

# WWT/JNCC/SNH Goose & Swan Monitoring Programme survey results 2018/19

## Greenland White-fronted Goose *Anser albifrons flavirostris*

### 1. Abundance

#### Revised 2017/18 results

Following the publication of the 2017/18 results in Fox *et al.* 2018, corrections were made to data supplied for some of the sites in southwest Scotland resulting in changes to the British totals and the overall population estimate for that season. The overall population estimate for spring 2018 has been revised to 20,285 (previously reported as 20,529), which represents a 1.3% decrease on the 2017 estimate (20,556). The British totals for autumn 2017 and spring 2018 have been revised to 10,765 and 10,698, respectively (previously reported as 10,774 and 10,942, respectively). No changes have been made to the Irish counts.

For further details of the updates to the 2017/18 results, see Fox *et al.* 2019.

#### 2018/19 results

Coordinated counts of the Greenland White-fronted Goose population in Britain and Ireland were carried out in autumn 2018 and spring 2019, representing the 37th annual census. The counts were organised by the Greenland White-fronted Goose Study in Britain and by the National Parks and Wildlife Service in Ireland.

Combining the results from the spring 2019 coordinated counts in Britain and Ireland gives a population estimate of 21,466, a 5.8% increase on the revised spring 2018 estimate (Figure 1).

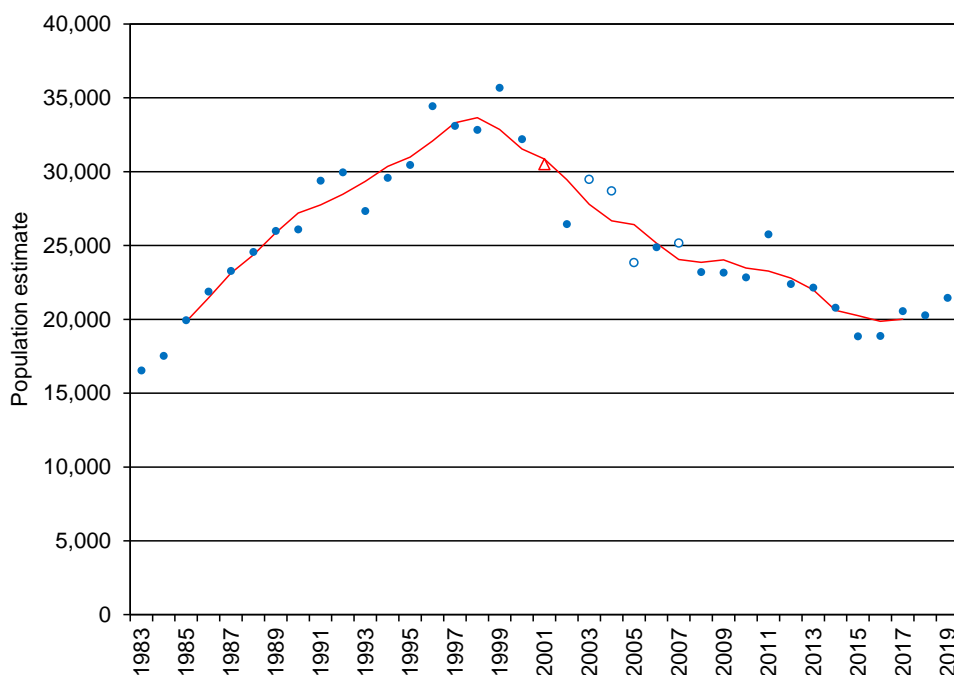


Figure 1. Annual population estimates of Greenland White-fronted Geese, spring 1983–2019 (filled circles) (from Fox *et al.* 2019). The five-year running mean (e.g. mean for 2009 is from population estimates for 2007–11) is shown as a red line. The open circles indicate estimated values for years when 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.

Coverage was more or less complete in Britain, with all resorts counted at least once during the 2018/19 season, with the exception of the Small Isles where there no longer seem to be regularly wintering geese. For any sites not covered during the census periods, counts were substituted with those undertaken close to the defined dates. For autumn 2018, counts were substituted for six sites, accounting for 3.1% of the British autumn total, whilst for spring 2019, counts were substituted for seven sites, accounting for 3.3% of the spring total.

