

When no. -88 returned in 1953 he went back to shaft G4, but on May 1 he was found to have a new mate (48-164510) with him. This female had been one of his visitors in G4 in 1951. Two days later he was found back in E1 with the former mate of no. -10 (48-164517), also a former visitor, and another bird. However, he soon returned to G4 with no. -10 where they nested, placing the nest at the same spot where it had been the two previous years. They raised three offspring from four eggs.

In 1954 these two returned to G4 to mate again. This time they had a visitor (21-128602) with them during much of the nesting season. Three eggs were laid on the nest attached at the same place as the year before. On June 6 the right wing of no. -88 was painted with a white stripe, the left wing of his mate was similarly marked, while the crown of their visitor was painted white for identification. Two days later the visitor left to nest in L3 with a mate of his own. The pair in G4 continued nesting by themselves, taking turns at incubating the eggs. Upon my return on July 24 after an absence of five weeks, I found the nest had fallen from the wall and a single juvenile was clinging to the spot where it had been. (For further information on three chimney swifts nesting together and on swift nests falling down while nesting is in process see *The Wilson Bulletin*, 64(3): 133-139. 1952, and *The Auk*, 69(3): 289-293. 1952.)

The last capture of no. -88 was made on September 4 when he was taken from G4 with his mate, the male from shaft H1 (48-164517—which was the former mate of the present mate of no. -88), and the male from shaft L3 which was the visitor with the G4 pair earlier in the season. Fifteen days later no. -88 was recaptured as one of a total of 1303 swifts trapped by Clive Smith in Chattanooga, but at that time he was not with any of the other swifts which summer on the campus of Kent State University.—Ralph W. Dexter, Department of Biology, Kent State University, Kent, Ohio.

## RECENT LITERATURE

### BANDING

(See also Numbers 14, 15, 19, 35, 36, 37, 39, 41)

**1. Sixth Annual Report of the Wildfowl Trust.** 1952-1953. Edited by Peter Scott and Hugh Boyd. 1954. Country Life Limited. London. 162 pp. 10 shillings. A very interesting report on the work at Slimbridge. There are articles on the ringing and recovery of ducks and geese, on the behavior of geese, on success and failure of hatching and rearing. Papers of particular interest are "Trapping of the Queen's Trumpeter Swans in British Columbia" by R. H. Mackay, "Some Results of Recent British Mallard Ringing" by Hugh Boyd, and "Experiments on the Following-Reaction of Ducklings" by Eric Fabricius and Hugh Boyd in which the little birds followed boxes and a balloon moved on overhead trolleys. "South America—1953" is a fascinating account of the Scotts' trip to Chile, Tierra del Fuego, and Lake Titicaca to see new ducks. This is followed by "Behaviour of the Bolivian Torrent Duck" by Peter Scott in which two sketches illustrate displays of this rare species. Three plates in color cover the scoters, sea ducks, and mergansers; the brief life histories give a maximum of information in small space; one aspect covered for each species is whether it has ever been kept or has ever bred in captivity. Incubation periods are not well known for most of these ducks. The book is illustrated with a number of excellent photographs and with many of Peter Scott's inimitable sketches.—M. M. Nice.

**2. Report on Bird-Ringing for 1953.** A. Landsborough Thomson and Robert Spencer. 1954. *British Birds*, 47(11): 361-392. In 1953 98,517 birds were ringed in Great Britain, 63,318 trapped, 35,199 as chicks. The species ringed in greatest numbers were: Blackbird, *Turdus merula*, 6,753; House Sparrow, *Passer domesticus*, 5,121; Greenfinch, *Chloris chloris*, 3,486; Lapwing, *Vanellus vanellus*, 3,270; Manx Shearwater, *Puffinus puffinus*, 3,243; Willow Warbler, *Phylloscopus trochilus*, 3,186 and Song Thrush, *Turdus ericetorum*, 3,155. A long list of selected recoveries is given. Four Swallows, *Hirundo rustica*, ringed as nestlings were recovered the following year, two at their birthplace, the others

28 and 30 miles distant. "Of others ringed as young, eight were recovered near their respective localities in their second year, two in their third year, and one in its fourth. Of birds ringed as breeding adults, four were recovered in their breeding localities in the following year; another was caught in five successive seasons including that of ringing." Starlings, *Sturnus vulgaris*, ringed in winter in Great Britain were recovered in the breeding season in Russia, Finland, Scandinavia, Germany and Holland. Two House Sparrows ringed as full-grown had moved: one ringed August 8, 1952 was found 15 miles east on April 26, 1953; the other ringed June 7, 1953 was recovered 8 miles northwest Nov. 12, 1953.—M. M. Nice.

**3. Banding of the Black-browed Albatross at Heard Island and Macquarie Island.** P. F. Howard. 1954. *Emu*, 54(4): 256. Since 1949 7 young and 26 adult *Diomedea melanophris* have been banded in the small colony at Macquarie Island, which rears only 2 to 5 chicks per year. In the larger colony at Heard Island, where some 80 pairs breed in the largest group, 170 young and 80 adults have been banded. The results so far have been disappointing. Only one bird from each colony has been heard from. An adult banded at Macquarie 3 December 1952 was caught 12 April 1953 near Eden, New South Wales. A nestling banded at Heard Island 22 February 1951 was caught 9 October 1953 off Boughton Island, about 100 miles north of Sydney, Australia.—O. L. Austin, Jr.

**4. Banding of Giant Petrels at Heard and Macquarie Islands.** M. C. Downes, A. M. Gwynn, and P. F. Howard. 1954. *Emu*, 54(4): 257-262. The Australian National Antarctic Expedition (ANARE) banded 2,078 young and 665 adult Giant Petrels (*Macronectes giganteus*) at Heard Island in 1951, 1952, 1953, 1954, and 199 young and 313 adults at Macquarie Island in 1950, 1951, 1952, 1954. From these bandings 18 recoveries have been received to date. The low rate of recovery is blamed on the type of bands used on 2,217 of the 3,225 Giant Petrels banded, an aluminum strip originally designed for sheep ear tags, and wrapped scroll-wise around the bird's leg. Inscribed only with the number and ANARE, AUSTRALIA, these bands were evidently too cryptic for decipherment, as well as impermanent. Only 6 of the 2,217 have been reported, and none of these beyond Australian waters. At the same time 408 B.T.O. lock-type bands inscribed INFORM ANARE MELBOURNE produced 6 recoveries, and 302 American-type bands marked SEND DOMINION MUSEUM NEW ZEALAND produced 4. These included 4 from southern South America, 2 from Africa, and one from Tahiti. All recoveries so far have been received within 41 weeks after the birds left the island, most of them within 15 weeks, and all but one of the recoveries were banded as nestlings. The one adult recovery was shot at South Georgia, after it had limped noticeably around a Norwegian whaling camp for a week with an overtight band.

When away from the breeding grounds, the Giant Petrels apparently spend their time circumnavigating the Southern Hemisphere, carried ever eastward downwind by the prevailing westerly anticyclones that blow persistently along the "roaring forties" and fifties. The authors find it "reasonable to conclude that in their first year many of the young birds travel at least once around the world, and that some may do the circuit two or three times in that period. . . . Except for one bird picked up dead soon after banding, none of the birds ringed as chicks has yet been recovered at its island of origin, suggesting that they do not breed till they are at least four years old. What happens during the intervening years is guesswork, but it seems possible that they may continue to circle the world in higher latitudes, where the chances of recovery are meagre."

