

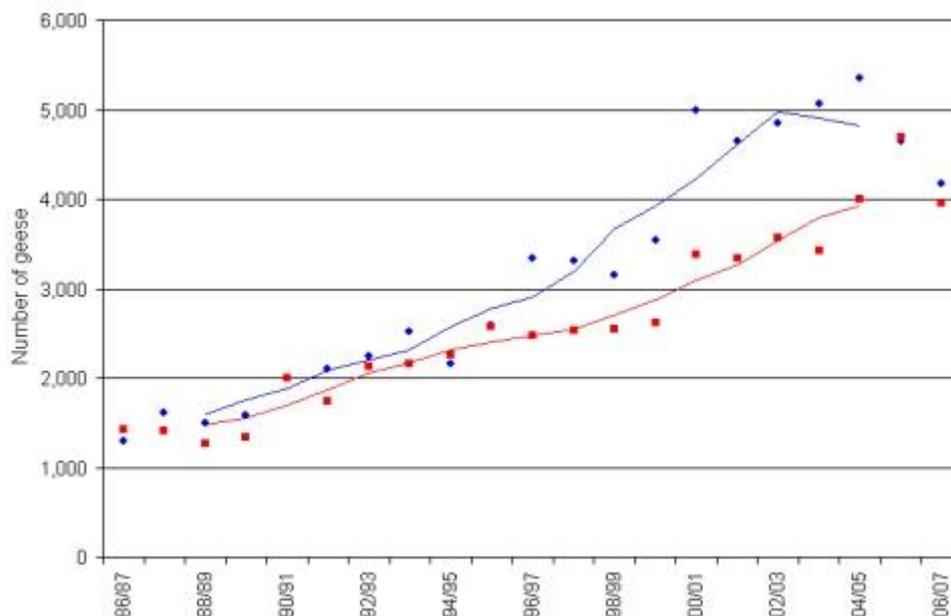
# WWT/JNCC/SNH Goose & Swan Monitoring Programme

## Survey results 2006/07

### Northwest Scotland Greylag Goose *Anser anser*

#### 1. Abundance

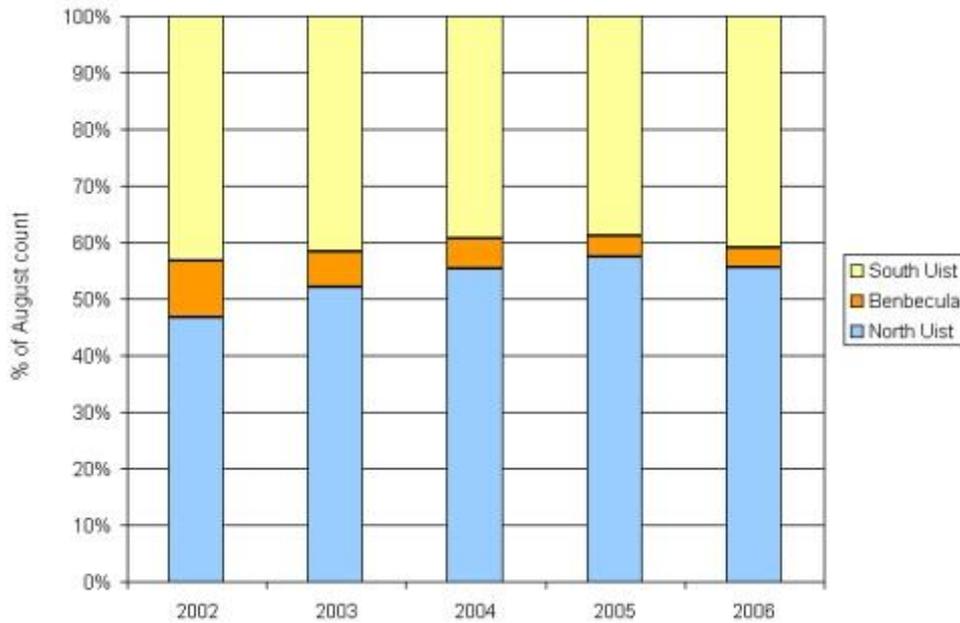
A total of 4,166 Greylag Geese was counted on the Uists on 2/3 September 2006 (this representing the annual August count). This is a decrease of 10.3% on the August count for the previous year. It is likely that this is an undercount of the actual number of birds present because the February 2007 count of 3,954 is only 212 birds less, and it is highly likely that mortality between these two counts would have been greater. Nevertheless, numbers appear to have been lower in 2006/07; the February 2007 count is a decrease of 15.7% since the count in February 2006. However, one site (Pabbay & Shillay) was not counted during either count, and in addition, another site (Boreray & Lingay) was not counted during February 2007. The mean numbers of birds at these two sites during the period 2001/02-2005/06 were: Pabbay & Shillay August: 23 ( $\pm 17.0$  se); Pabbay & Shillay February: 2 ( $\pm 2.0$  se); Boreray & Lingay February: 40 ( $\pm 5.5$  se).



