

AGGRESSIVE BEHAVIOR OF TRAPPED TUFTED TITMICE

By Mabel Warburton

Banding began at my Woodhaven Bird Banding Station in January of 1955 and during that first year five Tufted Titmice (Parus bicolor) were banded, presumably all one family. Skull aging was not generally used at that time, and so July, August and September birds with noticeably new plumage, yellow gape (and some with yellow wash on throat and breast) and in company of known adults were aged "immatures" while birds in October, November and December were called "adults" even though they may well have been of that year's hatch. There were no fatalities in 1955.

Bird banders, bearing in mind the aggressiveness of tufted titmice, avoid putting two in the same cell of a collecting box, for fear that one will destroy the other. But does this always occur? Is one tufted titmouse more aggressive than another? Or does the difference lie in the cell mates, i.e. as to age and sex? Do titmice attack members of their own family group, or only "outsiders?" Are these outsiders males of rival groups seeking mates, birds seeking nesting sites, or birds foraging for food or perhaps seeking new grounds? Let us see how and if the following statistics answer these questions.

1. In 1956 one of the immatures of 1955, #23-171853 and a February 1956 tit banded with #23-171856 were in the same trap (Seth Low or all purpose trap) five different times during May, from the 3rd through the 25th, and no injuries to either were noted.
2. During the summer and fall of 1956 consecutive numbers 860, 861, 862, 863 and 864 (last three digits of band number used for convenience) were banded, and I thought quite possibly they were offspring of the above mentioned #853 and 856. However, three of these tits were killed, and one injured by being confined in the trap with one another. On October 18, 1956, numbers 860, 861 and 862 were all together in one Seth Low trap; #861 was found badly pecked and bleeding. Brought into the house and kept until the next day, it died of its wounds. Number 862 had also been attacked, but did not appear too badly injured and was released and found dead three days later, October 21, 1956. In this battle, #860 had apparently been the victor, but on November 27, 1956, it was killed in a Seth Low trap by #864. This left only #863 alive, and the following May 1957 it was found battered in bleeding with one eye shut. No other tit was entrapped with him at this time, but the wounds were typical of tufted titmice attacks, heavy pecking about the head, feathers gouged out, and eyes injured.
3. Of the above group, #863 and 864 were congenial, as were #864 and 865. Numbers 863 and 864 were together in a small top-opening trap on one occasion (January 3, 1957) without injuring one another, and in December 1956, #864 was in the housetrap with 865 and there were no injuries to either. Number 864 had killed 860 in a Seth Low trap, but had not attacked 863 in the small confines of a top-opening trap.

4. Number 863 had upon another occasion, been caught in the same cell of a top opening trap with #22-179276 (banded by Jeanne Fluck) and both birds were in fine condition. This was on December 18, 1956.
5. Number 864 was trapped in the housetrap in March 1958 with #895 without mishap, although #864 had previously killed 860 (November 1956).
6. In March 1958, #870 was with 856 in a small top-opening trap and no harm was done.
7. In November 1960, #019 killed 020 in the large housetrap. Number 019 was an adult bird when banded in February 1960 and number 020 was an immature when banded earlier that same year.
8. On two occasions in April and May of 1960, #101-143466 and 104-191295 were in a top-opening trap and a potter trap, respectively, and both times, both birds were in good condition. (Note: the possibility of two titmice being in the same cell of a top opening trap may seem remote, but it frequently happened with the old-fashioned top-opening traps I used. They were set by means of a forked twig, the position of which determined the tension. The twig, more often than not, became wedged in the wire and the trap did not spring at all. On many occasions small birds like tits, could go in and out through the spread of the fork of the twig, not touching it. Sometimes, the weight of one bird was not sufficient to spring it. Hence, two birds were often in the same cell.)

What may be concluded from the above eight instances of aggressive titmice behavior?

- Two individual birds captured together five times in May (see 1) in the same trap may be safely judged to be a mated pair. We may say, then, that tufted titmice do not injure their mates even under stress of capture (also see 8).
- Birds banded with consecutive bands might possibly be a family of tits (see 2) but in this case #860 was killed by 864, and 861 and 862 were killed by #860, which makes it seem quite possible that siblings attack one another.
- Narrow confines of a trap apparently do not contribute to attack. The large housetrap was the scene of the death of #020, and the Seth Low was where numbers 860, 861 and 862 were fighting with the resultant death of two, while on four occasions birds entrapped in small space did not fight and harm each other (see 3, 4, 5, 6, 7 and 8).
- Aggressive behavior of the males of many species is common in the breeding season when rival males and beaten or driven off, but of all the the mentioned casualties (see 2 and 7) none took place in the breeding season, but in October and November. This would eliminate mating rivalry as a cause of these attacks. It would also, at the same time, remove nesting-site rivalry as the cause of belligerent behavior. Since titmice often spend winter nights in nesting boxes, is it possible there might be some rivalry over these shelters?
- This brings us to the matter of food. Since the death of all the tits mentioned, occurred in autumn, this would tend to point out that the older or established bird, in order to ensure a good supply of winter

food, might attempt to drive out or kill the younger or weaker ones, thereby thinning our the population and increasing the food supply. (paragraph 7)

