

The bait used was peanut hearts—the trade name given to the germ recovered as a by-product, in the manufacturing process.

We have been banding since March, 1946, but have never been able to attract Bluebirds to the feeding trays or the traps—until the early winter of 1952-53. At that time a pair of Bluebirds (male and female) found peanut hearts to their liking and came with increasing frequency. By the middle of January, 1953, they came regularly many times a day. Many visiting friends and adult and children's groups saw this pair of Bluebirds at close range through our observation "picture" window. This same pair (presumably, both banded) came regularly and continuously until late May and then gradually "tapered off" until late summer. A pair of banded Bluebirds (presumably the same birds) began coming for peanut hearts in October, 1953; they came regularly and continuously many times a day until late May, 1954. Thereafter they were seen less frequently but occasionally into July and August, 1954 (when this note was written). Although they were carefully observed, they were never seen to feed on anything but peanut hearts—although at times, apples, raisins, and other berries and fruits were available on the trays. During all of these times only 1 or 2 birds came at a time to the feeding trays.—Arthur H. Fast, 4924 Rock Spring Road, Arlington, Va.

## RECENT LITERATURE BANDING

1. **XV. Report on the Bird-Banding in Hungary.** (A Maggar Madartani Intezet 1933-1950. Evi Madarjelölései. XV Jelentes.) Keve Andras. 1954. *Aquila* **55-58**, pp. 89-107. This compilation of returns and recoveries of 96 species of birds banded or recovered in Hungary is one of the first such lists available from the countries bordering the Iron Curtain. It contains a surprising number of records of birds banded outside Hungary, in Sweden, Finland, Germany, Holland, Russia, Poland, Czechoslovakia, Italy, most of them pre-World War II. The respectable number of post-war recoveries, however, indicates a definite upsurge in general banding in central and eastern Europe, and shows several banding programs under way of which no mention has been made in current literature: the Italians have banded many Quail (*Coturnix*) in migration; the Czechs have evidently been banding gulls in quantity, the Russians have been banding numbers of waterfowl.—O. L. Austin, Jr.

2. **Portable Live Trap for Ducks, With Improved Gathering Box.** J. D. McCall. 1954. *Journal of Wildlife Management*, **18**(3): 405-407. Described in this article is a single-funnel collapsible trap with a unique gathering box. A hinged gate is placed at the back of the trap with one edge fastened to the vertical end of the trap at a point 4 to 6 inches above the water. When the ducks have retreated to the rear of the trap, a rope is pulled to raise the horizontal portion of the hinged gate to a vertical position and thus enclose the birds in a compartment above the water. Approximately 4,500 ducks had been taken in this type of trap at the time the article was written. Details on materials and construction are provided.—Helmut K. Buechner.

## MIGRATION

(See also Numbers 15, 33, 51, 52, 65)

3. **Migration near Maloja and on the Splügenpass in the fall of 1952 and 1953.** (Vogelzugbeobachtungen bei Maloga und auf dem Splügenpass im Herbst 1952 und 1953.) Ernst Sutter. 1954. *Ornithologische Beobachter* **51**(3): 109-132. This paper presents the results of the work of teams of observers in the Swiss Alps. Migration through the valleys and over passes was observed in unfavorable weather and with head winds. Under these conditions valleys and passes were used which did not conform to the normal direction of migration. With good weather and east winds the migration was observed at higher altitudes. These migrations occurred over a broad front and were little influenced by the valley system. Good weather migration occurred principally during the early morning hours.—R. O. Bender.

4. **Spring migration in Sicily.** (Über den Frühlings-Vogelzug auf Sizilien.) 1954. Joachim Steinbacher. *Die Vogelwelt*, 75(4): 129-139. Annotated list of migrants in 1953. A contribution to visible migration across the Mediterranean. Need for autumn studies and for simultaneous observations on Sardinia, and on the coast of Tunisia are stressed.—Frances Hamerstrom.

5. **Trans-Gulf Migration, Spring 1952.** Harvey R. Bullis, Jr. 1954. *The Auk*, 71(3): 298-305. Bullis adds a considerable amount of data to the ever-growing file on trans-Gulf migration by presenting detailed records of what must have been several thrilling nights aboard the M. V. *Oregon* in the northern Gulf of Mexico. The period of observation extended from March 31 through May. All of the major flights observed took advantage of favorable southeasterly winds. When some of the flights met head winds near the northern Gulf Coast they continued to fly toward the coast and into the adverse winds. There seems no reason to question any further the reality and magnitude of trans-Gulf migration.—J. C. Dickinson, Jr.

6. **The Homing Ability of Caged Carrier Pigeons.** (Das Heimkehrvermögen Gekäfigter Brieftauben.) Gustav Kramer and Ursula von Saint-Paul. 1954. *Der Ornithologische Beobachter* 51(1/2): 4-12. Eighteen carrier pigeons were kept caged to prevent their acquiring visual or sensory familiarity with their home by any means which required free movement about the area. Ten other pigeons of the same age (9-10 months) which were permitted free flight about the home area but which received no special homing training were used as controls.

All of the birds were transported 320 km. south in covered cages so that they could not see the sky or the countryside. From the similarity of their behavior upon release, presented in full detail, the authors conclude that homing ability is not dependent on extensive familiarity with the home environment acquired by movement about the area. This in turn supports the sun navigation theory of homing, although this requires sensory qualities not proved to be possessed by birds. This work is a very valuable contribution.—R. O. Bender.

7. **Winter Distribution of Robins East of the Rocky Mountains.** J. Murray Speirs. 1953. *The Wilson Bulletin*, 65(3): 175-183. The winter distribution of Robins, *Turdus migratorius*, east of the Rocky Mountains is clarified by this analysis of bird-banding recoveries and Christmas censuses. The principal banding data used were those in the files of the U. S. Fish and Wildlife Service for the years prior to 1940. Most Robins spend December, January, and February between latitudes 30° N. and 35° N. Recoveries indicate that northern Robins migrate to spend their winters in the same latitudes as Robins that breed in the southern portion of the range of the species. Eastern Robins tend to winter farther east than Robins that breed in the more westerly areas, but considerable overlap is shown. Robins that breed in the wintering latitudes usually migrate very little, if at all.—L. R. Mewaldt.

8. **Effect of Weather on Spring Bird Migration in Northern Alabama.** Thomas A. Inhof. 1953. *The Wilson Bulletin*, 65(3): 184-195. Birmingham, Alabama, about 220 miles north of the Gulf of Mexico, is thought to lie barely within the northern edge of the "coastal hiatus" of the north Gulf coast. Between 1 March and 1 June of 1947 to 1950, some 130 field trips yielded 227 records of 28 night-migrating land birds that winter south of the United States and that breed east of the Mississippi River, but not in the immediate vicinity of Birmingham. These "true transients" were found in all types of weather, but especially after being grounded by a cold front. They were seldom encountered during clear, warm weather.—L. R. Mewaldt.

