

## CARDINALS AND TITMICE

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A report from Massachusetts Audubon Society summarizes the Cardinal-Tufted Titmouse census for all New England during 1969-73. The historical resume notes that previous to 1957 both species were uncommon or rare in the six-state area, though a gradual expansion into southern New England was evident. Then, in the fall of 1957, an invasion into the central and northern states took place, and by 1962 "it was obvious that the birds were here to stay."

The census was established in 1963 to judge the extent and magnitude of the invasion. From the information collected, the report's author, Deborah V. Howard, concludes:

"What has become evident from this census is that the Cardinal is much less limited by habitat and physiography than the Tufted Titmouse. Cardinals have now spread into central Vermont and New Hampshire in some numbers ... and have been reported almost to the Canadian border in both Vermont and New Hampshire. They have appeared on Martha's Vineyard and Nantucket as well as the islands in Narragansett Bay, and they have apparently adapted, with the help of feeders to tide them over the winter, to habitats as diverse as the oak-pine woods of Cape Cod and the northern hardwoods-conifer vegetation of north-central New England.

By contrast, the Tufted Titmouse seems firmly tied to the oak forest. Indeed, the titmouse is described by early authorities as living in the deciduous bottomlands of the South, dependent upon acorns for much of its winter food. Sunflower seeds provided at most birdfeeders have replaced acorns in part, but the titmouse is still rare or absent in northern Vermont, New Hampshire and most of Maine. In addition, this species is apparently reluctant to fly over even a small amount of water, for it has been absent from all major Massachusetts islands and very scarce on outer Cape Cod."

Of course, the number of each species reported during any census period depends not only on the actual bird abundance but also on such factors as observer participation and weather. Furthermore, Cardinals are more conspicuous than Titmice. One statistic that is independent of these random factors is the ratio of Cardinals to Titmice. Taking the data in the MAS report, which includes over 30,000 Cardinals and over 20,000 Titmice, I derived this ratio for each year and for each state. (It should be noted that Connecticut carried out the census for only three years, and the data for Maine are too few for statistical significance.) A ratio of 1 indicates an equal reporting of both species, while a ratio of 2 means that Cardinals were noted twice as often as Titmice, and so on.

	1969	1970	1971	1972	1973	Av.
Connecticut	1.3	1.3	1.4	--	--	1.3
Maine	2	3	--	--	2	2
Massachusetts	2.1	1.4	1.3	1.1	2.1	1.6
New Hampshire	5.4	1.8	4.7	4.8	1.7	2.7
Rhode Island	1.8	1.9	1.9	1.6	2.5	1.9
Vermont	11	16	29	30	29	22
New England	1.8	1.5	1.6	1.3	1.5	1.5

From the last line of the table it is evident that throughout New England the ratio of Cardinals to Titmice has remained essentially constant during these five years: that is three Cardinals were seen for every two Titmice. Statewise, however, the data show some interesting variations.

For example, note that in Vermont the Cardinals outnumber the Titmice by more than 20 to 1, on the average, and this imbalance seems to be increasing. However, the scarcity of Titmice (only 144 over the five years) means that a small change in their counted numbers causes a marked change in the ratio.

In New Hampshire the ratio fluctuates much more than for other states, about 5 to 1 in 1969, 1971, and 1972, but 2 to 1 in 1970 and 1973. However, this variation may not be real, for the scarcity of both species again permits large changes in the ratio.

Statewide or regional statistics are not necessarily indicative of local populations. For example, Eliot Taylor notes that in Sherborn, Massachusetts, the 1972 census yielded 28 Cardinals and 112 Titmice, while in 1973 the numbers were 25 and 142, respectively. The

ratio, therefore, is 0.2. In other words, Titmice like Sherborn!

I would like to thank Mrs. Howard for her MAS report "Cardinals and Tufted Titmice in New England."

L.J.R.

THREE-YEAR COMPARATIVE  
CENSUS RESULTS OF THE  
TUFTED TITMOUSE - CARDINAL

<u>Massachusetts</u>	<u>1971</u>		<u>1972</u>		<u>1973</u>	
	C	T	C	T	C	T
Barnstable	170	24	112	71	281	142
Bristol	224	214	641	560	242	213
Dukes	32	0	32	0	67	0
Essex	267	252	326	258	210	183
Middlesex	659	1048	403	826	291	493
Nantucket	0	0	11	0	13	0
Norfolk	420	556	331	577	307	549
Plymouth	216	368	154	356	284	584
Suffolk	52	28	18	22	46	43
Worcester	181	201	191	269	84	74
Totals	<u>2221</u>	<u>2691</u>	<u>2219</u>	<u>2939</u>	<u>1825</u>	<u>2281</u>
N.E. Totals	<u>5080</u>	<u>3940</u>	<u>4807</u>	<u>4258</u>	<u>3203</u>	<u>2657</u>

NODDING OWLS

We traditionally think of owls as birds that hunt at night and sleep during the day. How much do they sleep? Perhaps a brief study by two Wisconsin ornithologists gives us a clue.

Their subject was a young Barred Owl. On August 22, 1972, which was cloudy a good part of the day, the bird was watched from 5:25 a.m. to 8:04 p.m., when it was light enough to determine whether the owl was asleep (eyes closed, bird motionless), dozing (eyes partly closed), or awake. Overall, the owl was asleep 28 percent of the time, and it dozed about as often.

Frances Hamerstrom and Keith Janick conclude in The Auk for October, 1973, that, "This owl catnapped throughout much of the day -- a pattern that may well be normal in the wild."

L. J. R.



" I DON'T KNOW WHAT'S WRONG WITH ME  
- I CANT STAY AWAKE NIGHTS "

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