

Oct. 5 was a beautiful, calm, sunny day. Rest of week was overcast and windy with rain. Believe the birds' death was due to drinking salt water on deck; we saw them keel over and die. One junco was thrown overboard, invited a shark, but a Herring Gull got it first! Unfortunately, crew members threw the Juncos over before I could get them. Warblers were feeding on moths—abundant (a few were preserved in formaldehyde).—John S. Rankin, Jr., Director, Marine Research Laboratory, Noank, Conn.

Injury to Birds by Ice-coated Bands.—Two recent repeats at my station show evidence which indicates that metal bands may sometimes cause injury by freezing to the body of a bird wearing them. This is probably a rare event, occurring only with certain weather conditions, but perhaps other banders could report similar observations. It would be desirable to learn just how frequently such injury does occur.

A male American Goldfinch (*Spinus tristis*) repeated on January 25, 1960, after being banded on January 23. There were a considerable number of body and down feathers adhering to the ice-coated band. Close examination showed that the feathers had come from the lower abdomen where the band might touch the body when the tarsus is drawn up close in perching. Skin and flesh were pulled away from an area about $\frac{1}{4}$ " X $\frac{1}{2}$ " in diameter, exposing what appeared to me to be the internal organs.

A banded Tree Sparrow (*Spizella arborea*) was trapped a few minutes later. This band was also coated with ice to which a small number of feathers were adhering. These feathers had come from the same area of the abdomen as noted in the Goldfinch, but the skin was not torn.

About four to six inches of snow lay on the ground, and flurries of snow had occurred during the morning. The temperature ranged from 24° to 32°.—Mrs. Roger N. MacDonald, 850 Main St., Lynnfield Center, Mass.

RECENT LITERATURE

BANDING

(See also Numbers 12, 13)

1. **A Bander's View of the 1960 Redpoll-Siskin Invasion.** Elinor G. McEntee. 1960. *EBBA News*, 23: 50-52. A general discussion of the March, 1960 flight of Redpolls (probably all or largely *Acanthis linaria*) and Pine Siskins (*Spinus pinus*) in northern New Jersey, with a list of numbers banded in the Northeastern U. S., as reported to the author. At least 6,800 Redpolls were banded, of which 3,450 were in Bergen County, N. J.; the author speculates that birds coming down the coast and others coming down the Hudson River Valley met at this point.—E. Alexander Bergstrom.

2. **Black or Striped Sunflower Seeds Equally Good As Bait.** Merrill Wood. 1960. *EBBA News*, 23: 53. Tests conducted at State College, Pennsylvania, in 1959 indicated no preference by seed-eating birds between the all-black or African sunflower and the striped or mammoth Russian. The smaller seed is becoming more widely sold (in my personal experience), possibly because the seed can be harvested with a combine. Merrill Wood will be remembered for other experiments, in particular that which indicated the most desirable color to paint banding traps was dull black, which increases their efficiency appreciably compared to unpainted hardware cloth.—E. Alexander Bergstrom.

3. **Long Distance Flyers—The Ospreys.** Mabel Gillespie. 1960. *EBBA News*, 23: 55-62. Results of 16 seasons (1926-1941) of banding of Ospreys (*Pandion haliaetus*), mostly in Cape May County, N. J., the remainder in Delaware. In all, 457 were banded as nestlings; 12 were reported as returns after the year of banding; and 57 were recovered elsewhere. The oldest bird reported was 18 years old. Ten of the recoveries were in the West Indies or South America, as far away as Rio de Janeiro in Brazil (close to 7000 miles, SSE, in 5 months). Details of all returns and recoveries are shown.—E. Alexander Bergstrom.

4. **Evening Grosbeaks in State College, Pennsylvania.** Dorothy L. Bordner. 1960. *EBBA News*, 23: 73-77 (2 maps). Comments on 7,685 Evening Grosbeaks (*Hesperiphona vespertina*) banded at the Bordner station from March, 1955 through the spring of 1960. Almost three-fourths of these, 4,933 to be

exact, were banded in the winter of 1959-60, perhaps a record for a banding station for this species in any one season.

