



NUMBERS OF DARK-BELLIED BRENT GEESE IN BRITAIN, JANUARY/FEBRUARY 1994

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SUMMARY

Counts of Dark-bellied Brent Geese were undertaken in January and February 1994 at 36 estuaries in Britain. Peak numbers were recorded in January, with just over **125,000** birds. This increase compared with counts made in January 1993 was to be expected following an average breeding year in 1993 (18% young). The January total represents approximately 42% of the world population. The principal concentration was present on the Wash which is outstanding in its importance for this sub-species, and, in all, 14 estuaries held internationally important numbers (>2,500) in either January or February.

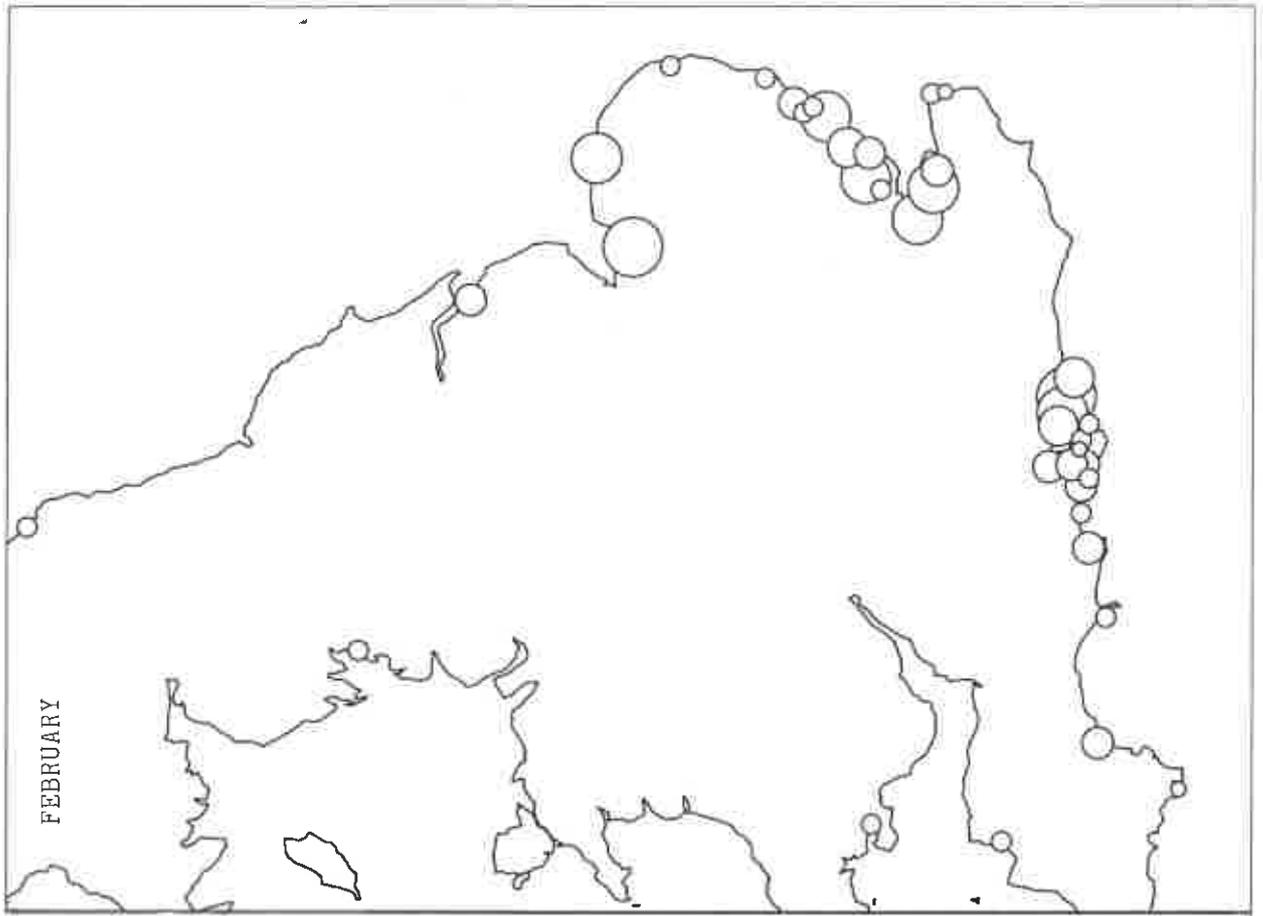
