

WWT/JNCC/SNH Goose & Swan Monitoring Programme

survey results 2006/07

Iceland Greylag Goose *Anser anser*

1. Abundance

The 47th consecutive Icelandic-breeding Goose Census (IGC) took place during autumn and winter 2006, providing information on the abundance and distribution of Iceland Greylag Geese. In addition to the two usual counts undertaken in October and November, a third count in December (introduced in 2005) was also conducted, primarily as a three year trial to re-assess the most suitable time for a complete census of this population.

Counts were conducted by a network of volunteer observers and professional conservation staff over the weekends of 14/15 October, 11/12 November and 16/17 December 2006. Coverage in Britain and Ireland was lower than the preceding year, with 78 sites visited in October, 130 in November, and 127 in December. Outside Britain and Ireland, counts were made at several sites in the Faroe Islands in all three months and an estimate of the maximum number in Iceland in October was also provided. No data were received from Norway.

Totals of 5,659 Greylag Geese were counted in October, 80,042 in November and 76,133 in December. Following adjustments and the addition of estimated counts¹, totals were adjusted to 4,422 in October, 82,339 in November and 68,754 in December (no estimated counts were included in the December total). A population estimate of 82,339 was derived from the higher November total, representing a decrease of 16.2% since 2005/06, when a population size of 98,243 individuals² was estimated.

The autumn distribution was typical, with a low proportion of the population present in Britain during October. Those that had arrived were primarily concentrated in North Scotland, East central Scotland and Southeast Scotland/Northeast England, though no count was made in Orkney during this month. By November, 72.2% of the population was present in North Scotland, with most of the remainder in East central Scotland. Distribution was similar in December, though the proportion present in East central Scotland had approximately halved since November.

¹ For definitions of adjusted and estimated counts, see full report (Newth 2007).

² Revised population estimate following receipt of additional data since Worden (2006). See below for further details.

Regional distribution of Greylag Geese during October, November and December 2006. Regional counts do not include estimated counts for sites where no data were received.

	October	November	December
Iceland	nc ¹	6,000	nc
Faroe Islands	618	500	443
Ireland	nc	427	1,950
North Scotland	1,196	58,773	61,832
Northeast Scotland	244	2,955	2,233
East central Scotland	1,000	6,025	3,514
Southeast Scotland/Northeast England	1,543	3,225	3,655
Southwest Scotland/Northwest England	1,058	2,137	2,506
Total counted	5,659	80,042	76,133
Adjusted counts	1,237	5,844	7,379
Estimated counts	n/a	8,141	n/a
Adjusted total	4,422	82,339	68,754
Population estimate		82,339	

¹ nc = not counted

Revised 2005 population estimate

Late data were received from Caithness, where estimated counts had been calculated for the population estimate presented in the 2005/06 report (Worden 2006). In Caithness, a count of 8,577 Greylag Geese was made on the November census weekend, an increase of 2,302 over the estimated count of 6,275 used in the 2005 report. This brings the population estimate to 98,243.

Revised Greylag Goose counts and population estimates for 2006.

	Worden (2006)	New data
Raw count totals	94,359	102,939
Adjusted counts ¹	5,776	5,776
Estimated counts ²	7,355	1,080
Population estimate	95,938	98,243

¹ Adjusted counts are estimates of the number of Northwest Scotland or Re-established Greylag Geese at individual count sites, and are subtracted from the total to give an improved estimate of the number of Iceland Greylag Geese present

² Estimated counts are estimates of the number of birds present, based on the average from the previous five years, for sites not counted during 2006/07 and likely to have supported >0.5% of the population, and are added to the count total to give an improved estimate of the number of Iceland Greylag Geese present

2. Breeding success

During early November, 2,188 Greylag Geese from 10 flocks were aged at various localities throughout northern Scotland. The proportion of the 2006/07 population estimate was 2.7%. The brood size of 11 families was also determined during this period.

Breeding success was slightly higher than average, with flocks containing 20.6% young (mean 1996-2005: 19.5%, ± 1.4 s.e.). The mean brood size of 1.9 goslings per successful pair was below that of the recent ten year mean (mean 1996-2005: 2.7, ± 0.06 s.e.).

3. Discussion

The 2006 Icelandic-breeding Goose Census revealed a 16.2% decrease in the population estimate of Iceland Greylag Goose since 2005. Following the high numbers found in 2004 and 2005, the estimate returned to a similar level as that recorded in the years prior to 2004 (mean 1999-2003: 80,013, ± 2.8 s.e.).

It is possible that this represents an undercount of Greylag Geese as November counts in Iceland, which have only recently been initiated, remain somewhat crude, with patchy coverage and anecdotal evidence (rather than accurate counts) informing the estimate. Even so, counts from Iceland suggest that increasing numbers of birds are remaining there for longer each winter. Coverage was also incomplete in Shetland, where it may be expected that numbers will increase given the rapid and seemingly continued redistribution northwards, which now appears to be strongly affecting numbers in the Moray Basin (e.g. very low numbers at Loch Eye). However, hunting bag estimates from Iceland since 2004 indicate that the number harvested has returned to the level (c. 37,000) that was believed to be the primary cause of the decline (of c. 20%) in overall abundance during the 1990s. Whilst data for 2006 are not yet available, on this basis it does not seem unreasonable to expect a decrease in abundance since 2004, as has been observed, though perhaps not of the magnitude as observed between 2005 and 2006.

Although the proportion of young in autumn flocks was 9.3% lower than in 2005, the estimate of 20.6% young in 2006 was still higher than average, as has been the case for the past four years. Brood size per successful pair, however, was 1.9 goslings - below that of the recent ten year mean and the lowest recorded since 1975 (1.5 goslings). However, the sample size (11 families) was small.

4. References

Newth, JN. 2007. *Status and distribution of Icelandic-breeding geese: results of the 2006 international census*. Wildfowl & Wetlands Trust Report, Slimbridge.

Worden, J. 2006. *Status and distribution of Icelandic-breeding geese: results of the 2005 international census*. Wildfowl & Wetlands Trust Report, Slimbridge.

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Goose & Swan Monitoring