

WWT/JNCC/SNH Goose & Swan Monitoring Programme

survey results 2012/13

Greenland White-fronted Goose *Anser albifrons flavirostris*

1. Abundance

Coordinated spring and autumn counts of the Greenland White-fronted Goose were carried out in Great Britain and Ireland for the 31st consecutive winter. This census is 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. 2013).

Combining the results for Britain and Ireland for spring 2013 gives an overall estimate of population size of 22,156, a decrease of 1% compared to spring 2012 and the lowest recorded since 1986 (21,890) (Figure 1).

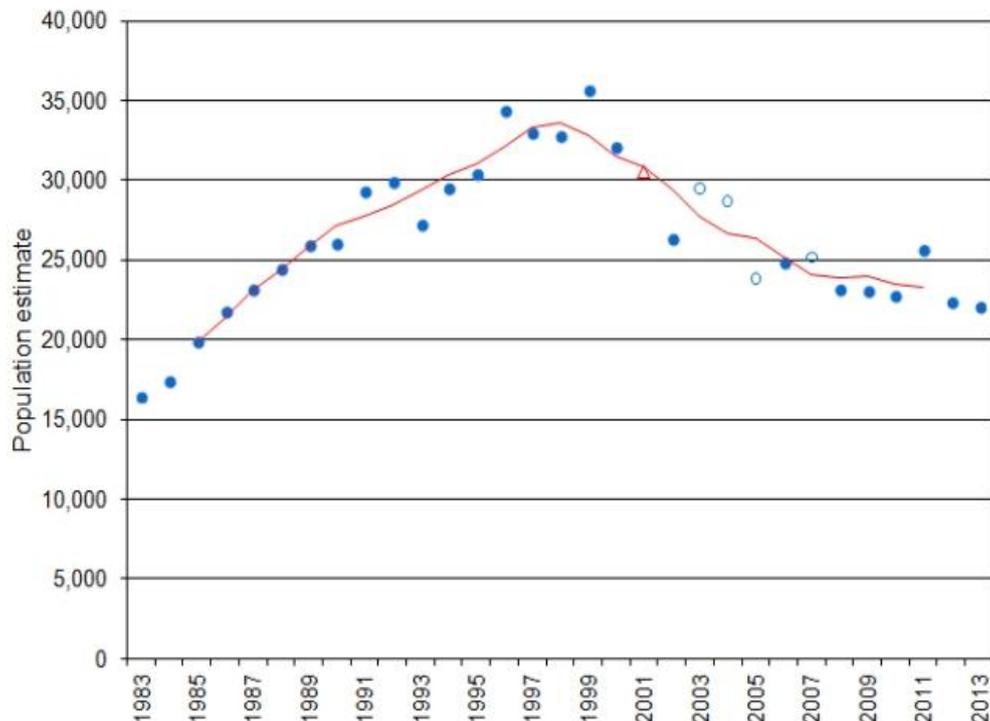


Figure 1. Annual population estimates of Greenland White-fronted Geese, spring 1983-2013 (filled circles) (Fox et al. 2013). The five-year running mean (e.g. mean for 2008 is from population estimates for 2006-10) is shown as a red line. The open circles indicate estimated values for years when data 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 2012/13 season. For any sites not covered during the census period, counts were substituted with those undertaken close to the defined dates; amounting to 1.6% and 2.4% of the autumn and spring totals, respectively.

Overall, totals of 10,089 and 10,940 Greenland White-fronted Geese were recorded in autumn 2012 and spring 2013, respectively (Table 1). This represents increases of 18.8% and 7.7% compared with autumn 2011 and spring 2012, respectively (Figure 2). The autumn 2012 total included a count of 10,023 in Scotland, of which 5,321 were observed on Islay (13.9% higher than in autumn 2011). During the spring 2013 census, 10,873 geese were seen in Scotland, 5,449 of these being seen on Islay (26.4% higher than the previous year), 12 were located in England and 55 in Wales.

Table 1. Autumn and spring counts in Britain and Ireland, 2012/13 (includes substituted counts; see text) (from Fox *et al.* 2013).

| Region | Autumn Census | Spring Census |
|----------------------------|----------------------|----------------------|
| Orkney | 62 | 63 |
| Caithness | 247 | 222 |
| Northeast Scotland | 2 | - |
| Western Isles | 196 | 208 |
| Inner Hebrides | 37 | 38 |
| Lochaber/North Argyll | 1,200 | 1,552 |
| South Argyll | 2,688 | 3,024 |
| Islay | 5,321 | 5,449 |
| Dumfries & Galloway | 270 | 317 |
| Wales | 55 | 55 |
| England | 11 | 12 |
| Britain total | 10,089 | 10,940 |
| Donegal | 1,147 | 1,266 |
| North Central | 93 | 99 |
| Mayo | 51 | 84 |
| Mayo/Galway Uplands | 54 | 54 |
| Galway Lowlands | 182 | 169 |
| Clare/Limerick | 69 | 69 |
| Shannon headwaters | 115 | 114 |
| Middle & lower Shannon | 396 | 372 |
| Midlands | 200 | 231 |
| Southwest | - | 7 |
| Wexford | 7,908 | 8,751 |
| Ireland total | 10,215 | 11,216 |
| Population estimate | - | 22,156 |

