

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

Pink-footed Goose *Anser brachyrhynchus*

1. Abundance

The 59th consecutive Icelandic-breeding Goose Census took place during autumn and winter 2018, providing information on the abundance and distribution of Greenland/Iceland Pink-footed Geese. A full account of the census can be found in Brides et al. (2019).

Counts were conducted by a network of volunteer observers and professional conservation staff over the weekends of 20/21 October and 10/11 November.

Coverage in Britain was good, with 115 sites visited in October and 145 in November. Outside Britain, counts were also received from Iceland, Ireland and the Faroes.

Totals of 440,891 and 388,738 Pink-footed Geese were counted in October and November, respectively (Table 1). The total numbers counted in these months were 14.5% lower than the October 2017 count and 3.2% higher than the previous November count. The October total was used as the updated population estimate, which represents a decrease of 14.5% on the previous year (Figure 1).

During the October census, 14 sites held over 10,000 Pink-footed Geese. The highest numbers were recorded at Montrose Basin, Angus, which held 78,320 birds (17.8% of the population estimate), Beaully Firth, Highland (25,200, 5.7%), Loch of Skene, Aberdeenshire (25,195, 5.7%), West Water Reservoir (24,400, 5.5%), Morecambe Bay, Lancashire (19,615, 4.4%) and Carsebreck and Rhynd Lochs, Perth and Kinross (18,200, 4.1%). Combined counts from the 28 sites holding numbers exceeding 1% of the population estimate (4,408 birds) accounted for 39.1% of the total October count.

Table 1. Regional distribution of Pink-footed geese during October and November 2018 (nc = not counted, or no count received).

Region	October	November
Iceland	nc	4
Faroe Islands	0	23
Ireland	nc	628
North Scotland	41,310	25,692
Northeast Scotland	79,216	141,559
East Central Scotland	132,407	39,801
Southeast Scotland / Northeast England	55,634	24,320
Southwest Scotland / Northwest England	20,881	10,249
West England	57,257	53,398
East England	54,186	93,064
Total Counted	440,891	388,738
Population estimate	440,891	

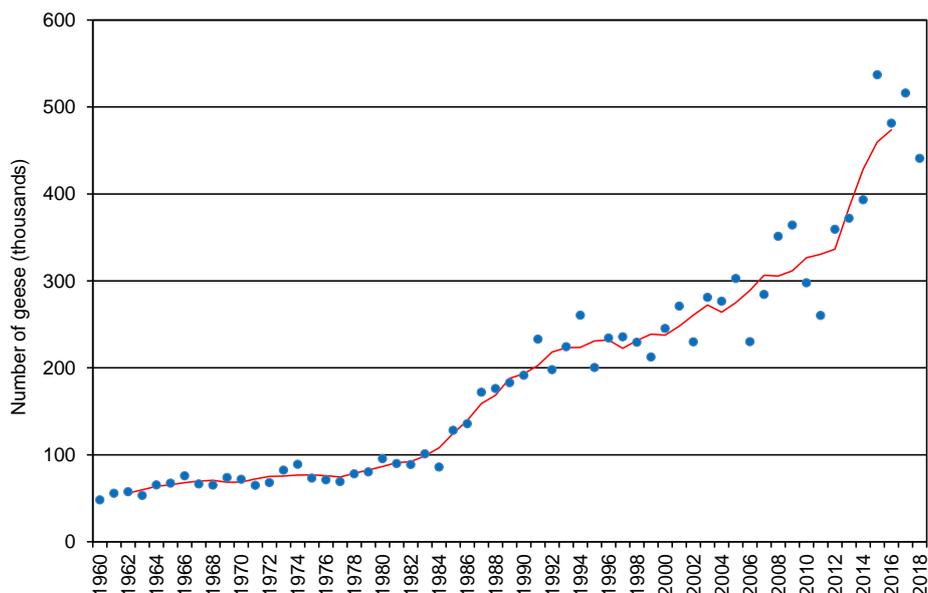


Figure 1. Annual census-derived estimates of Pink-footed goose population size, 1960–2018. Five year running mean shown as red line (e.g. mean for 2014 is from population estimates from 2012–2016).

2. Breeding success

Between late September and early November, a total of 22,089 Pink-footed Geese, in 29 flocks, was aged at various locations throughout Scotland and England. This sample represents 5.0% of the 2018/19 census-derived population estimate. The brood size of 610 families was also determined during this period.

Breeding success was similar to the mean for the previous decade, with flocks containing 17.9% young (mean 2008–2017: 18.1% ± 1.21 SE). The mean brood size of successful pairs was 2.00 juveniles, which mirrors the mean recorded during the previous ten years (mean 2008–2017: 2.00 ± 0.06 SE)

Table 2. The percentage of young and mean brood size of Pink-footed Geese in autumn 2018.