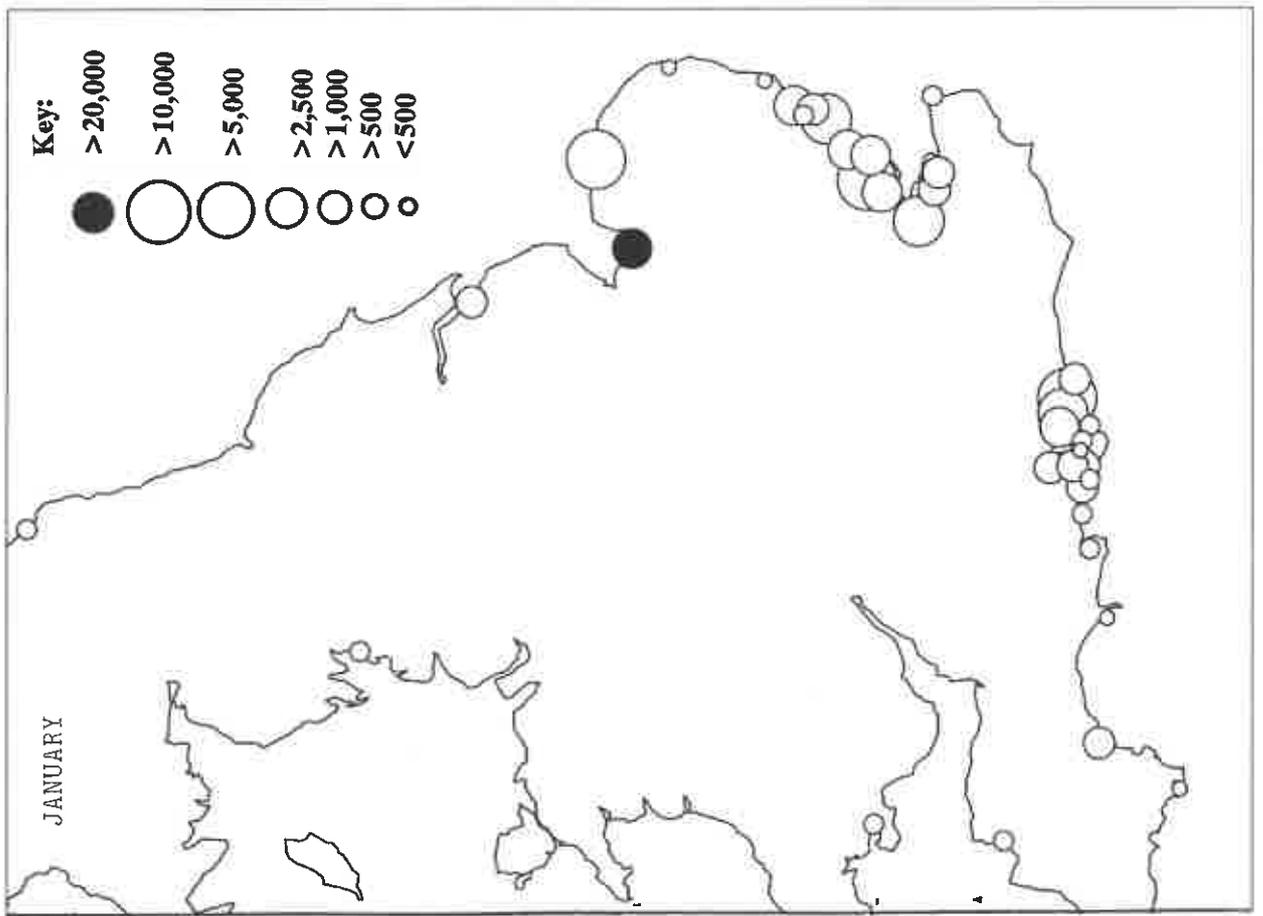
INTRODUCTION

The coastline of Britain has long been a major wintering area for the Dark-bellied race of the Brent Goose *Branta bernicla bernicla*. The peak numbers of Dark-bellied Brent Geese counted in January in Britain have fluctuated between 90,000 (1990) and 138,000 (1992) during the last six winters. This followed a period of little change in numbers from 1983 to 1988 (mean peak count = 89,700), and after a steady increase in numbers counted in the 1970s. The proportion of the world population counted in Britain during this time has, however, fallen compared to the late 1960s and early 1970s, from 50-65% to 35-50%. The distribution within Britain has demonstrated a slight range expansion through the period of rapid increase in the early 1980s to today.