Miss Bordner notes: "Although more foreign retraps have come from Ware, Massachusetts, and Hartford, Connecticut, than any other locality, no recoveries have been obtained from either place." In the winter of 1955-56, which produced a substantial flight of these birds around Hartford (as well as at State College), I banded some 900 at my station in West Hartford. It was noteworthy that the chief recoveries of that group after the year of banding, in early 1958, were generally west of Hartford, suggesting that year's flight had been displaced westward (one bird each was reported from Charleston, S. C., Marinette, Wisc., State College and Hawk Mt., Pa., and Binghamton and Sparrowbush, N. Y., and two from Watertown, N. Y.). While the Hartford region did have some grosbeaks in the winter of 1957-58 (see Shaub, *Bird-Banding*, 31: 140-150, for a general description of the flight), the numbers were below the 1955-56 flight, and their distribution was more spotty. This fits the known wide distribution of the species that winter, and deep penetration of the South.

In winters where the species continues to be widespread, numbers in southern New England may be modest and opportunities to recapture State College birds limited. It will be of great interest to see what sampling New England banders obtain during the winter of 1960-61 from the very large number banded at State College the previous season. I have an impression that in areas south of New England and New York, feeders with ample supplies of sunflower seeds are less common, so that the birds may concentrate more at major feeders. The high count of birds banded at State College last season is related to nine tons (!) of sunflower seed fed to birds there that winter.—E. Alexander Bergstrom.

5. An Easy Method For Providing a Water Source For Bird Traps. Don Bleitz. 1960. *News from the Bird-Banders*, 35: 35-36. Water traps are most often supplied from a pail or can over the trap, filled by hand. The labor involved tends to limit the use of such traps. Occasionally plastic hose or tubing is used, generally where the trap is near a source of water. Bleitz uses a method of supplying water traps with copper tubing, $\frac{1}{8}$ " outside diameter for up to 200', or $\frac{1}{4}$ " for greater distances or lower water pressure. He taps a water pipe (first shutting off the water) with a $\frac{5}{16}$ " drill and a tap for $\frac{1}{8}$ " pipe thread, and inserts a copper tubing petcock, such as catalog number 351 needle valve petcock for compression type fittings. The tubing can be laid underground if desired.

Another method is to "pre-drill and tap some short nipples in both $\frac{1}{2}$ " and $\frac{3}{4}$ " pipe sizes with these little petcocks already in place by carrying an extra coupling. It is very simple to unscrew a garden faucet, add the nipple to the line and the coupling, and then replace the faucet ahead of this combination which very quickly allows you to tap into the water supply."

In colder climates, any permanent installation of such tubing should be planned so that it can be drained before frost, preferably by avoiding spots where water will not drain out by gravity.—E. Alexander Bergstrom.

MIGRATION

(See also Numbers 1, 4)

6. Migration at Falsterbo 1956. Report No. 15. (Fågelsträcket vid Falsterbo år 1956. Meddelande från Falsterbo fågelstation 15.) Sven Mathiasson. 1960. *Vår Fågelvärld*, 19: 97-127. (English summary.) This report includes both the spring and fall migrations. The extensive migrations in reverse were the most notable features of the spring season. A revealing discussion concerns a weather-conditioned record wave of migrants arriving from the south, which was followed two days later by a reversed migration of equal proportions. It is suggested that whatever stimuli act upon the birds to bring about these phenomena, the leading lines of the Falsterbo isthmus are chiefly responsible for causing the concentrations of birds there.

The fall migration was considered largely normal. The fluctuations of the invasion species were of greatest interest. Among these, most notable was the Long-tailed Tit (*Aegithalos caudatus*) which figures rarely in this category and, in fact, has been absent from the Falsterbo migration lists since 1949. Much other valuable information may be found in the well-drawn summary.—Louise de K. Lawrence.

POPULATION DYNAMICS
(See also Numbers 12, 17, 25)

7. Contributions to the Population Ecology of the Pied Flycatcher. (Beiträge zur Populationsökologie des Trauerschnäppers (*Ficedula h. hypoleuca* Pallas). Eherhard Curio. 1959. *Zoologische Jahrbücher. Abteilung für Systematik, Oekologie und Geographie der Tiere*, **87**(3): 185-230. (With English summary.) From 1951 to 1956 an intensive study was carried out on a 25.6 hectare plot supplied with 64 nest boxes; here practically all the Pied Flycatchers were color-banded. The surrounding 730 hectare Schildhorn Revier containing 80 nest boxes was checked once or twice each season and the flycatchers banded. Of 121 males ringed as adults at least 44.7 percent returned, while of 120 females only 30 percent were recovered. Of 710 nestlings at least 10.4 percent but probably 12-15 percent settled in their native area, the males outnumbering the females. More than 35 percent of the females and 30 percent of the males bred when 1 year old, the others doing so for the first time at 2 years. In general the early breeders are offspring of early broods. Many immature males wander around their future breeding grounds, repeatedly calling females to boxes, but always without success as the nest entrances were too large or too high from the ground. For unknown reasons the mortality of the females is higher than that of the males—65 percent annually in contrast to 50 percent. This leads to an unbalanced sex ratio on the nesting grounds—130 males to 100 females. From 1057 eggs laid 628 young were fledged—59.4 percent. "The proportion of birds finally reaching maturity amounts only to ca. 15 per cent of the number of eggs laid." A very fine study.—M. M. Nice.