As the Heard Island station is being closed, no more banding will be done there, but ANARE plans to continue the program at Macquarie Island.—O. L. Austin, Jr.

**5. Recoveries of Some Birds Ringed in W. Jutland.** (Nogle ringmærking af vestjyske fugle.) Ernst Torp Pedersen. 1954. *Dansk Ornithologisk Forenings Tidsskrift*, 48(3): 173-183. With English summary. Reports the results of bandings at West Jutland between 1941 and 1951. In this period 2,065

of 62 species were banded. Raw data are given for the 75 recoveries obtained from 23 species, none of them of outstanding interest or significance.—O. L. Austin, Jr.

**6. Results of the Bird-Banding Carried Out by the Ornithological Institute at Zagreb in 1951 and 1952. VIII Report.** (Rezultati prstenovanja ptica Ornitološkog zavoda u Zagrebu u godini 1951. i 1952.) Renata Kroneisl-Rucner. 1954. *Larus*, 6-7 (1952-53): 5-30. The 81 Yugoslavian cooperators banded 12,500 birds of 93 species in 1951 and 1952. Data are given for some 200 repeats, returns, and recoveries received for 24 species during the same period. More than half of these records are short term repeats of little or no significance, many of them taken at the place of banding within a few weeks, some of them only a day or so after banding. The publication of such unimportant records is hard to justify in these days of high printing costs. However, the practice followed in the list of giving the coordinates of each locality is a most excellent one.—O. L. Austin, Jr.

**7. Recoveries of Birds Ringed by Foreign Institutions in the Period 1940-1952.** (Nalazi ptica prstenovanih po stranim zavodima za razdoblje 1940.—1952.) Renata Kroneisl-Rucner. 1954. *Larus*, 6-7 (1952-53): 31-52. The 147 Yugoslavian recoveries detailed here are of 39 species banded in 12 other European countries. Most interesting are 26 records of Quail (*Coturnix*) banded by the Bologna University ringing program, mostly on the east coast of Italy, that show the movements of this migratory species across the Adriatic Sea. Russian bandings are well represented by almost a score of waterfowl, mostly Mallards (*Anas platyrhynchos*), and most of them banded in the Volga Delta. The list contains many other informative records of passerines, hawks, and herons for the most part, banded largely in northern Europe, the preponderance in Finland, Sweden, Germany, and Holland.—O. L. Austin, Jr.

**8. Bird-Banding in Norway / Banding by Oslo University 1940-52.** Hjalmar Broch and Per Fjeld. 1954. *Sterna* (Stavanger Museum) No. 15, pp. 1-37. We are very sorry to learn that with Professor Broch's retirement 1 January 1953 the banding conducted for the previous 13 years by the Zoological Laboratory was discontinued. This account of the work is its valedictory. It lists the 36 students and assistants who shared in the work and the totals banded by each. It lists by years the numbers banded of each of the 126 species handled, totalling 11,135 birds, from which 394 recoveries were received. The details of all the recoveries are given without comment.—O. L. Austin, Jr.

**9. Bird-Banding in Norway 1953.** Holger Holgersen. 1954. *Sterna* (Stavanger Museum) No. 16, pp. 1-38. This fourth list of Norwegian bandings gives the details of some 300 returns and recoveries received in 1953, and summarizes the Norwegian banding for the year. Four agencies have been banding in Norway, the Tromsø Museum, Oslo University, the Government Game Investigation Service, and the Stavanger Museum. Combined totals for 1953 are 26,632, slightly down from 1953, "caused mainly by the restricted activity of the Stavanger Museum's bird observatory and ringing station at Revtingen, which in turn is caused by the increased activity here of the Norwegian Air Force. During the days of bombing and shooting exercise, the main trapping place must be abandoned. . ."

The banding total in Norway from 1914 to 1953 is nearly 166,000. In listing returns the author has been selective, and to keep printing costs low has "omitted a great number of recoveries of lesser interest to the study of migration, most of them being young birds recovered during the first summer months at or near the ringing place, and also most retraps." The short, pertinent comments he inserts in the list after significant recoveries are a useful and informative innovation. Samples: For a Senegal recovery of the Gray Plover (*Squatarola*), "Our southernmost one of 5 recoveries of the species." For two Stock Dove (*Columba oenas*) nestlings taken nearby, "Our first recoveries of the species, but of minor importance." And after a long list of splendid Dunlin (*Calidris alpina*) recoveries, "The many recaptures of Norwegian-ringed Dunlins at Ottenby [Sweden]

are remarkable, as they show that the same bird may choose different routes in different seasons, one year migrating along the Norwegian west coast, another year along the Baltic shores. No doubt, these birds come from very northerly parts of the breeding range."—O. L. Austin, Jr.

**10. Bird-Ringing in Finland in 1952.** (Die Vogelberingung in Finland im Jahre 1952.) Ilmari Välikangas and Göran Nordström. 1954. *Memoranda Societatis pro Fauna et Flora Fennica*, Helsingfors, 1954, **29** (1952-1953) : 59-80. In 1952 the banders of the Zoological Museum of Helsinki University banded 8,604 birds of 117 species, most of them passerines, but a respectable number of owls, hawks, waterfowl, waders, and colonial seabirds as well. Details are given for 212 returns and recoveries received up to 31 August 1953, most of them from the 1952 bandings, a few from previous years. Short summaries of the results obtained and their significance introduce the records for each of the 39 species concerned.—O. L. Austin, Jr.

**11. Results of the ringing investigation of migration instituted by the Royal Museum of Natural History, Leiden, 39 (1952), 2.** (Resultaten van het ringonderzoek betreffende de vogeltrek, ingesteld door het Rijksmuseum van Natuurlijke Historie te Leiden, XXXIX (1952), 2.) G. C. A. Junge and J. Taapken. 1954. *Limosa*, **27** (1-2) : 39-60. This second half of the reports of the Netherlands 1952 bandings (for the first see *Bird-Banding*, **25**: 152) lists the raw data for some 480 returns and recoveries of 44 species from the terns through the passerines. Well over half (259) of the records are for the Starling (*Sturnus vulgaris*), which also comprised 8,675 of the 19,163 birds of 160 species banded under the Dutch program in 1952. With the large amount of information now at hand on the Starling from several European marking programs, it seems someone should start gathering it together and analyzing it. Nothing seems to have been published as yet on this wealth of raw data. Of interest in this list are two Long-eared Owl (*Asio otus*) recoveries, both banded as nestlings, one taken after 11 years 4 months, the other after 14 years 4 months.—O. L. Austin, Jr.

**12. The Göteborg Natural History Museum's Banding of Migratory Birds in 1952.** (Göteborgs Naturhistoriska Museums Ringmärkningar av Flyttfåglar under 1952.) Viking Fontaine. 1953. *Särtryck ur Göteborgs Musei Arstryck*, 1953. 30 pp., 1 map. The regrettable downward trend in Swedish banding (see *Bird-Banding*, **24**: 69) continued through 1952. The efforts of 11 banders totalled only 3,216 birds of 134 species. The largest number banded by a single cooperator was 305. Starlings (*Sturnus vulgaris*) lead the list of species with 323, followed by 216 Redwings (*Turdus musicus*) and 147 Lapwings (*Vanellus vanellus*). The 240 returns and recoveries of 64 species received during the year bring the total to 6,725 to date, 2.8 percent of the 237,111 birds banded under the Göteborg program since 1911. Six birds banded abroad were recovered in Sweden, 3 Teal (*Anas crecca*) from England, a Goldfinch (*Carduelis carduelis*) and a Marsh Warbler (*Acrocephalus palustris*) from Helgoland, and a Black-headed Gull (*Larus ridibundus*) from Holland. Among the older birds reported are a 12-year Peregrine Falcon (*Falco peregrinus*), a 20-year Heron (*Ardea cinerea*), and a 7-year Lapwing (*Vanellus*).—O. L. Austin, Jr.

