

WWT/JNCC/SNH Goose & Swan Monitoring Programme survey results 2017/18

Greenland White-fronted Goose *Anser albifrons flavirostris*

1. Abundance

Coordinated counts of the Greenland White-fronted Goose population in Britain and Ireland were carried out in autumn 2017 and spring 2018, representing the 36th annual census. The counts 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.

Combining the results from the spring 2018 coordinated counts in Britain and Ireland gives a population estimate of 20,529, a slight decrease of 0.1% compared with spring 2017 (Figure 1).

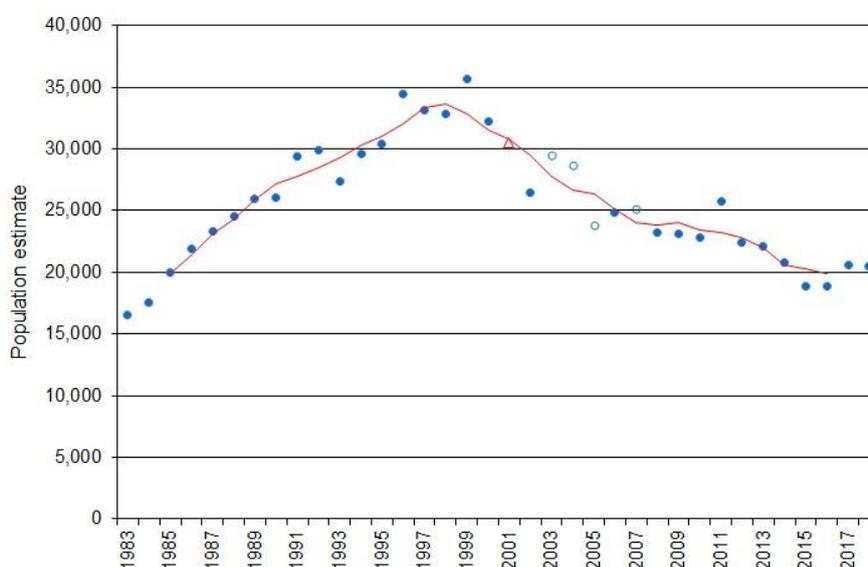


Figure 1. Annual population estimates of Greenland White-fronted Geese, spring 1983–2018 (filled circles) (from Fox et al. 2018). The five-year running mean (e.g. mean for 2009 is from population estimates for 2007–11) is shown as a red line. The open circles indicate estimated values for years when data were missing from Ireland. The open triangle indicates the estimated value for 2001 when data were missing due to the outbreak of Foot and Mouth disease that year.

All wintering resorts in Britain (except for the Small Isles where there no longer seem to be regularly wintering geese) were covered at least once during the 2017/18 season. On Islay, due to poor weather during the spring count and large discrepancies between the two count days, counts were substituted to better reflect numbers that might have been expected. For any sites not covered during the census period, counts were substituted with those undertaken close to the defined dates: amounting 0.7% of the autumn total and 5.1% (excluding Islay) of the spring total.

Overall, totals of 10,774 and 10,942 Greenland White-fronted Geese were recorded in autumn 2017 and spring 2018, respectively (Table 1). This represents an increase of 4.3% compared with autumn 2016 and a decrease of 5.6% compared with spring 2017 (Figure 2). During the autumn census, 5,351 birds were recorded on Islay, with 5,374 birds seen elsewhere in Scotland, 40 birds reported in Wales and none

recorded in England. During the spring census, 5,593 were recorded in Scotland (excluding Islay), 4 in Wales and 6 in England. On Islay, a total of 4,442 was recorded; however, a substituted total of 5,319 geese (taking the maximum counts from each sector over the two days) was used in the population total.