Overall totals of 10,833 and 12,131 Greenland Whitefronts were recorded in Britain during the autumn 2018 and spring 2019 censuses, respectively; this represents a 0.6% and 13.4% increase compared with the revised autumn 2017 and spring 2018 censuses, respectively (Figure 2). During the autumn census, eight Whitefronts were recorded in England, 20 in Wales and 10,805 in Scotland, of which 54.1% (5,847 birds) were on Islay (9.3% higher compared with 2017 count, 5,351 birds) (Table 1). During the spring census, three geese were recorded in England, 25 in Wales and 12,103 in Scotland, of which 55.9% (6,771 birds) were on Islay (Table 1): the spring count on Islay was 27.3% higher than that recorded in 2018 (5,319 birds, although this was a substituted count, see Fox *et al.* 2018).

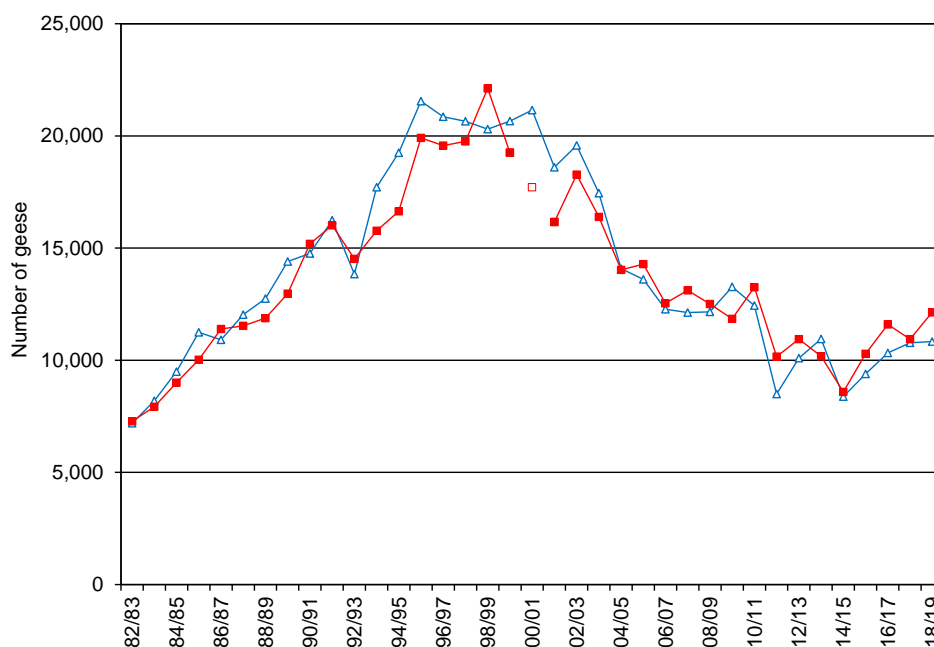


Figure 2. Coordinated count totals of Greenland White-fronted Geese in Britain, 1982/83–2018/19, showing autumn (open triangles) and spring (filled squares) census results for each season. Note the missing value for spring 2001 (unfilled square) due to the outbreak of Foot and Mouth Disease that year (from Fox *et al.* 2019).

Good coverage was achieved in Ireland, with all the key sites covered at least once during the season. For the autumn 2018 census, counts were substituted for five sites, accounting for 2.0% of the overall Irish autumn total, whilst for the spring census, the geese proved more elusive and counts had to be substituted for ten sites, which accounted for 7.7% of the spring total.

Overall totals of 8,714 and 9,335 Greenland Whitefronts were recorded in Ireland during the autumn 2018 and spring 2019 censuses, respectively; this represents slight decreases of 1.1% and 2.6% when compared with the autumn 2017 and spring 2018 censuses totals, respectively (Figure 3). During both the autumn and spring censuses, c. 79% of the geese were recorded in Wexford (Table 1); however, counts at the site were slightly lower compared with the previous season: 6,954 birds in autumn, compared with 7,030 in 2017, and 7,436 in spring, compared with 7,637 in 2018.

