

WWT/JNCC/SNH Goose & Swan Monitoring Programme  
 survey results 2013/14  
 Iceland Greylag Goose *Anser anser*

1. Abundance

The 54th consecutive Icelandic-breeding Goose Census (IGC) took place during autumn and winter 2013/14, providing information on the abundance and distribution of Iceland Greylag Geese. Counts were conducted by a network of volunteer observers and professional conservation staff over the weekends of 9/10 November and 7/8 December 2012. Coverage in Britain in November was similar to the preceding year, with 135 sites checked in November and 112 covered in December. Outside Britain, counts were made at several sites in Ireland, southwest Norway (no counts of Greylag Geese were made in southwest Norway during any of the census periods, however, 900 birds, the number counted there in January 2013, was used as an estimated count for the November and December census periods) and Iceland.

Total counts of 117,432 and 84,246 Greylag Geese were made in November and December, respectively (Table 1). Following adjustments for the presence of British Greylag Geese (which is significant in some areas) and the addition of estimated counts (for definitions and methods see full report, Mitchell 2014), a population estimate of 88,577 was derived from the November total, and represented a decrease of 15.3% compared to 2012/13 (Figure 1), when a population size of 104,632 individuals was estimated.

There were signs of an early migration from Iceland in autumn 2013 and, by November, 72.6% of the population was present in north Scotland, with most of the remainder in Iceland (24.3%). Distribution was similar in December although most Greylag Geese had left Iceland by this month.

Table 1. Regional distribution of Iceland Greylag Geese during November and December 2013 (nc = not counted).

Region	November	December
Iceland	21,266	2,024
Southwest Norway	nc	nc
Ireland	2,036	nc
North Scotland	86,998	75,945
Northeast Scotland	677	418
East Central Scotland	1,763	2,422
Southeast Scotland/northeast England	3,072	1,600
Southwest Scotland/northwest England	1,620	1,837
<i>Total Counted</i>	117,432	84,246
<i>Adjusted counts</i>	-29,755	-20,753
<i>Estimated counts</i>	900	3,031
<i>Adjusted total</i>	88,577	66,524
<b>Population estimate</b>	<b>88,577</b>	

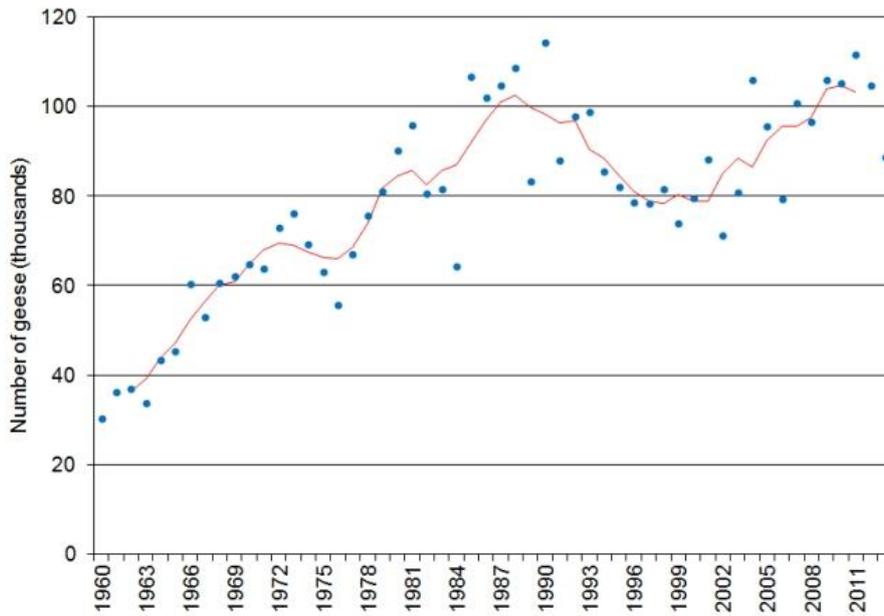


Figure 1. Annual census-derived estimates of Iceland Greylag Goose population size, 1960-2013. Five-year running mean shown as red line (e.g. mean for 2011 is from population estimates for 2009-2013).

