

## WINTER STATUS OF THE RUFIOUS-SIDED TOWHEE IN OKLAHOMA

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The Rufous-sided Towhee (*Pipilo erythrophthalmus*) nests locally in Delaware County and possibly elsewhere in northeastern Oklahoma. M. M. Nice (1931, *The birds of Oklahoma*, Oklahoma Biol. Surv. 3:179-180) listed the eastern form of the Red-eyed Towhee (*P. e. erythrophthalmus*) as a summer resident in northeastern Oklahoma and as a rare winter resident in eastern sections of the state. She described the Spotted Towhee (*P. maculatus*) as a "Transient and winter resident throughout the state, common in central and western Oklahoma, rare in eastern." G. M. Sutton (1967, *Oklahoma birds*, Univ. Oklahoma Press, Norman, pp. 599-602) listed midsummer sightings of *P. erythrophthalmus* in Delaware and Ottawa counties, and quoted several authorities who considered the eastern form rare and *P. maculatus* common except in eastern counties. The American Ornithologists' Union (1957, *Checklist of North American birds*, 5th ed., p. 578) merged the two species. F. M. Baumgartner (1979, *Breeding of the Rufous-sided Towhee in Oklahoma*, Bull. Oklahoma Ornithol. Soc., 12:9-11) reported the first two nests in the state, both in southern Delaware County.

This paper compiles and analyzes the results of 299 Christmas Bird Counts taken in ten Oklahoma localities since 1950. Those selected represented distinctly different ecological regions, had been conducted annually for several consecutive years, and included large areas of public lands where changes in land use were generally not pronounced. Before 1950, Christmas Counts were taken irregularly by small numbers of observers; consequently, coverage of the count area was usually limited.

The objectives of this study were to measure the relative abundance of Rufous-sided Towhees in the ten localities and to follow the trends in populations from 1950-1983. Since the numbers of birds observed fluctuated dramatically from year to year, the results were grouped into three periods: 1950-1960, characterized by few counts in some localities and a small number of participants in others; 1961-1972, during which most areas were counted practically every year by the same or larger numbers of observers than during the earlier period; and 1973-1983, a span of time when counts were made every year by much larger parties, resulting in more complete coverage of the areas.

The results of the counts are summarized in Table 1. In order to eliminate bias when counts made by a small party were compared to those compiled by numerous observers in several parties, all figures have been converted to numbers of towhees per 100 party-hours (PH). The use of this ratio has also made it possible to round off numbers and avoid fractions. The most obvious difference in the results is the comparative scarcity of Rufous-sided Towhees in the eastern and eastcentral regions of the state. The average count at Spavinaw, 4 birds/100 PH, was in sharp contrast to the 93 birds/100 PH at the Wichita Mountains National Wildlife Refuge in southwestern Oklahoma. From Oklahoma City and Norman west to Kenton, the number of birds/100 PH averaged significantly higher than those from Stillwater eastward. I have attempted to find a conclusive explanation for this change in abundance. Possibly the extensive system of timbered ravines and brushy shelterbelts of central and western Oklahoma

provides more units of winter habitat than the extensive woodlands interspersed by small pastures and crop fields typical of eastern Oklahoma.

Towhee populations show a long-term decrease from an average of 44 birds/100 PH for the period 1950-1960 to 33 between 1961-1972, and 28 during 1973-1983. All count localities followed this pattern except the Wichita Mountains National Wildlife Refuge and the Kenton area, where the average counts for the second and third periods were higher than for the first. Possibly the increase in number of parties has increased coverage in areas of high towhee populations.

Years showing very high or very low counts were scrutinized to determine if similar conditions had affected winter populations throughout the state. Two years clearly demonstrated such uniformity. The peak year of 1953 revealed unusually high numbers at five of the six localities where counts were made. In 1961, numbers of towhees at all count areas were very low except at Salt Plains, where Christmas Bird Counts seldom follow the pattern of ups and downs characteristic of other localities.

This study demonstrates that Christmas Bird Counts do indicate general trends in bird populations. When we have more complete information on the effects of land use and weather patterns, we may be able to better understand trends in our bird life.

**TABLE 1. Numbers of Rufous-sided Towhees tallied on selected Christmas Bird Counts in Oklahoma, 1950-1983.**

LOCALITY	1950-1960			1961-1972			1973-1983			TOTALS		
	No of Party-hrs	No of Birds Counted	No of Birds/100 Party-hrs	No of Party-hrs	No of Birds Counted	No of Birds/100 Party-hrs	No of Party-hrs	No of Birds Counted	No of Birds/100 Party-hrs	No of Party-hrs	No of Birds Counted	No of Birds/100 Party-hrs
Spavinaw	103	11	11	114	1	1	335	12	4	552	24	4
Fort Gibson	206	9	4	240	12	5	384	23	6	830	44	5
Broken Bow	17	0	0	79	7	9	178	10	6	273	17	6
Tulsa	562	156	28	452	66	15	964	110	11	1978	332	17
Stillwater	144	40	28	235	35	15	697	95	14	1073	170	16
Oklahoma City	418	240	57	844	318	38	1026	319	31	2288	877	38
Norman	294	223	76	541	104	19	573	120	21	1408	447	32
Salt Plains	297	247	83	479	169	35	304	91	30	1080	507	47
Wichita Mts.	187	66	35	331	390	118	609	587	96	1127	1043	93
Kenton	23	4	17	159	55	35	338	137	41	520	196	38
<b>TOTALS</b>	<b>2250</b>	<b>996</b>	<b>44</b>	<b>3474</b>	<b>1157</b>	<b>33</b>	<b>5408</b>	<b>1504</b>	<b>28</b>	<b>11453</b>	<b>3657</b>	<b>32</b>

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