233) that these cuckoos dispersed from Gondwanaland is refuted by a convincing alternative hypothesis involving dispersal from an early center in Asia to Africa, then to Australia, the latter involving possibly three successive invasions.—L.L.S.
- HARRISON, C. J. O. 1973. The origin of the apparent speciation in eastern central Australia. *Emu* 73: 138-139.—Arid refugia, possibly in the Eyre Peninsula and Mount Lofty regions of southern South Australia, and the lake barrier (Pleistocene Lake Dieri—present Lake Torrens and Lake Eyre region of South Australia) are invoked to account for the evolution of certain interior Australian, xeric-adapted species, e.g. *Ashbyia lovensis*, *Pomatostomus halli*, and *Amytornis barbatus*.—L.L.S.
- HOLYOAK, D. T. 1972. Adaptive significance of bill shape in the Palm Cockatoo (*Probosciger aterrimus*). *Avicult. Mag.* 78: 99-101.
- HORTON, D. R. 1972. Speciation of birds in Australia, New Guinea and the southwestern Pacific islands. *Emu* 72: 91-109.—A mathematical study of speciation in Australasia and the Southwest Pacific. The main conclusion is that "the ability of an area to form subspecies does not indicate its potential for speciation." One wonders if our knowledge of the speciation process is sufficient to allow mathematical speciation analyses based on a few assumptions, hence I am not reassured by the author's statement (p. 106) that "relatively simple explanations can account for the apparently complex pattern of speciation" in the region considered.—L.L.S.
- HOUSTON, D. C. 1974. The role of griffon vultures *Gyps africanus* and *Gyps ruppellii* as scavengers. *J. Zool.* 172: 35-46.—They probably evolved as scavengers of the "natural mortality" in migratory ungulate populations, feeding primarily on dead mammals that were not killed by predators.—M.H.C.
- KIKKAWA, J. 1973. The status of Silvereyes *Zosterops* on the islands of the Great Barrier Reef. *Sunbird* 4: 30-37.—Postulates a cline of larger birds with

- gray backs in the southernmost wooded islands (e.g. *Z. lateralis chlorocephala*) to smaller birds with green backs in the north (*Z. citrinella albiventris*). This cline has developed independently of a parallel cline in mainland forms.—M.H.C.
- PURVES, J. A. 1972. Breeding Malabar × Pagoda Starlings (*Sturnus malabaricus* × *S. pagodarum*). Avicult. Mag. 78: 51-52.
- ZAHAVI, A. 1974. Communal nesting by the Arabian Babbler. A case of individual selection. Ibis 116: 84-87.—Presents a strong case against kin selection in this species.—R.W.S.