It is regrettable that at the time most of this banding was done, skull ageing was not employed to age the birds in question, and wing measurements were not used to help determine sex. As I no longer have a titmouse habitat, perhaps someone, spurred on by my attempt at solving a behavior problem, will make a further study using today's ageing and sexing techniques.

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KEEPING RECORDS ON A LARGE BANDING OPERATION (Decoy Trap)-Harold E. Burt

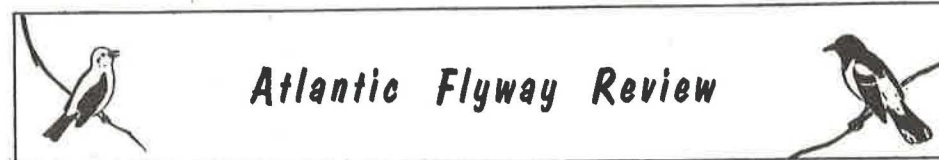
I keep my log by groups of birds, rather than by individuals. For example:

72-147321 - 335	Cowbird	AHY M	15	11-17-71
336 - 345	Cowbird	HY M	10	11-17-71
346 - 350	Cowbird	U F	5	11-17-71
752-61718 - 732	Redwing	HY M	15	11-17-71
733 - 745	Starling	AHY U	13	11-17-71

My projects and hypotheses do not call for weighing and I take measurements only to determine sex (e.g. Grackles). To sort the birds for the above listing, I use two gathering cages with a slit of innertube on one side. In the above example, I take a bird from the gathering cage and if it is a cowbird AHY-M (1A) or a redwing HY-M (2) I band it. If it is a cowbird HY-M or U-F or starling, I put it in the second cage. After the first cage is empty, I turn to the second cage and band cowbird HY-M and starling, but put cowbird U-F in another cage. Finally, I band the cowbird U-F. Sorting requires only a few seconds per bird but saves a lot of paperwork. In an 8½" x 11" loose-leaf notebook, I can get three columns on a page, but even so, after eight years at it, I'm on page 155 of my running log. I also keep a log by band sizes and one by species in two separate notebooks. Cardboard inserts with marginal tabs facilitate locating anything desired. These supplementary logs require some work but are a tremendous saving in analyzing data.

For repeats I use 3" x 5" slips -- one slip for each repeater. It gives bird, age, sex, band number, date banded and the date for each repeat. (One grackle repeated 70 times). The slips can be sorted for various types of analysis. A similar procedure is used for returns (after 90 days). For recoveries, I use the IBM cards which can be sorted easily. After all, I have only about 1100 of these.

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REGION III by Robert Dewire

Region III covers all the banding stations on Long Island, New York and one station in Westport, Connecticut. Ieroy Wilcox, who has operated a station at Tiana Beach in Suffolk County sent me a note that he did not operate his station this fall, but plans to resume operations in 1972.

The fall migration was not, in many ways, a good one in this region. The weather remained warm and virtually no strong cold fronts passed through the region. The weather was abnormally warm through October, in fact, in the New York region the average temperature for the month of October was just over 58° which was about five degrees warmer than any previous October since average monthly temperatures have been kept (1904). This warm weather persisted right to the end of the year. The myrtle warbler and sparrow flights were at their peak during the early part of the second week of October (9-13).

August was generally hot and quite dry, with little movement of migrants recorded. September was warm but with several periods of rain. North-northwest winds on Sept. 18-19 and 24-25 produced noticeable flights at several stations. Only two stations, Manorville and Westport commented on the thrush flight and both felt it was poor.

A brief station summary in table form is as follows:

	Manorville, N.Y.	Brookhaven, N.Y.*	Tobay Beach, NY	Atlantic Beach New York	Westport, Conn.
Days of Operation	69	96	31	92	53
No. of nets used	10 max.	14	15-25	7	3
No. birds banded	868	2564	5774	1934	841
No. birds banded in '70	998	2084	4906	2211	--
No. different species	62	84	90	85	63
Birds/100 net hours	42	79	140	--	66

*All data based on banding over the period: August 23 to December 19.