

WWT/JNCC/SNH Goose & Swan Monitoring Programme

survey results 2011/12

Greenland White-fronted Goose *Anser albifrons flavirostris*

1. Abundance

Coordinated spring and autumn censuses of the Greenland White-fronted Goose were carried out in Great Britain and Ireland for the 30th consecutive winter. Censuses were organised by the Greenland White-fronted Goose Study in Britain and by the National Parks & Wildlife Service in Republic of Ireland and Northern Ireland (Fox *et al.* 2012).

Combining the results for Britain and Ireland from the spring 2012 census gives an overall population estimate of 22,403, a decrease of 13% compared to spring 2011 and notably lower than the previous ten-year average (25,350 for 2002-2011) (Figure 1).

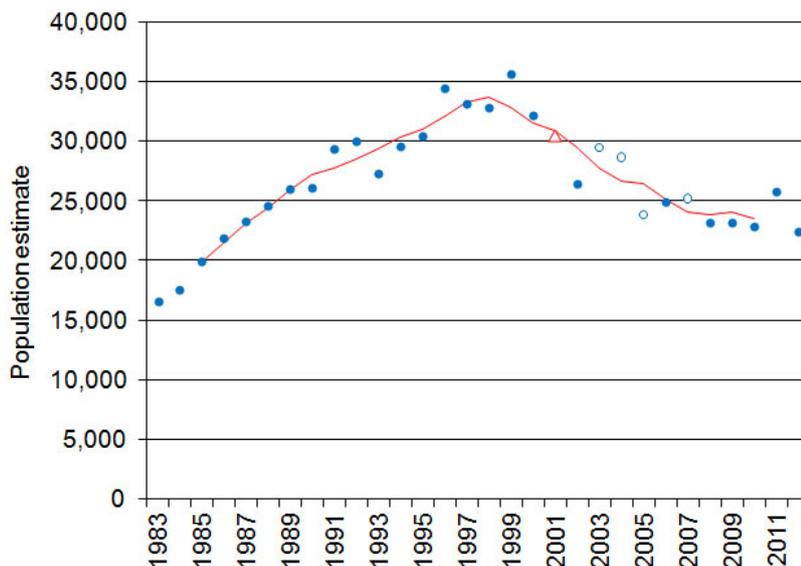


Figure 1. Population estimates of Greenland White-fronted Geese, spring 1983-2012 (filled circles) (Fox *et al.* 2012). The five-year running mean [e.g. mean for 2008 is from population estimates for 2006-10] is shown as a red line. The open circles indicate estimated values for years when data were missing from Ireland. The open triangle indicates the estimated value for 2001 when data were missing on account of the outbreak of Foot and Mouth disease that year.

All wintering resorts in Britain were covered at least once during the 2011/12 season. For any sites not covered during the census period, counts were substituted with those undertaken close to the defined dates; amounting to 4.1% and 5.9% of the autumn and spring totals, respectively. Overall, totals of 8,493 and 10,161 Greenland White-fronted Geese were recorded in autumn 2011 and spring 2012, respectively (Table 1). This represents decreases of 31.7% and 23.3% compared with autumn 2010 and spring 2011, respectively (Figure 2). The autumn 2011 total included a count of 8,445 in Scotland, of which 4,670 were observed on Islay. During the spring 2012 census, 10,091 geese were seen in Scotland, 4,309 of these being seen on Islay, and 22 were located in England. For calculating the autumn and spring totals, a substituted count of 48 birds was used for Wales.

Table 1. Autumn and spring census counts in Britain and Ireland 2011/12 (includes substituted counts; see above) (from Fox *et al.* 2012).