GENERAL BIOLOGY

- BEGG, G. W. 1973. The feeding habits of the Whitewinged Black Tern on Lake Kariba. Ostrich 44: 149-153.—*Chlidonias leucoptera* takes mainly small fish.—R.B.P.
- BIRKHEAD, T. R. 1973. Magpies [*Pica pica*] feeding on wasp larvae and pupae. Brit. Birds 66: 119-120.
- BORRETT, R. P. 1973. Notes on the food of some Rhodesian birds. Ostrich 44: 145-148.—Identification of stomach contents of 26 specimens of 14 species, particularly *Mirafra africana*, *Anthus trivialis*, and *A. similis*.—R.B.P.
- BUCKLEY, J. 1973. The prey of Short-eared Owls wintering on the Berkshire Downs. Brit. Birds 66: 143-146.—Mainly small rodents and birds.—J.J.D.
- CAITHNESS, T. A. 1971. Sexing Kiwis. Intern. Zoo Yearbook 11: 206-208.
- DESAI, J. H. 1971. Feeding ecology and nesting of Painted Storks (*Ibis leucocephalus*). Intern. Zoo Yearbook 11: 208-215.—Extensive notes on breeding behavior, growth, development, and feeding habits of an unconfined breeding colony nesting on the zoo grounds.—I.L.B.
- GRIMES, L. G. 1973. The breeding of Heuglin's Masked Weaver and its nesting association with the red weaver ant. Ostrich 44: 170-175.—*Ploceus heuglini* in Ghana tended to nest in trees with the ant colonies. The only observed instance of ant protection was once when a shrike, *Corvinella corvina*, attempted to rip open a weaver nest but gave up when it "appeared to be disturbed by the ants." Ants ignored young weavers in their nests on the tree, but attacked young in fallen nests.—R.B.P.
- GRINDLEY, J., W. R. SIEGFRIED, AND C. J. VERNON. 1973. Diet of the Barn Owl in the Cape Province. Ostrich 44: 266-267.—*Tyto alba* eats mainly small rodents.—R.B.P.
- HANSON, D. E. 1973. X-ray photographs of Little Owl [*Athene noctua*] pellets. Brit. Birds 66: 33.
- HEWSON, R. 1973. The moults of captive Scottish Ptarmigan (*Lagopus mutus*). J. Zool. 171: 177-187.—Details of the three annual molts; comparisons between males and females, adults and immatures; effects of temperature upon the amount of pigmentation.—M.H.C.
- HOGG, R. H., AND T. DELANEY. 1973. Passerines settling on the sea. Brit. Birds 66: 169-170.—Separate records of a *Turdus philomelos* and *T. merula* landing on the sea.—J.J.D.
- HOLLAND, T. R., AND D. E. CHITTENDEN. 1973. Bramblings [*Fringilla montifringilla*] taking peanuts from suspended mesh containers. Brit. Birds 66: 120-121.
- KEMP, A. C., AND J. C. SNELLING. 1973. Ecology of the Gabar Goshawk in southern Africa. Ostrich 44: 154-162.—*Melierax gabar* feeds mainly on small birds taken by active pursuit, still-hunting, and nest robbing.—R.B.P.

- KING, B., AND M. KING. 1973. Winter food of Green Woodpecker and association with Starlings. *Brit. Birds* 66: 33-34.—Four *Sturnus vulgaris* followed *Picus viridis* and fed on stray ants it disturbed.—J.J.D.
- KINGTON, B. L. 1973. Siskins associating flotsam with food supply. *Brit. Birds* 66: 231.—*Carduelis spinus* searching floating leaves for alder seeds.—J.J.D.
- KISTCHINSKI, A. A. 1971. Biological notes on the Emperor Goose in north-east Siberia. *Wildfowl* 22: 34.—Notes on habitat, arrival, breeding, ecology of non-breeding stock, parasites, and voice.—R.D.C.
- KOS, R. 1973. [Six years' observations (1967-72) on the population development, ecology, breeding biology, and food of the Goshawk (*Accipiter gentilis*) in an area approximately 400 sq km on the Lüneburger Heide.] *Vogelwelt* 94: 225-237.—(In German; English summary.)—N.A.M.V.
- LORBER, P. 1973. Nest building of *Serinus atrogularis*. *Ostrich* 44: 268-269.
- MACDONALD, D. 1973. Herring Gull colony in pine wood. *Brit. Birds* 66: 228.
- MACLEAN, G. L. 1973. A review of the biology of the Australian desert waders, *Stiltia* and *Peltohyas*. *Emu* 73: 61-70.
- MACLEAN, G. L. 1973. The Sociable Weaver, parts 2-5. *Ostrich* 44: 191-261.—Part 2: Nest architecture and social organization. Many birds cooperate in building the nest structure, and the individual pairs' brood chambers are built mainly by the pairs alone. Juveniles help their parents feed the young of later broods and sometimes may take over these brood chambers themselves. Part 3: Breeding biology and moult. Detailed study of annual cycles and breeding of *Philetarius socius*. Breeds only with substantial rains. Clutch size is larger after good rains. First broods help their parents rear later broods, and with fourth broods the young from the earlier three may all help feed. Wing molt takes most of the year to complete. Part 4: Predators, parasites and symbionts. Cobras live in the nest structures of the colonies and are the main predator on the young. Ectoparasites are uncommon in these birds. Other species of birds often nest in the weaver nest structures, particularly the Pygmy Falcon, *Poliobierax semitorquatus*, a bird that the weavers resent but which may help keep away snakes. Part 5: Food, feeding and general behaviour. *Philetarius socius* eats mainly insects (termites, caterpillars, and grasshoppers). Young are reared entirely on insects. The members of a colony usually feed within 1.5 km of their nest structure.—R.B.P.
- MATTOCKS, J. G. 1971. Goose feeding and cellulose digestion. *Wildfowl* 22: 107-113.—Cellulose digestion probably does not contribute significantly to food uptake in *Anser anser*.—R.D.C.
- MILSTEIN, P. LE S. 1973. Adept fruit-feeding in Streakyheaded Canary [*Serinus gularis*]. *Ostrich* 44: 266.
- MOORE, R., AND C. VERNON. 1973. Crowned Plover nesting in loose colonies. *Ostrich* 44: 262.—*Stephanibyx coronatus* is said to be nonterritorial but the authors may have missed the egg-laying period.—R.B.P.
- MURTON, R. K., AND J. KEAR. 1973. The influence of daylight in the breeding of diving ducks. *Intern. Zoo Yearbook* 13: 19-23.—Photoperiod effects upon species from various latitudes.—I.L.B.
- OWEN, C. 1973. Little Grebe [*Podiceps ruficollis*] eating bread. *Brit. Birds* 66: 227.
- OWEN, M., AND R. H. KERBES. 1971. On the autumn food of Barnacle Geese at Caerlaverock National Nature Reserve. *Wildfowl* 22: 114-119.
- PLAYER, P. V. 1971. Food and feeding habits of the Common Eider at Seafield.