**13. The Göteborg Natural History Museum's Banding of Migratory Birds in 1953.** (Göteborgs Naturhistoriska Museums Ringmärkningar av Flyttfåglar under 1953.) Viking Fontaine. 1954. *Särtryck ur Göteborgs Musei Arstryck*, 1954: 7-26. The 3,557 birds of 128 species banded in 1953 bring the Museum's totals to 240,668 birds of 228 species. The list of recent returns and recoveries contains some interesting records. A Scaup Duck (*Aythya marila*) banded at Golland in 1947 was reported in 1953 from Ust-Tsilma on the Pechora River, northwest Siberia, and a Shoveler (*Anas clypeata*) banded at Golland in 1950 was taken the next year near Archangel. An Osprey (*Pandion haliaetus*) banded 4 July 1952 at Närke was taken 3 September 1952 some 1,500 miles eastward near Borskoje, Siberia. Foreign bandings recovered in Sweden and reported

to the Museum include 3 from England, 2 from Helgoland, 1 from Norway, and 1, a Teal (*Anas crecca*) from the Volga Delta. Longevity records include a 12-year-old Swift (*Apus apus*), a 12-year Lapwing (*Vanellus*), and a 7-year Oystercatcher (*Haematopus*).—O. L. Austin, Jr.

## MIGRATION

(See also Number 4)

**14. On the Migration of Norwegian Thrushes and Blackbirds.** (Trostrekk.) Holger Holgersen. 1953. *Stavanger Museum Yearbook*, 1953: 91-102. The English summary states: "Basing upon recoveries of ringed birds a preliminary account is given of the migration of Norwegian thrushes and blackbirds—preliminary because the material is still rather scanty.

"In the autumn, the Song-Thrush (*Turdus ericetorum*) migrates in a south-westerly direction to its winter quarters in France, Portugal, and Spain. This south-westerly route is used also by the Ring-Ouzel (*T. torquatus*), whilst the Redwing (*T. musicus*) migrates more 'fanned out,' more dispersedly south and south-west, wintering in France, the Iberian Peninsula, and Italy.

"The Blackbird (*T. merula*) has its principal winter quarters in Britain, reaching them chiefly by crossing the North Sea, partly over land (Jutland, NW-Germany, Holland). Wintering may take place as far north as in Shetland, and parts of the population winter even in Norway. The return flight in spring takes place in much the same manner, some birds crossing the ocean, others flying over land." The five maps illustrating these movements are somewhat misleading, because the straight lines connecting points of banding and recovery suggest straight flights which the birds seldom if ever make.—O. L. Austin, Jr.

**15. Abnormal Winter Flight of the Common Gull.** (Unormalt vintertrekk av fiskemåke (*Larus canus* L.)). Holger Holgersen. 1954. *Fauna, Norsk Zoologisk Forenings Tidsskrift*, Blindern University, Norway, 1954 (2): 63-68. The English summary: "During and after a cold spell of weather in NW Europe in late January 1954, six Norwegian-ringed Common Gulls were recovered far south of the normal winter range for our populations of this species. These and other recoveries, together with detailed information in letters reporting the recoveries, indicate that both the gulls and other Norwegian migrants, wintering in Britain, N. France etc., were then forced to renew their southward movement and were driven ahead of the weather, to S. France and the Iberian Peninsula. The map shows the normal winter range of Norwegian Common Gulls, and our recoveries during the winter 1953/54 (Stavanger Museum rings)."—O. L. Austin, Jr.

**16. Firecrests in Britain, 1952-1953.** P. S. Redman and W. D. Hooke. 1954. *British Birds*, 47(10): 324-335. A discussion of the unusually large fall migration of *Regulus ignicapillus* into the British Isles, followed by wintering, as well as a further large immigration in spring. Three weather maps are presented for October 13, 14 and 18-19 and one for April 4-5 as well as a table of direction and speed of winds for the latter date. "It is inferred that two entirely different movements originated in the north and west of Germany within a few days of each other during October, 1952. . . . Support is given to Williamson's (1954) theory that the reason for Chiffchaffs wintering in Britain is due to adverse weather conditions inhibiting the migratory urge, by the fact that both Firecrests and Chiffchaffs wintered in larger numbers than usual in 1952/53."—M. M. Nice.

**17. Migration by swimming in two *Podiceps* species.** (Simflyttning hos skäggdopping (*Podiceps cristatus*) och gråhakedopping (*P. griseigena*).) Tore Andersson. 1954. *Vår Fågelvärld*, 13(3): 133-142. (From the English summary.) During the August migration from August to October, Great Crested Grebes (*P. cristatus*) and Red-necked Grebes (*P. griseigena*) pass the Swedish coast facing

the Aland Islands on their way southward. The Scandinavian Grebe populations are believed to migrate almost exclusively by night. While some fly by during the day, many "approach swimming over the sea from directions between N and E and then follow the coast south at a distance of usually 50-200 meters [offshore] swimming (and also diving for fish) at a pace of some 2km/hour on the average." The author suggests that "the diurnal migration by swimming in this case would be not a casual phenomenon, but a semi-regular behavior in the diurnal 'lower phase' of the migratory rhythm."—O. L. Austin, Jr.

**18. On the night-migration of thrushes and their probable orientation.** (Waarnemingen over de nachttrek van lijsters (*Turdus*) en hun waarschijnlijke oriëntering.) D. A. Vleugel. 1954. *Limosa*, 27(1-2): 1-19. (From the English summary.) From nightly counts of the calls of migrating thrushes in October and November, 1950, the author draws a number of interesting conclusions. The highest frequency of sounds usually occurred before midnight, with occasionally under certain conditions a second peak around 4 A.M., after which the birds continued flying in daylight. The thrushes made few sounds during variable or changing winds, and with a change in wind direction at night, even in good weather, migration came to a standstill. Migration was heavier with a headwind than with a tailwind, with no moon than in moonlight, during an overcast than with a clear sky, with light winds than with moderate winds. With strong winds migration usually stopped, and there seemed to be little or no movement in rain. No indication was found that thrushes fly at great heights at night as Chaffinches (*Fringilla coelebs*) and other migrants do by day. The author believes "the migrating thrushes use the position of the sun at sunset to find their standard direction, and maintain this course with the help of the direction of the wind."—O. L. Austin, Jr.

**19. Ornithological Observations from Lista 1953.** Michael K. Swales. 1954. *Sterna* (Stavanger Museum) No. 14, pp. 1-34. The third annual report of a group of six ornithologists who spend the autumn months watching the migration at Lista, a headland on the southwest coast of Norway. As a comprehensive paper is planned after 5 years of observations have been completed, this report is descriptive rather than analytical. Five main peaks of migration were noted between 7 September and 24 October, "each apparently associated with the approach or presence of anticyclonic conditions." A total of 173 species was recorded. The daily totals of the commoner species are listed in tabular form and shown graphically against the pressure record.