The Dark-bellied race breeds between 70° and 100° E on the seaboard of western Siberia and on the Arctic islands of Severnaya Zemlya. The autumn migration begins in mid-August and the first geese are in the Baltic by mid-September and in The Netherlands and Britain later that month. Numbers build up to a peak in November at the main gathering areas at Foulness and Leigh, Essex, from where they disperse to other parts of England and a few to France. The return migration begins in late February and early March and the geese spend April and May in the Dutch and German Wadden Sea, returning to the breeding area in late May.

Monitoring of Brent Goose numbers has been carried out since the late 1940s on a site-by-site basis by the Wetland Bird Survey (WeBS, formerly 'National Wildfowl Counts'). As the population has grown in recent years, geese have also ventured inland to feed on arable crops and grass. Since the winter of 1986-87, extra effort has been expended to try to locate these birds during the January and February counts - corresponding with the peak numbers of Dark-bellied Brent in Britain. Consequently, supplementary counts of birds away from the principal coastal resorts have been made, and it is thought that the survey provides a relatively complete count for Britain.

Figure 1. The distribution of Dark-bellied Brent Geese in Britain in January and February 1994.



Throughout the wintering range in north-western Europe counts are now co-ordinated by the International Waterfowl and Wetlands Research Bureau (IWRB) Goose Research Group. Data collected by WeBS, and in particular the results presented here, represent an important contribution in estimating the annual world population.

Preliminary results of counts made in January and February 1994 are presented here, together with data from the previous three winters. The data from the principal sites will be updated when the annual report of the WeBS scheme (e.g. Waters & Cranswick 1993) is produced in March 1995.

METHODS

This census focuses on the principal sites for Dark-bellied Brent Geese in Britain, and nearly all of the 36 sites included are classified as estuaries in Waters & Cranswick (1993). Most counts were conducted at the same time as the monthly WeBS counts for January and February. However at some sites, coverage is extended to include additional areas to those searched during the WeBS counts with the aim of recording birds feeding inland. Observations made at large sites, which require more than one counter, are generally made synchronously to avoid birds being missed or double-counted. The date of the count, however, may vary between sites to co-incide with local tide conditions. All counts are made within one week of the recommended dates.

RESULTS

The numbers of Dark-bellied Brent Geese at each of the principal British sites are given in Table 1 together with data from the Channel Isles. The peak count was 125,398 birds in January, with the count in February being 10% lower (113,703). The distribution of the counts is shown in Figure 1. Monthly WeBS counts for October 1993 to May 1994 are shown in Figure 2.

The highest count, as last year, was made on the Wash (22,388 in Jan) and Chichester Harbour, the Blackwater and the North Norfolk Marshes also held in excess of 10,000 birds in that month. In all, 14 sites held internationally important numbers (>2,500) in either January or February.

Compared with the January five-year mean values for each estuary (1990-94, Table 1) the North Norfolk Marshes showed the greatest increase (14,121 in Jan 1994; 10,225 FYM), and other sites holding notably higher numbers included the Deben (3,282; 1,818 FYM) and Hamford Water (6,598; 4,381 FYM).

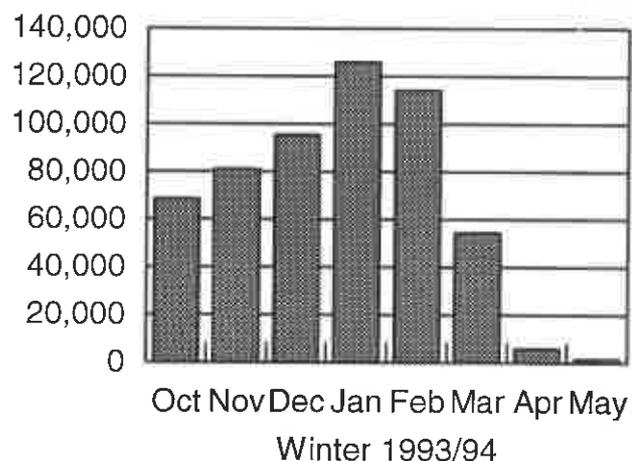


Figure 2. Monthly counts of Dark-bellied Brent Geese in Britain, October 1993 to May 1994.