9. **Effects of Weather on Nocturnal Migration as Seen from One Observation Point at Philadelphia.** Joseph M. Devlin. 1954. *The Wilson Bulletin*, 66(2): 93-101. From 14 March to 5 June 1953 approximately 115 hours were spent making daily morning and evening checks of migrants in a 5-acre Botany Garden in the midst of West Philadelphia, Pennsylvania. Of 468 noc-

turnal migrants of 59 species identified, 310 arrived on southerly winds, 141 arrived on "calm" nights, and 17 arrived on northerly winds. Of the 30 nights when the wind was southerly, migration occurred on 25; on 4 of the remaining 5 nights, heavy rains fell. Migration occurred on all 9 nights classified as "calm" (wind less than 0.5 m.p.h.). No evidence of migration was detected on 30 of the 32 nights when northerly winds were recorded. Evidence suggests that if night migrants have already acquired the urge to migrate, the hour just before nightfall is critical. If at that hour winds are calm or southerly, migration can be expected. Unfavorable conditions for migration (fog, rain, or northerly wind) at dusk prevent migration. It was found that day to day predicting of migration was as safe, at least, as forecasting the weather.—L. R. Mewaldt.

**10. Meteorological Analysis of Occurrence of Grounded Migrants at Smith Point, Texas, April 17-May 17, 1951.** John V. Dennis. 1954. *The Wilson Bulletin*, 66(2): 102-111. Daily census counts were made of migrants (52 species) in a woody thicket about 50 feet wide and ¾-mile long on a projection of land in Galveston Bay. Counts of migrants increased sharply on the day following the arrival of each of five cold fronts. Another increase in numbers was apparently associated with a westerly wind unfavorable to migration. Grounded migrants departed with the arrival of southerly winds, rising temperature, and falling barometric pressure.—L. R. Mewaldt.

**11. The flight of spring migrants at Malmö in 1949 and 1950.** (Om flyttfåglarnas i Malmö åren 1949 och 1950.) Staffan Ulfstrand. 1952. *Vår Fågelvärld*, 11(1): 16-23. The density of arrivals of *Phylloscopus trochilus* and apparently several other passerine species in April and May, 1949, showed a fairly close correlation with morning temperatures. Similarly there was a correlation in May 1950 between minimum nightly temperatures and arrival of *Phylloscopus trochilus*. During this season species migrating from the southeast arrived unusually early whereas those from the southwest arrived late. This is correlated with unseasonably warm weather in southeastern Europe and extremely cold weather in western Europe.—D. S. Farner.

**12. Ornithological Observation from Utsira, 1950.** Holger Holgerson. 1952. *Stavanger Museum Opuscula Series Zoologica* Nr. 6. 20 pp. This is a record of observations, many of them on migration, made by several individuals during September-October 1949. In a discussion the author makes the cogent observation that undue attention to particular islands in studying migration may lead to invalid concepts of migration on a restricted front. Examples are cited.—D. S. Farner.

**13. Ornithological Observations from Lista, 1951.** John H. Hyatt and Christopher K. Mylne. 1952. *Stavanger Museum Opuscula Series Zoologica* Nr. 7. 45 pp. A party of five made observations with respect to visible migration during the period 12 September to 2 October 1951. Included are data obtained at the lighthouse at night. Among the interesting results of these observations were the appearance of several rare eastern species during 23-28 September, a period of steady east wind and the development of intense migratory movements during 29 September-1 October with rising barometric pressure and no wind. Since this followed a period of easterly winds it is suggested that these birds arrived by "drift" movements from the Baltic area. It is to be hoped that these observations can be extended into subsequent seasons.—D. S. Farner.

## POPULATION DYNAMICS

(See also Numbers 22, 23, 34, 36, 37, 57, 64)

**14. Population Density Studies in Coniferous Forests** (Untersuchungen zur Siedlungsdichte der Vogelwelt in den Harzwaldungen.) W. Lehmann. 1953. *Ornithologische Mitteilungen*, 5(9): 161-163. The presence of managed forests in Europe with uniform stands of trees of one age and species affords an opportunity for unusual population density studies. This paper describes the results

of one such study. A tract of 150-year old beech forest which occupies land just below the altitude of the conifers had only 0.5 pair of birds per hectare while a 25-year old stand 4-5 m. in height had a density of 1.1 pr./ha. Much higher densities have been reported from deciduous forests of the lowlands of northwest Germany.

The introduction of conifers increased the population density so that a mixed forest of 150-200-year old trees had a density of 0.8 pr./ha. In uniform coniferous forests the density was somewhat higher; 1 pr./ha. As all trunks containing cavities were removed from these managed forests, hole-nesting birds were absent, accounting in part for the low densities. The Chaffinch was the most abundant species in all types of forest. The methods employed in obtaining these figures is not stated.—R. O. Bender.

**15. Swans in Sweden on 25 March 1951.** (Svanarna i Sverige den 25 mars 1951.) Nils Linnman. 1952. *Vår Fågelvärld*, 11(1): 1-10. Coöperation in a census of Swedish swans was solicited through the Swedish radio; 9,365 individuals, *Cygnus olor* and *Cygnus cygnus* (possible also, a few *Cygnus columbianus bewickii*) were reported.—D. S. Farner.

**16. Quantitative Variations in the Populations of Birds in a Tropical Area.** (Variazioni quantitative in popolazioni di uccelli di un' area tropicale.) Augusto Toschi. 1952. *Supplemento alle Ricerche di Zoologia Applicata alla Caccia*, 2(6): 181-237. The study area contained about 30,000 hectares of park about the Coryndon Museum and adjacent fields in Nairobi; the area is bisected by the Nairobi River. Census methods of Linsdale and Winterbottom were employed. Data were obtained from November 1943 through February 1946. Eight stations were established at selected locations. Routinely (almost daily) counts were made for 2-minute periods at each station; in addition a daily list was maintained. Compilations and analyses of both types of data are presented. The relative abundances of species as calculated from the two sets of data are essentially similar. Correlations are made with season, weather, palearctic migration, and other factors. There is also an annotated list of all species observed.—D. S. Farner.

**17. New techniques for the analysis of absenteeism data.** A. G. Arbous and H. S. Sichel. 1954. *Biometrika* 41(1/2): 77-90, folding table. 2 Fig.—The methods of this paper may be applied to the question of whether a bird tends to avoid a trap after being once or more often trapped. By appropriate shifting of traps it would also be possible to say whether the avoidance is primarily a matter of trap type or of location. It is further possible to examine whether some individuals are more likely than others to avoid traps, that is are absence-prone.

Two models are set up. One gives the probability of finding an individual in the group having  $x$  absences in the same known exposure period. Throughout, an absence is a "period (of any length) of unbroken non-attendance." The second model employs two equi-long, non-overlapping periods of exposure and is used to study absence-proneness. The authors recognize the need of keeping conditions of exposure constant and that individuals learn and adapt themselves in the course of time. The way is now open for some elegant and realistic work on the effects of trapping on the action of birds.—C. H. Blake.

**18. A confidence interval for a percentage increase.** Irwin Bross. 1954. *Biometrics* 10(2): 245-250. The problem is to determine whether a percentage increase resulting from change of conditions is significant. The author recommends Mainland's (in *Elementary Medical Statistics*) tables of binomial confidence limits or the normal approximations for the 95% limit. The degree of confidence is dependent on sample and subsample sizes.—C. H. Blake.