Most of the observations were on diurnal migration, but night watches were kept as well, particularly at the Fyr lighthouse during periods of poor weather. In view of the recent interest in ceilometer casualties in the United States, the following notes on the weather conditions under which birds are attracted to the Fyr lighthouse are significant: "It appears that the best nights for this are those on which there is 10/10 cloud, slight drizzle, light breeze and visibility of ca. 5-7. At visibilities less than this the number of birds coming to the lantern is first greater, but the fog signal frightens them away. If these conditions are merely a continuation of those which have existed throughout the previous day, there is little or no nocturnal migration. A night that starts clear, but which changes to the above condition later, results in the greatest number of birds coming to the lantern; however, as soon as the first stars appear again, the number of birds diminishes rapidly."

The party banded 412 birds of 31 species, most of them taken in a Helgoland trap in the light-keeper's garden. Others were taken at the light at night. Five recoveries of these birds are given, the most recent in May 1954.—O. L. Austin, Jr.

## POPULATION DYNAMICS

**20. Concerning the White Stork in Osnabrück.** (Vom Weissen Storch im Bezirk Osnabrück.) 1954. Matthias Brinkmann. *Die Vogelwelt*, 75(5): 194-200. The White Storks (*Ciconia ciconia*) at Osnabrück have fluctuated in num-

bers between 20 and 39 pairs since 1927. Low years were 1927, 1949 and 1953. Reproduction was particularly successful in 1946 and in 1951. Over a 10-year period the storks threw 44 eggs and 23 young birds out of their nests, almost always during fights. Some of the fighting was caused by storks trying to take over nests with apparently unattached widows and their eggs. It appears to me that the fighting cannot be attributed to scarcity of nests, as Brinkmann states that nest sites were not a limiting factor. His tally of available nests showed only 22 out of 46 occupied in 1953, the year in which the most eggs (11) were thrown out. Early spring return of adults increases reproductive success. The average number of young fledged per pair over a 10-year period was 2.09. Brinkmann used an interesting technique to discover local attitudes toward storks; he asked school children to write essays on storks with the help of their parents.—Frances Hamerstrom.

### LONGEVITY AND MORTALITY

(See also Numbers 12, 13, 35, 36)

**21. Unaccountable Death of Birds.** Motoichi Chiba. 1954. *Tori*, 13(64): 48-50. In Japanese with short English summary. A decrease of the wild bird population was noted in Niigata Prefecture. Cause of death of most of the many birds found dead was undetermined, but some specimens examined, particularly of migrants, showed radioactivity.—O. L. Austin, Jr.

**22. Migration emergency by Radioactivity.** Tamiya Narusawa. 1954. *Tori*, 13(64): 51-54. In Japanese, with English summary as follows: "The decrease of birds in Kamo, Niigata, is suggested numerically, particularly in the swallows. From the result of the count examination of radioactivity made by Dr. Watanabe, Niigata University, its influence on birds may not be denied, though not fatal."—O. L. Austin, Jr.

### LIFE HISTORY

**23. Life Histories of Central American Birds. Families Fringillidae, Thraupidae, Icteridae, Parulidae and Coerebidae.** Alexander F. Skutch. 1954. *Pacific Coast Avifauna*, No. 11. Cooper Ornithological Society, Berkeley, Cal., 448 pp. Paper covers, \$9.00; buckram, \$10.00. A very remarkable book. This distinguished ornithologist and botanist has spent 16 nesting seasons studying Central American birds, 9 of them at El General on the Pacific slope of Costa Rica at an elevation of 2,500 feet. Two seasons were spent "in the lowlands of Panamá, one each in the Caribbean lowlands of Honduras and Guatemala, one on the Caribbean slope of Costa Rica, at 2,000 feet, one in the highlands of Costa Rica and one in the high mountains of Guatemala" (p. 14). He has gathered together in this book life history studies of 9 fringillids, 13 tanagers, 14 icterids, 5 wood warblers and 3 honey creepers, a total of 44 species.

Each study is clearly organized under many headings, as, for instance, with the Song Tanager, *Ramphocelus passerinii*; characteristics and habitat, food, roosting, voice, nest building, the eggs, incubation (including a table on incubation patterns of 16 individuals of 12 species of tanagers), defense of the nest, a nest with two claimants, the incubation period, the nestlings (including three tables on rates of feeding), brooding, departure of the nestlings, the young after leaving the nest, the breeding season and second broods, the question of polygamy, nesting success, summary. Each of the five families is also summarized, and comparisons are made with nesting studies of representatives in the Temperate Zone.

In migratory species of tanagers, orioles, and wood warblers the male is usually brilliant and the female dull colored, but in many of these species in the Tropics both sexes are equally gorgeous. Moreover, in Central America, the young normally acquire adult plumage shortly after leaving the nest. In the honey creepers, however, where the males are highly colored, the females are much more soberly

clad. In most species of the five families the females incubate alone and also brood the young, but in the majority of cases the males help feed the young. In the tanagers and warblers (all of the warblers build domed nests) incubation and nestling periods are longer than in the Temperate Zone. With the tanagers, "The nestling period is variable; it is shortest in those species which habitually nest low (11 to 13 days in *Ramphocelus*); it is somewhat longer in species whose open nests are placed higher (14 to 16 days in *Tanagra*, 16 to 20 days in *Thraupis*); it is longest in species which build roofed nests (17 to 24 days in *Tanagra* and up to 23 or 24 days in *Chlorophonia*)," (p. 260).

Helpers at the nest were recorded with only two species—both tanagers. With many of the species there is a close bond between mates throughout the year. Much attention is paid to song; in a few cases females have musical songs. Anting was seen with a Buff-breasted Saltator, *Saltator maximus*, (p. 62). Complications sometimes arose between females that nested close together, as with the Saltator and Song Tanager. The 14 species of icterids present a varied picture, from the orioles with their bright plumage, melodious songs, and well-woven nest pouches, to the parasitic Giant Cowbird, *Psomocolax oryzivorus*, that lays its eggs in the nests of colonial, pouch-weaving members of its own family—the caciques and oropéndolas. As to nestling periods, the North American Cowbird, *Molothrus ater*, and Redwinged Blackbird, *Agelaius phoeniceus*, leave the nest at 9 to 11 days; Boat-tailed Grackles, *Cassidix mexicanus*, at 21 to 23 days; *Oropéndolas*, *Gymnostinops* and *Zarhynchus*, at 30 to 37 days. Like many others, Dr. Skutch missed Amelia Laskey's fine study of 29 color-banded *Molothrus ater* (1950, *Wilson Bulletin*, 62: 157-174) in which all her "observations indicated that the species was monogamous."

The volume is illustrated with numerous photographs by the author of nests and habitats, by black and white sketches of many species by Don Eckleberry, and has a handsome color plate of five species of tanagers by the same artist. There are a bibliography of about 100 titles and indices of common and scientific names of the birds.

This book is a mine of authentic information, based as it is on the author's zeal in searching for the truth, his deep sympathy with his subjects, and his meticulous care in all his scientific work. It presents an extraordinary picture of the natural history of the 44 birds about which little or nothing was known. It constitutes one of the most notable contributions ever made to life history study. In short, it is of utmost importance as a guide and inspiration to all bird students interested in the study of the living bird and particularly to those of us primarily engaged in watching passerines.—M. M. Nice.