- Wildfowl 22: 100-106.—Based on 50 *Somateria mollissima* collected from November through March.—R.D.C.
- RADFORD, A. P. 1973. Song Thrush [*Turdus philomelos*] feeding thrift leaves to juvenile. Brit. Birds 66: 231.
- RAMSAY, A. D. K. 1973. Arctic Skuas repeatedly chasing passerines. Brit. Birds 66: 168.—*Stercorarius parasiticus* chasing *Anthus pratensis* and *Alauda arvensis* and feeding on food they dropped as well as on the latter species itself. —J.J.D.
- REYNOLDS, J. F. 1973. Greenshanks feeding away from water. Brit. Birds 66: 119.—*Tringa nebularia* eating ants in open grassland.—J.J.D.
- RISDON, D. H. S. 1973. The eating of meat by parrots. Avicult. Mag. 79: 87-89.—Observations on captive birds.—I.L.B.
- RONGREN, B. 1972. On hand-raising nestling hummingbird chicks: observations on behaviour and maturation. Avicult. Mag. 78: 202-205.
- ROWAN, M. K. 1974. Bird pollination of *Strelitzia*. Ostrich 45: 40.—*Ploceus capensis* apparently pollinating while feeding.—R.B.P.
- RYDER, J. P. 1971. Distribution and breeding biology of the Lesser Snow Goose in central arctic Canada. Wildfowl 22: 18-28.—Data on clutch size, incubation period, hatching, nest success, egg loss, and color ratios.—R.D.C.
- SEGFRIED, W. R. 1973. Post-embryonic development of the Ruddy Duck, *Oxyura jamaicensis*, and some other diving ducks. Intern. Zoo Yearbook 13: 77-87.—Growth curve analyses plus some information on behavioral development.—I.L.B.
- SIMMONS, K. E. L. 1973. Pellets of the Great Crested Grebe. Brit. Birds 66: 30-31.—First British record for *Podiceps cristatus*.—J.J.D.
- SMITH, G. A. 1972. Some observations on Ringnecked Parakeets (*Psittacula krameri*). Avicult. Mag. 78: 120-137.—Behavior, natural history, and growth data.—I.L.B.
- SMITH, G. A. 1972. Nesting and nestling parrots. Avicult. Mag. 78: 155-165.
- SMITH, K. D. 1974. The utilization of gum trees by birds in Africa. Ibis 116: 155-164.—The introduced *Eucalyptus*.—R.W.S.
- STEYN, P. 1973. Some notes on the breeding biology of the Striped Cuckoo. Ostrich 44: 163-169.—*Clamator levaillantii* parasitizes the babbler *Turdoides jardineii* in southern Africa. The pair of cuckoos appears to molest the host at the nest. A young cuckoo lived in the nest with a young babbler, for 9 days, when the cuckoo was found dead. Young has begging call like that of the host young.—R.P.B.
- TODD, F. S. 1974. Torrent Ducks—the ultimate specialists. Gamebird Gazette 23 (1): 6-10.
- TROLLOPE, J. 1971. Some aspects of behaviour and reproduction in captive Barn Owls (*Tyto alba alba*). Avicult. Mag. 77: 117-126.
- VAN OOSTEN, J. R., AND J. W. FOSTER. 1974. Sexing techniques in birds. Gamebird Gazette 23 (2): 20-21.
- VESTJENS, W. J. M. 1972. Swamp Harrier drowned during predation. Emu 72: 115.—Apparently a *Circus approximans* attacked a swimming darter (*Anhinga rufa*), perhaps mistaking it for a swimming snake. It is surmised that the harrier grasped the neck of the darter, was pulled under water and drowned, then remained attached to the darter. The two were found dead in a bush growing out of the water, entangled and with the closed toes and talons of the harrier still attached to the darter's neck.—L.L.S.
- WARHAM, J. 1974. The Fiordland Crested Penguin *Eudyptes pachyrhynchus*. Ibis 116: 1-27.—Thorough study based on 6 years of fieldwork in New Zealand. Includes details on nesting habitat, the breeding cycle, egg measure-