8. Bird of Prey Numbers on a Hampshire Game-preserve during 1952-1959. J. S. Ash. 1960. *British Birds*, **53**(7): 285-300. In connection with a study on Gray Partridges (*Perdix perdix*) on a 4,000-acre estate in west Hampshire, the author counted over 2,000 birds of prey in over 5,000 hours, an average of one for every 2½ hours. Five species decreased—Sparrow-hawks (*Accipiter nisus*), Merlin (*Falco columbarius*), Hen Harriers (*Circus cyaneus*), Peregrines (*Falco peregrinus*), and Hobbies (*F. subbuteo*): two fluctuated in numbers—Buzzards (*Buteo buteo*) and Kestrels (*Falco tinnunculus*), and only one increased—Montagu's Harrier (*Circus aeruginosus*). Tables and graphs summarize the findings. Rabbits were decimated by myxomatosis by 1954, but were recovering locally 2 years later.—M. M. Nice.

9. Studies of duck and gull populations at Ängelholm during the winter 1958-59. (Studier av and- och måsfågelbeståndet i Ängelholm vintern 1958-59.) Lennart Hansson. 1960. *Vår Fågelvärld*, **19**: 136-145. (English summary.) At this inland town of southern Sweden, which is transected by a small river, weekly censuses were carried out from November to the end of March. The data are presented in 1 table and 3 diagrams. The most common species were Mallards (*Anas platyrhynchos*) and Herring Gulls (*Larus argentatus*). The influence of weather conditions, the sex ratio in the ducks, and the correlation between immatures and adults in the gulls were the aspects given most attention. Strong winds drove the birds away but, contrary to observations in other centers farther north, cold spells increased the population density at Ängelholm. The preponderance of the males in the Mallards was highest during cold weather, apparently depending on the return of the already paired birds, which dispersed during the warm spells presumably to their breeding territories.—Louise de K. Lawrence.

10. On the sex ratio, wing-length, and the total length of the Great Tit. (Om könkvoten samt ving- och totallängden hos talgoxen (*Parus major*).) Leif Björn. 1960. *Vår Fågelvärld*, **19**: 146-156. (English summary.) The material of the paper is obtained from 204 Great Tits belonging to a stationary population in southern Sweden. Formulae used in computing the data are given and techniques described. The sex ratio was found to be 1.5:1. In both the wing-length and the total length of the birds sex and the age of the males determined statistically significant differences.—Louise de K. Lawrence.

11. General Theory of Mortality and Aging. Bernard L. Strehler and Albert S. Mildvan. 1960. *Science*, **132**(3418): 14-21.— This article is in many respects not only interesting but also significant. Its basic premise is that a death rate at any age can be regarded as made up of two terms. One of these is an age-independent term, or Makeham term (A); the other is an age-dependent term, or Gompertz term ($R_0 e^{at}$). In the second term R_0 is the death rate at time zero, a is the Gompertz slope, and t is time. It is stated on page 14—and there are many other statements essentially of the same import in the literature—that the Makeham term predominates in wild birds and even may be the only term in the mortality. It should be noted, however, that this term may be age-independent without being density-independent and might differ from one year class to another within the same population.

The authors point out something which is actually intuitively true, namely, that, in a Gompertz term, as R_0 increases from one population to another a on the whole must decrease. In other words, if a becomes too large, then no individuals may live to breed so there should be a fairly strong selection against too high a ratio of a to R_0 . The authors rather gloss over the fact that a is not necessarily a constant in a given population but may itself be age-dependent. They do note that at great ages in man a becomes smaller. It does not, however, decline to zero, in which case the Gompertz term would become a Makeham term. It is also possible for a to be negative, in which case mortality declines with increasing age. At least one mortality table for U.S. whites actually shows this decline between ages approximately of 1 to 11.