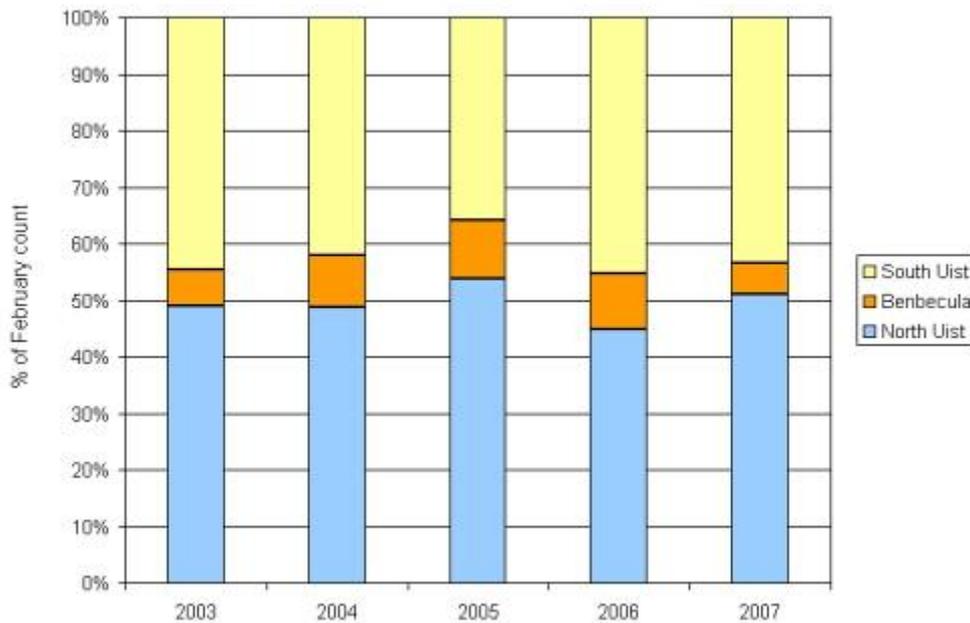
Peak counts of Northwest Scotland Greylag Geese recorded in August (circles) and February (squares) on the Uists, Outer Hebrides, 1986/87 to 2006/07. The five-year running means (eg mean for August 2002 is from counts for August 2000-2004) are shown as lines.

A total of 23 sites was surveyed in August and 22 in February. Greylag Geese were present at 22 sites during August and 17 in February, with no birds seen at Lochmaddy in both months and at four other sites in February. The distribution of birds in both August and February was fairly typical, with North Uist holding the largest number of the three islands in both months. Between 2001 and 2005, there was a steady increase in the proportion of birds found on North Uist during August, from less than 45% in 2001, to almost 60% in 2005. In 2006, this increase seemed to stop, with the proportions in the three key areas remaining at a very similar level to the previous year. The proportion during the February count, however, has remained relatively consistent, at around 50%, over this time period.