**24. The Territorial Range of the Alabama Towhee.** May S. Laudén. 1954. *Alabama Bird-Life*, 2(1-2): 3-15. Ten representative territories of *Pipilo erythrophthalmus canaster* were studied and mapped (Figure 1) in Auburn, Alabama. The birds remain in pairs the year round on their territories which ranged from 1.7 to 6.4 acres, averaging 3 acres in size. Fighting between males was seen in November. Males drove away Blue Jays and English Sparrows, but not other species. "Whenever 2 male towhees foraged on the same ground, the male who had established the territory would approach the intruder without any particular display of belligerence, and when arriving at a point about 3 feet from him, the intruder would then fly away," (p. 7).

Nests were built from ground level to a height of 6 feet. Sets ranged from 2 to 4 eggs, averaging 3. Incubation lasted 12 to 13 days and was performed by the female. In two of the territories, "As soon as the first eggs hatched, the female left in an unusual hurry, flew to the male's feeding ground from which they both returned immediately, he going to the nest and she perched on a nearby limb until he departed," (p. 13). Males did most of the feeding of the young. They were noted singing on the ground and as high as 60 feet above it. Scratching in leaves "suddenly ceased about the middle of April. . . . The scratching apparently is not necessary during warm weather when insects are plentiful."—M. M. Nice.



## BEHAVIOR

(See also Numbers 23, 24)

**25. Colonial Behaviour in the House Sparrow.** D. Summers-Smith. 1954. *British Birds*, 47(8): 249-265. Observations on *Passer domesticus* in a rural area of 2 square miles in north Hampshire. The birds were found to nest in discrete, isolated breeding colonies of about 10-15 pairs. The sparrows in one colony were color-banded for a number of years. In fall the legs of young birds are smooth, those of older birds hard and scaly. In fall first year males start prospecting for nest sites, but by November are repulsed by the owners. "In February the first of the first-year males begin to adopt permanent nest sites and acquire mates. In the majority of cases once a male has taken up a permanent site he retains possession of it throughout his life. However, if he is unable to obtain a mate he may take up a new nesting-site and try to obtain a mate there." Center nests are preferred to those on the periphery. "Behaviour appropriate to the stage of the colony is very infectious; nest-building by one pair may induce other pairs to follow suit, and in the same way coition by one pair elicits the same behaviour in surrounding pairs. . . . On the other hand the stage of the breeding cycle varies from colony to colony." "Whereas possession of the nest is retained by the cock even during the moult and he usually visits it in the morning and evening on his way to and from the grain-field, the hen normally loses interest in it for a month or so at this time." Young birds may settle in adjacent colonies. Attachment to nest sites appears to be less strong in studies in Holland (Daanje, 1942) and in North America (Weaver, 1943). A splendid example of careful, well-planned work based on color-banding of a very common species.—M. M. Nice.

**26. "Anting" by Wryneck.** R. C. Stone. 1954. *British Birds*, 47(9): 312. A *Jynx torquilla* shuffled along a lawn where there were many ants; it shook its half-opened wings and tail and seemed to be rubbing something into its plumage with its beak.—M. M. Nice.

**27. "Anting" by Blackbird.** W. M. Logan Home. 1954. *British Birds*, 47(9): 312. A female *Turdus merula* picked up ants, tucked them "under both wings, next the body, and also at the root of the tail (on the top). It also sometimes ate the ants as well."—M. M. Nice.

**28. "Anting" by Blackbird.** W. P. C. Tenison. 1954. *British Birds*, 47(9): 312-313. A hen Blackbird repeatedly picked up ants from the ground and rubbed them under her wings and tail. She "appeared in a state of ecstasy." The editors discuss the subject briefly, mentioning several inconclusive theories. "Now, however, the solution seems to have been provided. As already reported by Julian Huxley in his summary of the recent XIth International Ornithological Congress (*Country Life*, June 24th, 1954, p. 2084), H. Poulsen of Denmark has described observations on the subject which show convincingly that these actions are instinctively carried out to rid the sensitive skin on the bird's head of the irritating formic acid squirted up by the ants as a defense." I fail to see how this theory explains in any way the behavior of the many species I have watched anting with sumach berries, orange skin, hot chocolate, soap suds, and ants.—M. M. Nice.

**29. Some Concepts of Ethology.** W. H. Thorpe. 1954. *Nature*, 174(July 17): 101. A clarification of this approach to the study of behavior, incidentally answering some recent criticisms. Dr. Thorpe summarizes the "essential elements of Lorenz's formulation" thus:

(1) The division of behaviour into a flexible appetitive behaviour and the relatively rigid consummatory act.

(2) The assumption that the fixed action pattern of the latter is generating some specific action potential. . . . This brings back in a new form the concept of internal drive, so resuscitating the essential idea of instinct.

(3) The concept of the 'innate releasing mechanism' which assumes there to be within the central nervous system a series of mechanisms of a particular type

which effectively inhibit or block all discharge of activity unless the animal encounters the right environmental situation or stimulus to remove or release the block."—M. M. Nice.

**30. An Attempt at Analysis of Hummingbird Courtship.** (Versuch einer Analyse der Kolibrihalz.) Helmuth O. Wagner. 1954. *Zeitschrift für Tierpsychologie*, 11(2): 182-212. A very interesting paper based on Dr. Wagner's 11 years of experience in Mexico where he became acquainted with 14 species of Hummingbirds; he has also made a thorough study of the literature. From the English summary we learn: "The female hummingbird searches for a mate only having finished building her nest. She mates with the first conspecific male which she meets and this union lasts only for a few hours." Courtship consists first in attracting the female, and second, in stimulating her by display flight, often accompanied by song or mechanical production of sound. In the luring phase there are three degrees of vocal sound production: song of a single bird, singing in groups, song combined with display flights. There may also be mechanical sound from modified flight or tail feathers during display flights. In courtship proper there are wild and elaborate flights of the partners; these are illustrated by some 20 sketches.

"The songs of different species show a gradation of differentiation. A low melodious song exists in all species as long as the birds are in juvenile plumage. In the adult males in nuptial plumage this subsong is developed into a loud song or into a strophe of one to four syllables which is repeated continuously." In courtship there exists "a series of differentiations: At the lower end of this series there are species in which there is comparatively little sexual dimorphism in behavior and/or coloration, while at the other end there are forms in which the development of the nuptial flight as well as that of the male plumage attains its maximum. . . . There is a strict correlation between the differentiation of the nuptial flight and that of the male's plumage; the more complicated the former, the greater is the sexual dimorphism." The fact that some species have modest and others splendid feathering, that some show simple and others elaborate courtship patterns would seem to be an example of the drive towards extravagance often shown in nature. "Play flights" are often indulged in by young birds either singly or in company. Similar play flights occur in some of the swifts and also in a few of the tyrant flycatchers, in which display flight is a part of courtship.—M. M. Nice.

