

# **GREENLAND WHITE-FRONTED GOOSE STUDY**



## **REPORT OF THE 2005/2006 NATIONAL CENSUS OF GREENLAND WHITE-FRONTED GEESE IN BRITAIN**

*Final revised report – November 2006*

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## SUMMARY

*Two complete censuses of all known Greenland White-fronted Goose wintering haunts found totals of 13,609 birds in autumn 2005 and 14,287 in spring 2006, compared with 14,079 and 14,030 respectively in the previous season. The 2005/2006 totals comprised 7 birds in England, 76 and 84 in Wales, 7,456 and 7,111 on Islay and 6,070 and 7,085 in the rest of Scotland in autumn and spring respectively. Counts were missing from Muck where the figures from the last available year were substituted (comprising <0.2% of the totals). Some counts from Orkney, Caithness, South Uist, Skye and Jura were substituted from the nearest suitable months, amounting to 4.6% and 3.9% of the British totals in autumn and spring, respectively. Breeding success was again well below the average for the last 15 years at 8.6% young ( $n = 8,120$  aged, slightly higher than last year's value), brood size was 3.1 ( $n = 114$  broods). The trend for poor reproductive performance in recent years continued in 2005, but the decline in the annual number wintering in Britain was less than in the previous two years. After the dramatic 26% fall in numbers on Islay last spring, the counts showed little change there in 2005/2006 over the previous year. The spring count from Wexford (7,892) and elsewhere in Ireland (2,716) provides the global population estimate for spring 2006 of 24,895, the lowest spring count since 1988. However, it would appear that despite continuing low reproductive output in the population, there was generally little change in the overall numbers in 2005/2006 compared to the previous winter.*

## INTRODUCTION

The 2005/2006 survey was the twenty-fourth annual census of Greenland White-fronted Geese co-ordinated in Great Britain by the Greenland White-fronted Goose Study. As usual, full censuses were attempted in autumn and spring to coincide with the International counts made concurrently in Northern Ireland and the Republic of Ireland and co-ordinated there by the National Parks and Wildlife Service from Dublin. Table 1 shows the most recent total census data available to the present, although counts from Ireland are missing from 2001, 2003, 2004 and 2005. The global population in spring 2006 stood at 24,895, the lowest spring count since that in 1988.

*Table 1. Spring population census totals for Greenland White-fronted Geese, 2001-2006. The British total for spring 2001 (missing because of the outbreak of Foot and Mouth Disease) has been estimated based on the relationship between spring and autumn counts from previous seasons. At the time of compilation, collation of count coverage for the rest of Ireland from spring 2001, 2003, 2004 and 2005 was incomplete, hence global population totals cannot be estimated in these years.*

	spring 2001	spring 2002	spring 2003	spring 2004	spring 2005	spring 2006
<i>Wexford</i>	-	7133	7915	8424	7707	7892
<i>Rest of Ireland</i>	-	3158	-	-	-	2716
<i>Islay</i>	13281	9161	10677	9653	7152	7111
<i>Rest of Britain</i>	7787	6960	7595	6734	6878	7176
<i>Population total</i>	?	<b>26412</b>	?	?	?	<b>24895</b>

## ARRIVAL/DEPARTURE DATES

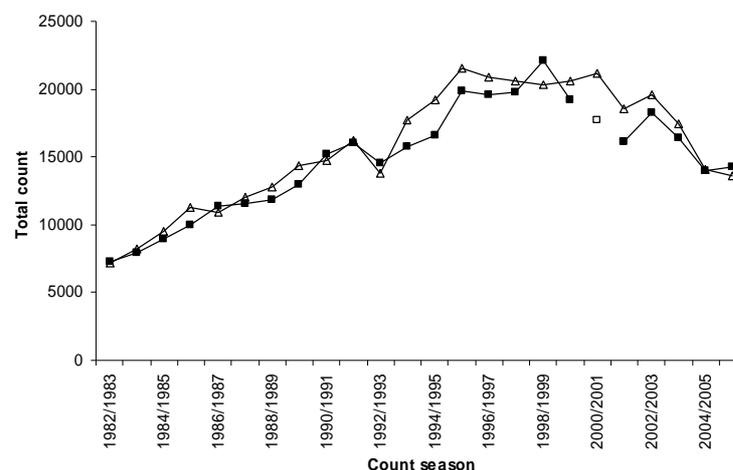
The earliest birds were one seen from Colonsay flying over the sea towards Islay on the very early date of 15 September, with 16 more flying south there on 29 September. More typical arrival dates were birds coming off the sea on Tiree on 4 October, 26 at The Loons (Orkney) on 6 October, 21 on Bute, 9 October and 46 on the Dyfi Estuary in mid-Wales on 12 October 2006.

At Askernish, 66 took off heading northwards on 7 April, 20 did the same on 8 April and 208 (in four flocks) did the same on 11 April. At Loch Ken, 112 birds still present on 11 April were gone by 18 April, but 77 stayed at Lorn until 12 April and geese lingered at Lismore until 19 April (12, although none were seen subsequently), Dyfi (where one single bird remained until 20 April) and Tiree where 3 stayed until 21 April (one of which remained with Greylags, being seen 19-30 May and on 5 June).