Region	Autumn Census	Spring Census
Shetland	1	7
Orkney	54	55
Caithness	264	338
Northeast Scotland	18	3
Western Isles	174	181
Inner Hebrides	53	50
Lochaber/North Argyll	954	1,595
South Argyll	1,941	3,136
Islay	4,670	4,309
Dumfries & Galloway	316	417
Wales	48	48
England	-	22
Britain total	8,493	10,161
Donegal	1,048	1,556
North Central	120	73
Mayo	64	76
Mayo/Galway Uplands	6	5
Galway Lowlands	166	176
Clare/Limerick	70	70
Shannon headwaters	54	54
Middle & lower Shannon	364	398
Midlands	237	261
Southwest	6	6
Wexford	7,962	9,567
Ireland total	10,097	12,242
Population estimate	n/a	22,403

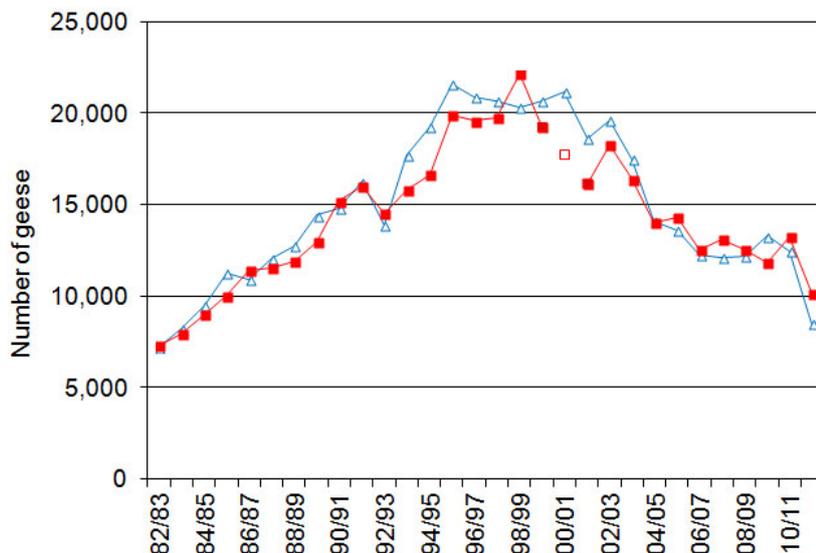


Figure 2. Counts of Greenland White-fronted Geese in Britain, 1982/83-2011/12, showing autumn (open triangles) and spring (filled squares) census results for each season. Note the missing value for spring 2001 (unfilled square) on account of the outbreak of Foot and Mouth Disease that year (from Fox *et al.* 2012).

Coverage of Ireland was also near complete, with all important sites covered at least once during the season. For calculating census totals, counts were substituted for sites where no count was made during the census period and for Loughs Foyle and Swilly, where geese were known to have been missed during the international counts; substituted counts contributed 11.2% and 11.7% of the autumn 2011 and spring 2012 totals, respectively. A total

of 10,097 Greenland White-fronted Geese was recorded in autumn and 12,242 during the spring census (Table 1), representing decreases of 8.5% and 2.1% compared with the autumn 2010 and spring 2011 counts, respectively. As usual, Wexford held a high proportion of the geese, with 7,962 seen during the autumn count and 9,567 observed in spring.

2. Breeding success

During 2011/12, 5,851 Greenland White-fronted Geese were aged at 21 sites in Britain and brood size was assessed for 192 families. Overall, the percentage young was 8.8% (Table 2), this being over 12% lower than in 2010/11 (Figure 3) and below the previous ten-year mean (10.6% for 2001/02-2010/11), which itself is already below the long-term mean. The mean brood size (2.93 young per successful pair) was slightly lower than the previous winter and also below the previous ten-year mean (3.14 for 2001/02-2010/11).

The percentage of young varied between wintering sites, ranging from 0-36.4%, with only five sites recording over 10% young. On Islay, the proportion of young was well below average (13.9% for 1962/63-2010/11); only 9.9% of a sample of 1,867 geese aged. Elsewhere in Britain, breeding success was also lower than in recent years, with 8.31% young recorded amongst the 3,984 geese aged.

Table 2. Percentage of young and mean brood size of Greenland White-fronted Geese in Britain and Ireland during winter 2011/12 [Fox *et al.* 2012].