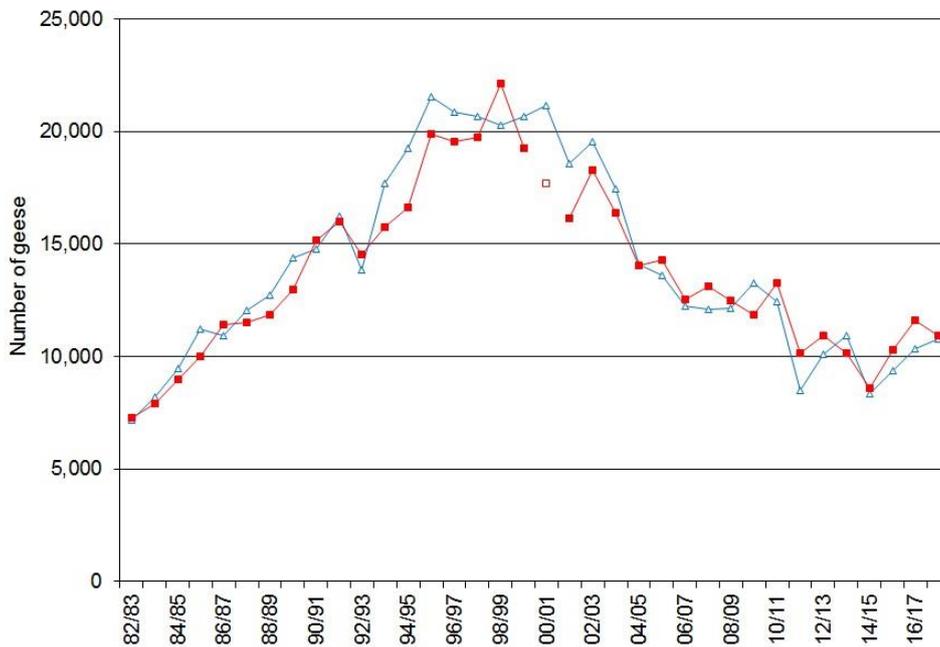


Figure 2. Coordinated count totals of Greenland White-fronted Geese in Britain, 1982/83–2017/18, showing autumn (open triangles) and spring (filled squares) census results for each season. Note the missing value for spring 2001 (unfilled square) due to the outbreak of Foot and Mouth Disease that year (from Fox et al. 2018).

Good census coverage in Ireland was achieved, with most of the known flocks counted at least once over the course of the winter. During the autumn census, counts for eight sites were substituted, amounting to 3.0% of the Irish total, whilst counts for thirteen sites were substituted for the spring census, representing 9.6% of the total.

Overall, totals of 8,884 and 9,587 Greenland Whitefronts were recorded in autumn 2017 and spring 2017, respectively (Table 1). This represents a slight decrease (0.4%) compared to the autumn 2016 census and a 7.0% increase on the spring 2017 census (Figure 3). . During both censuses, the majority of geese were recorded at Wexford, with 7,030 seen there during autumn (0.8% higher than in 2016) and 7,637 in spring (8.4% higher than in 2017).



Figure 3. Coordinated count totals of Greenland White-fronted Geese in Ireland, 2008/09–2017/18, showing autumn (open triangles) and spring (filled squares) census results for each season (from Fox et al. 2018).

Table 1. Autumn and spring counts in Britain and Ireland, 2017/18 (includes substituted counts; see full report) (From Fox et al. 2018).

Region	Autumn Census	Spring Census
Orkney	72	66
Caithness	288	311
Western Isles	197	194
Inner Hebrides	16	15
Lochaber/North Argyll	1,054	1,354
South Argyll	3,423	3,296
Islay	5,351	5,319
Dumfries & Galloway	323	353
Other irregular sites (Scotland)	1	4
Wales	49	24
England	0	6
Britain total	10,774	10,942

Region	Autumn Census	Spring Census
Donegal	886	837
North Central	136	114
Mayo	49	37
Mayo/Galway Uplands	52	52
Galway Lowlands	170	182
Clare/Limerick	50	60
Shannon headwaters	120	120
Middle & Lower Shannon	178	280
Midlands	213	268
Wexford	7,030	7,637
Ireland total	8,884	9,587
Population estimate	–	20,529

2. Breeding success

A total of 4,724 Greenland White-fronted Geese was aged at 26 sites across Britain during 2017/18, of which 10.7% were young birds (Table 2); lower than in 2016/17 (16.5%) and below the previous ten-year mean (13.2%, 2007/08 – 2016/17) (Figure 4). Overall, mean brood size was 2.63 young per successful pair (148 families assessed, at 12 sites) which was slightly lower than the previous season (2.78) and also the previous ten-year mean (2.95, 2007/08 – 2016/17) (Table 2 & Figure 4).