**31. The Reproductive Behaviour of the Zebra Finch (*Poephila guttata*), with Special Reference to Pseudofemale Behaviour and Displacement Activities.** Desmond Morris. 1954. *Behaviour*, 6(4): 271-322. An exhaustive study of the behaviour of this small Australian ploceid, based on 23 individuals in captivity. The male builds a domed nest with a side entrance, while the female takes the larger share in incubation and in care of the young. Feeding in the dark nest is facilitated by the brightly marked gapes of the nestlings—7 black spots form a semicircle on the white roof of the mouth. The parents feed by regurgitation. Young spend 2 weeks in the nest and are independent in another fortnight. The author groups under "agonistic behaviour" "the groups of activities associated with intraspecific fighting. These activities include attack, threat, submissive and fleeing behaviour." (In the Century Dictionary "agonistic" is defined as "pertaining to contests"; it comes from the same Greek word as does "agony," the first meaning of which is "a violent contest or struggle.") "In general the more dangerous the weapons possessed by a particular species, the more that species relies upon its agonistic code in the settlement." (p. 273). The Zebra Finch, possessing only mildly dangerous weapons, depends chiefly on chasing and pecking.

Agonistic postures are described, but most attention is paid to courtship with the upright pivoting, song-accompanied dance of the male and the rapid quivering of the tail of the female. When females were unresponsive, their mates sometimes showed this female display; the suggestion is made that this results from "strong sexual thwarting in combination with the arousal of the drive to flee." Many displacement activities are described and a possible reason for the complexity of the markings of the Zebra Finch is discussed.—M. M. Nice.

**32. The Courtship Behaviour of the Cutthroat Finch (*Amadina fasciata*).** Desmond Morris. 1954. *Avicultural Magazine*, **60**: 169-177. As a favorable subject for the study of the comparative behaviour of related species, some English ethologists have chosen the Mannikins and Grassfinches that breed readily in captivity. The Cutthroat, although at present classified with the Amadinae, is not a typical Mannikin. This is a semi-social species, many pairs nesting in close proximity. The song of the male has no threatening effect, but is used "as an almost non-stop accompaniment of the courtship dance." This dance, which displays all the special markings of the male, may be described as an "inverted curtsy." "His upright posture and his hesitant advance . . . lead one to think of his mood as being basically a conflict between a sexual tendency to mount the female and at the same time a tendency to flee from her," (p. 174). In her invitation display the female quivers her tail "in a series of immensely rapid vibrations." Apparently all the Grassfinches and Mannikins "possess back and wing plumage colour which merges with their natural environment." But on the ventral surfaces there are "bars, spots, bands, and patches of colour and intense contrast. These are displayed to the female by the courting males, and it is remarkable to note how frequently the particular patch of colour or contrast, possessed by a particular species, is displayed so well by the special dance movements and posturings of that species."—M. M. Nice.

**33. Polygamy in Wheatears.** (Polygami hos stenskvätta (*Oenanthe oenanthe*.) Wolf Jenning. 1954. *Vår Fågelvärld*, **13**(3): 167-171. (From the English summary.) Describes two cases observed near Stockholm. The first occurred in a marked pair nesting in the same territory they had occupied the 2 previous years. While the hen was incubating, the cock paired with another hen who built a nest about 160 meters away. The broods hatched 23 days apart. The bigamous cock helped feed the young in the first nest until a few days before the second brood hatched. He then confined his attentions to the latter, though the first brood was not yet independent. In the second case the nests were about 350 meters apart and, from the size of the young, the first brood preceded the second by only 7 or 8 days. This cock helped feed the young in the first nest, and when the second brood hatched he fed both sets for some days. He then took no further notice of the first hen and her young and fed only the second brood.—O. L. Austin, Jr.

**34. Irrepressible Nuthatch.** Louise de Kiriline Lawrence. 1954. *Audubon Magazine*, **56**(6): 264-267. An important contribution to the ethology of *Sitta canadensis*, based on observation of color-banded birds, and most delightfully told. Young Redbreasted Nuthatches have green legs, while in older birds the color becomes olive green or almost black. Pair formation occurs in winter and, in the instance watched, the female, a young bird, took the initiative. The day-to-day life of the mates, the spring singing of the male which is not really territorial nor a call for a mate, but seems to spring "mostly from pure enjoyment," "courtship feeding," all these are described in detail. The gum smeared around the entrance to the nest hole sparkled in the sun like eyes; it is suggested that "eyes in nature, whether live or imagined, as they may appear in a pattern or as light strikes an object or a substance, seem to have a discouraging effect upon would-be trouble makers." The pair raised a second brood the first season, apparently the first record of such an occurrence for the species.

In one of the sketches by Walter Ferguson illustrating the article four fledglings are shown close together on a branch with a parent standing on the back of one while feeding it. As no mention of this surprising episode is made in the article, I wrote to the author inquiring about it. She never has seen all the fledglings collected together on one branch; instead "they are scattered around in the foliage, one here, one there, so there is no occasion for the parent to step on it when feeding it."—M. M. Nice.

## WILDLIFE MANAGEMENT

(See also Number 1)

**35. Mourning Dove Populations in North Carolina.** Thomas L. Quay. 1954. Wildlife Resources Commission, Raleigh, North Carolina, pp. 1-47, 2 tables, 24 text figs., June 1954. This general summary of the information obtained by the North Carolina Mourning Dove Project from August 1949 through February 1953 was edited by Dr. Quay at the request of the Wildlife Resources Commission after Donald G. Allison, who conducted and supervised the project, resigned in late 1953 while in the process of summarizing his data. It is well written in a simple, popular style "as a report to the sportsmen and people of the State, for their information and use in acquiring a clearer understanding of the principles involved in sound mourning dove conservation and management" (Director Patten's foreword).

The audience at which this attractive booklet is aimed, the dove hunters of North Carolina, will doubtless receive it most cordially. All information that might disturb them is carefully played down, and they are exhorted to continue the most damaging of their practices, killing doves in early autumn before the local population has finished nesting. "A good dove hunt affords lots of shooting, at fast-moving targets. What better warm-up is there for the regular fall hunting season soon to follow?" (p. 35). Splendidly exciting photographs of dove hunting are interspersed with enough graphs and tables to lend the false conclusions the ring of truth based on sound scientific investigation.

A semipopular dissertation of this sort naturally cannot present the available data in full, nor comment on them adequately or in detail. A mimeographed compilation (40 tables, 3 graphs, 1 map) of some of the original data has been issued separately and given limited circulation. The information to be gleaned from this publication does not always support and sometimes contradicts the main paper's conclusions. For instance, on p. 18 of the subject paper, site tenacity is claimed to be exhibited "in about the same degree . . . [by] spring and fall transients, summer residents, and winter visitors." The mimeographed return data show the banding returns of the summer population to be considerably higher than those of the wintering and transient populations.

The paper makes extensive use of the banding data gathered by the project, but the analysis of them leaves much to be desired. The failure to describe methods of trapping or to estimate trapping efficiency makes comparison with other sets of data rather misleading. Inspection of the mimeographed tables suggests that the North Carolina trapping effort was less stable and its efficiency somewhat lower than ours on Cape Cod.

I should probably feel complimented by the project's adoption (unacknowledged) of some of my methods in presenting its data (see *Bird-Banding*, **22**: 149-174). The use of the same 10-day periods in grouping repeat records certainly facilitates comparison. But in adapting the caption of my fluidity graph to their copy (pp. 16-17), the compilers forgot that their data cover only a 4-year period, not a 5-year one as in my original.