- ments, development of chicks, adult molt, mortality, display behavior, and comments on nonbreeders and yearlings.—R.W.S.
- WATSON, A. 1973. Moults of wild Scottish Ptarmigan, *Lagopus mutus*, in relation to sex, climate and status. J. Zool. 171: 207-223.—Feather growth occurs through most of the year, with overlapping molts and individual variation. Sexes differ in timing and rate of all three annual molts.—M.H.C.
- WATSON, D. J. 1973. A Cattle Egret rookery near Brisbane. Sunbird 4: 62.—Nesting with three other heron species.—M.H.C.
- WINKEL, W., AND D. WINKEL. 1973. Höhlenschlafen bei Kohlmeisen (*Parus major*) zur Zeit der Brut und Mauser. Vogelwelt 94: 50-60.—In winter Great Tits sleep in artificial or natural holes. Toward the breeding season most males switch to sleeping in shrubs, presumably because it is safer there and occupying a potential nesting site would be dysgenic. A second peak in hole-sleeping coincides with molt, when some 20 to 40% of the females and 50 to 65% of the males sleep in holes. The gain in energy conserved probably outweighs the danger of sleeping in a hole. (English summary.)—N.A.M.V.
- YOM-TOV, Y., G. M. DUNNETT, AND A. ANDERSON. 1974. Intraspecific nest parasitism in the Starling *Sturnus vulgaris*. Ibis 116: 87-90.

MISCELLANEOUS

- ATKINSON, K. M. 1971. Further experiments in dispersal of phytoplankton by birds. Wildfowl 22: 98-99.—*Melosira* was the only species tested that passed through the Mallard gut in a viable condition.—R.D.C.
- BIRDS OF PREY IN CAPTIVITY. 1970. Intern. Zoo Yearbook 10: 3-41.—A collection of 20 papers by various authors, dealing with the biology and (mostly) with captive propagation of raptors.—I.L.B.
- BOURNE, W. R. P. 1974. English vernacular names for sea-birds. Ibis 116: 232-233.
- CHRISTENSEN, S., B. P. NIELSON, R. F. PORTER, AND I. WILLIS. 1973. Flight identification of European raptors. Part 6. Large falcons. Brit. Birds 66: 100-114. Detailed drawings, descriptions, and photographs help identify *Falco rusticolus*, *F. cherrug*, *F. biarmicus*, and *F. peregrinus*.—J.J.D.
- CLANCEY, P. A. 1974. Red-tailed Tropicbird incapacitated by flying fish. Ostrich 45: 39.—*Phaethon rubricaudus* with fish stuck in throat.—R.B.P.
- GRANT, P. J. 1973. Field identification of Ring-billed Gulls. Brit. Birds 66: 115-118.—Detailed descriptions of the various plumages of *Larus delawarensis* and comparisons with *Larus canus*.—J.J.D.
- HONG KONG BIRD REPT. OF 1972. 1973. The Hong Kong Bird Watching Society (c/o The Chartered Bank, P.O. Box 21, Hong Kong). 58 pp.—Includes an annotated list of 247 species by M. A. Webster and C. A. Viney; a description of birding areas on the Sai Kung peninsula by J. Chapman; an annotated list of 16 species of ducks at Deep Bay by S. de E. Carvalho; an account of recent occurrences of the Black Vulture, *Aegyptus monachus* ("The flying barn door") including two photographs of this huge bird; and a final article by J. Llewellyn on the trade of raptorial birds imported into Hong Kong from China involving 23 species of owls, vultures, kites, hawks, eagles, and falcons.—H.W.K.
- MCCRAE, A. W. R., AND J. F. WALSH. 1974. Association between nesting birds and polistine wasps in north Ghana. Ibis 116: 215-217.
- PRYS-JONES, R. P., L. SCHIFFERLI, AND D. W. MACDONALD. 1974. The use of an emetic in obtaining food samples from passerines. Ibis 116: 90-94.