## NIDIFICATION AND REPRODUCTION

(See also Numbers 28, 29, 31, 43, 56, 57, 65)

**19. The Breeding Biology of Hammond's Flycatcher.** David E. Davis. 1954. *The Auk*, 71(2): 164-171. The breeding biology of *Empidonax hammondi* as observed at Flathead Lake, Montana is reported in some detail, covering such points as voice, territory, the nest, and general behavior. The species inhabits moderately tall, dense, mixed vegetation. A "position note" and "alarm call" were recorded for both sexes; the male also has a "flight song." Territories are maintained. The nest is usually built about 30 feet from the ground and is constructed primarily by the female. The female alone incubates the clutch which usually consists of 3 eggs. Both adults feed the young. Comparisons with *E. wrightii*, *E. minimus*, *E. traillii*, *E. flaviventris*, *E. virescens*, *E. difficilis*, and *E. fulvifrons* indicate much similarity in breeding ecology, but great differences in habitat preference.—J. C. Dickinson, Jr.

**20. Criteria of Age of Incubated Mallard, Wood Duck, and Bob-white Quail Eggs.** Harold C. Hanson. 1954. *The Auk*, 71(3): 267-272. This paper, which is a continuation of another report published elsewhere (*Journ. Wildl. Mgt.*, 18: in press), provides photographs and notes on the developmental stages of three species: *Anas platyrhynchos*, *Aix sponsa* and *Colinus virginianus*. The information presented should allow the determination of age in incubated eggs. The techniques of observation and details of special equipment needed are presented in the paper now in press.—J. C. Dickinson, Jr.

**21. Hybridization between the Bob-White and Scaled Quail.** Robert A. McCabe. 1954. *The Auk*, 71(3): 293-297. The records of a cross between a captive female *Callipepla squamata* and a male *Colinus virginianus* are presented. Six eggs were produced; all were hatched and reared to maturity; all were females, and unfortunately all of them died before any further crosses could be made. The ranges of the two species overlap slightly in Texas, where a single male specimen has been taken. The respective sexes of this wild-caught bird's parents are not known. Comparison of two of the captive-reared hybrids and the wild bird with typical representatives of the parent stocks shows a general blending of color characters; the dimorphic pattern of *Colinus* is evident in the male hybrid.—J. C. Dickinson, Jr.

**22. A History of Some Bald Eagle Nest Sites in East-Central Florida.** Joseph C. Howell. 1954. *The Auk*, 71(3): 306-309. At 5-6 year intervals from 1935 to 1951, 24 Bald Eagle (*Haliaeetus leucocephalus*) nests in Brevard and Volusia counties, Florida, were checked for occupancy. Percentages of occupancy for the 24 nests are reported as follows: 1935 (83%), 1940 (46%), 1946 (54%), 1951 (58%). Howell does not discuss the possibility of bias in the selection of the 1935 sample although he comments ". . . what in one instance had been considered two pairs was in reality only one; and two pairs included in earlier calculations have been omitted because their histories are incomplete and two pairs with complete histories have been used instead." My calculations of percent occupancy, based on Howell's data, show 41% to be the correct figure for 1940 when 11 of 24 nests were occupied. In 1951 two new nests were found, and air search revealed occupancy of two nests reported as not occupied on the basis of ground search. Howell concludes the data probably indicate that the group of nest sites was occupied in 1951 by 70-90 percent of the pairs occupying these sites in 1935.—J. C. Dickinson, Jr.

**23. Census of Swallows in the Sedbergh Area, N.W. Yorkshire, in 1953.** E. I. Cuthbertson, G. T. Foggitt and G. E. Taylor. 1954. *British Birds*, 47(6): 204-205. In 106 nests of *Hirundo rustica* 468 eggs were laid, 399 of these hatched and 386 were fledged, 82.5 percent of success.—M. M. Nice.

**24. Experimental Ending of Incubation and other Observations on Breeding Behavior with the Herring Gull.** (Experimentelle Brutbeendigung und andere brutethologische Betrachtungen bei Silbermöven (*Larus a. argentatus*

Pontopp.) Friedrich Goethe. 1953. *Journal für Ornithologie*, **94**(1/2): 160-174. Pipped eggs with calling chicks were given to Herring Gull pairs at the beginning, middle and end of incubation; a prompt change-over to the phase of care of the young took place in each case but one, where an apparently inexperienced pair had not yet finished their clutch. While the blinds were being erected the males took the major part of nest duties, but while the young were hatching the females did so. In one nest a 6-hour chick had moved 5 centimeters out of the nest, a 24-hour chick a meter.—M. M. Nice.

### LIFE HISTORY

(See also Number 65)

**25. Biology of the Chiffchaff.** (Beitrag zur Biologie des Zilpzalps, *Phylloscopus collybita* [L.]. Werner Geissbuhler. 1954. *Ornithologische Beobachter* **51**(3): 71-99. Students of nesting biology should profit from this paper, which shows how valuable banding techniques can be in investigating the life history of a single species. The study, although of a species already thoroughly treated, (the bibliography numbers 45 titles) is exceedingly complete. The author presents data clearing up two uncertainties in the biology of the Chiffchaff: he shows that second nestings do occur following successful first nestings, and that the male assists in the care of the young, although his contribution is too small to have biological importance.—R. O. Bender.

### BEHAVIOR

(See also Numbers 6, 19, 24, 56, 58, 62, 63, 65)

**26. Development of Vocalizations in Whitethroats Kept from the Egg in Sound-proof Chambers in Comparison with Others Isolated Later and with Wild Birds.** (Die Entwicklung der Lautäusserungen vom Ei ab schalldicht gehaltener Dorngrasmücken (*Sylvia c. communis*, Latham) im Vergleich mit später isolierten und mit wildlebenden Artgenossen.) Franz Sauer. 1954. *Zeitschrift für Tierpsychologie*, **11**(1): 10-93. This remarkable study is based first on a thorough knowledge of the species in the wild, and second, on seven individuals, four males and one female isolated soon after hatching and two males raised in isolation from the egg. The Whitethroat's song is described in "The Handbook of British Birds" (Witherby et al, 1938) as a "short, rapidly uttered warble, brisk and lively, of rather poor quality, though some more musical than others." The 25 call notes and all 3 types of song proved completely innate. The difficult technique of raising the young from the egg is described, and valuable observations are given on growth and the development of behavior. Vocalizations were recorded on tape, the song being transposed onto the musical scale. The song first appears as a reiteration of the same note. "Gradually a growing number of single innate notes make their appearance and are integrated within the first month of the bird's life to the juvenile song. The above mentioned single notes matured synchronously in the two males absolutely isolated as eggs, as typically and in the same times as in wild living whitethroats." The third male started at 38 days with a song at the same stage as that of the others. "So, the whole process of maturation can take place latently."

The last three sentences of the English summary are applicable to many species besides the Whitethroat: "Juvenile song as well as autumn and winter song are considered as 'play,' as they are uttered without a function for their own sake; they represent the highest differentiation of the species' song. Territorial song which develops a definite function in reproduction, originates by simplification and reduction of the juvenile song. All notes or groups of notes uttered in territorial song are present in and derived from juvenile song."—M. M. Nice.