Across the British sites, the percentage of young ranged from 0% to 55.6% (with sample sizes ranging from two to 1,970 birds), with 18 sites exceeding 10% young in flocks (See Fox et al 2018 for details). On Islay (where the highest number of birds were aged), the percentage of young was 9.3% (compared with 18.4% in 2016/17), whilst elsewhere in Britain, 11.6% of the birds aged (2,754) were young (compared with 15.3% in 2016/17) (Table 2).

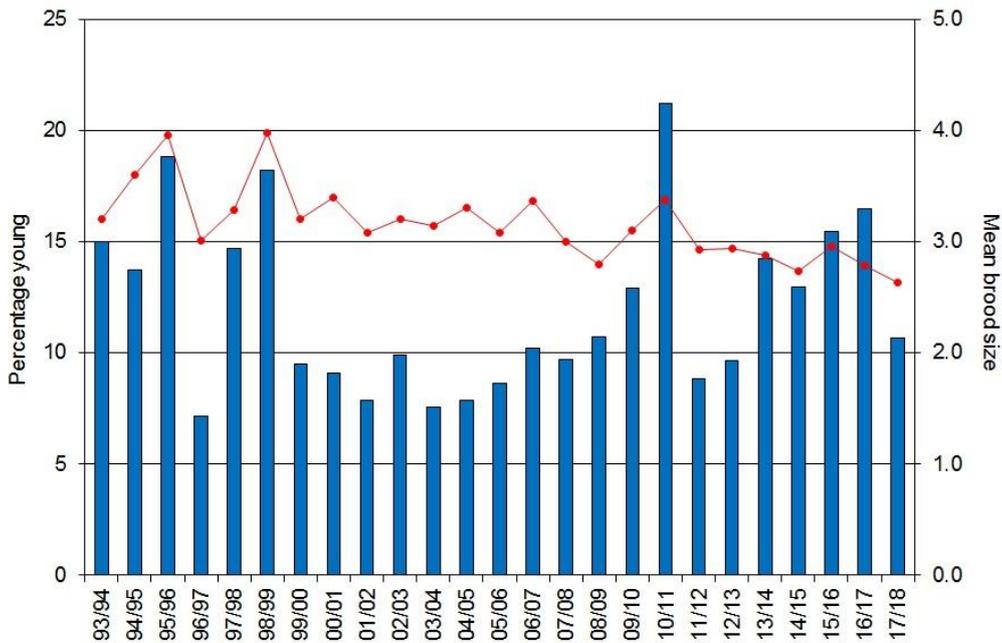


Figure 4. The percentage of young (blue columns) and mean brood size (red circles) of Greenland White-fronted Geese in Britain, 1993/94–2017/18 (from Fox et al. 2018).

In Ireland, 5,202 birds were aged at eight sites, resulting in an overall percentage young of 5.3%, lower than the previous five-year mean (7.3%, 2012/13-2016/17) (Table 2 & Figure 5). Overall, mean brood size was 2.82 young per successful pair (of 77 families assessed at four sites), which is lower than in 2016/17 (3.04) but slightly higher than the previous five-year mean (2.75, 2012/13-2016/17) (Table 2 & Figure 5).

The percentage young varied between sites ranging from 0% to 15.8% (with samples sizes ranging from 19 to 4,859 birds), with one site exceeding 10% young amongst flocks (see Fox *et al.* 2018 for details). The majority of birds were aged at Wexford, of which 5.3% were young birds (Table 2).

