

# WWT/JNCC/SNH Goose & Swan Monitoring Programme

## survey results 2005/06

### Greenland/Iceland Pink-footed Goose *Anser brachyrhynchus*

## 1. Abundance

The 46th consecutive Icelandic-breeding Goose Census (IGC) took place during autumn and winter 2005, providing information on the abundance and distribution of Greenland/Iceland Pink-footed Geese. In addition to the two usual counts undertaken in October and November, a third count was carried out in December, primarily to gather data to allow a reassessment of the most suitable time to census Iceland Greylag Geese.

Counts were conducted by a network of volunteer observers and professional conservation staff over the weekends of 8/9 October, 5/6 November and 3/4 December 2005. Coverage within Britain and Ireland was similar to previous years, and an estimate (rather than actual counts) of the number of Pink-footed Geese present in Iceland in October was also provided. A total of 138 sites were visited in October and 175 in November. The response to the newly introduced December count was extremely good with 161 sites visited in this month.

Totals of 234,120 Pink-footed Geese were counted in October, 258,258 in November and 244,064 in December. After the addition of estimated counts for key sites not counted, a population estimate of 268,650 was derived based upon the November count. This represents a decrease of 8.0% since 2004/05, when a population size of 292,154 was estimated.

The distribution of Pink-footed Geese varied considerably over the three count months. Northeast Scotland and East central Scotland held the greatest numbers of birds in October, with the highest concentration of geese at the Loch of Strathbeg. Fewer were present in the west and east of England with the largest concentrations in Southwest Lancashire. By November, numbers had decreased in Northeast Scotland but increased substantially in East England with birds concentrated at Holkham and Wells next the Sea. Almost 50% of the population estimate was present in East England in December, with a corresponding decline in numbers in Northeast and East central Scotland. The largest concentrations of birds were recorded at Snettisham, Holkham and Southwest Lancashire at this time.

Regional distribution of Pink-footed Geese during October, November and December 2005. Regional counts do not include estimated counts for sites where no data were received.

	October	November	December
Iceland	2,000	nc	nc
Faroe Islands	3	11	3
Ireland	nc	0	0
North Scotland	121	12,908	1,547
Northeast Scotland	80,800	59,612	38,059
East central Scotland	61,404	61,592	45,896
Southeast Scotland/Northeast England	16,620	28,088	2,340
Southwest Scotland/Northwest England	1,312	1,701	4,939
West England	31,860	17,560	30,620
East England	40,000	76,786	120,660
<b>Total counted</b>	<b>234,120</b>	<b>258,258</b>	<b>244,064</b>
Estimated counts	24,936	10,392	n/a
<b>Adjusted total</b>	<b>259,056</b>	<b>268,650</b>	<b>244,064</b>
<b>Population estimate</b>	<b>268,650</b>		

## 2. Breeding success

A total of 16,448 Pink-footed Geese was aged at various localities throughout Scotland and England and information on the brood sizes of 298 families was collected between September and mid-November.

The overall percentage of young recorded in autumn 2005 was 18.1%, and although lower than the preceding three years, was comparable to the mean of the most recent five years (18.1%). The mean brood size of 1.7 goslings per successful pair was lower than the ten year mean (1995-2004 mean:  $2.3 \pm 0.04$  se).

There was considerable regional variation in the percentage of young Pink-footed Geese, varying from 14.7% in West England to 23.7% in East England. Likewise, mean brood size varied from 1.5 in the west of England to 2.1 in East central Scotland.

The percentage of young and mean brood size of Pink-footed Goose flocks in autumn 2005.

	Total aged	% young	No. of broods	Mean brood size
Northeast Scotland	6,038	19.2	107	1.9
East central Scotland	4,494	15.3	12	2.1
Southeast Scotland	1,639	16.7	5	2.0
East England	2,435	23.7	4	2.3
West England	1,842	14.7	170	1.5
<b>Total</b>	<b>16,448</b>	<b>18.1</b>	<b>298</b>	<b>1.7</b>

## 3. Discussion

The 2005 Icelandic-breeding Goose census indicated a decline of 8% in the Pink-footed Goose population since 2004, in contrast to the 4% increase recorded between the two preceding years. The 2005 population estimate of 268,650, although lower than the previous two years, remains above estimates prior to 2001.

Although the introduction of a December count was primarily to reassess the most suitable time period for measuring population size of Iceland Greylag Geese, this will allow further information to be collected on the abundance and distribution of Pink-footed Geese throughout the winter period. The extra count was very well received by the counter network with almost as many sites counted in December as in November. Although the December count has revealed some differences in the distribution of Pink-footed Goose at this time, full analyses of the December counts will not be carried out until the three year trial period is completed in 2008.

Recent data collected during the census have revealed that Pink-footed Geese, like Iceland Greylag Geese, may be departing later from the breeding grounds. The peak count of Pink-footed Geese in 2005 occurred in November, suggesting that the arrival of geese in 2005 may have been slightly later than that in 2004 when peak numbers occurred in October. Over the most recent five years, the peak count has occurred most commonly in November. Subsequent censuses should clarify whether the population is best censused in November due to progressively later arrival from the breeding grounds.

The breeding success of Pink-footed Geese was lower than the preceding year, as was mean brood size. Considerable variations in the proportion of young in flocks of Pink-footed Geese existed between regions. The lowest percentage of young was seen in East central Scotland, Southeast Scotland and West England. This relatively low breeding success was consistent with preliminary hunting bag statistics from Iceland which suggested a poor breeding season (15% of young in the bag – A. Sigfusson pers. comm.). In East central England, however, a comparatively high percentage of young Pink-footed Geese (23.7%) was recorded. Few age assessment data have been collected regularly in this region prior to 2005, so it is difficult to ascertain whether this region attracts a higher proportion of families in most years.

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## Goose & Swan Monitoring