

it is this date which may be expected to yield the evidence of such changes. In my area the winter carrying capacity seems to vary much more than the summer capacity. I believe the area has been working at its maximum capacity in terms of breeding pairs although it does not always seem to have produced the maximum number of young birds. However, since chickadees are essentially independent of their parents before they can be trapped the variation in numbers on 1 September may represent, in part, a variable amount of wandering off by the young.

I have assumed that the death rate does not vary with season. This may not be entirely true but there is not yet any way of stating the variation accurately.

The loss during a period (Table II) may be mostly from birds which move away and never return to my vicinity even though they may live months or years longer. On the other hand, the gain must consist of new bandings less any moving away. That the second effect is rather small may be concluded from the fact that the sum of the gains (Table II) and the throughputs within a period (Table III) is 44.4 while the average number of new bandings is 51.5 per year. Seven birds per year are unaccounted for. The method of tallying and calculation is such that the figures in Table III are independent of those in Table II.

The small number of birds banded in one period and last recorded in the immediately succeeding one compared with those banded and last recorded within one period validates my choice of tally dates as dates of population stability.

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GENERAL NOTES

New Age Record for a Blue Jay.—Blue Jay (*Cyanocitta cristata*) No. 35-336385 was banded by me at 5833-85th Street, Elmhurst, Long Island, New York, on May 11, 1939. This bird was retrapped by Leonard Llewellyn on January 16, 1948, in a boxtrap at the Patuxent Research Refuge at Laurel, Maryland. On March 4, 1952, the Blue Jay was again caught in a boxtrap which was set out on the Patuxent Research Refuge during the month of March for the capture of small mammals alive. Mr. Oscar Warbach, a biologist at the Refuge, writes me that the trap was baited with an ear of corn and a piece of smoked herring.

When Mr. Warbach handled the bird he noticed nothing unusual in its actions that would indicate that it was an old bird. It jumped about the trap as he approached it in the same manner as other younger birds. The edges of the band were worn thin but the numbers were still very legible and the band showed little wear.

Mr. Warbach states that the bird lay quietly in his hands while he was examining it and made no attempt to peck him or to escape. When released, it flew into the nearby pines and disappeared without a scolding note.

This second recovery at the Refuge of the bird was about 1700 feet away from the place where it was trapped on January 16, 1948.

Mr. Seth Low reports that according to the files at Washington, D. C., this is the oldest Blue Jay on record.—Marie V. Beals, 165 South Marengo Avenue, Pasadena 5, California.

Robin Movements in North Dakota.—On July 14 a woman reported a dead robin found on the other side of town about two miles away. This proved to be one which I had banded September 26, 1948, and was the fourth of about 100

robins banded in five days, on which returns have been obtained. Another bird, banded the same day, was caught the next April by W. E. Brentzel who lives only two blocks from us. A third, banded the same day, was found dead at Napoleonville, Louisiana, on January 31, 1949, and one banded the following day at Kellyville, Oklahoma, December 25, 1950.

From similar periods in 1947 and 1948, there are also four records. One bird, banded October 1, 1947, was found dead about one-half mile east on May 24, 1948. I had a sight record of this bird at my window shelf on May 9. Another, banded October 5, 1947, was trapped at the same location, July 23, 1948. One bird banded September 28, 1948, was found dead June 1, 1951, about one-half mile east. One banded September 29, 1948, was found caught in a tree by a string on May 14, 1949, on the other side of town about two miles from the place of banding.

I have many other cases of birds banded in the fall and found or trapped in spring or summer in following years. One banded September 2, 1937, was a raisin box guest and was caught October 6, 1940. Another, also a raisin box bird, was banded October 4, 1942, and recaptured October 11, 1943, and September 23, 1947. A third, banded October 22, 1940, was recovered at Irma, Alberta, Canada, on June 29, 1943. The two robins previously cited (*Bird-Banding* XV: 142) as recovered at Oriska and Grand Forks, North Dakota are still the only cases which suggest a change of residence.

I have not been able to tell much about robin migration. They gather in the college orchard where fruit is usually abundant and a large number are often taken from the middle of September up to October 1. Usually they are in waves, many for two or three days, then few for a few days. Some evenings flocks will be seen flying southeastward, and few birds are seen the next day.

The question is, where do they come from? Are they birds from farther north or merely local birds which have gathered before leaving? The above records show that six in the three years did return (the bird caught in April might have gone on north but it is not probable), presumably to nest here. The winter recoveries are non-committal. We have of course practically no chance of capturing individuals which have been banded farther north.

Mr. Tyler, writing in Bent's Life Histories, states that the first robins arriving in New England migrate farther north and that the local birds arrive later. That is not the case in this area. I recall distinctly that on my first visit with Dr. T. S. Roberts I mentioned that robins were usually seen first on the south side of Fargo and probably it took them a few days to move across town. He looked at me with kindly tolerance and stated that the first birds to arrive were the local residents.

Since that date the truth of his statement has been more firmly impressed by observation. Sometimes the first arrival drops down to our raisin box. More often he sings from some tree in the neighborhood for several days before another bird appears. Later in the spring I may see robins in some numbers in unusual places or I may not notice such. Rarely do they congregate in large numbers and I do not get them in the traps. One year I made a special effort to count them daily for Dr. Speirs on our largest area of campus but the results seemed without significance.

Other observations indicate that local birds at least often remain until late in the fall and this is what would be expected from general migration patterns. A particular bird often is a regular visitor to the raisin box until about October 15-20, when he disappears. Only a few robins are seen after that date, but an occasional bird until about November 1. The large number of returns and local recoveries from late fall banded birds seems to indicate that these fall groups are composed of local birds. During the summer they would be scattered over a considerable area, say six to ten square miles. The local recoveries must be only a small fraction of the resident banded birds. Perhaps there is no considerable migration through the area as a rule.—O. A. Stevens, State College Station, Fargo, North Dakota.

Foot Pox in Passerines. While there has been a good deal of interest in this condition (see for example Dr. Meade's note in *Bird-Banding*, 16: 38), it has been sporadic rather than intensive. This is induced by a virus, *epithelioma contagiosum*, which produces wart-like growths on the toes and tarsi, occasionally around the base of the bill. Toes are often lost. Banders have a particular interest in it,