

SEX RATIOS OF BANDED EASTERN RED-WINGS  
(*AGELAIUS P. PHŒNICEUS*)<sup>1</sup>By CARLTON M. HERMAN  
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VERY little is known concerning the sex ratios of wild birds. Recently F. C. Lincoln (1932) of the Biological Survey made an analysis of banded ducks. Of 40,904 ducks, representing ten species, 24,411 were males and 16,493 were females . . . a ratio of 3 to 2. M. M. Nice (1937), in a study of Song Sparrows in a small area in Ohio, found that the males of this species were always more abundant than the females.

During the summers 1930 to 1937 a total of 195 Eastern Red-wings (*Agelaius p. phœniceus*) were banded as nestlings at the Austin Ornithological Research Station at North Eastham, Massachusetts. Of these only fifteen have returned or were recovered elsewhere. Twelve were males, three were females. Since the Station was started in 1930, 156 adults have been listed as return birds of which 121 were males and 35 were females. Returns of both nestlings and adult Red-wings were thus at a ratio of four males to every female.

Returns at other banding stations as shown by an analysis of the records on file at the Biological Survey in Washington also demonstrate a preponderance of the male sex. Henry O. Havemeyer, operating a station in Polk County, Florida, has had returns of thirty-one males and three females (10 : 1). The late Frank W. Commons, Crystal Bay, Minn., has had returns of fifty-one males and six females (8 : 1). Verdi Burtch, Branchport, N. Y., has had returns of forty-six males and twenty-four females (2 : 1). Other banders have had fewer returns of Red-wings but most of them have shown a preponderance of males. The returns of Red-wings as listed for all the American banding coöperators in the records on file at the Biological Survey total 874. No sex was given in 370 of these reports; 391 were males and 113 were females . . . a ratio of 4 to 1.

The preponderance of males among the Red-wings returning to banding stations may mean one of several things. There may be an actual overbalancing of this sex, the male birds may be less wary of the traps that are used to capture them or the male Red-wings may tend to concentrate in larger less scattered flocks and to remain in closer proximity to their nesting sites. Mrs. Nice (1937) has suggested the probability that the reason for the disproportionate numbers of the sexes among the returns of Song Sparrows may be that the females do not return as faithfully to the place of their birth as the males and that their late arrival in the spring might often make it impossible to do so.

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During the summers of 1936 and 1937 an attempt was made to determine the sex ratio of siblings by banding nestling Red-wings and diagnosing the sex of the young birds later the same season when they repeated in the traps. Sex was determined in these juvenile birds by the methods described by F. M. Packard (1936). The accompanying table shows the results obtained, listing only those nests from which the young repeated subsequently the same year or returned the following year so that the sex determinations were possible. It can be seen from these results that there is a definite preponderance of males. The data for 1937 are the more complete and seem to suggest a ratio of two males to one female. Indeed, in three broods where all the siblings were captured in the traps the ratio was exactly three to one. The sex ratio of the nestlings from all seven nests from which all the siblings were recaptured is fourteen males to six females.

RECORDS OF SIBLINGS WHICH REPEATED

Nest No.	1936				1937			
	No. of Siblings	Males	Females	Unknown	No. of Siblings	Males	Females	Unknown
1	3	3			3		1	2
2	4	1		3	2	1	1	
3	4	1	2	1	3	2		1
4	2	1		1	3	2	1	
5	2	1	1		4	1	1	2
6	3	1	1	1	3	1		2
7	3	2		1	4	2	1	1
8	2	1		1	3	1		2
9	4	3	1		3	2	1	
10					3	1		2
11					3	2	1	
12					3		1	2
Totals	27	14	5	8	37	15	8	14

Allen (1914) observed that Red-wings are sometimes polygamous. The females of this species do all the incubating. These two facts, plus the data presented in this paper, raise the question as to the significance of such a preponderance of males.

CONCLUSIONS

Nestling Red-wings are predominantly males. This preponderance of males seems to persist in the adult population. Further data of this sort are needed on the Red-wing to substantiate these views.

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