**27. On the Innate Behavior of Birds, especially Chickens.** (Ueber angeborene Verhaltensweisen bei Vögeln, insbesondere bei Hühnerküken.) Annette Curtius geb. Roth. 1954. *Zeitschrift für Tierpsychologie*, **11**(1): 94-109. Large-scale experiments on the characters important in food recognition were

carried out on 1624 chickens, 86 Lapwings, *Vanellus vanellus*, and 30 turkeys. Each species preferred the size best suited to the size of its beak: turkeys to objects 5 mm. in diameter, chickens 2.5, Lapwings 1 mm. Colored models on white, black or grey backgrounds were chosen according to the contrast of brightness between the model and background, but when grey was placed on grey, the chicks preferred the weaker contrast.—M. M. Nice.

**28. Notes on the Winter Roosting and Behaviour of a Pair of Nuthatches.** M. C. Radford. 1954. *British Birds*, 47(5): 166-168. A chart gives the times of roosting and rising of a female *Sitta europea* from October 15 to March 22. The time of leaving the box followed the course of sunrise closely with a tendency for later rising on dark and foggy mornings. Roosting was more variable; sometimes the bird roosted early on dark afternoons, at other times not. In severe cold she roosted later, probably because of difficulty in obtaining food. Courtship feeding was first seen January 31, nest-building started March 22 and five young were fledged May 28.—M. M. Nice.

**29. Experiments with an Artificial Nestling.** Monica M. Betts. 1954. *British Birds*, 47(7): 229-231. In order to obtain samples of food brought to 12-day-old Pied Flycatchers, *Muscicapa hypoleuca*, the author constructed an artificial gape out of a black rubber pipette-bulb cut like a beak and lined with yellow balloon-rubber smeared with red paint. "A pair of forceps is used as mounting for this in such a way that one of the points, also covered with yellow rubber, makes a tongue while the other is attached to the part forming the upper mandible so that when the forceps are closed the food is firmly grasped." Photographs show details of the apparatus and 2 views of the interior of the nest, in one of which the male is feeding the artificial nestling, which from the back view looks more like a snake than a baby bird, clearly showing how powerful is the instinctive drive to feed whatever gapes in the nest. As to the color of the gape, when I have exchanged nestlings I never found one with a red gape slighted in a nest where the hosts had yellow gapes nor vice versa.—M. M. Nice.

**30. Factors Governing the Changes in Strength of a Partially Inborn Response, as Shown by the Mobbing Behaviour of the Chaffinch (*Fringilla coelebs*).** I. The nature of the response, and an examination of its course. II. The waning of the response. R. A. Hinde. 1954. *Proceedings of the Royal Society*, B, 142: 306-331; 331-358. Well-planned experiments on a large number of captive Chaffinches with live and mounted owls and other objects. The *chink* call was used as an index of the intensity of the response. In Part I comparisons of mobbing movements are made with 13 other Fringillidae. Roles of approaching and fleeing tendencies are analyzed; an investigatory tendency is also present. Recognition of owls as enemies and the motor pattern of response are inborn, but they do not mature until the bird is about a month old. In Part II the process of habituation is analyzed. Two processes appear to be involved, one "specific to the response and subject to rapid recovery," the other specific to the stimulus and producing long-term effects.—M. M. Nice.

**31. A Study of the Display of the Ruff (*Philomachus pugnax* (L.)).** P. Banke and H. Messenburg. 1952. *Dansk Ornithologisk Forenings Tidsskrift*, 46(3): 98-109. Minute by minute observations from 0210 to 1635, June 5, 1950 in the Tipperne Sanctuary on a group of six Ruff "owners," three "whites" (Ruffs with white collars), "guests" (other visiting Ruffs), and several Reeves. The owners, one of which had been banded in 1947, another in 1948, stayed on the "hill" until about 8 o'clock; from then until noon they foraged nearby, and spent the afternoon and evening on their "hill." Each owner had his private display territory, but all protected the "hill" from visiting males, except from the whites which were not molested. Twice Reeves were seen trying to copulate with other Reeves.—M. M. Nice.

**32. Swimming Movements of Diving Ducks.** (Die Schwimmbewegungen der Tauchenten (Gatt. Aythya).) Zdeněk Veselovský. 1952. *Acta Societatis Zoologicae Bohemoslovenicae*, 16(3-4): 354-376. Careful analysis of swimming

movements with 24 photographs and 4 series of sketches from moving pictures. Ducks of the genus *Anas* have a specific gravity of about 0.6, those of *Aythya* 0.8. Observations are given on the length of dives and intervals between them of a Tufted Duck, *Aythya fuligula*.—M. M. Nice.

**33. Further Contribution to the Question of Swifts Spending the Night in the Air.** (Weiterer Beitrag zur Frage des Nächtigens beim Mauersegler, *Apus apus* [L.].) Emil Weitnauer. 1954. *Der Ornithologische Beobachter* **51**(3): 66-71. Supplementing his first study (see *Bird-Banding* **25**(3): 122) the author presents data to show that during nesting season the non-breeding birds, mostly 1 year old, are the ones which spend the night in the air. This behavior is subject to weather and does not occur during rain; this is confirmed by a chart. Later in the season when the young are almost ready to leave the nest some of the breeding adults, mostly males, also share in this behavior. Several attempts to confirm the presence of Swifts in the air at night from an airplane failed because weather conditions prevented satisfactory observations.—R. O. Bender.

#### WILDLIFE MANAGEMENT

(See also Numbers **21, 38, 39, 40, 41, 57, 59, 61, 64**)

**34. Estimating the Percentage Kill in Ringnecked Pheasants and Other Game Species.** George A. Petrides. 1954. *Journal of Wildlife Management*, **18**(3): 294-297. To appraise the effectiveness of harvest regulations, knowledge of the percentage of population mortality attributable to hunting is essential. Formulae for determining the percentage harvest of males alone or of each sex (where both sexes are hunted), based on pre- and post-season sex ratios, are presented. The total number of birds harvested is not required. For seasons involving harvests of males only, the percentage killed can be determined from a table included in the article.—Helmut K. Buechner.

**35. Further Studies of Bob-White Mobility in Central Missouri.** John B. Lewis. 1954. *Journal of Wildlife Management*, **18**(3): 414-416. Data were obtained by trapping and banding 300 Bobwhite Quail (*Colinus virginianus*), 145 of which were trapped a total of 596 times. Of the 27 marked birds observed from June 1 to August 1, 1951, 18 birds remained within  $\frac{1}{4}$  mile of the place of banding, 6 travelled from  $\frac{1}{4}$  to  $\frac{1}{2}$  mile, 2 moved from  $\frac{1}{2}$  to  $\frac{3}{4}$  mile, and 1 moved over  $\frac{3}{4}$  but less than 1 mile, supporting previous evidence of low summer mobility. Greatly increased movement during the so-called fall shuffle was not observed. Dispersal of over one-half mile from the trap site was 15 percent greater in the spring than during the summer. One banded bird was shot 12 miles from the last trap site. It is suggested that units larger than individual Missouri farms, which are often less than one-half mile in greatest dimension, be managed for effective production.—Helmut K. Buechner.

**36. Game Farm Pheasant Returns to the Hunters' Bag, Weber County, Utah, 1946-1951.** Jessop B. Low. 1954. *Journal of Wildlife Management*, **18**(3): 419-423. Of 764 game-farm pheasants (*Phasianus colchicus*) released during a six-year period, 211 birds (28 percent) are known to have been harvested. The highest return was 46 percent in 1947; the lowest 15 percent in 1946. Birds released up to 4 weeks prior to the opening date of the hunting season gave 40 to 60 percent returns, while less than 30 percent of those released longer than 4 weeks were returned. Banded birds averaged slightly over 18 percent and wild birds about 81 percent of the total harvest.—Helmut K. Buechner.