In order to show a distribution of the challenges to an organism's vitality, the authors start with the Maxwell-Boltzmann distribution. It seems to me that they could have achieved the same result by starting with the Poisson distribution, of which the Maxwell-Boltzmann is a particular expression. My own calculations for some extreme longevities and annual mortalities actually observed in birds show that a can exceed 0.02 only in unusual cases. For a series of (say) 1000 known ages at death, A and R_0 can be so chosen that the mortality patterns differ only in the first year. For most species it is, as yet, academic which pattern we choose.—C. H. Blake.

NIDIFICATION AND REPRODUCTION

(See also Numbers 7, 16, 17, 19, 23, 25, 26)

12. Figures and observations from a seven-year study of passerines breeding in nest-boxes. (Nagra siffror och rön från sju års studier av småfåglar häckande i holkar.) Karl-Erik Jansson. 1960. *Vår Fågelvärld*, **19**: 127-136. (English summary.) Pied Flycatchers (*Ficedula hypoleuca*) and five species of tits (*Parus*), nesting in 45 to 50 nest-boxes, were studied in east-central Sweden. From 79 to 97.5 percent of the boxes were occupied each year. The birds accepted any kind of box, even newly painted ones, provided the dimensions of the entrance and the bottom space met with each species' requirements and the territorial space each species needs was allowed in the placing of the boxes. The quantitative data derived from 133 nestlings are presented in 7 tables showing arrivals in the spring, clutch-size, incubation periods, and nesting success. The results are compared with those of other studies. A total of 1,245 birds were banded. Of these 1,078 were taken as nestlings but yielded only 6 recoveries and 1 return.—Louise de K. Lawrence.

13. Observations on the Nesting of the Woodlark (*Lullula arborea* L.). K. Koffán. 1960. *Acta Zoologica Academiae Scientiarum Hungaricae*, **6**(3-4): 371-412. This first report on the life history of the Woodlark is largely confined to the nest—the choice of the site and its construction. The author started watching a population of this species near Budapest in 1943, began ringing them in 1946, adding colored bands from 1950. Since 1951 he has spent 5 to 6 hours daily starting in the early morning from the arrival in spring “to the end of the incubating season.” His findings are based on 270 nests of some 160 pairs. The pair search together for a nesting site and each partner may make several hollows by digging and cutting with its bill. “The hen, be she a beginner or an experienced bird, builds equally well.” The cock helps occasionally, but his main task is “vigilant watching.” He evidently exercises considerable influence

in the choice of nesting sites. After losing a nest with eggs or unfledged chicks, the first egg of the next set is usually laid 6 days later. One pair made six nesting attempts, only the last of which was successful. We shall be looking forward to much more information on the results of this ambitious study.—M. M. Nice.

14. The Behaviour of a Pair of House Sparrows while Rearing Young. David C. Steel. 1960. *British Birds*, 53 (1): 303-310. A pair of *Passer domesticus* was watched 6 hours a day during the 16 days of the nestling period. Figures and tables show the daily rate of feeding, brooding, and times of roosting and rising of the parents. The male made more trips to the nest than did his mate and also helped brood the young.—M. M. Nice.

BEHAVIOR

(See also Numbers 14, 23, 24, 25, 26)

15. Ontogeny and Phylogeny of Some Instinctive Behavior Patterns of Flycatchers. (Ontogenese und Phylogenese einiger Triebhäuserungen von Fliegenschläppern.) Eberhard Curio. 1960. *Journal für Ornithologie*, 101 (3): 291-309. (With English summary.) Dr. Curio points out that so far the comparative studies of various bird groups have largely neglected the crucial phase of behavior development in the young. In this paper he has made a beginning on this problem with his flycatchers, having raised from very early stages Pied, Collared, and Spotted Flycatchers (*Ficedula hypoleuca*, *albicollis*, and *striata*).

"The 'scraping-ceremony' in males of the genus *Ficedula* is derived from a nest building movement which, in the course of its ritualization, has become sexually motivated. The *albicollis* male uses this movement as a preliminary to copulation and also when threatening a rival male. The *semitorquata* [Semi-collared] male shows the same movement at least during the phase in which copulations take place. The *hypoleuca* male, finally, only uses the scraping-ceremony in threatening a rival. In all three species only the female builds the nest." Young *hypoleuca* males show the first intention movements of this ceremony at the age of 26 days.