During August, the favoured areas on North Uist were Berneray (420 birds), Baleshare/Carinish (410 birds), and Balranald, Clettraval and Tigharry (300 birds), and on South Uist most birds were counted in the Iochdar, Gerinish and Drimsdale area (549 birds). In February, the geese were again concentrated at Iochdar, Gerinish and Drimsdale, where 640 were counted. On North Uist the favoured area was Paible (547 birds).

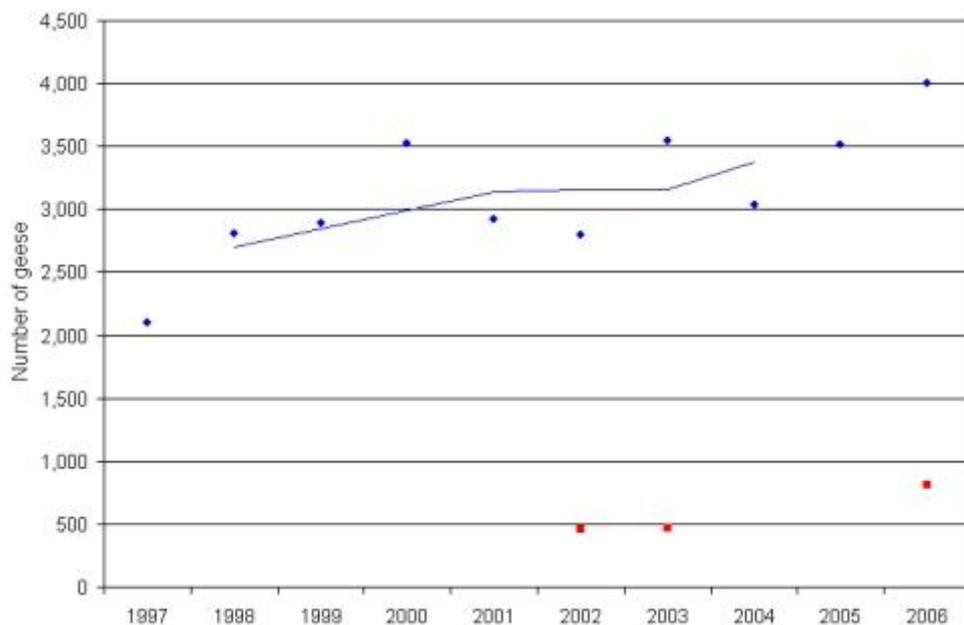


The distribution of Northwest Scotland Greylag Geese on the Uists, 2002/03 to 2006/07, expressed as a percentage of the annual August count.



The distribution of Northwest Scotland Greylag Geese on the Uists, 2002/03 to 2006/07, expressed as a percentage of the annual February count.