#### CONSERVATION

**37. Problems of Controlled Sea Bird Protection.** (Probleme des Gelenkten Seevogelschutzes.) Rudolf Drost. 1954. *Ornithologische Mitteilungen* **6**(6/7): 112-119. This is a very interesting discussion of the problem of maintaining a balance in the protection of sea bird colonies. When gulls and other aggressive



forms are protected, their resulting increase may diminish the populations of other species. The principal conclusion is that protective measures must be instituted for large areas on a scientific basis rather than for local areas on an emotional basis.—R. O. Bender.

**38. Scientific Foundations for the Protection of the Swallow.** (Die wissenschaftlichen Grundlagen des Schutzes der Rauchschnalbe [*Hirundo rustica*].) Arnold Frhr V. Vietinghoff-Riesch. 1954. *Ornithologische Mitteilungen* 6(6/7): 105-112. After an historical review of the public attitude toward the protection of swallows and its effect on population densities in various parts of Europe, the author discusses various factors to be investigated in an effort to place their protection on a sounder basis. The measures proposed do not have much significance for North American populations.—R. O. Bender.

### PARASITES AND DISEASES

**39. The Effect of Lead Poisoning on the Fertility and Fecundity of Domestic Mallard Ducks.** William H. Elder. 1954. *Journal of Wildlife Management*, 18(3): 315-323. Domestic mallard ducks treated with dosages of 6 and 18 lead shot showed no significant loss in weight or erythrocytes, but the percentage of eggs found infertile was slightly greater among the birds with the higher dosage. When both sexes suffered from the high level of lead poisoning, twice as many eggs were infertile. In a second experiment, 18 lead shot did not produce significantly higher early embryonic (less than 4 days of incubation) mortality; however, groups in which either male or female suffered from lead poisoning showed a significantly greater percentage of late embryonic deaths (5-24 days of incubation) than did the controls. During the April-May period, normal hens exceeded leaded hens by 11 eggs in 1948 and 7 eggs in 1949, suggesting that lead poisoning in late winter or early spring may have a real effect on fecundity. The data are not considered conclusive, and whether the effect is sufficiently great to produce productivity of wild female ducks is still uncertain.—Helmut K. Buechner.

**40. A Technique for Bleeding Nestling Birds by Cardiac Puncture for Viral Studies.** Clarence A. Sooter. 1954. *Journal of Wildlife Management*, 18(3): 409-410. During investigations to determine natural reservoirs for equine encephalomyelitis, blood samples were taken by the method described from 3,401 nestlings in 1,290 broods with an estimated sampling mortality of about 2 percent. Some birds were bled as many as four times. In Mourning Doves and pigeons it was necessary to extract blood from the brachial vein in the wing. All other species were sampled by cardiac puncture.—Helmut K. Buechner.

**41. Avian Malaria in Relation to Survival and Growth of a Group of Young Gambel's Quail in Captivity.** Howard Campbell. 1954. *Journal of Wildlife Management*, 18(3): 416-418. Observations on 12 Gambel Quail (*Lophoryx gambelii gambelii*) raised from 3-5 weeks of age to maturity showed that two malarial organisms, *Haemoproteus lophorytx* O'Roke and *Plasmodium* sp., had a negligible effect on survival and growth.—Helmut K. Buechner.

**42. The Fair Isle Apparatus for Collecting Bird Ecto-Parasites.** Kenneth Williamson. 1954. *British Birds*, 47(7): 234-235. Description and photograph of apparatus for collecting ecto-parasites by chloroforming them.—M. M. Nice.

**43. Protocalliphora in Birds' Nests.** D. F. Owen. 1954. *British Birds*, 47(7): 236-243. A summary of European and some American records of infestation with these flies whose larvae are parasitic on nestlings. As the parasites depend on living birds, it is probable that the hosts do not often die unless other unfavorable factors play a part.—M. M. Nice.

### PHYSIOLOGY AND PSYCHOLOGY (See also Numbers 6, 27, 30, 58, 62)

**44. The Oil Gland of Birds.** William H. Elder. 1954. *The Wilson Bulletin*, **66**(1): 6-31. The functions of the uropygial or oil gland of birds are generally little known. This paper brings together and evaluates the scattered literature and reports the results from experiments on three species of Anatidae. The act of preening induces secretion of a substance containing much fatty acid plus some fat and wax, which is transferred to the body plumage by the bill and the head plumage. The secreted substance is essential for maintenance of feather structure from one molt to the next, especially in ducks, and is apparently important in maintaining bill and leg surfaces. Redhead (*Aythya americana*) ducklings from which uropygial glands had been removed displayed the same preening behavior as unoperated controls, but the glandless birds tended to avoid water. Although the uropygial gland is not considered essential for growth and development, its absence in captive Mallards (*Anas platyrhynchos*) and Redheads impaired their growth. The author suggests that the differential growth rates may be attributed to the more efficient insulating layer provided by the properly preened feathers of normal birds. The uropygial gland does not appear essential for the maintenance of life of ducks in captivity, but is most likely imperative for survival in the wild.—L. R. Mewaldt.

### MORPHOLOGY AND ANATOMY (See also Number 46)

**45. Variation in a Flock of the European Starling.** LeRoy C. Stegman. 1954. *The Auk*, **71**(2): 179-185. In careful study of variation in a series of 455 specimens of *Sturnus vulgaris*, 280 males and 215 females collected during a single evening, the author made precise measurements of total length, tail, wing, head, cranial width, bill, and recorded total weights of brain, gizzard, heart, liver, lungs and gonads. Statistical analysis of these data shows the males to be significantly consistently larger than females in all characters investigated, but in no case is the dimorphism of sufficient magnitude to allow accurate determination of sex. An overlap of 78 percent precludes the use of external measurements for sex determination in the field.—J. C. Dickinson, Jr.

### PLUMAGES AND MOLTS

**46. Postembryonic Development of Our Wild Ducks.** (Postembryonale Entwicklung unserer Wildenten. Two page German summary of Czechoslovakian article.) Zdeněk Veselovský. *Sylvia*, **14**: 36-73. Weights and measurements of 24 diving ducks of three species and 13 river ducks of three species are given from hatching to maturity. The surface of the webs is markedly larger in the diving than in the river ducks. The straining movements of the bill are analyzed; the lamellae on the edge of the bill first appeared at 6-7 days in all the ducklings. The Shoveller's, *Spatula clypeata*, bill is no larger to begin with than in other ducklings, but starts to grow fast at 6 days and still increases in length and breadth after flight is attained. Growth of feathers was recorded in all species. Contour feathers first appeared in the Teal, *Anas crecca*, at 16 days, in the Shoveller and Mallard, *A. platyrhynchos*, at 17, in the Gadwall, *A. strepera*, at 20, in the Pochard, *Aythya ferina*, at 19 and in the Tufted Duck, *A. fuligula*, at 20 days. In the Teal the primaries appear on the 20th day and flight is attained at 36 days. Corresponding figures for other species are: Gadwall 25th and 59th days, Mallard 32nd and 60th days, Pochard 29th and 55th days, Tufted Duck 30th and 59th days. In all species the primaries grew about 5mm. a day. Eight pages are devoted to tables giving details on weight and on growth of bill, nail, tarsus, primaries, etc. by species and by sex. A valuable paper.—M. M. Nice.