Region	Proportion (%) of young (n)	Mean brood size (n)
Islay	9.9 (1,867)	3.35 (91)
Britain excluding Islay	8.3 (3,984)	2.54 (101)
Britain overall	8.8 (5,851)	2.93 (192)
Wexford	7.1 (4,342)	2.86 (80)
rest of Ireland	9.9 (931)	2.00 (31)
Ireland overall	7.6 (5,273)	2.62 (111)

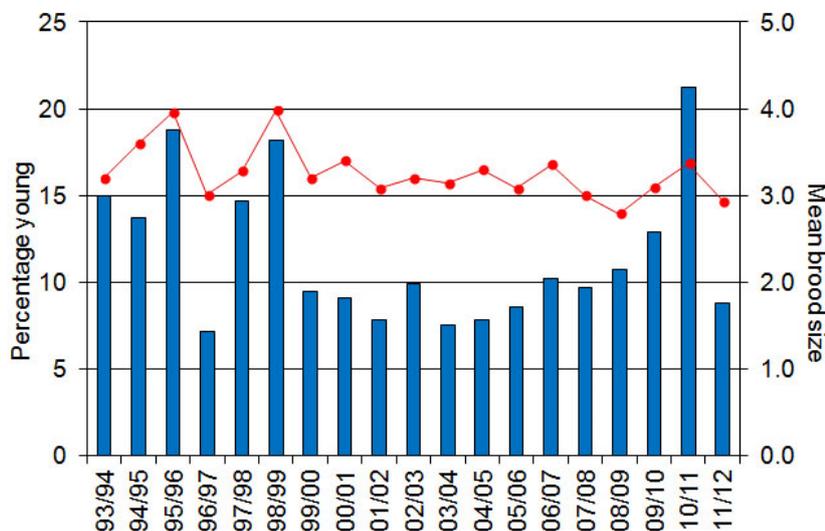


Figure 3. The percentage of young (blue columns) and mean brood size (red circles) of Greenland White-fronted Geese in Britain, 1993/94 - 2011/12 [from Fox *et al.* 2012].

In Ireland, age assessments were made at ten sites, where a total of 5,273 birds were aged and brood size was collected for a total of 111 families (Table 2). The overall percentage young was 7.6%, a decrease of over 6% on the previous winter, and mean brood size was 2.62 young per successful pair, slightly lower than in 2010/11. Breeding success varied between sites, ranging from 0-23.7%. The majority of birds were aged at Wexford, where 7.1% of the 4,342 geese aged were juveniles, this being less than half of that recorded in 2010/11 (14.4%, $n = 6,346$). In areas away from Wexford breeding success was also notably lower, with flocks holding 9.9% young ($n = 931$) compared with 13.1% ($n = 1,080$) for the previous year.

3. Discussion

The further decline in the Greenland White-fronted Goose population seen in 2012 is, in part, thought to be a result of another poor breeding season in 2011. However, it is possible that other factors may have caused fewer geese to be present at many of the regular wintering resorts where counts are conducted, contributing to the drop in overall numbers counted compared to the previous winter. Unusually, a large number of geese remained in Iceland late into November, following a mild autumn, and they left into what was believed to be unfavourable wind conditions at the end of the month. It appears some geese were blown off course, turning up in Norway, along the North Sea coasts and in eastern Britain away from regular resorts. Many counters noted that the geese were more scattered across Britain than has been seen before, with unusual numbers reported away from regular sites. In some cases the geese remained at these other sites throughout the winter. An analysis of other count data from 2011/12, primarily from the Wetland Bird Survey, may help to explain the extent to which birds wintered away from traditional sites.

For further information see Fox *et al.* 2012.

4. References

Fox, A.D., I. Francis & A. Walsh. 2012. *Report of the 2011/2012 International Census of Greenland White-fronted Geese*. Greenland White-fronted Goose Study / National Parks & Wildlife Service report, Kalo.

This report should be cited as:

WWT. 2012. *Goose & Swan Monitoring Programme: survey results 2011/12 Greenland White-fronted Goose Anser albifrons flavirostris*. WWT/JNCC/SNH, Slimbridge.

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This report was produced under the Goose & Swan Monitoring Programme (GSMP). This programme monitors numbers and breeding success of geese and swans in the UK during the non-breeding season. GSMP is organised by the Wildfowl & Wetlands Trust in partnership with the Joint Nature Conservation Committee (on behalf of Natural Resources Wales, Natural England and the Council for Nature Conservation and the Countryside) and Scottish Natural Heritage.



Goose & Swan Monitoring