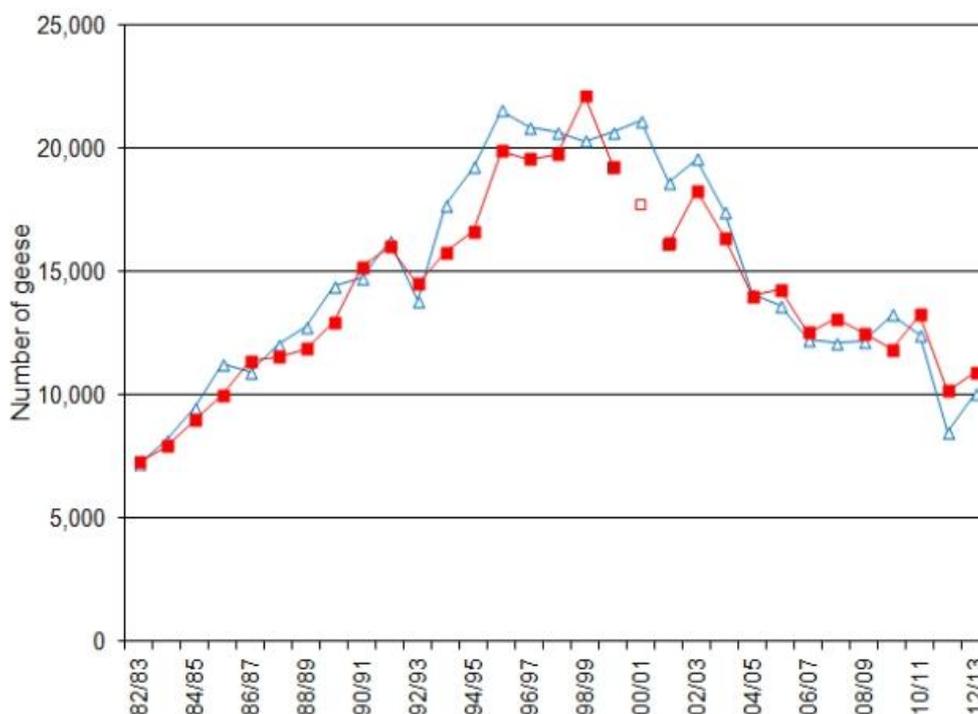


Figure 2. Coordinated count totals of Greenland White-fronted Geese in Britain, 1982/83-2012/13, showing autumn (open triangles) and spring (filled squares) census results for each season. Note the missing value for spring 2001 (unfilled square) on account of the outbreak of Foot and Mouth Disease that year (from Fox *et al.* 2013).

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, contributing 6.2% and 2.6% of the autumn 2012 and spring 2013 totals, respectively.

A total of 10,215 Greenland White-fronted Geese was recorded in autumn, an increase of 1.2% compared with 2011, and 11,216 during the spring census, representing a decrease of 8.4% compared with 2012 (Table 1). Wexford held a high proportion of the geese, with 7,908 seen during the autumn count (less than 1% lower than during autumn 2011) and 8,751 observed in spring (8.5% lower than in spring 2012).

2. Breeding success

During 2012/13, 4,050 Greenland White-fronted Geese were aged at 31 sites in Britain and brood size was assessed for 148 families. Overall, the percentage young was 9.6% (Table 2), this being only slightly higher than in 2011/12 (Figure 3) but remaining below the previous ten-year mean (10.7% for 2002/03-2011/12). Similarly, the mean brood size was 2.94 young per successful pair, only fractionally higher than the previous winter but also below the previous ten-year mean (3.13 for 2002/03-2011/12).

The percentage of young varied between wintering sites, ranging from 0-100% (six geese seen on the Isles of Scilly were all juveniles), with 12 sites recording 15% or more young. On Islay, the proportion of young was below average at 11.1% (c.f. 13.9% for 1962/63-2011/12) whilst elsewhere in Britain 8.6% of the geese aged were juveniles, remaining at the lower end of the range for recent years.