Region	Time period	Total aged	Percentage of young (%)	Number of broods	Mean brood size
North Scotland	Late Oct	1,450	16.7	11	2.09
	Early Nov	250	11.2	–	–
NE Scotland	Late Sept	1,000	28.7	56	2.2
	Early Oct	1,000	18.6	16	2.13
	Late Oct	1,500	16.1	4	1.75
EC Scotland	Late Oct	3,700	13.6	–	–
	Early Nov	1,250	16.7	8	1.63
SW Scotland	Late Oct	211	38.4	–	–
W England	Late Oct	4,268	12.8	260	1.8
E England	Late Sept	178	23.6	19	2.21
	Early Oct	6,250	21.7	190	2.09
	Early Nov	1,032	22.7	46	2.17
Total		22,089	17.9	610	2

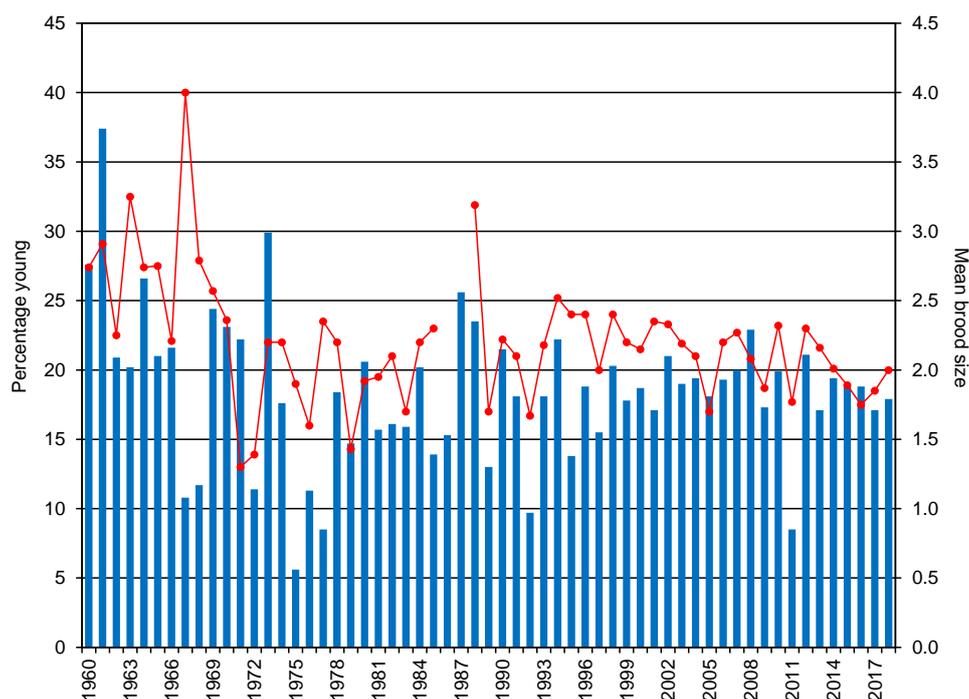


Figure 2. The percentage young (blue columns) and mean brood size (red circle) of Pink-footed Geese, 1960/61–2018/19.

3. Discussion

The 2018 Pink-footed Goose population estimate of 440,891 was 14.5% lower than the 2017 estimate (515,852) and lower than the presumed undercount in 2016 (481,341). Given that population estimates in recent years have fluctuated considerably between years, it seems highly likely the 2018 population estimate also suffered from a degree of undercounting.

No estimate of the number of Pink-footed Geese in Iceland at the time of the October census was available. Data from the tracking of Pink-footed Geese using Global Position System (GPS) highlighted that of the 42 birds with functioning tags at the time of the October census, 97.6% had already migrated to the wintering grounds. However, tracking data also showed that some birds were still present in northern Iceland at the time of the October census.

GPS tracking data continue to provide useful information on roosting locations used by birds throughout the wintering area and can help to identify roost sites that are not currently covered as part of the Icelandic-breeding Goose Census. In order to try to reduce the possibility of missing birds during future censuses, the information gained from the Pink-footed Goose tracking project will be used to identify any new sites that should be covered.

Overall, the lack of information regarding how many Pink-footed Geese were present in Iceland during October 2018, twinned with the potential of birds roosting at locations not covered as part of the census is likely to have contributed to the lower number of birds recorded during the October census and thus affecting the overall census total and population estimate.

4. Acknowledgements

Many thanks go to the many IGC counters and Local Organisers who provided the basis of the population estimates, and to all those who contributed age assessment data. Our thanks also to the international organisers and counters who kindly provided data from outside the UK.

5. References

Bridges, K, C. Mitchell & S.N.V Auhage. 2019. *Status and distribution of Icelandic-breeding geese: results of the 2018 international census*. Wildfowl & Wetlands Trust Report, Slimbridge. 18pp. Download.

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