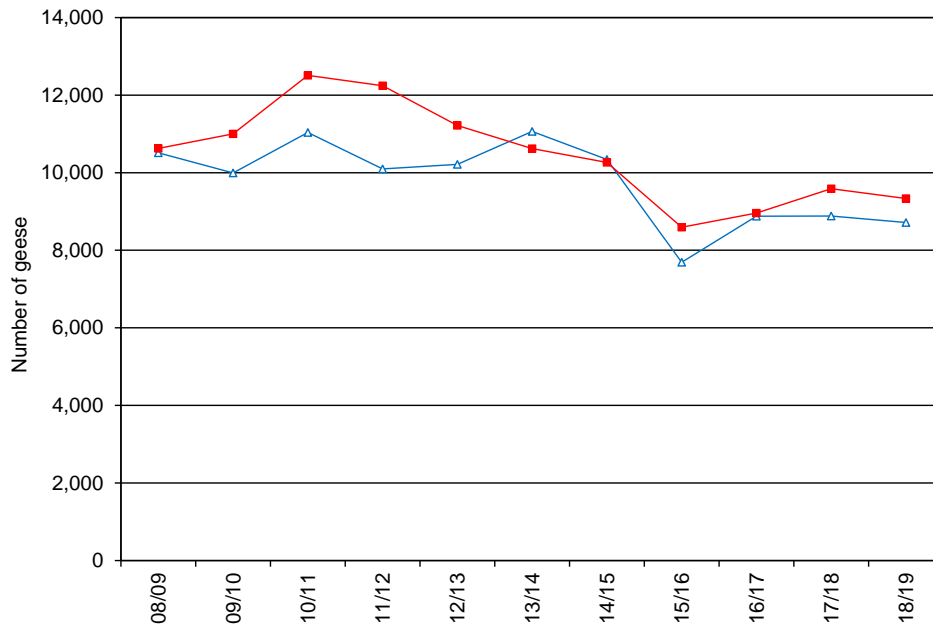


Figure 3. Coordinated count totals of Greenland White-fronted Geese in Ireland, 2008/09–2018/19, showing autumn (open triangles) and spring (filled squares) census results for each season (from Fox *et al.* 2019).

Table 1. Autumn and spring counts in Britain and Ireland, 2018/19 (includes substituted counts; see full report) (from Fox *et al.* 2019).

Region	Autumn Census	Spring Census
Orkney	50	54
Caithness	184	255
Northeast Scotland	1	6
Western Isles	186	187
Inner Hebrides	7	7
Lochaber/North Argyll	1,104	1,292
South Argyll	3,113	3,186
Islay	5,847	6,771
Dumfries & Galloway	312	341
Other irregular sites (Scotland)	1	4
Wales	20	25
England	8	3
<b>Britain total</b>	<b>10,833</b>	<b>12,131</b>
Donegal	722	798
North Central	108	103
Mayo	77	89
Mayo/Galway Uplands	50	61
Galway Lowlands	167	172
Clare/Limerick	47	52

Region	Autumn Census	Spring Census
Shannon Headwaters	118	134
Middle & Lower Shannon	254	305
Midlands	217	185
Wexford	6,954	7,436
<b>Ireland total</b>	<b>8,714</b>	<b>9,335</b>
<b>Population estimate</b>	<b>-</b>	<b>21,466</b>

## 2. Breeding success

A total of 6,424 Greenland White-fronted Geese were aged in Britain during 2018/19, of which 11.5% were young birds (Table 2), this being slightly higher than recorded in 2017/18 (10.7% young) but lower than the previous ten-year mean (13.3%, 2008/09–2017/18) (Figure 4). The overall mean brood size, amongst the 227 families sampled, was 2.67 young per successful pair (Table 2), which is only slightly higher than for the previous winter (2.63) and lower than the previous ten-year mean (2.91, 2008/09–2017/18) (Figure 4).

Across the 23 sites in Britain where age assessments were carried out, the percentage of young amongst flocks ranged from 0% to 34.6% (sample sizes of 2–3,551 birds), with below 10% young recorded at ten sites. On Islay, where the majority of geese were aged, 12.3% were recorded as young birds (Table 2), which is higher than recorded in 2017/18 (9.3% amongst 1,970 birds). Elsewhere in Britain, amongst the 2,873 birds aged, 10.6% were young, this being slightly lower than the previous winter (11.62% amongst 2,754 birds).