Table 2. Percentage of young and mean brood size of Greenland White-fronted Geese in Britain and Ireland during winter 2012/13 (Fox *et al.* 2013).

| Region | Proportion (%) of young (n) | Mean brood size (n) |
|-------------------------|-----------------------------|---------------------|
| Islay | 11.1 (2,834) | 3.01 (91) |
| Britain excluding Islay | 8.6 (4,050) | 2.85 (57) |
| Britain overall | 9.6 (6,884) | 2.94 (148) |
| Wexford | 4.9 (4,034) | 2.63 (62) |
| Rest of Ireland | 5.7 (802) | - |
| Ireland overall | 5.0 (4,836) | 2.63 (62) |

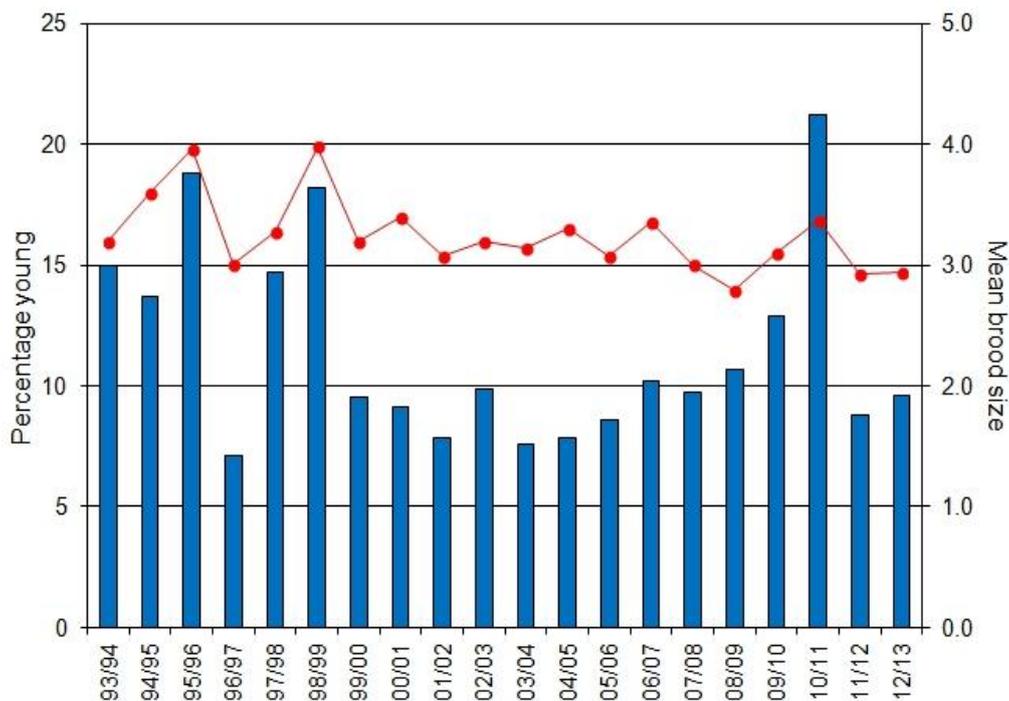


Figure 3. The percentage of young (blue columns) and mean brood size (red circles) of Greenland White-fronted Geese in Britain, 1993/94 – 2012/13 (from Fox *et al.* 2013).

In Ireland, age assessments were made at 12 sites, where a total of 4,836 birds were aged (Table 2). The overall percentage young was 5.0%, a decrease of 2.6% on the previous winter and the lowest recorded since records began. Breeding success varied between sites, ranging from 0-13.0%. The majority of birds were aged at Wexford, where 4.9% of the 4,034 geese aged were juveniles, whilst in areas away from Wexford breeding success was marginally higher, with flocks holding 5.7% young (n = 802). Mean brood size was 2.63 young per successful pair at Wexford, where 62 families were assessed, this being just slightly lower than in 2011/12 (2.86). No brood size data were reported from elsewhere in Ireland.

3. Discussion

The slight decline in the Greenland White-fronted Goose population recorded in 2013 was, perhaps, not as great as might have been expected given the low breeding success observed amongst flocks on the wintering grounds, particularly in Ireland. Numbers recorded on Islay in spring 2013 were encouragingly higher than the previous year, particularly given the large decline (38%) observed there in spring 2012 compared with in 2011. This increase counterbalanced the widespread declines observed elsewhere in Scotland during spring 2013.

Comparatively, total counts at Wexford have taken a slight downward turn since showing an increase from 2006, during which time the general pattern of totals elsewhere in Ireland was one of a relatively constant level. Further coordinated site monitoring is required to investigate and hopefully better understand these major shifts between wintering resorts for a population that generally shows high between-year site fidelity.

For further information see Fox *et al.* 2013.

4. References

Fox, A.D., I. Francis & A. Walsh. 2013. *Report of the 2012/2013 International Census of Greenland White-fronted Geese*. Greenland White-fronted Goose Study / National Parks & Wildlife Service report, Kalo.

This report should be cited as:

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Goose & Swan Monitoring