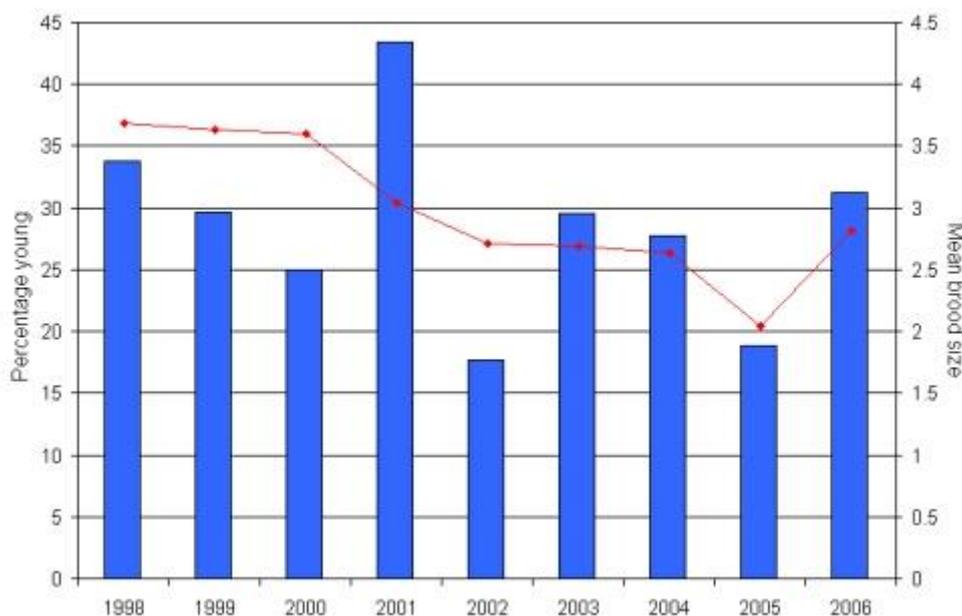
The other key area monitored on an annual basis is the island of Tiree, in the Inner Hebrides. An island-wide census on 28/29 August 2006 produced the highest ever count of 4,005 birds, including goslings. This represents an increase of 14.1% on the August census in 2005 and continues the steady increase (at an average annual rate of 7.5% p.a.) in numbers on Tiree over the past ten years.



Peak counts of Northwest Scotland Greylag Geese recorded in late August/early September on Tiree, Inner Hebrides, 1997 to 2006. The five-year running mean (eg mean for August 2002 is from counts for August 2000-2004) is shown as a line. Coordinated counts for Coll, Inner Hebrides are also shown (red squares).

## 2. Breeding success

A total of 3,427 Northwest Scotland Greylag Geese was aged on Coll and Tiree on 28/29 August 2006, and brood sizes were collected for 296 broods on Tiree. The percentage of young birds in the post-breeding August count was 31.2% - just above the average for the previous five years (mean 2001-2005:  $27.4 \pm 4.63$  se). The mean brood size was also just above average for the previous five years at 2.8 goslings per successful pair (mean brood size 2001-2005:  $2.6 \pm 0.16$  se).



The mean percentage of young (bars) and mean brood size (dots) of Northwest Scotland Greylag Geese on Coll and Tiree, 1998 to 2006. Data from Bowler *et al.* (2005).

Productivity data were also collected from the Outer Hebrides in 2006, the first such data from there for a number of years. A total of 769 birds in 10 flocks was aged between 23 and 31 August 2006 (four flocks totalling

423 birds on North Uist, five flocks totalling 226 birds on South Uist, and one flock of 120 birds on Benbecula), with an overall proportion of young of 32.8%. Only two broods, both numbering four goslings, were counted.

### 3. Discussion

The numbers of Greylag Geese counted on the Uists in August 2006 and February 2007 were lower than the previous year, falling by 10.3% and 15.7%, respectively. This suggests that a decrease in overall abundance did occur, despite breeding success (which was estimated for the first time in many years) being similar to the slightly above average estimate obtained from Tiree. Numbers on Tiree, however, where breeding success was very similar to the Uists, increased by 14.1% on the previous year, continuing the steady increase that has occurred there over the past decade.

Since the last national census in 1997, the Northwest Scotland Greylag Goose population is thought to have increased in number and range. In some parts of Scotland, the Re-established and Northwest Scotland populations overlap and are therefore indistinguishable. It is likely that it will become increasingly difficult to separate these populations in future, with consequences for the monitoring schemes.

The next complete census of the Northwest Scotland Greylag Goose population is due to take place in August 2008. Due to the difficulties in delimiting the two populations in Scotland, it is hoped that the area surveyed will be extended from that covered in 1997 to include most of Scotland, in order to improve the understanding of distribution and to determine whether the two populations can still be delimited. There is also a need for more information on the movements of Northwest Scotland Greylag Geese, especially between breeding areas, and on mortality patterns. This could be achieved through increasing the number of individually marked birds.

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## Goose & Swan Monitoring