## 2. Breeding success

During early November, 2,588 Greylag Geese from 31 flocks were aged at various localities in Orkney and Caithness. The sample, expressed as a proportion of the 2013/14 population estimate, was 2.9%. The brood size of 43 families was also determined during this period. Breeding success was similar to the recent mean, with flocks containing 22.2% young (mean 2003–2012: 22.4% ± 0.79 SE) (Figure 2). The mean brood size of 2.23 goslings per successful pair was also similar to that of the recent ten year mean (mean 2003–2012: 2.33 ± 0.09 SE).

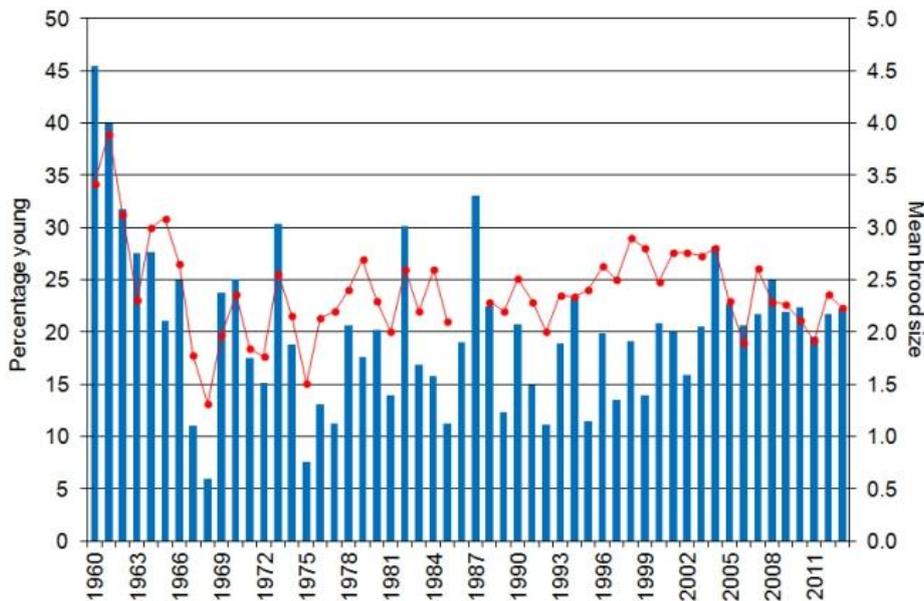


Figure 2. The percentage of young (blue columns) and mean brood size (red circles) of Iceland Greylag Geese, 1960-2013.

### 3. Discussion

The November 2013 count of Iceland Greylag Geese was thought to be reasonably comprehensive with sites being covered throughout most of the winter range although, once again, no counts were undertaken in the Faroe Islands. However, the number of birds typically present there is relatively small. Coverage in Ireland was not complete (compared with an extensive survey carried out there in autumn 2007) and it is possible that the number of geese in Ireland, particularly in Northern Ireland, is greater than reported here. A new update on the number of Greylag Geese summering in Orkney (20,242 counted in August 2013, Brides *et al.* 2013) meant that alterations to the Iceland population estimates for 2013 could be made.

The timing of the census of Iceland Greylag Geese is important in confidently assessing their abundance. In some years, the migration of Greylag Geese from Iceland to Scotland and other winter haunts can be staggered; in other years there can be a mass exodus. The timing of the movement can be as early as late October and as late as the second half of November. In autumn 2013, there appeared to have been a reasonably early departure from Iceland with around 87,000 birds counted in Britain and Ireland in November. In comparison, in mid November 2011, c. 43,000 were still in Iceland.

Orkney continues to hold the bulk of the winter stock. After deducting the number of British Greylag Geese thought to be resident on the archipelago, and taking account of those shot under a pilot management programme, an estimate of 47,065 Iceland birds were thought to be present in November, 18.4% lower than during the same month in the previous year.