**47. Plumage Aberrations of the Redwing (*Agelaius phoeniceus*).** Robert W. Nero. 1954. *The Auk*, **71**(2): 137-155. Color aberrations in the plumage of 322 Redwings are reported in this detailed study, 219 of them collected in the

vicinity of Madison, Wisconsin, 90 obtained from various museum collections, and 13 taken from published descriptions. Total albinism (complete absence of melanin from the eyes, skin and feathers) was found in 6 females and 1 male possibly wrongly sexed. Imperfect albinism (dilution) was detected in 14 females and 2 males. Nero suggests that this is an indication of sex-linkage in that the heterogametic sex allows its expression more frequently. His suggestion ignores differential sexual selection against the aberrant individual. Partial albinism affecting random areas (complete or partial inhibition of melanins within localized areas) was observed in 80 specimens; partial albinism of a restricted type was observed in 46 specimens. Practically all of the specimens collected at Madison showed some deviation from the wholly black plumage. Evidence is presented suggesting that red pigment normally occurs in the anterior regions of the male Redwing where it is masked by melanins. Brief comments on the behavior of two abnormally plumaged Redwings are included.—J. C. Dickinson, Jr.

**48. The Tail Molt of Small Owls.** Ernst Mayr and Margaret Mayr. 1954. *The Auk*, 71(2): 172-178. Investigation of tail molt in owls of the genera *Speotyto*, *Athene*, *Glaucidium*, *Otus*, *Ninox*, *Tyto*, *Bubo*, and *Strix* show the type of molt apparently correlated with size of the species. Small species have a simultaneous molt of all, or nearly all, rectrices. Large species have a gradual molt of the "centrifugal" type, i.e., from the innermost feathers outward. Molt appears to be gradual in *Tyto*, *Bubo*, and *Strix*. It is simultaneous in *Otus*, *Glaucidium*, *Athene*, and *Speotyto*. It is simultaneous in the smaller species of *Ninox* and gradual in the larger forms. The authors discuss the possible reasons for simultaneous tail molt in the light of its probable selective significance.—J. C. Dickinson, Jr.

#### FAUNISTICS

(See also Numbers 7, 8, 22, 37, 65, 66)

**49. Bird Records and the A.O.U. Check-List Ranges.** E. M. Reilly, Jr. 1954. *The Auk*, 71(2): 156-163. The author, who has been engaged since 1948 in preparing the ranges of North American birds for the new A.O.U. Check-List, discusses some of the difficulties he has encountered. These arise from three main causes: (1) the ranges of many species are not static, (2) the ranges are plotted from accumulated observations which are irregular in space and time, (3) many of the records, both sight and specimen, are not reliable. Reilly discounts the reality of the first two causes in that corrective measures are easily applied. The body of his discussion is taken up with well thought-out criticisms of published records of distribution.

Some of the principal causes of error are (1) faulty assessment of breeding or non-breeding status, (2) failure to retract sight misidentifications once they have been published, (3) compound errors resulting from faulty transcription of records, (4) eagerness to add new forms to published lists, particularly when a hypothetical list is appended, (5) lack of uniformity in using the relative terms common, rare, casual, accidental, etc., (6) use of trinomials on the basis of locality, (7) failure to collect the specimen, (8) faulty or inadequate locating of reported occurrences, (9) failure to indicate whether A.O.U. Check-List names are being used, (10) reluctance to document breeding status by collecting the nest.

The author's points are well taken; certainly careful attention to his recommendations by both professionals and amateurs would be of great benefit.—J. C. Dickinson, Jr.

**50. Summer Birds of Western Ontario.** L. L. Snyder. 1953. *Transactions of the Royal Canadian Institute*, 30(1): 47-95. The Royal Ontario Museum of Zoology and Palaeontology has sent four summer expeditions to western Ontario, an area on which heretofore little information has been available. Combining the results of these expeditions with data from other sources, this paper lists for the region 170 species of summer birds (three hypothetically) of which 95 are known to have bred there. Concise annotations deal mainly with occurrence and distribution; a few notes on voice and behavior are added for some species.

Taxonomic examination of 739 specimens shows a considerable influence of campestrian elements and indicates several useful distributional cornerposts for species whose ranges center farther south. The author concludes that, "Obviously faunal influx or peripheral pressure is from the south and west."—W. Earl Godfrey.

**51. Invasions of Leach's Petrel and of Storm Petrels in Central Europe in the Autumn of 1952.** (Invasionen von Wellenläufern und Sturmschwalben in Mitteleuropa während des Herbstes 1952.) 1954. Friedrich Goethe. *Die Vogelwelt*, **75** (3): 89-100. These best documented invasions of Leach's Petrel (*Oceanodroma l. leucorrhoa*) and of Storm Petrels (*Hydrobates p. pelagicus* and *H. p. melitensis*) in historic times are tabulated, mapped, and dated. Waves of invasion are correlated with precise weather records. The question is raised whether or not New World individuals of Leach's Petrel may not have participated in this invasion. A taxonomic discussion is included.—Frances Hamerstrom.

**52. The "Wreck" of Leach's Petrels in the Autumn of 1952.** Hugh Boyd. 1954. *British Birds*, **47** (5): 137-163. A large-scale "wreck" of *Oceanodroma leucorrhoa* occurred in the British Isles between October 21 and November 8, 1952, the last such catastrophe having taken place in September and October 1891. The number found dead or dying in Great Britain in 1952 were 2,609, while estimates reached 6,700. The wreck took place at a time of widespread gales over the North Atlantic. "It is probable that the whole population of the species, not merely its small European component, was involved. If this was so, the effects of the 'wreck' may not be serious," p. 150 (as the loss would be spread over a considerable population). All the records are listed as well as the names of the 560 people who contributed information.—M. M. Nice.

**53. The Thrush Nightingale in Dalsland.** (Näktergalen (*Luscinia luscinia*) in Dalsland.) Nils-Gerhard Karvik. 1952. *Vår Fågelvärld*, **11** (2): 76-80. A series of records indicate that there has been a northward extension of the range of this species in eastern Sweden in recent years (1945-1951).—D. S. Farner.

**54. The First Breeding Record of the Indian Ring Dove in Sweden.** (Turkduvan (*Streptopelia decaocto*) svensk häckfågel.) Gunnar Strömberg. 1952. *Vår Fågelvärld*, **11** (4): 177-179. A report of two pairs breeding in southern Skåne in 1951. This is a further contribution to our knowledge of one of the most remarkable range expansions of an avian species.—D. S. Farner.

**55. Notes on the Vertebrates of the Island of Montecristo.** (Note sui vertebrati dell' Isola di Montecristo.) Augusto Toschi. 1953. *Ricerche di Zoologia Applicata alla Caccia*, **23**: 1-55. The author visited this island for a week in the latter part of May 1953. Included in the annotated list are 46 species of birds. There is also a brief section which records observations on migration.—D. S. Farner.