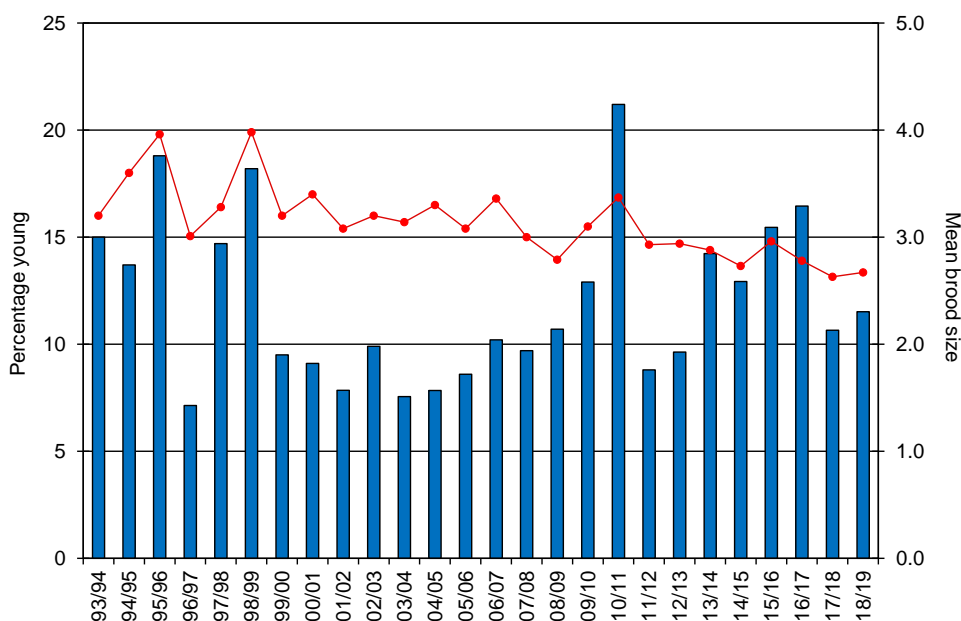


Figure 4. The percentage of young (blue columns) and mean brood size (red circles) of Greenland White-fronted Geese in Britain, 1993/94–2018/19 (from Fox *et al.* 2019).

A total of 4,828 Whitefronts were aged across six sites in Ireland during 2018/19, of which 6.9% were recorded as young birds (Table 2), slightly higher than in 2017/18 (5.3%) but lower than the previous ten-year mean (8.3%, 2008/09–2017/18) (Figure 5). The overall mean brood size, for the 94 families assessed, was 2.80 young per successful pair, the same as recorded in 2017/18 (2.82) and the previous ten-year mean (2.88).

Across the sites, the percentage young ranged from 0% to 9.8% (with sample sizes of 25 to 4,447 birds), with all sites holding below 10% young. At Wexford, where the majority of birds were aged, 6.9% were recorded as young birds (Table 2), this being higher than the previous winter (5.3% amongst 4,859).

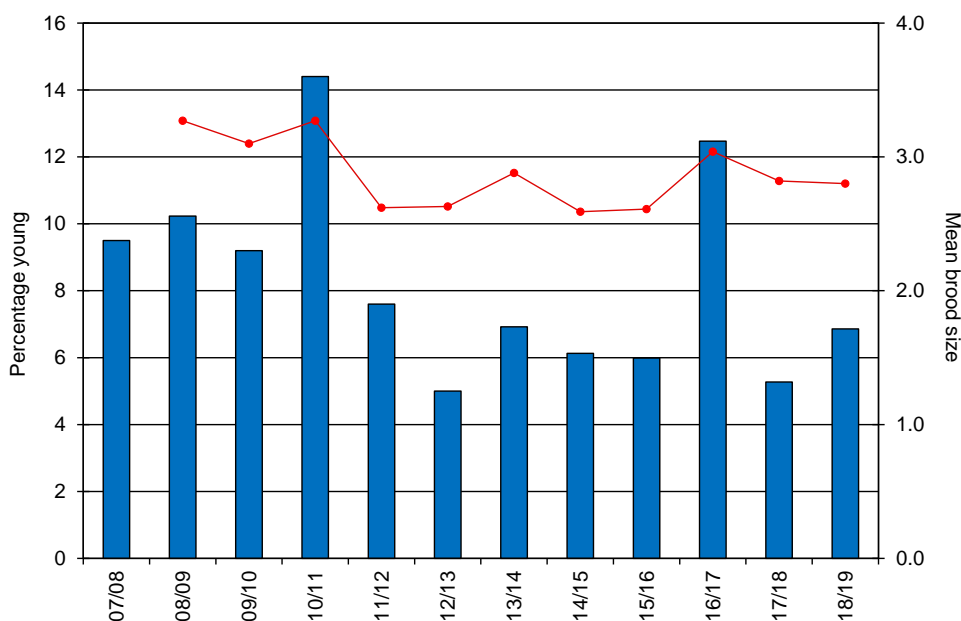


Figure 5. The percentage of young (blue columns) and mean brood size (red circles) of Greenland White-fronted Geese in Ireland, 2007/08 – 2018/19 (no overall brood size data are available for 2007/08) (from Fox *et al.* 2019).