- REILLY, P. N. 1973. Invited papers on ornithology in Australasia: practice, prospects and progress. Introduction. *Emu* 73 (Suppl.): 203-205.—This paper introduces a spate of reports on ornithological administration, research efforts, bird observatories, field notes, publications, the role of museum ornithology, and even the "metaphysics of ornithology" by Australian ornithologists Serventy, Fleming, Ridpath, Davies, Lockley, Purchase, Dow, Keast, and McEvey.—L.L.S.
- TROLLOPE, J. 1973. Release of a captive Barn Owl. *Avicult. Mag.* 79: 7-9.—A second-generation captive-reared *Tyto alba* released at 106 days of age was known to be still alive in the wild after 2 months.—I.L.B.
- WATERFOWL IN CAPTIVITY. 1973. *Intern. Zoo Yearbook* 13: 1-103.—A collection of 25 papers by various authors dealing with aspects of the biology and captive-propagation of waterfowl. Most papers are descriptive accounts of the experiences of various zoos with the captive maintenance, hatching, and rearing of various species including both common and rare forms.—I.L.B.

PHYSIOLOGY

- BALASUBRAMANIAN, K. S., AND R. N. SAXENA. 1973. Effect of pinealectomy and photoperiodism in the reproduction of Indian weaver birds, *Ploceus philippinus*. *J. Exp. Zool.* 185: 333-340.—Pinealectomy in winter causes sexual recrudescence either of itself or acting synergistically with prolonged photoperiod. It also causes short photoperiods to become stimulatory and advances the onset of puberty in juveniles.—A.S.G.
- CHAN, K. M. B., AND B. LOFTS. 1974. The testicular cycle and androgen biosynthesis in the Tree Sparrow *Passer montanus saturatus*. *J. Zool.* 172: 47-66.—The spermatogenic cycle has two peaks: in late April-early May, and in July. *In vitro* production of testosterone has the same bimodal pattern.—M.H.C.
- HINDE, R. A., AND R. J. PUTMAN. 1973. Why Budgerigars breed in continuous darkness. *J. Zool.* 170: 485-491.—Relative darkness, as in a nest hole, stimulates laying.—M.H.C.
- PUTMAN, R. J., AND R. A. HINDE. 1973. Effects of the light regime and breeding experience on Budgerigar reproduction. *J. Zool.* 170: 475-484.—Exposed to male vocalizations, females lay more rapidly under a 14L:10D photoregime than under shorter light periods. Some will lay in continuous darkness. Experienced females lay sooner than do naive birds.—M.H.C.
- RUTLEDGE, J. T., AND R. G. SCHWAB. 1974. Testicular metamorphosis and prolongation of spermatogenesis in Starlings (*Sturnus vulgaris*) in the absence of daily photostimulation. *J. Exp. Zool.* 187: 71-76.—Starlings held in complete darkness achieve spermatogenesis in about 100 days and maintain the condition for 9 months. Complete testicular involution does not occur.—A.S.G.

