DARK-BELLIED BRENT GEESE 1985-6

NUMBERS IN BRITAIN. MID-DECEMBER 1985 AND MID-JANUARY 1986

A report to the Nature Conservancy Council
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Summary

Totals of 82,100 and 83,100 Dark-bellied Brent Geese were counted in Britain on 15th December 1985 and 12th January 1986 respectively. This compares with 89,000 on 13th January 1985. Age-ratios gathered during November-December gave a global figure of 25.3% young birds, though with considerable variation between different areas. Taking area totals of geese into consideration produces a young proportion of about 27.0%. Even in this quite good breeding season only 28% or birds old enough to breed were successful. The total population this winter is probably around 170,000, assuming normal annual mortality.

Introduction

Two censuses of Dark-bellied Brent Geese in Britain have been held this winter, on 15th December and l2th January. These dates coincided with those or the monthly National Wildfowl Count Scheme and Birds or Estuaries Enquiry, and the great majority or observers taking part in the censuses were doing so as part or their contribution to those surveys. In past winters, the total of Brent Geese in the country has only become available once the counts for the whole winter have been received from local organisers, often several weeks after the last mid-March count. In order to have the figures available more quickly, observers were circulated beforehand with stamped addressed postcards for returning to Slimbridge immediately after each of the two census dates. This system has worked well, with only some small delays in one or two of the areas which are covered by large teams of people.

15th December 1985

Conditions were reasonable everywhere, though visibility was no more than moderate in some parts of the Wash, and there were showers around on the south coast. Coverage was good, though incomplete in parts of Essex, notably the Blackwater estuary and Dengie peninsula.

12th January 1986

The weather was again mostly good, though with some showers in Lincolnshire, and a cold wind almost everywhere. Visibility was generally excellent. Coverage was better than in December, particularly in Essex. However, many observers commented on the number of geese feeding inland, often at distances of several kilometres from the coast, and it is felt that some birds may have been missed because of this.

Results (see Table 1)

Even bearing in mind that a few thousand birds could have been missed from both censuses, as explained above, the two totals are remarkably similar and only some relatively small shifts in distribution are apparent between the two. Among these is the normal decline in numbers that always takes place during the winter around Foulness in south-east Essex, and a corresponding increase in the Blackwater to the north. The decline on the South Coast could indicate onward movement of birds to France, but observers in Sussex and Devon both mentioned the probability of inland-feeding flocks being missed. The stability of the numbers in the Wash and North Norfolk is notable.

Comparisons with the figures for January 1985 reveal higher numbers that month in Essex, but much lower totals in North Norfolk and, particularly, on the South Coast. The fact that the British total is about 10% lower this winter than last, despite the good breeding season in 1985 compared with the 1984 failure, is perhaps surprising. However, even when the total population was at its peak of 203,000 in 1982-3, the British total only reached 92,600, suggesting perhaps that 80,000-90,000 represents the current carrying capacity of the British haunts.

There seems little doubt that Brent Geese are feeding further and further inland, with up to 8 kilometres reported this winter. Obviously, this makes carrying out a census using what is essentially a coastal counting network liable to miss substantial numbers. Local knowledge is clearly of vital importance and it is to be hoped that counters will be able to extend their searching, or bring in additional help as necessary for future censuses.

Age-ratios and population structure (see Tables 2-4)

The age-ratios gathered during November-December from six different areas produced an overall figure of 25.3% young in samples totalling over 22,000 birds (Table 2). This confirmed the preliminary indications from sampling in October that the season had been a good, though not outstanding, one and that there were wide differences between areas, with a higher proportion of young in North Norfolk and along the South Coast than in Essex. The situation was as usual complicated by the tendency for inland feeding flocks to contain more young than those out on the mudflats.