Comparative observations are made on the development of singing in the three species raised, especially on the Spotted Flycatcher. The author concludes: "The premature courtship and nest building patterns in young birds in general appear during a restricted period of their early development. The gonads do not change in size before, during or just after this period. Therefore these activities are more likely to result from developmental processes in the nervous system than from hormonal changes."—M. M. Nice.

16. Vocal Expressions of the Red-backed Shrike; Field Observations and Kaspar-Hauser Experiments. (Die Lautäusserungen des Neuntöters (*Lanius c. collurio* L.), Freilandbeobachtungen und Kaspar-Hauser Versuche.) Burkhard Blase. 1960. *Zeitschrift für Tierpsychologie*, 17(3): 293-344. (With English summary.) After thorough acquaintance with the notes and behavior of Red-backed Shrikes in the field, the author raised 21 individuals, some from eggs, others from 8-13-day-old nestlings; they were kept in soundproof rooms or free-flying in Dr. Blase's room. The time of appearance and significance of 10 call notes are described; all these are innate. The song can be subdivided into juvenile song, call song and courtship song. Only the juvenile song is innate; it consists of a soft warble. The call song contains many imitations of other birds' songs and different sounds; it is given on the territory until the arrival of a mate. Then the male switches to the courtship song, a song "reduced to its most simple elements."

Experiments with sound records were made at nests, often reinforced with mounted specimens of shrikes. Table 2 summarizes the development of the young; at 3-4 days they scratched from under the wing, at 13 days from over the wing; at 15 days they left the nest; at 17 they pulled and tugged at protruding objects; at 19 days the brood separated and first gave the note of antagonism; at 21 days they became interested in places for impaling and at 36 days impaled objects successfully. At 6-7 weeks the males started to sing; at 6-10 weeks they courted the females. Spectrograms are given of many of the calls and songs as well as many sketches and photographs of the birds. A fine study.—M. M. Nice.

17. Nest Behavior of the Alpine Swift. (Nestverhalten des Alpenseglers, *Apus melba*). Hans Arn-Willi. 1960. *Proceedings XII International Ornithological Congress. Helsinki. 1958.* 1: 50-54. The author began his study in 1932 when he ringed all the breeding pairs of Alpine Swifts in two localities in Switzerland, namely 38; these have now increased to over 220. From 6,916 eggs 4,224 young have fledged—61 percent success. The chicks scratch their heads under as well as over the wings. Of the young 13 percent have returned; of the adults 51 percent. Of these latter 76 percent have reoccupied the same nest as before. One male bred in the same nest for 17 years; he returned to it the 18th spring, but fell a victim to cold weather in April; for 11 years he had had the same mate. Six of these swifts have reached the age of 18 years; two of them 19 years.—M. M. Nice.

18. Comparability of Some Social Displays of Grouse. Frederick and Frances Hamerstrom. 1960. *Proceedings XII International Ornithological Congress. Helsinki. 1958.* 1: 274-293. After a clarification of terminology used in describing social displays of European and American grouse, the authors compare in detail these displays in the Greater Prairie Chicken (*Tympanuchus cupido pinnatus*) and Black Grouse (*Lyrurus tetrix*). "Both are territorial, and the territories are won by fighting," hard fighting at the beginning, soon displaced by display-fighting. "Unlike Black Grouse, Prairie Chickens differ very little in plumage as between the sexes" and they can only distinguish sex by behavior. Prairie Chicken booming can be heard at a distance of 2 miles, Black Grouse can be heard only at a half mile. After a full and very interesting description of the displays of these two species, the authors conclude that the displays are closely comparable.—M. M. Nice.

19. Some Photographs of Woodpigeon Behaviour and Feeding. R. K. Murton. 1960. *British Birds*, 53(8): 321-324. Nine outstanding photographs of parent *Columba palumbus* hovering and feeding a chick. A meeting of the pair at the nest is pictured and discussed, and three photographs show the process of feeding the chick, while in another the soft spatulate bill of the chick is well illustrated; it is "specially adapted for thrusting into its parent's throat."—M. M. Nice.

20. Anting by Meadow Pipits. E. G. Holt. 1960. *British Birds*, 53(7): 313-314. Anting by *Anthus pratensis* was noted on 10 dates in 1957 and 1959.—M. M. Nice.