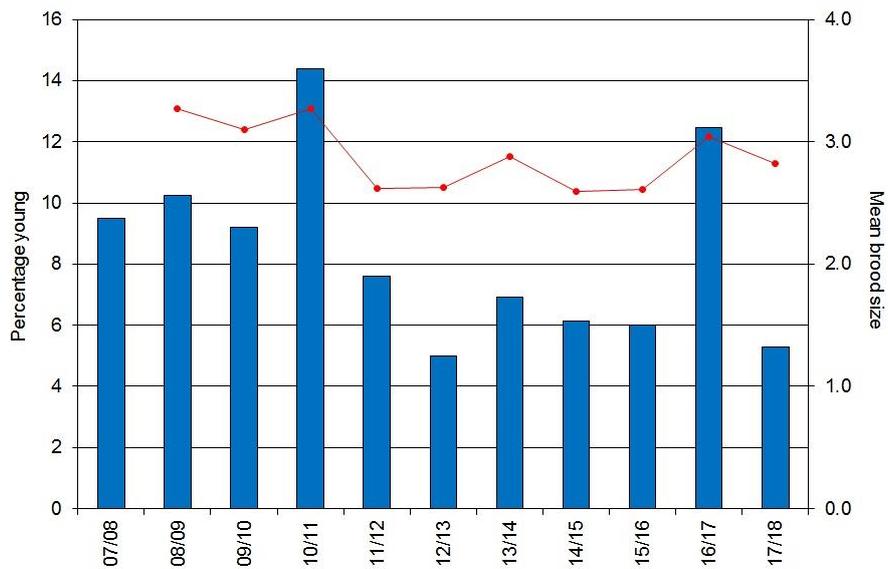


Figure 5. The percentage of young (blue columns) and mean brood size (red circles) of Greenland White-fronted Geese in Ireland, 2007/08 – 2017/18 (no overall brood size data are available for 2007/08) (from Fox et al. 2018).

Table 2. Percentage of young and mean brood size of Greenland White-fronted Geese in Britain and Ireland during winter 2017/18 (from Fox et al. 2018).

Region	Percentage (%) of young (n)	Mean brood size (n)
Islay	9.3% (1,970)	2.97 (58)
Britain excluding Islay	11.6% (2,754)	2.41 (90)
Britain overall	10.7% (4,724)	2.63 (148)
Wexford	5.3% (4,859)	2.90 (72)
Rest of Ireland	5.0% (343)	1.83 (5)
Ireland overall	5.3% (5,202)	2.28 (77)

3. Discussion

Since the mid-1990s, this small global population of Greenland White-fronted Geese has shown consistent decline. Despite what appeared to be some level of stability between 2008 and 2013, there have since been further declines, with the 2016 population estimate being 47.1% lower than the peak in 1999 (35,692). Although the number of individuals counted during spring 2018 was down very slightly on the previous year (20,556 in spring 2017), it was encouraging to see the population remain above 20,000 in 2018 (Figure 6).

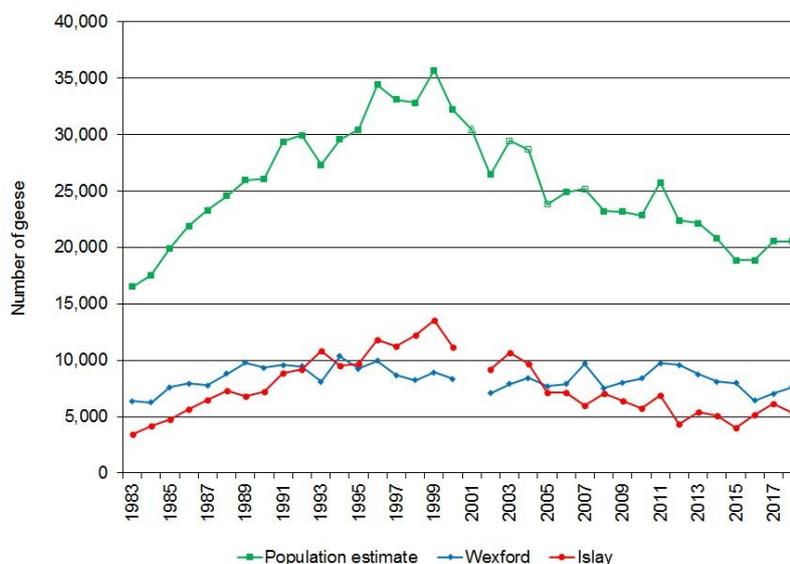


Figure 6. The annual population estimate of Greenland White-fronted Goose (green squares), with numbers recorded at Wexford (blue diamonds) and Islay (red circles), spring 1983–2018 (from Fox et al. 2018)

The recent increase in population size is likely due to the good breeding season in 2016, which was particularly noticeable amongst flocks in Ireland where the percentage of young rose above 10% for the first time since 2010/11. However, 2017 appeared to be another poor breeding season for this species, particularly in Ireland, which may, in part, be why numbers have not increased.

For further details see *Fox et al. 2018*

4. References

Fox, A.D, I. Francis, D. Norriss & Alyn Walsh. 2018. *Report of the 2017/2018 International Census of Greenland White-fronted Geese*. Greenland White-fronted Goose Study / National Parks & Wildlife Service report, Kalo. [Download](#)

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Goose & Swan Monitoring