It is possible to use the age-ratio information to examine the age structure of the population, to discover how many birds of the year are present. While this can be done by simply applying the overall breeding success percentage to the population, the fact that the percentage has been found to be different in different areas could introduce biases to the result. In Table 3 therefore, the totals for the different regions are set against the age-ratio information gathered during November and December to produce the number of young and old birds in each region. For those regions where there were no age-ratios gathered, or only very small samples, the overall figure of 25.3% young has been used; the number of geese present in these areas amounts to less than 20% of the total. The effect of applying regional age-ratios in this way is to increase the number of young birds in the population from 20,770 (calculated using the overall 25.3%) to 22,181, which represents 27.0% of the total.

Table 4 shows the age structure of the Brent Goose population in Britain in December 1985, using a breeding success of 27.0% and a mean brood size of 2.63 (obtained from sampling in October). Although this can be classed as a moderately good breeding season, it should be remembered that it follows two complete failures so that virtually every bird should have been of breeding age. It can be seen that only some 28% of the adult population were in fact successful breeders.

Finally, if there are about 27% young in the whole population of Dark-bellied Brent Geese this winter, and if the mortality in the last 12 months has been about the average 15%, then we can expect a total of around 170,000 birds this winter, compared with 149,000 last winter. The mid-December and mid-January censuses will also have been carried out in the other wintering countries, West Germany, Denmark, the Netherlands and France, while there is sometimes an opportunity for a further check on the total during the spring concentration on the Waddensee islands.

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M. A. 0gilvie
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Table 1. Numbers of Dark-bellied Brent Geese in Britain, December 1935 and January 1986. Figures for January 1985 are included for comparison.

Area	13 Jan 1985	15 Dec 1985	12 Jan 1986
Humber	1758	1898	1500
Wash	14219	13838	14254
Norfolk	7147	12592	12160
Suffolk	2012	1037	652
Stour	424	583	464
Hamford Water	9500	4300	4500
Colne	2680	574	1610
Blackwater	8500	3115+	10300
Dengie	2000	505+	2000
Crouch	8990	1696	2146
Foulness-Canvey	5904	6913	1963
North Kent	3141	1863	1781
Bracklesham-Pagham	4219	3188	1735++
Chichester	6669	10748	9737
Langstone	4459	7650	8646
Portsmouth	473	1626*	1626*
Solent-Isle of Wight	4447	3478	3859
Dorset	594	2143	2176
Devon-Cornwall	1648	3836	1107++
South Wales	405	511	868
TOTAL (rounded)	89200	82100	83100

Notes:
+ = count incomplete.
++ = some birds probably missed inland.
* = only count available, made on 29 Dec.

Table 2. Breeding success of Dark-bellied Brent; from observations in different parts of the British range November-December 1985. Updated from earlier reports.

Area	Number aged	Young		% in late October
		No.	%	
Humberside	1491	277	18.6	-
Wash	1029	216	21. 0	-
N. Norfolk	4937	1564	31. 7	29.1
Essex	7296	1075	16.2	19.5
Kent	216	109	50.5	-
S. Coast	7316	2389	32.7	25.9
TOTAL	22285	5630	25.3	20.6

Table 3. Numbers in December and breeding success in November-December 1985 of Dark-bellied Brent Geese in Britain, with calculated totals of young birds and older.

Area	Number counted	Young %	Number of young	older
Humberside	1898	18.6	353	1545
Wash	13838	21.0	2905	10933
N. Norfolk	12592	31.7	3991	8601
Suffolk	1037	25.3*	262	775
Stour	583	25.3*	147	436
Hamford Water	4300	25.3*	1087	3213
Colne	574	25.3*	145	419
Rest of Essex	12229	16.2	1981	10248
Kent	1863	50.5	940	923
Sussex-Hants	26690	32.7	8728	17962
Dorset-Cornwall	5979	25.3*	1513	4466
South Wales	511	25.3*	129	382
Totals	82094		22181	59913
Totals using overall 25.3%	82094	25.3	20770	61324

* Overall 25.3% young used, in absence of age-ratios from that area.

Table 4. Population structure of Dark-bellied Brent Geese in Britain, December 1985

	Number	%
Total in Britain	82094	
No young Birds	22181	27.0
No. successful parents (Brood size 2.63)	16860	20.6
Non-breeders	43045	52.4
No. successful parents / Total number of adults	16868 / 59913	= 28.2