A fall in numbers counted between January and February were noted at the Blackwater (down 5000) and the North Norfolk Marshes (down 2500) although other sites gained birds between the two months, e.g. the Thames and the Medway both gained c.3,000 birds.

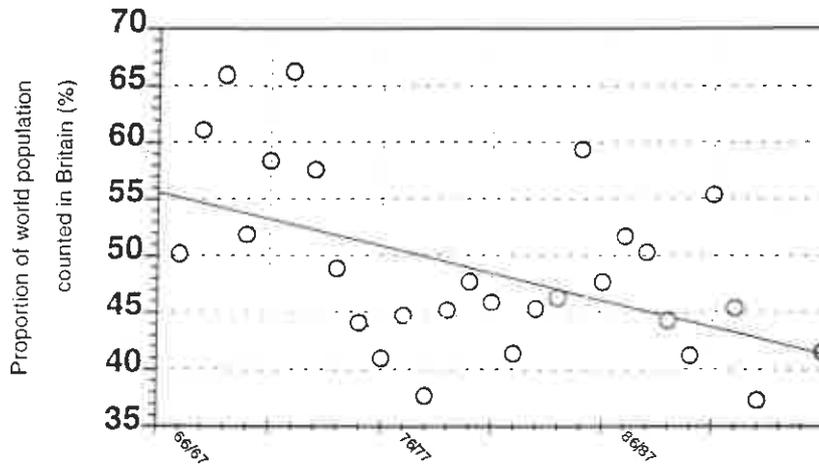
Table 1. Numbers of Dark-bellied Brent Geese at principal sites in Britain in January and February 1994. Counts made in 1992 and 1993 are also given, as well as the five-year mean (FYM) for each month. A cross (x) indicates that no data are available. Counts considered to be very incomplete are given in italics. Channel Isles birds have not been included in the totals.