21. Anting in the Motacillidae. K. E. L. Simmons. 1960. *British Birds*, 53(7): 314-315. Holt's and C. J. Stevens' (Anting Behaviour by Meadow Pipits, 1960. *British Birds* 53(7): 314) records are the first for any member of the Motacillidae in the wild. A captive Tree Pipit (*Anthus trivialis*) has been reported as doing so by Poulsen (*Dansk. Orn. Foren. Tidsskr.*, 50: 267-298.)—M. M. Nice.

ZOOGEOGRAPHY

(See Numbers 1, 4, 7, 8, 9, 23, 24, 26)

22. Kestrel Pellets at a Winter Roost. T. A. W. Davis. 1960. *British Birds*, 53(7): 281-285. The chief prey in 113 pellets of *Falco tinnunculus* from a roost in Pembrokeshire proved to be field voles (*Microtus agrestis*). Bank voles (*Clethrionomys glareolus*) and shrews (*Sorex* spp.) were common; birds and dumble-dor beetles (*Geotrupes stercorarius*) were occasional.—M. M. Nice.

SONG

(See Numbers 16, 23)

BOOKS AND MONOGRAPHS

23. Life Histories of Central American Birds. Part II. Families Vireonidae, Turdidae, Sylviidae, Troglodytidae, Paridae, Corvidae, Hirundinidae, and Tyrannidae. Alexander F. Skutch. 1960. *Pacific Coast Avifauna*, 34. 593 pp. University of California, Los Angeles 24, California. \$15.00.

In the first volume of these very important studies, published in 1954 (reviewed in *Bird-Banding*, 26: 78-79), Dr. Skutch covered 44 species of 5 passerine families. In volume II he tells of 59 species of 8 families. Each species is handsomely illustrated in black and white by Don Eckelberry, who spent 5 weeks on the author's farm; the frontispiece presents three species in color. Many photographs by Dr. Skutch of nests and young are also provided.

The usual topics covered are description and range, voice, food, nest building, eggs, incubation, nestlings, and often roosting behavior. Each of these is treated with meticulous care, in most cases from information gleaned from wide experience. For most species there are many hours of observation on incubation and feeding routines. The account of each species is summarized. An especially valuable feature is the general summary of each family in which the author gives an illuminating picture from his own experience as well as covering the literature from North America and in many cases the Old World as well.

Most of the book is devoted to two families—to 12 species of wrens and 31 species of tyrant flycatchers. Fledged young of the Southern House Wren (*Troglodytes musculus*) sleep in the nest until the eggs of the next brood hatch. In one case, however, two continued to sleep there and brought much food to their young sibling in the nest. When 73 days old the young female became antagonistic to her mother; after a day's fierce fighting, she disappeared. The brother remained and helped care for the nestlings of the third brood. Helpers at the nest assisted parent Banded-back Wrens (*Campylorhynchus zonatus*); a delightful account is given of the efforts of one of these helpers to show the fledglings how to enter the nest to spend the night. Unmated male helpers often assist the pair of Black-eared Bushtits (*Psaltriparus melanotis*) in building the elaborate nest, and in brooding and feeding the young. White-tipped Brown Jays (*Psilorhinus mexicanus*) may be assisted by from one to five unmated helpers, "apparently yearling birds which will not breed until they are two years old." They may feed the female while she builds or incubates; after the young hatch "they bring food and guard the nest as zealously as the parents."

A wealth of fascinating information is given on the flycatchers. For most of them Dr. Skutch recorded "twilight songs." "The dawn song consists usually of a simple phrase, which is repeated interminably with little variation for many minutes together. It nearly always ends before sunrise. Flycatchers' dawn songs are of such diverse types that by themselves they form a whole branch of bird music; some are loud and harsh, others low and shrinking, some inexpressibly quaint, and a few are pure and beautiful in tone. Amongst these last, the crepuscular songs of species of *Myiodynastes* are outstanding." (p. 572).

In most of the species watched the female builds alone; in all she incubates and broods alone, but in most cases the male guards the nest and helps feed the young. A number of species show striking characteristics. Gray-capped Flycatchers (*Myiozetes granadensis*) are very noisy, possessing a wealth of vocal expressions; the female usually builds beside wasps' nests; she sings and shouts as she incubates. Piratic Flycatchers (*Legatus leucopharius*) seem to have lost the ability to build their own nests; they take over closed structures from other species, throwing out the eggs of the owners. A number of species build elongate, pensive nests usually over water; these are attached to the tips of branches and are inaccessible to any but winged predators. Incubation in such nests is slow, lasting from 18-19 days to 22-23 days; nestlings develop slowly, some not leaving before 24-28 days.

