

LONGEVITY IN TUFTED TITMICE

By Ralph W. Condee

Determining the longevity of the Tufted Titmouse (Parus bicolor) with any precision is difficult. As any bander knows, the corpses of small passerines are rarely found, so that even at best most of the evidence on longevity is negative and therefore difficult to evaluate. Charles Blake (Bird Banding XX 151-152) records a Tufted Titmouse returning to nest for seven years; Mrs. Mack Short (Bird Banding IV 159-160) reports a bird at least five years old. (See age records by Raymond Middleton elsewhere in this issue. -Ed.) Since September 1965 I have banded (and recently color-banded) 70 titmice on a partially wooded tract of about 220 acres in central Pennsylvania. Data on the twelve (presumably) longest-lived of the 70 may help to indicate the life-expectancy of the bird. The data are from September 1, 1965 to April 1, 1969.

<u>Bird</u> ¹	<u>Sex</u> ²	<u>Date Banded</u>	<u>Date Last Seen</u>	<u>Estimated Age</u> ³	<u>No. of Observations</u> ⁴	<u>Maximum Observed Winter Range</u> ⁵
136	M	10-15-66	03-29-69 ⁶	34.00	75	1700'
166	M	11-11-66	03-29-69 ⁶	34.00	21	1700'
159	U	10-29-66	03-10-69 ⁶	34.00	20	1500'
017	U	03-17-66	03-26-68	33.26	6	2100' ⁷
794	M	10-14-65	02-25-68	32.25	16	800'
135	F	10-15-66	12-26-68	30.26	50	1650'
165	U	11-11-66	10-27-68	28.27	15	2250' ⁷
185	F	09-16-67	03-29-69 ⁶	22.00	25	3000'
186	U	09-24-67	03-25-69 ⁶	22.00	8	2100'
183	M	09-10-67	03-10-69 ⁶	22.00	34	2100'
193	M	11-19-67	12-13-68	18.13	8	2500'
203	M	03-22-68	10-27-68	16.27	3	600'

Notes

1. These are the last three digits of the bird's band.
2. The basis for sexing is measurement of the wing chord: up to 78 mm, female; 79-82 mm, unknown; 83 mm and up, male. This distinction is based on research set forth in an unpublished manuscript by Professor Merrill Wood of the Dept. of Zoology, Pennsylvania State University.
3. The estimated age arbitrarily assumes a hatching date of June 1 prior to banding. I did not know how to age first-year titmice until late in 1967, a date too late to be of use in this table. The estimated age also assumes the survival until April 1, 1969 of any titmouse seen after

March 9, 1969, since all the titmice on a 220-acre tract cannot be located simultaneously. Age is expressed in months and days: 33.26 = 33 months, 26 days.

4. "Observations" means either the trapping of a bird or the unmistakable sighting of a color-banded bird.

5. The maximum observed winter range is based on the distance between the farthest two points at which the bird was sighted (if color-banded) or trapped by the portable rig described in EBBA News 32:1, pp. 17-18.

6. These six titmice are presumably still alive on April 1, 1969; the other six in the table may well be dead, although 017 remained unseen, untrapped, but alive from March 17, 1966 to March 15, 1968.

7. Between the first trapping and the last sighting, 017 and 165 (and only these two) moved their winter territories to a new, non-contiguous area. The range in these instances includes the travels of each over its two territories.

None of these titmice, of course, has shown itself for as long as Dr. Blake's 7-year-old bird or Mrs. Short's 5-year-old, because the study has gone on for only $3\frac{1}{2}$ years. But the study gives some indication of the rarity of old titmice: of the 15 titmice banded in the winter of 1965-6, only two could be found by the beginning of 1968, and they disappeared shortly after. Of the 17 banded in the next winter (1966-7) only three are demonstrably alive in 1969.

Out of the total of 70 titmice, 23 seem now to be alive. How many of the remaining 47 are lurking out of sight cannot of course be told; I have found only one actually dead. But the very large number of repeats among the living birds seems to show that there are not many unseen titmice in the area: 136 has appeared 75 times in all, three of these appearances being during the closing search period (March 9 to April 1). The 50 appearances of 135 during a $2\frac{1}{2}$ -year period gives a strong indication that her subsequent disappearance 16 months ago was the result of her death. The closing search period of 22 days recorded 43 appearances of previously banded birds; obviously a few birds might have escaped the search (as did 017 for two years). But at this point it seems safe to say that not many titmice survive beyond three years.

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