SOME NOTEWORTHY RETURN RECORDS

BY GEOFFREY G. OMMANNEY

My first banding station which I referred to as "Home Station," was started December 14, 1941. This was in operation until early October 1945. My present station "Winglands" was opened in late November 1945. It is about 150 yards southwest of "Home Station." Both stations are located near the boundary line between the villages of Hudson and Hudson Heights, on the Ottawa River, in the Province of Quebec, some 40 miles westward of Montreal.

Having recently had occasion to summarize some of the banding data obtained at these stations, it seemed that the return histories of certain birds might be worthy of record, and these are given below:

Northern Blue Jay *(Cyanocitta cristata bromia)*

Band number	A-387663	A-387671	42-307678	39-315697
Date banded	Nov. 15, 1942	Dec. 24, 1942	Mar. 7, 1943	Dec. 2, 1944
Age & sex	Ad. ♂	Im. —	Im. ♂	Ad. ? ♀
Returns:				
first	Dec. 23, 1944	Mar. 31, 1943	Dec. 22, 1948	Feb. 1, 1946
second	Aug. 31, 1946	Dec. 2, 1944		Aug. 31, 1946
third	Apr. 19, 1947	Dec. 29, 1945		Dec. 18, 1946
fourth	Dec. 20, 1947	Mar. 1, 1947		Apr. 4, 1947
fifth		Mar. 2, 1948		Dec. 31, 1947

Black-capped Chickadee *(Parus atricapillus atricapillus)*

Band number	42-45928	37-14689	45-2587
Date banded	Oct. 22, 1942	Dec. 21, 1945	Dec. 21, 1946
Age & sex	Ad. —	Ad. —	Im. —
Returns:			
first	Feb. 28, 1943	Oct. 2, 1946	Dec. 14, 1947
second	Aug. 15, 1943	Apr. 29, 1947	Dec. 5, 1948
third	Dec. 30, 1943	Jan. 4, 1948	
fourth	Apr. 30, 1944		
fifth	Aug. 12, 1944		
sixth	Dec. 9, 1944		
seventh	May 7, 1945		
eighth	Early Jan. 1946		

White-breasted Nuthatch *(Sitta carolinensis carolinensis)*

Band number	37-131795	41-141749
Date banded	Dec. 9, 1942	Oct. 1, 1943
Age & sex	Ad. ♂	Ad. ♀
Returns:		
first	May 1, 1943	Jan. 15, 1944
second	Sept. 28, 1943	Oct. 1, 1944
third	May 19, 1944	June 6, 1945
fourth	Oct. 21, 1944	June 5, 1946
fifth	May 29, 1945	Nov. 9, 1946
sixth	Nov. 21, 1946	
seventh	Dec. 10, 1947	

Catbird *(Dumetella carolinensis)*

Band number	41-127698
Date banded	Aug. 10, 1945
Age & sex	Ad. ? ♂

Catbird (continued)

Returns:	
first	May 18, 1946
second	June 29, 1947
third	June 6, 1948

Eastern Tree Sparrow *(Spizella arborea arborea)*

Band number	C-761	43-25251	41-83662	41-83668
Date banded	Dec. 14, 1941	Dec. 30, 1943	Dec. 30, 1944	Jan. 10, 1945
Age & sex	Ad. ♂	Ad. —	Ad. ? ♂	Ad. ? ♀
Returns:				
first	Dec. 1, 1942	Mar. 31, 1944	Apr. 5, 1945	Jan. 25, 1948
second	Mar. 10, 1943	Dec. 16, 1944	Mar. 23, 1946	
third	Feb. 6, 1944	Dec. 22, 1945	Oct. 23, 1946	
fourth	Feb. 7, 1945		Apr. 16, 1947	

Band number	41-83669	45-58012	46-65439
Date banded	Jan. 10, 1945	Dec. 26, 1945	April 3, 1948
Age & sex	Ad. ♂	Ad. ♂	Ad. ♀
Returns:			
first	Mar. 30, 1946	Dec. 18, 1946	Oct. 22, 1948
second	Apr. 29, 1947	Jan. 23, 1948	
third		Jan. 7, 1949	

Eastern Song Sparrow *(Melospiza melodia melodia)*

Band number	C-771
Date banded	Apr. 3, 1942
Age & sex	Ad. —
Returns:	
first	Aug. 15, 1942
second	Apr. 14, 1943
third	July 17, 1943
fourth	Apr. 16, 1944
fifth	Mar. 22, 1945

FURTHER NOTES ON THE ABOVE RETURNS

Blue Jays. A-387663. On date of "4th return" this bird was found dead in a natural position on the ground and apparently with no injury. Its minimum age at that date was six years, four months. As it was banded as an adult it may have been considerably older. Possibly this is one of the rare exemplifications of death from natural causes.

A-387671 at date of 5th return had minimum age of five years, five months.

42-307678 between date of banding (March 7, 1943) and of 1st return (Dec. 22, 1948) there were no intermediate records.

39-315697 Assuming age at date banding 1½ years minimum age at 5th return four years, six months.

Black-capped Chickadee. 42-45928. As ad. on date of banding probably not less than four years, eight months at 8th return.

White-breasted Nuthatch. 37-131795. Minimum age at 7th return five years, six months.

41-141749 mated with above bird 1943 and probably in 1944. Minimum age at 5th return four years, four months.

Catbird. 41-127698. Minimum age at repeat of July 17, 1948, four years, 1 month.

Eastern Tree Sparrow. C-761. This first bird banded by author. On 5th return accidentally killed. Skin (per Dr. A. Rand) added to collection National Museum of Canada, Ottawa, Ont. Minimum age at death four years, eight months.

41-83662. 4th return minimum age probably more than four years, six months.

41-83668. Last record prior to 1st return Feb. 26, 1945. Thought to have been three years at date banding; if correct, age at 1st return more than six years.

45-58012. After 1st return remained at station to April 16, 1947 recording 53 repeats. After 2nd return remained to March 17, 1948 recording 10 repeats. The last repeat recorded after 3rd return was Jan. 12, 1949.

Eastern Song Sparrow. C-771. At 5th return minimum age four years, nine months.

Hudson Heights, Quebec.

LENGTH OF STAY OF MIGRANTS

By CHARLES H. BLAKE

The available evidence (Blake 1948; Borror 1948) appears to show that the distribution of elapsed time to first repeat and the length of stay of banded migrant birds approaches a geometric progression. In any event, the best representative value for such times will be taken, in what follows, to be the geometric mean. I show below how the desired means can be calculated.

Formally the geometric mean is obtained from the equation

$$g = \text{antilog } (\Sigma \log d/n) \qquad [\text{Eq. } 1]$$

where g = geometric mean
d = time in days
n = number of birds

Σ is an operator meaning "the sum of," i.e. add together all log d's. In words, the logarithm of the geometric mean is the quotient obtained by dividing the sum of the logarithms of the elapsed times by the number of birds. For repeats, the day of banding would be recorded as zero elapsed days, but as a practical matter we use ½ day as the numerical value. This could be further refined by using ¼ day for repeats in the same forenoon or afternoon as original banding. No problem arises with length of stay since the least recorded time would be one day.

Now, let G = mean length of stay of all birds
G_r = geometric mean of time to first repeat
s = known stay, in days, of a repeater
n_o = number of non-repeating birds
n = total number of birds = n_o + no. of repeaters

Assume that the mean length of stay of non-repeaters is G_r. It is clear that if the stay were longer the birds would repeat.