An especially moving life history is that of the little Torrent Flycatcher (*Serpophraga cinerea*); the pair remains mated throughout the year and both birds build the nest. "The antithesis between the Torrent Flycatchers and their wild river home is as great as one can find between any organism and its environment, so that they seem to symbolize the disparity between life and its cosmic setting. The fragile birds are all warmth and animation; the stream is cold and invulnerable. The birds seem ever to tempt the surging waves, yet again and again elude their lapping tongues."

It is a privilege to read these life histories where the individuality and the charm of the birds has not been squeezed out through the endeavor to be "strictly scientific," as cut and dried as the report of a chemistry experiment. Dr. Skutch, on the contrary, has a great love of and sympathy with the world of nature and particularly with the *living bird*. This book cannot be too warmly recommended to all serious students of the life histories of birds.—M. M. Nice.

24. Our birds of the Northland. (Våra fåglar i Norden.) Edited by Kai Curry-Lindahl. 1959. *Natur och Kultur*, Stockholm. Part II, pp. 558-1022, plates LXXXVI-CXXXVII. The second volume of this work, of which the first part was reviewed earlier in this journal (31: 168), deals with 14 species of the Order Galliformes, 6 Gruiformes, and 38 Charadriiformes, all of which are of regular occurrence in Sweden. One of its most striking features is the generosity which marks the allotment of space to each species. Costs of printing and reproduction are obviously disregarded in the effort to produce as complete and authentic a record as possible. One acquires a picture of each bird that is intensely alive and characteristic. In part this is of course done through reference to the literature, but chiefly through the accumulation of a wealth of data derived from each of the 13 authors' intimate and extensive contact with the bird about which he writes. In their technique time-saving devices have had no place. The general histories that introduce and characterize each species abound with original data and observations. These supply a background of authenticity that is so often lacking in the work of the compiler who bases most of his text on hearsay, be it ever so well documented. This is refreshing.

With delight we read for instance the story of the Capercaillie (*Tetrao urogallus*). Through 9 pages, illustrated with 7 black-and-white photographs, 3 colored plates, and 1 map, we are treated to an account of literary quality and profound understanding of this secretive bird of the coniferous forests by Rosenberg, perhaps Sweden's most experienced bird-watcher and best known nature writer. "The Capercaillie is a bird of the pines," he writes, "that tree is for him a requirement of life." We hear of the Capercaillie "alarm-clock" which in the deep of the lightening spring night of the high north announces the pending overture of the great cock's weird music and impassioned displays. Its form is neither that of the Robin (*Erithacus rubecula*), nor of the Woodlark (*Lullula arborea*), but of the Pygmy Owl (*Glaucidium passerinum*), the whistled notes of which, repeated at exactly 2-second intervals, sound like the tingling of an insistent alarm-clock of human make. Duly "awakened" sometime after midnight, the Capercaillie embarks upon its ritualized "singing" and elaborate displays. These are executed first on the roosting branch, but at the first glimmer of dawn with a loud whirr of wings the bird flies down to the ground. A special paragraph is devoted to "display-mad" cocks, which are apparently quite common. Most famous is "Hällefors Niklas" which performed its phrenetic rituals like a witch doctor in the jungle in the same place for 10 springtimes. In full display this cock would advance upon the observer, often attacking with stinging blows of wings and beak, while at other times it flew up on the visitor's shoulder without hostile intent and emitted from this convenient perch its complete series of vocal ejaculations. Hormone imbalances or some kind of strange displacement activity are thought to be responsible for the exaggerated display behavior of these cocks.

Equally fascinating details are found in the account of each species until toward the end of this remarkable book we reach the Ruff (*Philomachus pugnax*). Through 21 pages of Curry-Lindahl's and Mellquist's factual narrative, with 16 photographs and 3 plates showing various plumages and phases of behavior, we may follow these interesting birds from their arrival in the spring to their return the next year, a trip that takes us at least as far as the Congo and through many years of study of the Ruff there, and then northwards again over territories marked and mapped by banding recoveries back to the breeding grounds. Our acquaintance with the "Standing Cocks" which own their stands in the display court, and the "White Cocks," and the "Visiting Cocks," and our initiation into the various roles they play in their amazing tournaments, is truly an impressive piece of ornithological accomplishment.—Louise de K. Lawrence.

