

March and April. Lincoln gives a record of a banded White-breasted Nuthatch showing a northward migration. This bird was banded at Middleboro, Massachusetts, on February 22, 1926; and two months later, April 23, 1926, it was caught by a cat at St. George, New Brunswick.

During the past six years I have banded 35 White-breasted Nuthatches at my Ardmore, Pa., station. From this number I have had seven returns, six of which I would consider permanent residents on the basis of their repeats in my traps. The seventh one may possibly be a migratory bird. This bird was banded at Ardmore June 27, 1940, and repeated once on September 19, 1940, and did not return again until October 20, 1941, and was not retaken after that date until November 29, 1942. Since there was a lapse of over a year between each return, it may indicate a possible migration.

Recently I received a recovery report from the Fish & Wildlife Service, Washington, showing an actual migration of one of my White-breasted Nuthatches. This bird, an adult female, No. 39-169253, was banded at the Ardmore, Pa., station on December 31, 1939, and about three years later, on February 14, 1943, it was found frozen to death at Barrytown, Dutchess County, New York, a distance of about 200 air miles north of the Ardmore, Pa., station, the place of banding. Due to the fact that banding records of White-breasted Nuthatches showing actual migration appear to be rare, I thought it may be of interest so report this recovery.—HORACE GROSKIN, 210 Glenn Road, Ardmore, Pennsylvania.

**The Second Nesting of the Red-Wing on Cape Cod.**—In the *Birds of Massachusetts and Other New England States*, volume 2, page 430 (1927), Forbush states that he has "seen no conclusive evidence" that the Red-wing (*Agelaius p. phoeniceus* (Linn.)) raises two broods yearly in New England. The following observations show that some Red-wings do nest twice in one season on Cape Cod.

On May 2, 1936, while at the Austin Ornithological Research Station, North Eastham, Massachusetts, I heard a female Red-wing give an extraordinary call, quite unlike any Red-wing note I had ever heard. During the next few days I saw the bird frequently, identifying her easily by her call, and noted that she was wearing a band. On the 18th, she flew off a nest in some bushes over the pond. There was a house trap near her nest where Red-wings often were caught, and on May 21, as I approached the trap I saw this female inside and heard her sound her characteristic call. Her number was A277036, banded May 2, 1931, and caught yearly thereafter. She had been caught in the trap before, but could not be identified certainly with the bird I was watching until she called in the trap. A male, A277830, banded June 13, 1932, also frequented the trap, and was probably her mate. On June 10 two young were banded in her nest, 34-258924 and 34-258925. At that time sixteen pairs of Red-wings were breeding on the pond.

Forbush gives June 18 as the late nesting date for Red-wings in Massachusetts. On June 27, 1936, I made a second census of the Red-wing nests on the pond. All the young had flown from the nests in use on June 10, and six new nests with eggs were discovered. From one new nest, located about twenty feet from her first, A277036 flew up, calling characteristically in her alarm. There were no eggs in it then, but on July 8 she was again observed on this second nest, with four unhatched eggs. Observations terminated before the second brood could be banded.—FRED M. PACKARD, Ensign, U.S.N.R.

**Heavy Flight of Purple Finches.**—It has surprised me neither to hear nor to read any mention of last spring's (1943) flight of Eastern Purple Finches (*Carpodacus p. purpureus* Gmel.). My own station was visited, during February

March and early April, by this species in numbers second only to the historic flight of 1939. Two hundred seventy-three new birds were trapped and banded, but not a single return was taken.—G. HAPGOOD PARKS, 99 Warrenton Ave., Hartford, Connecticut.

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## RECENT LITERATURE

Reviews by Donald S. Farner

### BANDING STUDIES

1. **The Age of the Blackbird.** David Lack. 1943. *British Birds*, 36: 166-175. In the four years, 1931-1934, a total of 10,539 nesting Blackbirds, *Turdus merula merula* (Linn.) were banded; 192 (1.8%) were recovered dead. Of the Blackbirds trapped and banded during the same period 3.5% were recovered. The age determinations in this study are based on 592 birds banded as nestlings. It was found that 55% of the first-year birds die during the year whereas 38% of the second-year birds die during the year. In the third-, fourth-, and fifth-year age groups the death rate is about 40% per year. Hence assuming the population to be stable, for each 100 juveniles alive on August 1 there should be 46 second-year birds, 28 third-year birds, 14 fourth-year birds, etc. For every 100 juveniles alive on August 1 there are about 107 adults. This has been verified by field observations. On August 1 the life expectancy of the first-year birds is 1.6 years; for all other age-groups, 1.7-1.9 years. "Assuming that there are six males to every five females, 100 adult Blackbirds correspond to 45 breeding pairs. Therefore if the Blackbird population is stable, every 45 breeding pairs must produce 133 fledglings per year or just less than three fledglings per pair per year." This is reasonable in view of the fact that the Blackbird normally lays four or five eggs per nest and has two or three broods per season. The "potential age" (captive records) of the Blackbird is stated to be about twenty years. Two ten-year birds were recorded in this study. It is therefore to be concluded that the Blackbird's expectancy is only 8% of its potential life span. An interesting paper.

### MIGRATION

2. **The Migration of the Sandwich Tern.** A. Lansborough Thomson. 1943. *British Birds*, 37: 62-69. The conclusions in this paper are based on 317 recoveries of banded Sandwich Terns, *Thalasseus sandvicensis sandvicensis* (Lath.). From 1909 to 1942 a total of 17,987 of this species was banded; 1.76% were recovered. There is a more or less random dispersion of some of the young as soon as they are able to fly. It is possible that there is a northward tendency in this dispersion. The southward migration follows the coasts of Europe and Africa to the Cape of Good Hope and then eastward and northward sometimes as far as Sicily. "Some of the first year birds remain in the North Temperate Zone in November, and many probably never cross the equator as there are records from the North Tropical Zone throughout the winter." It appears that the older birds reach Cape Province more frequently than do the young and that possibly only old birds reach Natal. "Some birds, of all ages, remain in the Tropics through-