Table 2. Percentage of young and mean brood size of Greenland White-fronted Geese in Britain and Ireland during winter 2018/19 (from Fox *et al.* 2019).

Region	Percentage of young (n)	Mean brood size (n)
Islay	12.3% (3,551)	2.80 (137)
Rest of Britain	10.6% (2,873)	2.47 (90)
<b>Britain overall</b>	<b>11.5% (6,424)</b>	<b>2.67 (227)</b>
Wexford	6.9% (4,447)	2.92 (79)
Rest of Ireland	6.8% (381)	2.13 (15)
<b>Ireland overall</b>	<b>6.9% (4,828)</b>	<b>2.80 (94)</b>

### 3. Discussion

The Greenland White-fronted Goose population has suffered a significant decline since the turn of the century, with numbers falling from a peak of c. 35,700 in 1999 to under 19,000 by 2015. However, since 2017, the population appears to have stabilised, with the 2019 population estimate being higher than the revised 2018 estimate (20,285), and the highest since 2013. The increase in 2019, was largely seen on Islay (Figure 6), with numbers elsewhere in Britain remaining mostly unchanged and numbers in Ireland, particularly in Wexford, being lower than the previous spring.

Breeding success was slightly higher amongst flocks in Britain compared with the previous year, which is likely to have contributed to the increase in numbers recorded there. However, although overall breeding success in Ireland was also fractionally higher overall, it was relatively low among many of the flocks,

including at Wexford (Figure 6), and thus not surprising that numbers of geese in the country were lower than recorded during spring 2018.

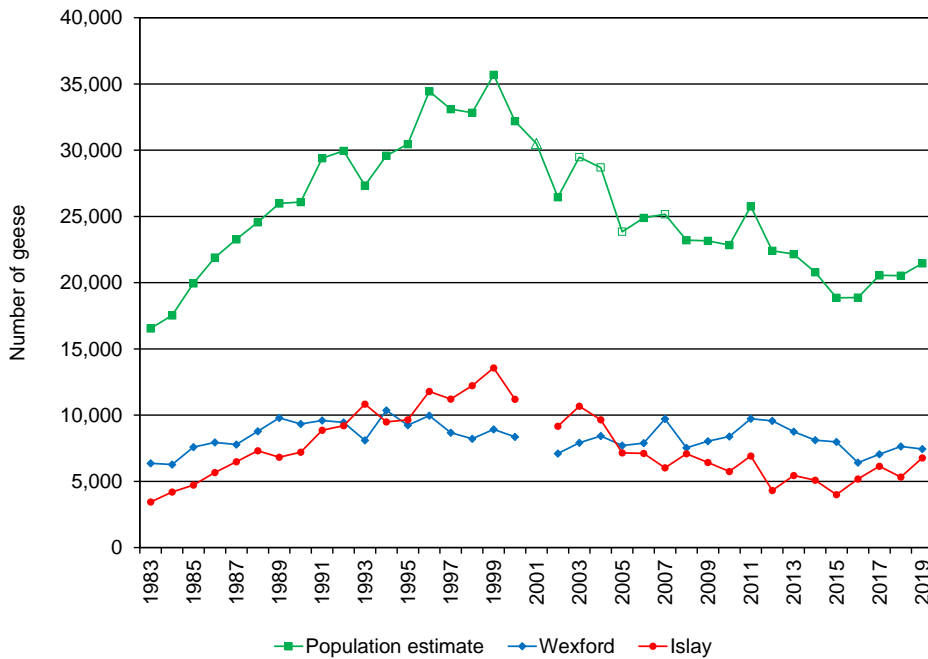


Figure 6. The annual population estimate of Greenland White-fronted Goose (green squares), with numbers recorded at Wexford (blue diamonds) and Islay (red circles), spring 1983–2019 (from Fox *et al.* 2019).

For further details see (from Fox *et al.* 2019).

#### 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.

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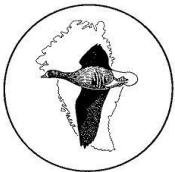
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### Greenland White-fronted Goose Study



## Goose & Swan Monitoring