At least three and perhaps four or more separate dove populations are represented in the North Carolina sample. Failure to separate them adequately in analyzing the banding data prevents the delineation of any clear picture of their separate movements. The one important and unescapable fact to the hunters and game managers of the State that the banding data are made to show is the low ebb of doves in October and November, the heart of the hunting season. The North Carolina dove hunters are dependent for most of their sport on birds produced outside their State. These go through the territory so early in September and October that in order to harvest them they must put undue pressure on their own breeding population which has not yet finished nesting. The paper neatly avoids this crucial issue with the statement (p. 42) "The exact importance of this late breeding to the whole population is not yet clear."

The project failed to obtain (or at least fails to present) any reliable estimate of dove production within the State, and makes no effort to estimate the effects of hunting on the local breeding population. These are serious omissions, but

after all, whether or not their own covers produce doves for them is only of academic interest to the North Carolina hunters. Why worry about such inconsequentialities when year-round protection on the doves' northern breeding grounds assures them a continuing supply of migrants?

The paper's estimate of "Mortality Due to Hunting" (pp. 39-40) is most interesting. Starting with the percentage of banded birds reported shot, 1.5 percent, guessing at the proportion of those killed that the hunters probably report, and adding an equally unsubstantiated surmise of the illegal kill and the crippling losses, the hunters are assured they are killing not more than 15 to 20 percent of the population each year. This is claimed to be a very liberal estimate, which "may well be less." And as the total annual mortality is about 70 percent, this must be quite comforting. However, table 38 of the mimeographed supplement presents figures made by the project biologists on birds present, killed, and crippled on 65 separate shooting fields studied over four September seasons. The hunters here are shown to account for an average of 32 percent of the birds present. This is hardly light gun pressure, and represents a dangerously high proportion of the species' probable replacement potential, of which no mention is made.

The average Carolina hunter who reads this pamphlet is also going to be strongly impressed by the fact that the number of days of the open dove season has been reduced by Federal regulation in the past 36 years from 107 whole days to 30 half days, and the daily bag limit from 35 to 8 doves. (Oh, the injustice of it!) A graph showing the disproportionate increase of hunters and the corresponding decrease of doves during this same period would have been most apropos.—O. L. Austin, Jr.

**36. Status, Movement and Management of the Mourning Dove in Florida.** Frank A. Winston, 1954. Technical Bulletin No. 2, Florida Game and Fresh Water Fish Commission, pp. 1-86, 20 tables, 19 maps. This paper is propaganda to lengthen the dove hunting season in Florida disguised as a scientific report. Its conclusions and recommendations, reached by a rash and careless disregard for facts and logic, could well lead to the species' extinction if they were ever taken seriously. Among the most unreasoned and dangerous are the contentions (p. 82) that "with our present regulations, hunting activity does not just 'not harm' the dove, it makes no difference to the dove; that furthermore the earlier the hunting season can be set, the greater the take which can be allowed without reducing the spring breeding population."

I feared when I first pointed out (*Bird-Banding*, 22: 171) the discrepancy between the roughly 70 percent annual mortality in the Mourning Dove and the 4 percent or less of the banded doves reported shot, that someone would use this to argue that hunting is of no significance to dove survival. Although I showed some of the fallacies in such reasoning, the author boldly asserts that hunters do not account for more than the minimum 4 percent per year proved by the banding recoveries, and therefore should be allowed to take a larger share of the remaining 66 percent, which he claims is all wastage from "natural causes."

When he states (p. 81) that banding recoveries are a "reasonably accurate reflection of mortality due to hunting activity," I agree with him. I believe that banding recoveries, *honestly evaluated*, are the best evidence of hunting mortality available, and far more reliable and informative than the coo counts, random road counts, bag checks, and other boondoggles Pittman-Robertson funds have been squandered on. His interpretation of the recoveries, however, undervalues the variables that experience has shown them to contain. He states (p. 81) that "Loss of bands through illegal kill or through non-return is believed to be negligible," and that crippling losses "will not exceed twenty-five percent of the total birds brought to bag."

He bases his premise that hunters fail to report only a negligible number of bands on the alleged failure of a publicity campaign in Florida to increase the percentage of recoveries (p. 72). Yet we find (p. 48) that the recovery rate augmented by this publicity in Florida alone was 3 percent, whereas that for the entire southeastern dove project, including Florida, was only 2.3 percent. Various Florida samples for the publicity period quoted elsewhere in the paper range

from 5 to 9 percent recovery, increases of 100 to 400 percent. Considering the tremendous effort needed to overcome public apathy and inertia, even the 23 percent increase in the comprehensive recovery figures is not to be dismissed cavalierly. Current evidence on the percentage of recovered bands reported is slight and inconclusive, but most unbiased observers believe that not more than half the bands that come to human notice are reported, and many banders, myself among them, consider the probable reporting rate far lower.

Being a fairly experienced hunter myself, I am highly suspicious of the author's low estimate of crippling losses, and his naive claim that the illegal kill is negligible makes me wonder just how much field experience he has had, especially here in the South where game-law enforcement is notoriously lax. Most students of the evidence admit that hunting mortality in the Mourning Dove today is at least 15 percent, and some evidence is available (see No. 35 above) indicating it may be twice that amount.

Typical of the sort of reasoning found throughout the paper is this essential cog in the author's thesis (p. 71): "It is believed that if there were no hunting of doves at all throughout the country . . . this [70 percent] rate of mortality would remain approximately the same." Unsubstantiated and indefensible as this premise is, the author reasons from it that as 70 percent of the dove population is going to die every year anyhow, the hunters should be allowed to kill more than their present bag. This is a paralogism no college freshman would dare attempt if he expected to pass Logic I.

The author disregards completely the fine balance which has been shown to exist between the mortality and replacement rates, and the importance of keeping the death rate below the rate of recruitment. In fact he is not at all concerned with dove production, and makes no attempt to assess the local breeding population. His main concern with dove breeding is to note that the entire population is at its peak toward the end of the nesting season, and to urge that the hunting season be set as early as possible to take advantage of the larger number of birds then available (p. 83): ". . . the prospect of delaying a season to permit a few late nestlings to fly, while at the same time permitting hundreds of thousands of older birds to die from natural causes, unharvested, seems to be carrying the sacredness of motherhood to something of an extreme."

The paper is full of unsubstantiated premises and nonsequiturs and, aside from its unabashed sophistry, it is badly done in other respects. The text contains awkward redundancies and occasional lapses in grammar. Even casual comparison of the maps, tables, and text reveals errors, inconsistencies, and contradictions which show how carelessly the work was done.

As for that unqualified claim that hunting under present regulations "makes no difference to the dove," I find this interesting observation on p. 59: "It was the experience of this writer and others, that when [dove] shoots were held on successive days, or even a few days apart, the hunting declined because the birds wouldn't come back, or if they did, they were flying high out of gun range." As they believe hunting has no effect on the dove, there was of course no reason for the investigators to try to determine how many doves were left to come back, or where the survivors, if any, went.

If this paper is a fair sample of the use to which Pittman-Robertson funds have been put, I shudder for the future of government subsidized research in the natural sciences. It will not take many such biased and badly executed reports to damage irreparably the scientific reputations of those ornithologists who make their livings by working for the taxpayer.

I hope that the original raw banding data gathered at such great expense (and poor planning) by the Florida Mourning Dove Project are still available for study and analysis, and that someone capable of doing so accurately and honestly will be given the opportunity not only to do so, but to publish the results. —O. L. Austin, Jr.