## COUNT TOTALS

The counts presented here are based on the regular coverage of all known regular wintering sites organised by GWGS, but also incorporate counts carried out by Scottish National Heritage. Again this year, no data have been incorporated from the WeBS database, as these counts were not available at the time of report writing, but they normally only contribute a few birds from elsewhere in Britain away from those counted at the regular wintering haunts.

Numbers have stabilised this year (see Figure 1), perhaps the result of slightly higher reproductive success which were manifest at some of the larger resorts. The results show little change on Islay and signs of a modest recovery in numbers elsewhere. This does mask the dramatic decline on Islay (46% since 2001) compared to that at other sites combined (9% over the same period), but nevertheless in the light of declines in recent years, this trend is very welcome.



*Figure 1. Counts of Greenland White-fronted Geese in Britain, 1982/1983-2005/2006, showing autumn (open triangles) and spring (filled squares) census results for each season. Note the missing value for spring 2001 (unfilled square) on account of the outbreak of Foot and Mouth Disease that year.*

## **COUNT BREAKDOWN**

A full breakdown of the count totals giving the maximum counts per month and the census period total is appended at the back of the report.

It proved difficult again to locate geese on Orkney away from The Loons site where 75-100 Greenland White-fronted Geese were present throughout. Orkney has been the subject of a considerable influx of Icelandic Greylag Geese which now winter on the islands in substantially greater numbers than in recent years. It is interesting to see that this species is occurring in greater numbers along the various west coast resorts of Greenland White-fronted geese, including Kentra Moss where the Whitefronts were again not located in winter 2005/2006, following our confirmation of their continued presence last winter. This flock seems to be using the peatlands of the general area (Claish Moss and Kentra) more than in recent years at this resort, with the result that they are much less easier to see and census. There were also no reports from the Plockton area, after an absence the year before last.

## **AGE RATIOS IN 2005/2006**

Breeding success for Greenland White-fronted Geese in 2005 was again extremely low, amounting to almost half of the long-term average level since 1960. Such consistently low production over the last 5 years is having a serious effect, as numbers of young birds fall well below those needed to replace annual losses. Overall production was 8.6% (compared with 7.8% last season) among the aged samples (Table 2), but the majority of wintering sites again failed to reach 10% young in the flocks. There were 8.9% young on Islay (compared with 13.5% average during 1982-2004, and 8.1% last year) and 8.2% in the rest of Britain (compared with 13.3% average during 1982-2004 and 7.5% last year). Mean brood size was 3.08 (see Table 2) based on 114 families sampled from a restricted number of sites. The average values were 3.58 on Islay (little change from last year, but again higher than the 1982-2002 average, 3.27) and 2.55 elsewhere (slightly down from last season).

*Table 2. Summary of age ratio determinations and brood sizes for Greenland White-fronted Geese wintering in Britain 2005/2006.*

SITE	% YOUNG	SAMPLE	MEAN BROOD SIZE	SAMPLE
Loch of Mey, Caithness	6.00	100	-	-
Westfield, Caithness	0	114	-	-
Tiree	4.81	686	2.20	15
Coll	12.82	655	-	-
Colonsay	17.02	94	-	-
Fidden, Mull	0	53	-	-
Benderloch/Appin/Eriska	7.22	97	2.33	3
Danna	6.00	100	-	-
Moine Mhor	6.25	32	-	-
Rhunahaorine, Kintyre <sup>1</sup>	9.36	534	3.07	14
Machrihanish, Kintyre <sup>1</sup>	11.00	609	2.00	6
Clachan, Kintyre <sup>1</sup>	9.50	200	4.00	2
Islay <sup>1</sup>	8.91	4109	3.58	59
Bute	10.57	123	4.33	3
Loch Ken	3.70	189	1.67	3
Stranraer	8.20	122	1.83	6
Endrick Mouth	7.78	90	-	-
Grindon	0	7	-	-
Dyfi Estuary	4.90	102	2.50	2
Britain, excl. Islay	8.23%	4011	2.55	55
OVERALL	8.57%	8120	3.08	114

<sup>1</sup>Details from Islay and Kintyre courtesy of Dr Malcolm Ogilvie

## **GLOBAL POPULATION SIZE**

The spring count from Wexford (7,892) and elsewhere in Ireland (2,716) provides the global population estimate for spring 2006 of 24,895, the lowest spring count since 1988. Numbers at Wexford have fluctuated at between 7,000 and 8,000 birds for the last 5 springs, despite previous declines. Numbers elsewhere in Ireland showed a 14% decline since the last available complete spring count in 2002. However, it would appear that despite continuing low reproductive output in the population, there was generally little change in the overall numbers in 2005/2006 compared to the previous winter, perhaps as a result of the slightly higher reproductive output in 2005.

