

# ANALYSIS OF BLACKBIRD DATA, 1951-56

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When in 1950 the Society first started trapping and measuring Blackbirds during October and November it was realized that two different sizes passed through the island (Annual Reports 1950-51-52), the October birds being slightly smaller and lighter than those of November. During the last four years, with equipment for weighing at the Terrace and Garden Traps, a further considerable quantity of data has been collected which seems worthy of analysis.

I am much indebted to Mark Williamson for making a statistical comparison of the mean wing lengths of the different groups of male birds, which has brought some interesting facts to light. The data on female wing length have not been subjected to a statistical analysis as these birds have not been put into age groups during the whole period 1951-56.

In the table below Period I in each year runs from October 1st until some date between November 12th to 14th, except in 1954, when the dividing date was fixed at November 6th. Period II runs from the termination of Period I until the end of November or into the first week of December if any birds were caught as late as that.

TABLE I. WING MEASUREMENTS IN m.m., 1951-56

	<i>Adult Male</i>			<i>1st Winter Male</i>		
	<i>No. Speci- mens</i>	<i>Mean Length</i>	<i>Ranges</i>	<i>No. Speci- mens</i>	<i>Mean Length</i>	<i>Ranges</i>
Period I	17	129.7	126-133	61	127.9	122-133
Period II	17	133.1	128-137	34	130.9	125-138
	<i>Adult and 1st Winter Female</i>					
	<i>No. Speci- mens</i>	<i>Mean Length</i>	<i>Ranges</i>			
Period I	135	123.9	116-133			
Period II	91	126.7	117-135			

TABLE II. WEIGHTS IN GRAMS, 1951-56

	<i>Adult Male</i>			<i>1st Winter Male</i>		
	<i>No. Speci- mens</i>	<i>Mean Weight</i>	<i>Ranges</i>	<i>No. Speci- mens</i>	<i>Mean Weight</i>	<i>Ranges</i>
Period I	11	91.2	78.1-106.9	29	93.6	81.4-101.2
Period II	13	98.4	87.8-114.7	29	101.9	86.9-110.7
	<i>Adult and 1st Winter Female</i>					
	<i>No. Speci- mens</i>	<i>Mean Weight</i>	<i>Ranges</i>			
Period I	73	91.6	77.1-109.7			
Period II	71	96.1	77.2-112.5			

The following groups compared, showed a significant difference (at the 0.1% level) of mean wing length.

Adult Period II larger than Adult Period I.

1st Winter Period II larger than 1st Winter Period I.

Adult Period I larger than 1st Winter Period I.

Adult Period II larger than 1st Winter Period II.

The adult males of Period II also average 7.2 grams heavier than the period I adult males and the first winters averaged 8.3 grams heavier than the Period I first winter males. Having established the passage of two different sized Blackbird populations it would be interesting to know their origin. Unfortunately we have no ringing evidence as to the origin of the Period I birds but have two recoveries of males trapped during Period II. Both were recovered during the breeding season, one from Norway and one from Denmark. The measurements of these birds had been (Norway) wing 134 m.m., weight 104.6 grams (Denmark) wing 132 m.m., weight 102.4 grams. These wing measurements being near the average for Period II males and the weights being above the average (Table I and II).

The mean average wing length of the Period I adult males (129.7) is very similar to that found by D. Snow (in litt.) for thirteen British resident adult males which was 129.8 m.m. Therefore it seems possible that the Period I immigrants are either British breeding birds or a similar sized stock possibly from France or the Netherlands. This possibility is supported by the fact that in the autumn of 1956, an exceptionally mild season, practically no Blackbird immigration occurred at the east coast observatories including Fair Isle, whereas on Lundy there was a normal Period I immigration but a very small Period II immigration. This is what would be expected if the Period I birds originate from an area west of the east coast observatories and are moving west into Ireland. Ringing returns show that many British breeding birds winter in Ireland (Lack 1943).

The comparative size of females in the two periods shows a similar pattern to the males, the Period II birds being on the average heavier and longer in the wing than the Period I birds. There is no reason to suppose that they are of different origin from the males with which they arrive.

The adult males show an expected greater wing length than the first winter males of the same period, but they show an unexpected lower mean weight than the first winter birds of the same period. Unexpected because Baldwin and Kendeigh (1938), working on American birds found in nearly all instances that the immature birds weigh less than the adults, as also did K. and E. Browne (1956), working on British migrant birds.

The proportion of males to females as shown in Table I is also of interest, the males forming only 36½% of the total catch of three hundred and fifty-six. They also form this proportion in the

separate periods. VENABLES (1952) found in many areas that the number of males exceeded the number of females during the winter. This was so in Shetland where they form 64% of the population, in the Thames Valley 57% in N. Wales 61% and in Gloucestershire 67%. Migrant Blackbirds passing through Heligoland in autumn (Drost 1935), have an excess of females much the same as we have on Lundy, the males forming only 40% of the total and birds passing through Saltee Observatory (J. Weaving in litt.), show to a lesser degree this sex proportion the males forming 44.6% of the population. As yet no wintering population has been found with the sexes in this proportion. It would seem probable that equal proportions of both sexes immigrate into Britain, but that a larger proportion of females pass further west. Some may continue to Ireland and others possibly move S.W. from Lundy to Cornwall, Western France or Spain. The meagre evidence we have for this speculation are two February recoveries (i) a Period I male recovered, Manche, France, (ii) a Period II male recovered near Lands End.

As was pointed out in the 1950 report (D. Lea), wing measurements frequently range above those given in the Handbook. This has been so each year during Period II migration from 1951-56, except for the males in 1955 when only two were trapped. The total range difference for females (Table I) taking the two periods together is 19 m.m. and for males (1st winter and adult combined) is 17 m.m., this possibly an indication in itself of a mixed population. The range difference for the Lundy resident population is 10 m.m. for both sexes (Table III).

TABLE III

DATA FOR ALL RESIDENT BIRDS TRAPPED OTHER THAN JUVENILES, 1951-56

	No. Specimens	Mean Wing Length	Ranges Wing	No. Specimens	Mean Weight
Adult Male	5	126.6	122-132	2	93.2
1st Winter Male	8	125.4	123-130	5	98.3
Adult Female	8	122.6	119-128	4	91.2
1st Winter Female	8	123.3	120-126	3	98.2

The resident male Blackbirds are significantly smaller (at the 0.1% level), than the males of Period I, (Tables I and III), comparing mean wing measurements adult/adult and first winter/first winter. Unfortunately there are no figures readily available for comparison with British resident birds except for museum specimens which suffer some shrinkage. Museum specimens measured by D. Snow gave the following results: adult male, thirteen specimens mean wing length 129.8 m.m. First winter male, thirteen specimens mean wing length 125.4 m.m., indicating that our Lundy birds may prove to be of shorter wing length when adult than the mainland birds. The subject warrants further investigation.