TAXONOMY AND PALEONTOLOGY

- BAPTISTA, L. F. 1973. On courtship displays and the taxonomic position of the Grey-headed Silverbill (*Odontospiza caniceps*). *Avicult. Mag.* 79: 148-154.—Suggests a close relationship to species of the *Spermestes* group.—I.L.B.
- CLANCEY, P. A. 1974. A note on *Parus afer arens* Mihi, 1963. *Ostrich* 45: 39.—Recognized.—R.B.P.
- CLANCEY, P. A. 1974. Miscellaneous taxonomic notes on African birds. 38. *Durban Mus. Novitates* 10 (5): 67-79.—*Ploceus velatus* varies in breeding and non-breeding plumage. Forms recognized are: *velatus*, *nigrifrons*, *tahatali* (including *mariquensis*), *shelleyi*, *caurinus*, and *finschi*.—R.B.P.

- COURTNEY, J. 1974. Comments on the taxonomic position of the Cockatiel. *Emu* 74: 97-102.—The view that *Nymphicus hollandicus* belongs in the Cacatuinae is supported by diverse evidence, but (p. 101) "some parrot-like characteristics cannot be dismissed as the result of convergence and seem to give weight to the old view of aviculturalists and others that the Cockatiel forms a link, perhaps a distant one, between the cockatoos and the Australian parrots."—L.L.S.
- CROME, F. H. J. 1973. The relationship of the Helmeted and Yellow-tufted Honeyeaters. *Emu* 73: 12-18.—*Meliphaga cassidix* and *M. melanops* are linked by a discrete, intermediate race of the latter, *M. m. gippslandica*, and hence *cassidix* should be treated as conspecific with *melanops*.—L.L.S.
- FORD, J. 1974. Taxonomic significance of some hybrid and aberrant-plumaged quail-thrushes. *Emu* 74: 80-90.—Relationships are discussed within *Cinclasoma*, and *C. castaneothorax* and *C. cinnamomeum* are considered conspecific.—L.L.S.
- FORD, J., AND S. A. PARKER. 1973. A second species of wedgebill? *Emu* 93: 113-118.—*Psophodes cristatus* (= *Sphenostoma cristatum*) actually represents two morphologically very similar species, eastern *P. cristatus* (Gould) and western *P. occidentalis* (Mathews) that meet northwest of Lake Eyre in South Australia. These species differ vocally (the songs differ, and apparently only *cristatus* engages in duetting) and ecologically.—L.L.S.
- HOLYOAK, D. T. 1972. The relation of *Nymphicus* to the Cacatuinae. *Emu* 72: 77-78.
- HOLYOAK, D. T. 1973. Comments on taxonomy and relationships in the parrot subfamilies Nestorinae, Loriinae and Platycercinae. *Emu* 73: 157-176.—An important paper on parrot relationships, although, as in so many such cases, the author fails to explain his concepts of the various taxa. These three subfamilies seem to be monophyletic (are they really separable?). Neotropical parrots suggested by other authors to be related to these Australasian parrots are considered more closely related to other Neotropical parrots, and only convergent upon Australian platycercine parrots. The Platycercinae are considered "primitive," having given rise to the Loriinae, early stock of which perhaps gave rise to the Nestorinae. *Melopsittacus* and *Pezoporus* are placed in the Platycercinae, the Psittaculirostrinae is erected for *Psittaculirostris* (regarded as intermediate between platycercines and lories), and *Lathamus* is placed in the Loriinae. The linear order, the author suggests, namely Platycercinae, Psittaculirostrinae, Nestorinae, Loriinae, seems odd—his phylogenetic views instead suggest Platycercinae, Psittaculirostrinae, Loriinae, Nestorinae.—L.L.S.
- PARKER, S. A. 1972. Remarks on distribution and taxonomy of the grass wrens *Amytornis textilis*, *modestus*, and *burnelli*. *Emu* 72: 157-166.—*Amytornis modestus* is marked into *A. textilis*, which is partly sympatric with *A. burnelli*.—L.L.S.
- PARKER, S. A. 1973. The tongues of *Ephthianura* and *Ashbyia*. *Emu* 73: 19-20.—These Australian chats have brush-tipped tongues, possibly relating them with the Meliphagidae, although maintained for now as a family, the Ephthianuridae.—L.L.S.
- PARKER, S. A. 1973. The identity of *Microeca brunneicauda* Campbell, 1902. *Emu* 73: 23-25.—*Microeca brunneicauda* Campbell 1902 becomes a synonym of *Pachycephala simplex* Gould 1843, as the type of the former, although no longer extant, can be referred to the latter thanks to later remarks of Campbell. The flycatcher later assigned the name *Microeca brunneicauda* Campbell 1910 represents a race of *Microeca flavigaster* (*M. flavigaster tormenti* Mathews 1916).—L.L.S.