25. Ecology of the Peregrine and Gyrfalcon Populations in Alaska. Tom J. Cade. 1950. *University of California Publications in Zoology*, 63(3): 151-290. \$2.50. This fine monograph is based on eight summers of field work by the author and on findings of other observers, both published and unpublished. It analyzes information from 246 nestings of *Falco peregrinus* and 86 of *F. rusticolus* in Alaska. Peregrines are migratory and live largely on migratory birds. It takes about 95 days from the laying of the eggs to independence of the young. The average number of eggs laid is 3; the average number of young fledged

is 1. The most dangerous time for young birds is after independence, "starvation is probably the greatest decimating factor on peregrines less than one year old." Females do most of the incubating and brooding, while the male's chief role is bringing food to his mate and young. The much larger female is dominant over the male. Either member of a pair may arrive first at the nesting cliff; any member of the opposite sex is accepted, but as soon as the former mate arrives, the interloper is chased off. The same holds true with the American Kestrel (*F. sparverius*).

Very interesting descriptions are given of mating behavior and pair socialization, particularly of cooperative hunting and courtship feeding. "Falcons are by nature extremely avaricious and pugnacious over items of food. . . . In some respects it is remarkable that falcons can mate at all, and the performance of the mated male in giving up food to his female represents a striking transition in behavior," (pp. 193-194). In some pairs there is difficulty in adjustment and the female pre-emptorily snatches the prey from her reluctant mate.

The Gyrfalcon is a true arctic species, circumpolar in distribution; it is resident and feeds largely on resident species, in many regions primarily ptarmigan. It starts laying a month before the peregrine, hence too early for ornithologists to get to its nesting grounds. Its average clutch is 3.8 eggs. "In years of poor food supply, non-breeding occurs on a region-wide basis."

The author concludes that between these two falcons "the gyrfalcon is the dominant competitor because of (1) its greater size and strength and (2) its early breeding schedule which gives it first chance to settle on available cliffs. Nevertheless, the peregrine is a numerically more successful species over most of the range that it occupies with the gyrfalcon because of (1) changing climatic conditions that are favorable to the biotopic adaptations of the peregrine, (2) its less restricted requirements for nesting sites on cliffs, (3) its summer exploitation of a constantly adequate source of food, and (4) its escape from the arctic winter by migration."—M. M. Nice.

26. The Eleventh Annual Report of the Wildfowl Trust. 1958-1959.

Hugh Boyd and Peter Scott. 1960. Bailey and Son. Dursley, Glos. 10 shillings. 167 pp. Another informative and handsome report of the Wildfowl Trust at Slimbridge, illustrated with excellent photographs and Peter Scott's sketches. The Nene (*Branta sandvicensis*) eggs show low fertility and poor hatchability. Spotted Whistling Ducks (*Dendrocygna guttata*) bred for the first time in captivity. Five young Hartlaub's Ducks (*Cairina h. hartlaubi*) are the first ever raised in captivity. Paul A. Johnsgard discusses "Comparative Behaviour of the Anatidae and its Evolutionary Implications." N. G. Blurton Jones describes "Experiments on the Causation of the Threat Postures of Canada Geese," based on experiences with a pair of hand-raised birds. In his interesting brief report on "Injury-feigning in the Anatidae" Frederick V. Hebard lists 58 species in which this behavior has been recorded and 17 in which it seems not to occur; on 74 species information as yet is insufficient. "Lead Poisoning in Wildfowl" by P. J. S. Olney, pp. 123-234, is a valuable presentation of this baffling problem that takes an appreciable toll of our waterfowl, at times the mortality from the ingestion of lead shot reaching "spectacular proportions." There is a two page bibliography. Peter Scott's account of his visit to the Galapagos Islands "BBC/IUCN Darwin Centenary Expedition," pp. 61-76, is full of interest and the sketches are a delight.—M. M. Nice.

NEBBA INCORPORATES

At the annual meeting held on October 1, 1960, the Northeastern Bird-Banding Association decided to incorporate as a Massachusetts corporation for scientific and educational purposes, after more than 35 years of existence as an unincorporated association. A committee, appointed at this meeting, was authorized to take the necessary legal steps in its behalf.

The association came to this decision for two principal reasons:

- (1) to make it easier for NEBBA to hold land and securities over a period of time, which was the primary reason; and
- (2) to limit the liability of its officers.