#### FOOD HABITS (See also Number 29)

**56. The Starvation Theory in Albatrosses.** L. E. Richdale. 1954. *The Auk*, **71** (3): 239-252. Careful observations of *Diomedea epomorpha sanfordi* at Taiaroa Head, Otago Peninsula, New Zealand, and of *D. e. epomorpha* on Campbell and Auckland Islands demonstrates the falsity of the starvation theory in the Royal Albatross. It was formerly held that the young birds were not fed for the last 4 months of nest life, and that during this period of forced fasting they lived on accumulated fat. It was further suggested that this was necessary to reduce the birds' weight enough to allow flight. The author confirms this loss of weight during the last months of nest life, but furnishes adequate evidence that the young birds are fed by the parents until they leave the nest.—J. C. Dickinson, Jr.

**57. Possibilities and Limits of Bird Protection as a Natural Pest Control Measure in Fruit Culture.** (Möglichkeiten und Grenzen des Vogelschutzes --als natürlichen Schädlingskampfung--im Obstbau), Hans Löhrl, 1954. *Orni-*

*thologische Mitteilungen* 6(6/7): 126-129. After discussing the effect of various chemical pest control measures on bird populations and concluding that these have no effect (in Germany), the author examines the possible usefulness of birds in controlling insect pests. He concludes that in most situations they are insufficient and other measures should be used.

A study in which 500 nest boxes were placed in a hillside orchard covering 11.25 hectares showed that 162 pair of six species used the boxes in 1952 and 142 in 1953. Starlings were excluded. Thus there were 14.4 nesting pair per hectare in 1952 and 12.6 in 1953. The population density was higher in the lower part of the orchard where exposure to the sun was less, 20.7 pr./ha. in 1952 and 17.0 in 1953. There was no evidence of food shortage with this high density, but the fact that the undercover was grass which was mowed at about the time the larva of the Frost Moth (Frostspanner) began to pupate may have been a factor in the maintenance of an adequate food supply. In orchards where the grass is not mowed the food supply, particularly for Titmice, might become critical. He concludes that the determining factor for Titmouse populations is their ability to survive the winter which is the season of least adequate food supply.—R. O. Bender.

**58. Studies on the Selective Choice of Food by Birds.** (Untersuchungen über die selektive Nahrungswahl der Vögel.) Herbert Bruns. 1954. *Ornithologische Mitteilungen* 6(6/7): 130-133. After a short, general review of previous work on the food of birds and on methods for studying it, the author discusses the various factors which could affect the birds' choice of food in the light of studies made principally on three species of Titmice confined in roomy cages. Factors treated are location (seeds on the edges of radially arranged series were chosen 20-30% more frequently than those in the middle), mass (larger masses preferred), size (larger preferred), form (variation according to species), brightness (lighter colored food preferred), color (no choice, further research needed), contrast (sharp black and white contrasted food shunned with preference given to solid black or white; yellow-black, yellow-blue, and red-black were also avoided), protective coloration (wild Marsh-Tits chose red or half red and half black seeds 142 times from a weak multicolored background and only 72 times from a single colored background).

Brunns considers the information available on the effects of smell, taste, and temperature is insufficient to justify any statement. He also discusses the possible effects of satiation, habit, and season. This stimulating paper should provide many ideas for research for the amateurs who operate feeding and banding stations.—R. O. Bender.

**59. Is the Destruction of Potato Beetles by Birds Insignificant?** (Ist die Vertilgung des Kartoffelkäfers durch Vögel bedeutungslos?) Karl Mansfield. 1954. *Ornithologische Mitteilungen* 6(6/7): 134-137. After reviewing the literature which generally minimizes the importance of the destruction of potato beetles by birds the author reviews the available data by species. Most attention has been given to the Quail (*Coturnix coturnix*) and to the common hen. Experiments with chicken wagons (Hühnerwagen) in which the birds were transported to potato fields succeeded in destroying large numbers of beetles and larva, particularly in August and September.—R. O. Bender.

**60. Birds as Destroyers of Plant Lice.** (Vögel als Vertilger von Pflanzensaugen.) Robert Gerber. 1954. *Ornithologische Mitteilungen* 6(6/7): 138-140. Literature records of European species of birds known to feed on plant lice. Nineteen references are given.—R. O. Bender.

**61. Third Report on the Food of the Owls in Amrun.** (Dritter Beitrag zur Ernährungsbiologie Amruner Eulen.) H. Kummerloewe and H. Remmert. 1954. *Ornithologische Mitteilungen* 6(8): 165-170. This paper presents the results of an analysis of pellets of the Long-eared Owl (*Asio otus*) and the Short-eared Owl (*Asio flammeus*) collected on the island of Amrun. The data may be tabulated as follows:

	<i>Asio otus</i>	<i>Asio flammeus</i>
<i>Apodemus sylvaticus</i>	1425	1468
<i>Arvicola terrestris</i>	154	155
<i>Passer domesticus</i>	75	—
Total Aves	203	207
Total Mammals	1587	1839

Sixteen beetles (*Geotrupes*, *Carabus*) and 30 mollusca (*Hydrobia*, *Mytelus*) were recovered from the Long-eared Owl pellets.—R. O. Bender.

## SONG

(See also Number 26)

**62. The Process of Song-Learning in the Chaffinch as Studied by Means of the Sound Spectrograph.** W. H. Thorpe. 1954. *Nature*, 173: 465. Thorough, well-planned experiments on a large number of *Fringilla coelebs* showed that the normal song of three phrases "has a very restricted inborn basis amounting to little more than the ability to produce a song of about the normal length (2.3 sec.) and consisting of a *crescendo* series concluded by a single note of relatively high 'pitch.'" (With my hand-raised Song Sparrows the length and tripartite form of the song proved to be inborn, as well as the rate at which the songs were sung. The quality, however, was different.) Some learning of details of the song can take place in the first weeks of life, but the final form "is acquired during a period of high learning ability" in a few weeks in the bird's first spring. Eleven examples of songs are shown on the sound spectrograph.—M. M. Nice.

**63. The Leier-Song of the Black-cap.** (Der Leier-Überschlag der Monch-grasmucke.) K. D. Morike. 1953. *Ornithologische Mitteilungen* 5(5): 90-95. About 1920, reports of a variation of the normal song of the Black-cap (*Sylvia atricapilla*) began to be recorded from the Alps. This variation which became known as the "leier" song consists of the insertion of a series of notes in the regular song. This song form has now expanded over a much larger area at a rate which the author estimates to be about 5 km. per year. A few distant outposts have been recorded. There is some evidence that other Sylviidae may also sing the "Leier." This development is under close observation and further reports will be awaited with interest, particularly studies which might shed some light on the relative survival value of the two types of song.—R. O. Bender.

## BOOKS

**64. Our Wildlife Legacy.** Durward L. Allen. 1954. Funk and Wagnalls, New York. x + 422 pp. \$5.00. In recent years there has been great need for a new treatise in wildlife science to supplement Aldo Leopold's "Game Management" published in 1933 by Scribner's and Sons. Three attempts, one a two-volume work, have failed to fill the need. *Our Wildlife Legacy*, although written primarily for laymen, represents the most lucid, well-written, up-to-date account produced in the past two decades.