## **OTHER NEWS**

### *Iceland*

Perhaps the most exciting news of all this year was the announcement of the end of hunting of Greenland White-fronted Geese in Iceland from autumn 2006. Until this autumn, this source of mortality still accounted for some 3,000 birds per annum. Quite clearly in the 1980s, when the population was increasing at a rate 5-6% per annum, this kill was obviously sustainable, in the sense that the population was expanding in number despite this level of off take. Since then, this level of artificial mortality had clearly become unsustainable, because it has been removing the equivalent of the number of young joining the population each year, before any other natural mortality was taken into account. Hence as the total number fell, so this additional mortality was simply accelerating the already alarming rate of decline. Therefore, although the Icelandic autumn hunt was not the original cause of the decline, the population simply could not tolerate this level of kill in its present parlous state without adding directly to natural sources of mortality through the annual cycle. Voluntary constraint on the part of some Icelandic hunters had reduced the level of kill in recent years, but clearly this was not enough. It is therefore of the utmost importance that the Icelandic Ministry of the Environment declared an end to the hunt as from this coming autumn (2006) a decision which came as a considerable relief to all those involved with the conservation of the Greenland White-fronted Goose. It is of course increasingly important to continue to annually monitor breeding success, annual survival and the changes in abundance of this population as a result of this major change in legislation to fully understand the impact of the removal of this major source of mortality on the population. It will be interesting to see just what effect this will have on the numbers of Greenland White-fronted Geese in the coming years, but it is also essential that the management planning process, started in the early 1990s agreed by the range states but never formally ratified, should be taken up again in the light of the present declines. It becomes ever clearer that progress towards effective conservation of this population necessitates international agreement and action, and the existence of agreed priorities agreed under a management plan for the population would go a long way towards achieving such coordination.

## *Greenland*

This summer the Danish Environmental Protection Agency again provided funding for aerial surveys of west Greenland to assess the distribution and abundance of geese there post moult. The main aim was to establish the extent to which the stocks of North American Canada Goose has increased in the breeding period since the first survey took place in 1999. Christian Glahder and Tony Fox were again in west Greenland in mid August to attempt to survey the summering areas post moult. This is a period we know precious little about, yet it is a critical period for the geese, during which they fatten up with fuel for the journey back to the winter quarters. Alas, as in 2005, the autumn weather was against them. A series of low pressure and frontal systems meant that their chartered twin-engined high-wing Parthenavia aircraft remained in Iceland with the pilot, who was unable to come over the Greenlandic icecap because of the poor weather. It was a very frustrating trip, though the rain and bad weather in west Greenland would have disrupted the survey even if the aircraft had managed to get over. It is hoped that the funds can be transferred over to next year again, as little new expenditure was incurred this year. We can only hope for better weather in this the third attempt to undertake this survey!

## **REPORT ACKNOWLEDGEMENTS**

Only because of the dedication of a long list of people are we able to report on the status of this goose population every year. It is obvious that without such coverage of all known wintering sites, it could not have been possible to provide the necessary evidence to support the successful conservation management of the population. In order to document the impacts of the cessation of the autumn hunt in Iceland it is essential that we continue the present level of monitoring into the future. We therefore very much hope that you will be willing to continue the momentum in the future! In the meantime, we extend our grateful thanks as ever to the magnificent labours of the counters for counting, collating and sending the fruits of their efforts to us to report! Thanks, too, to all of you in the count network for contributing your information to the mapping of feeding and roosting sites used by your wintering flocks. This initiative is important if we are to understand site and habitat use of the different flocks and be able to understand how the birds use the landscapes and habitats available to them. For this reason, we are extremely appreciative as always to all those who have helped with counts and the supply of other information for yet another season. In 2005/6, these include: John Adair, Bob Adam, Dave Batty, Pat Batty, John Bowler, Roger Broad, George Christie, Paul Collin, Colin Corse, Peter Cunningham, John Dye, Keith Fairclough, Ian Fisher (for collation of the Grindon records), Derren Fox, Mike Gear, Mary Gregory, Louise Gregory, Larry Griffin, Dick Hewitt, Ian Hopkins, Keith Hoey, Dave Irving, Paul Isaacson, Tim Jacobs, David Jardine, Russell Jones, Wilma Kelly, Andy Knight, Stan Laybourne, Ross Lilley, Dennis McCullough, Marco McGinty, Rae McKenzie, Bob McMillan, Leigh Marshall, Dick Matson, Eric Meek, Andy Mitchell, Carl Mitchell, Margaret Morris, Brian Neath, Bill Neill, Malcolm Ogilvie, Scott Paterson, Mike Peacock, Alan Reid, Chris Rollie, Dave Sexton, Dick Squires, Andrew Stevenson, David Stroud, Arthur Thirlwell, James Towill, Simon Wellock, Anna White, Catriona White and Fergus Younger. Thanks to SNH for coverage of sites in Argyll, to the counter teams on Kintyre and Islay and our sincere apologies as ever for forgetting anybody

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