- SCHODDE, R., AND J. L. MCKEAN. 1973. Distribution, taxonomy and evolution of the gardener bowerbirds *Amblyornis* spp. in eastern New Guinea with descriptions of two new subspecies. *Emu* 73: 51-60.—The bowerbirds *Amblyornis subalaris* and *A. macgregoriae* are parapatric altitudinally in the Owen Stanley Range, with contact between 1200 and 1400 m. The new subspecies are *A. m. kombok* of the Kubor-Mt. Hagen-Bismarck mountain ranges, and *A. m. nubicola* of the eastern Owen Stanley Range; *A. subalaris* is monotypic.—L.L.S.
- SCHODDE, R., AND J. L. MCKEAN. 1973. The species of the genus *Parotia* (Paradisaeidae) and their relationships. *Emu* 73: 145-156.—Recognized are *Parotia wahnesi*, *P. helenae* (usually treated as a race of *P. lawesii*, but see Schodde and McKean 1972, *Emu* 72: 113), *P. sefilata*, *P. lawesii*, and *P. carolae*. Intra-specific variation of *P. lawesii* is treated. These montane birds perhaps form a superspecies, but this is not to infer simple allopatric speciation; rather, the authors suggest that complex introgressive hybridization and recombination in geographically isolated stock of "hybrid" origin probably played a role in the evolution of these birds of paradise.—L.L.S.
- SIBLEY, C. C. 1974. The relationships of the lyrebirds. *Emu* 74: 65-79.—Egg-white protein analysis and a reevaluation of anatomical evidence prompt the conclusions that the suborder Menurae be discarded, and that the Menuridae and (with less supportive evidence) the Atrichornithidae be placed within the oscines near the Ptilonorhynchidae and Paradisaeidae, to which the lyrebirds seem related.—L.L.S.
- SIBLEY, C. G., AND J. E. AHLQUIST. 1974. The relationships of the African Sugarbirds (*Promerops*). *Ostrich* 45: 22-30.—Protein electrophoresis indicates that the closest relatives are starlings. *Promerops* is regarded as a specialized, nectar-feeding starling.—R.B.P.

OBITUARIES

JOSEPH JAMES MURRAY, an Elective Member of the A.O.U., died in Lexington, Virginia, on 9 December 1973 at the age of 83. A Presbyterian minister by vocation, Dr. Murray pursued his avocation of bird study with such energy and thorough attention to detail that he was the preeminent authority on the distribution of birds in Virginia for much of his long life. He was one of the founders of the Virginia Society of Ornithology in 1929 and edited its journal, *The Raven*, for 40 years (1930-70). He was elected to the Board of Directors of the National Audubon Society in 1934 and served as the society's secretary for a decade (1936-46). With the late Julian Potter, he prepared from 1948 to 1957 the quarterly reports on the Middle Atlantic Coast Region for Audubon Field Notes. He joined the A.O.U. in 1928 and became an Elective Member in 1936.

Murray's chief ornithological work was the establishment of the first complete account of bird distribution in Virginia. His "Check list of the birds of Virginia" (1952) was based in part on his careful review of past records and in part on his own extensive field notes and collecting. He was also keenly interested in altitudinal life zones in the Virginia mountains. In all, Murray published 3 books, a paper and 71 notes in *The Auk* between 1929 and 1958, 2 papers and 5 notes in *The Wilson Bulletin*, 5 articles in *Bird-Lore* and its successor *Audubon Magazine*,