Breeding success in the Iceland Greylag Goose population appeared to be average in 2013 (22.2%), although the figure was based on a small sample size. Due to their later migration and more limited range, age counts were only collected in one region (north Scotland) during November. Monitoring annual breeding success for this population is becoming more difficult because the main wintering areas (Orkney, Caithness and around the Moray Firth) hold ever larger numbers of British Greylag Geese and separating birds from each population is impossible in the field. The percentage of young in the Iceland bag was 55.6%, the highest ever recorded (A. Sigfússon in litt.).

In Shetland, post breeding and winter surveys of Greylag Geese in 2010 and 2011 have revealed a summer population of c. 5,000 birds that is joined by up to c. 2,000 winter migrants (Harvey *et al.* 2012). Ringing of a small number of British Greylag Geese there in July 2011 and 2012 revealed that that it is likely that the summer stock is largely sedentary. The count from November 2013 of 6,045 Greylag Geese was incomplete and local counters estimate the wintering population to be nearer c. 10,500 birds. A rolling programme of summer surveys will help determine the number of both populations.

The number and distribution of British Greylag Geese continues to increase and present problems in identification of the provenance of Greylag Geese encountered on the winter quarters. Guidance from IGC counters in other parts of Scotland suggest that at the time of the November IGC count, the number of Iceland Greylag Geese occurring at sites south of the Moray Firth, Badenoch & Strathspey, Aberdeenshire and east of Bute has diminished over the last 15 years. Thus, for many areas, notably, Northumberland, Dumfries & Galloway, the Borders, Lothians, parts of Fife, parts of Angus and parts of Perth & Kinross, the number of Greylag Geese counted in November are similar to those counted in October and probably refer to British Greylag Geese. Several counters from southeast Scotland have suggested that, in late autumn, no Iceland Greylag Geese are likely to occur there at that time. The results of the February 2012 survey (Mitchell 2012) however, indicate that birds from Iceland probably do occur at former important sites later in the winter (*e.g.* 1,317 at Loch Lomond, Argyll; 1,230 at Loch of Lintrathen, Angus; 1,110 at Loch of Skene, Aberdeenshire). This strengthens the value of the periodic late winter counts, which we hope to repeat every three years, the next one being scheduled for spring 2015.

Bute remains an important area that attracts large numbers of Greylag Geese from November onwards and ring sightings of marked birds confirm that most of these are from Iceland. However,

even there, the number of British Greylag Geese is increasing, with an estimated 500 birds present in late summer 2013 (I. Hopkins in litt.).

Thus, as the abundance and distribution of British Greylag Geese increases, it is getting ever harder to separate, and hence accurately record the abundance of Icelandic migrants. Regular summer surveys in key areas (e.g. Orkney) give figures that can be deducted from the IGC counts, but summer surveys of large parts of south and east Scotland would be very difficult to orchestrate on an annual basis. Certainly some key sites in south and east Scotland that formerly held large numbers of Iceland migrants (e.g. Lindisfarne in Northumberland, Drummond Loch, Loch Leven and Carsebreck & Rhynd Lochs in Perth & Kinross, and Loch of Skene, Dinnet Lochs and Haddo Country Park in Aberdeenshire) hold virtually no Iceland migrants at the time of the autumn IGC counts. Any geese that are counted at most of the lochs in south and east Scotland during IGC are now far more likely to be British Greylag Geese.

#### 4. Acknowledgements

As ever, thanks are extended to the many IGC counters who provided the basis of the population assessments. Of particular importance is the role of the Local Organisers. G. Gudmundsson and A. Sigfússon provided information from Iceland, Helen Boland from Ireland and Arne Follestad from Norway.

#### 5. References

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This report should be cited as:

WWT. 2014. *Goose & Swan Monitoring Programme: survey results 2013/14 Iceland Greylag Goose Anser anser*. WWT/JNCC/SNH, Slimbridge.

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This report was produced under the Goose & Swan Monitoring Programme (GSMP). This programme monitors numbers and breeding success of geese and swans in the UK during the non-breeding season. GSMP is organised by the Wildfowl & Wetlands Trust in partnership with the Joint Nature Conservation Committee (on behalf of Natural Resources Wales, Natural England and the Council for Nature Conservation and the Countryside) and Scottish Natural Heritage.



## Goose & Swan Monitoring