| | January | | | | February | | | |
|-----------------------|---------|---------|---------|--------|----------|--------|---------|--------|
| | 1992 | 1993 | 1994 | 5YM | 1992 | 1993 | 1994 | 5YM |
| Kingsbridge Estuary | 65 | 43 | 78 | 48 | 65 | 43 | 70 | 45 |
| Exe Estuary | 1,304 | 1,533 | 1,495 | 1,299 | 1,944 | 1,582 | 1,285 | 1,456 |
| Taw/Torridge | 286 | 87 | 309 | 209 | 264 | 183 | 260 | 185 |
| Poole Harbour | 1,381 | 1,273 | 960 | 1,282 | 1,711 | 949 | 1,486 | 1,061 |
| Christchurch Harbour | 259 | 270 | 221 | 224 | 278 | 282 | 280 | 253 |
| Wey/Fleet | 979 | 69 | 94 | 587 | 232 | 174 | 151 | 279 |
| Beaulieu | 915 | 1,780 | 1,200 | 1,045 | 1,030 | 2,478 | 1,272 | 1,288 |
| Portsmouth Harbour | 3,427 | 2,557 | 2,644 | 2,771 | 3,580 | 2,544 | 3,042 | 2,716 |
| Langstone Harbour | 7,357 | 5,210 | 7,776 | 6,628 | 7,860 | 5,140 | 6,793 | 5,859 |
| North-West Solent | 4,868 | 3,054 | 2,202 | 2,983 | 3,240 | 2,000 | 2,276 | 2,499 |
| Southampton Water | 2,033 | 660 | 2,420 | 1,612 | 2,752 | 670 | 1,537 | 1,609 |
| Brading Harbour | 214 | 21 | 353 | 398 | 260 | 315 | 178 | 440 |
| Yar | 240 | 178 | 212 | 168 | 93 | 156 | 185 | 348 |
| Newtown | 1,213 | 1,742 | 1,708 | 1,400 | 1,163 | 1,664 | 1,584 | 1,295 |
| Medina | 48 | 83 | 96 | 62 | 42 | 94 | 78 | 62 |
| Chichester Harbour | 10,655 | 11,099 | 12,647 | 10,114 | 11,582 | 10,096 | 12,077 | 9,054 |
| Pagham Harbour | 4,750 | 243 | 1,892 | 2,144 | 3,669 | 1,209 | 2,638 | 2,072 |
| Westbrook, Thanet | x | 440 | 766 | 603 | x | 280 | 850 | 565 |
| Swale | 1,787 | 5,008 | 1,843 | 2,422 | 2,101 | 3,027 | 1,661 | 1,796 |
| Medway | 4,484 | 3,706 | 2,282 | 2,831 | 3,092 | 3,050 | 5,104 | 3,036 |
| Dengie Flats | 1,630 | 320 | 2,780 | 1,510 | 2,050 | 2,032 | 1,740 | 1,910 |
| Hamford Water | 3,750 | 3,695 | 6,598 | 4,381 | 4,008 | 3,061 | 8,154 | 5,528 |
| Stour | 1,840 | 1,351 | 1,742 | 1,424 | 1,980 | 1,501 | 578 | 1,320 |
| Thames | 17,211 | 3,050 | 6,911 | 7,852 | 8,606 | 8,500 | 9,231 | 8,831 |
| Crouch/Roach | 7,978 | 2,667 | 4,913 | 4,923 | 2,527 | 2,444 | 700 | 3,434 |
| Blackwater | 10,137 | 12,500 | 12,208 | 9,737 | 11,130 | 7,111 | 7,738 | 7,712 |
| Colne | 4,591 | 6,453 | 3,696 | 4,248 | 6,705 | 4,866 | 6,840 | 5,216 |
| Alde Complex | 299 | x | 41 | 159 | 367 | x | 306 | 391 |
| Orwell | 900 | 1,001 | 920 | 630 | 312 | 1,169 | 655 | 669 |
| Deben | 1,600 | 1,259 | 3,282 | 1,818 | 3,000 | 673 | 2,170 | 1,590 |
| Breydon Water | 7 | 37 | 9 | 12 | 1 | 12 | 247 | 59 |
| North Norfolk Marshes | 9,990 | 10,142 | 14,121 | 10,225 | 11,128 | 9,391 | 8,958 | 9,943 |
| Wash | 27,742 | 19,147 | 22,388 | 21,868 | 27,239 | 19,113 | 19,896 | 20,923 |
| Lindisfarne | 20 | 25 | 329 | 125 | 0 | 18 | 120 | 38 |
| Humber | 2,626 | 1,081 | 1,795 | 1,971 | 2,027 | 566 | 1,681 | 1,472 |
| Loughour, Burry Inlet | 1,525 | 835 | 803 | 835 | 1,017 | 989 | 782 | 816 |
| Channel Isles | x | 2,421 | 235 | 1,328 | x | 7,833 | 276 | 4,055 |
| Other sites (1) | x | x | 1,664 | | x | x | 1,100 | |
| Total (2) | 138,189 | 102,645 | 125,398 | | 127,072 | 97,397 | 113,703 | |

Notes: 1) Other sites: Small numbers of Dark-bellied Brent were counted at an additional 23 sites (e.g. 115 at Foreland, Isle of White in January)

2) Total: Does not include counts from The Channel Isles

Figure 3. The proportion of the total population estimate of Dark-bellied Brent Geese counted in Britain (1966-67 to 1993-94)



DISCUSSION

Brent Geese bred reasonably well in 1993 with an estimated 18% young in flocks checked in the autumn months (Mitchell & King 1994). Consequently a higher number of birds was counted in Britain, compared with the 1993 peak. The January 1994 total represents 42% of the estimated 298,000 world total (IWRB Goose Research Group unpubl.data). This compares with 43% recorded in 1992 and 40% recorded in 1993. The numbers of Dark-bellied Brent Geese counted in January in Britain and the total world population between 1966-67 and 1993-94 are shown in Figure 3. During that period the proportion of the world population wintering in Britain has fallen significantly from, on average 50-65% during the late 1960s to early 1970s, to between 35-50% during the latest seven winters ($r = -0.47$, $t = 2.69$, $P = 0.01$, see Mitchell *et al.* 1994).

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