Allen's intent has been to present a wide range of relevant facts on terrestrial and aquatic wildlife in such a manner that responsible citizens can do their own thinking. In this objective he succeeds admirably. Principles permeate throughout the book, often under the guise of such attractive chapter titles or subheadings as: "They Grow in the Soil"—relations of nutrition to vigor and reproduction; "The One-Year Plan"—population mortality or turnover in short-lived birds; "So Many and No More"—carrying capacity and limiting factors; "Social Whirl"—territoriality; "Shuffling Things"—habitat improvement; "Boom or Bust"—population fluctuations; "Lead Kindly Light"—research.

To support the principles, an abundance of fact flows in rapid, easy-to-read style from Allen's pen. The excellent choice of significant facts bears witness to the alert mind through which the selection was accomplished. A unique system of documentation (by page and line) appears in a 36-page section of "Reference Notes" (based on 501 selected literature references), thereby freeing the text

from authority references that may annoy the lay reader. One is attracted on nearly every page by Allen's refreshing literary style. The book is divided into three parts, the first, "Numbers at Work," concerning population dynamics; the second, "Paths and By-Paths," dealing with management and mismanagement; and the third, "The Method and the Outlook," showing the path toward intelligent management based on research and freedom from politics.

Although written for the lay public rather than as a text, this book will serve perhaps better than any other now available as a first book to provide supplementary reading for lectures in elementary courses in wildlife conservation. It has depth, philosophy, and charm to encourage and excite the young student as well as a wealth of sound facts and ideas to formulate a lasting foundation.—Helmut K. Buechner.

**65. The Yellow Wagtail.** Stuart Smith. 1950. Collins. St. James Place, London. Distributed in the United States by John de Graff, Inc., 64 W. 23rd St., New York. xiv + 172 pages, 8 color and 4 black and white plates. \$2.50. The author of this excellent life history study covers in minute and careful detail the bird and its breeding distribution, winter quarters and migrations, territory, pair-formation and aggressive display, nuptial display, nest, clutch, brood, and then delves into the historical origin of the name (*ca.* 1453), the background of nomenclature leading up to the present scientific name, *Motacilla flava flavissima*, and a general discussion of this palearctic genus. Appendices elaborate on the breeding distribution of the subject race in Europe and the various parts of the British Isles, and on the little known subject of parasites. The bibliography of 365 names, including a small amount of necessary repetition, refers conveniently to each chapter as an entity. A brief index coordinates salient features.

The thoroughness of this work precludes, in itself, any attempt to describe in a short review the vast amount of information presented. Unsolved is the puzzle of why the old cocks, migrating from Africa at a speed of 100 to 120 miles a day, precede the old hens which, in turn, arrive ahead of flocks of mixed adults. Lastly come the young of the year. Again why, after families have consolidated into flocks in the autumn and migrated, are the remaining stragglers always cocks or immatures, never hens?

Nest construction may require from 4 days to 3 weeks, depending largely on the weather and food supply. The hen does three quarters of the incubating of the clutch, which averages 5.2 eggs. The incubation period is 12 to 13 days. The fledglings leave the nest, which is customarily on the ground, after 11 to 13 days, but do not fly until the 16th day. Hatching success is 75.7 per cent, fledgling success 88 per cent, and total nesting success is thus 66 per cent. In the fifth year of observation the author finally recorded a second breeding following a successful first one.

Forty per cent of all the southbound birds return the following season, but only 25 per cent of the immatures.

The Yellow Wagtail group shows a wide range of individual variation within its 13 races (excluding a form considered probably a hybrid). Aberrants are numerous, even to the point of occurring as colonies, and may be due to hybridization with casual immigrants of another subspecies, or even to mutation in spite of the mathematical improbabilities, 1 in 5,000 at best, 1 in 1,000,000 normally. The genus is unstable from an evolutionary viewpoint and in need of further study.—Wendell Taber.

**66. Birds of France.** (Oiseaux de France.) 1954. No. 8. 16 pp. Association pour l'Etude dans la Nature des Oiseaux de France et leur Protection, 129 Blvd. St. Germain, Paris 6, France. 100 francs. Worthy of the professional's attention is Michael-Hervé Julien's article on the terrain and bird-life of the island of Ouessant, rising out of deep water some ten miles off the tip of Finisterre near Brest. Breeding species are few; the migratory pelagic and littoral forms are of great interest, and the terrestrial ones especially so. The lighthouse undoubtedly attracts many of the latter group. Here were taken the only two European specimens of Gray's Grasshopper Warbler, *Locustella fasciolata*, one on 26 September 1913, the other 17 September 1933; this eastern Siberian species normally migrates in autumn to the Philippines, the East Indies, and New Guinea.

J. de Brichambaut in discussing the subspecific distribution of Herring Gulls,

*Larus argentatus michahellis* in Mediterranean waters and *L. a. argentatus* nesting in British and French Atlantic waters, elaborates on the inexplicable peculiarity of the eyes, orange or reddish-orange in the British birds, yellow in birds of the nesting colony at Iles-Glenans in the Bay of Biscay.

For the novice there is a detailed comparative study with diagrams of wing and tail patterns of those gulls and terns most likely to be encountered in the field.

To encourage needed reforms, a lengthy exposition cites many recent cases of blatant disregard for the laws protecting birds, and the equally conspicuous lack of enforcement by the proper authorities.--Wendell Taber.

### NOTES AND NEWS

We have been asked to find certain back issues of *Bird-Banding* for the Alexander Library at the Edward Grey Institute of Field Ornithology at Oxford: vol. 3, no. 1 (Jan. 1932), vol. 4, no. 1 (Jan. 1933), and vol. 5, no. 4 (Oct. 1934). This is one of the best ornithological libraries in Great Britain, and it is used intensively. It is hoped that some reader of *Bird-Banding* may be willing to give the library these issues, to complete their set; the issues can be sent to the editor, for forwarding. If anyone has these issues but prefers to sell them, please let the editor know, stating the price, but not forwarding the issues themselves at first.

At the annual meeting of the Northeastern Bird-Banding Association (at Barre, Mass., on October 2, 1954) the retirement of Mr. Richard M. Hinchman as Secretary-Treasurer was announced. He had served in that office for more than three years, carrying a heavy load of the business affairs of *Bird-Banding*, and setting a high standard in that office. By chance, it was at that same meeting that the Association voted a message of sympathy to the family of the late Charles B. Floyd, who died in the summer of 1954; Mr. Floyd had served as Treasurer of the Association at least since 1925 down to 1951; his devoted labors thus covered all five volumes of the old *Bulletin of the Northeastern Bird-Banding Association* and extended into the twenty-second volume of our present journal.

The inside back cover of this issue lists the new Secretary-Treasurer of the Association, Mr. Daniel P. Johnson, who is a Boy Scout executive on Cape Cod, and an active bander. Please direct to him all correspondence about dues, subscriptions, missing issues, back issues, and similar matters.

In this issue we show another Treasurer's report of the Association, feeling that it will be of general interest because the primary activity of the Association is the publication of this journal. It will be noted that the reserve for the publication of indices is now \$1500; this reflects a transfer of \$1136.50 from general funds, by vote taken at the annual meeting. Work is continuing on a ten-year index for the period 1941-50, though it is not yet possible to set a publication date.