**37. Waterfowl Conservation in Victoria.** M. C. Downes. 1954. *Emu*, 54(3): 169-180. Overshooting and loss of suitable habitat with the rapid development of agricultural and other land-use programs are threatening seriously the survival of a number of Australian game species. The Fisheries and Game De-

partment of Victoria has launched an extensive and well-thought-out program of rehabilitation in which banding is taking a prominent part. This article stresses the importance of the results obtained from banding waterfowl at Lara Lake (see *Bird-Banding*, 25: 17). In 1951, 1952, and 1953 the Department banded 11,620 birds, 8,698 of them Grey Teal (*Anas gibberifrons*) and 2,277 Black Duck (*Anas superciliosa*). There are good photographs of the banding, and maps showing some of the recoveries.—O. L. Austin, Jr.

## CONSERVATION

(See also Numbers 1, 37)

**38. The Steller's Albatross of Torishima, A Rediscovery.** Masaji Yamamoto. 1954. *Sokkojiho* (Tokyo), 21(8): 232-233, 1 plate. In Japanese. The author of this most welcome paper is a technician in the Japanese weather service, and not an ornithologist, but he presents the first indisputable evidence in 20 years that Steller's Albatross (*Diomedea albatrus*) is still extant. Though several uncertain sight records have been made since, the last definite record of the species was the 5 birds killed in 1933 at Torishima, a lonely volcanic islet 300 miles due south of Tokyo which was formerly the bird's chief nesting ground. I searched unsuccessfully for it there and in the neighboring Bonins in 1949, and ever since I published my fears that the species was probably extinct (*Pacific Science*, 3: 283-295), the Japanese weather observers stationed on the island have been watching carefully for it. Now, after an absence of 21 years, it has suddenly reappeared out of the ocean fastnesses, and has bred successfully. Yamamoto's account is accompanied by three clear photographs, one taken 16 January 1954 of a chick in down plumage, one of its parents incubating it, and the third a distant view of the nesting ground with 6 birds present. We will probably never know where the birds have been all this time, but we are certainly glad they are back, and we can be sure that the Japanese authorities will give them the protection they need.—O. L. Austin, Jr.

## PLUMAGES AND MOLTS

**39. Feather Markings in a Population of Collared Flycatchers.** (Gefedermkmale bei einer Population des Halsbandschnäppers (*Muscicapa albicollis*.) Hans Löhrl. 1954. *Bonner Zoologische Beiträge*, 5(1-2): 33-48. A by-product of the life history study of a population of these birds in the vicinity of Stuttgart, Germany, conducted by means of banding. Changes with age in the amount of white in the plumage are described and tabulated. Wing length averaged 81.4 mm. in 45 yearling males and 83.8 in 80 older males; 79.6 mm. in 12 yearling females, and 81.8 in 83 older females.—M. M. Nice.

## FOOD HABITS

**40. Food Habits of Wood Pigeon and Stock Dove—observations from a roost near Bonn.** (Zur Ernährung von Ringel und Hohltaube Beobachtungen an einem Schlafplatz bei Bonn.) 1954. Günther Niethammer and Wilfried Przygodda. *Die Vogelwelt*, 75(2): 41-55. Increase in numbers of wintering Wood Pigeons (*Columba palumbus*) is attributed to their ability to shift to a leafy diet in winter. Sixty-one crops collected between January 5 and April 1 are tabulated; 45 of these appear to have contained identifiable food and most contained brussel sprout or clover leaves. Seven crops of Stock Dove (*Columba oenas*) are also tabulated. The data on winter flock composition are too scanty for the conclusions drawn from them.—Frances Hamerstrom.

**41. Bird Revival and Food.** Lila Lofberg. 1954. *News from the Bird-Banders. Western Bird-Banding Association*, 29(4): 41-42. Birds stunned by

flying against windows can often be revived by being held in an upsidedown position. Food cakes can be made by mixing baby chick food, table scraps, etc., into melted grease, putting the mixture into milk cartons and refrigerating it.—M. M. Nice.

## BOOKS

**42. Biographies of Members of the American Ornithologists' Union.** T. S. Palmer and Others. Reprinted from 'The Auk' 1884-1954. Edited by Paul H. Oehser. 1954. Lord Baltimore Press. Baltimore, Md. \$4.00, paper covers, \$5.00, cloth. The preface states that about 1,200 biographies are here reprinted from "The Auk," including "66 nonmembers identified with ornithological work. It does not include 46 biographies published elsewhere. . . . About one-half of the obituaries were contributed by 5 members: J. A. Allen, A. K. Fisher, T. S. Palmer, A. W. Schorger, and Witmer Stone." The accounts differ greatly in length and interest, depending on the writer, on the degree of his acquaintance with and friendship for his subject, and sometimes on the subject's importance to ornithology. A useful feature is the inclusion of biographies of eminent foreign ornithologists as well as of some American nature writers.

Ironically enough it is the Fellows who are slighted. Some are mentioned briefly in editorials that give an idea of the loss sustained by ornithology in their deaths, but include few details as to their lives, nor is there any reference added as to where the memorials are published. Many Fellows—apparently 46—are not cited at all except sometimes incidentally as husbands of their wives, or their names may appear as authors of obituaries of others. It is a shock indeed to find no biography of Florence Merriam Bailey, first woman Fellow of the Union, of Glover M. Allen, Allen Brooks, Frank Chapman, A. K. Fisher, Joseph Grinnell, C. Hart Merriam, Thomas S. Roberts, and Witmer Stone, to mention only a few of the leaders of American ornithology. The 46 eminent and neglected ornithologists should have had at least a few lines dedicated to them, giving an epitome of their work and a reference to the full biography in "The Auk." Despite these most unfortunate omissions, the book should serve as a useful reference work on 1,200 people interested in birds who died during the last 70 years.—M. M. Nice.

**43. The Mammal Guide/Mammals of North America north of Mexico.** Ralph S. Palmer. 1954. Doubleday & Co., Inc., Garden City, N. Y. pp. 1-384, 40 colored plates, numerous text figures. Price \$4.95. And well worth it. This fine piece of work is a *must* for your reference shelf, and for your pocket when you go afield. Dr. Palmer has produced as clear, succinct, simple, readable, complete, and authoritative a guide as has been published for any of our fauna and flora in the spate of pocket guides now available. He has handled the several difficult problems the mammals present for such treatment in a most satisfactory way—such involved and controversial matters as the subspecies problem (few authors today agree on even the specific relationships in many mammals), and that of suitable and acceptable vernacular names for those that have none in common use. Range maps are given for every species, and the volume is well indexed. The publishers have treated the book well. The author's fine colored plates and his many line drawings are excellently reproduced.—O. L. Austin, Jr.

**44. The Little Book of the Woods.** (Das kleine Waldbuch.) Rolf Dirksen. 1954. C. Bertelsmann. Gütersloh. 32 pp. 2.20 DM. A charming little book describing with feeling the changing beauty of the woods throughout the seasons. A section on the development and history of the forest is followed by descriptions of the chief forest types in Germany: beech woods, mixed woods, spruce, fir, pine and pine-spruce-larch forest of the mountain tops. References are given to seven books on the subject. The 31 photographs show these different forests in many moods and also give a glimpse of the birds and mammals that dwell in the wild woods.—M. M. Nice.