

WWT/JNCC/SNH Goose & Swan Monitoring Programme

survey results 2012/13

Svalbard Barnacle Goose *Branta leucopsis*

1. Abundance

The adopted total for this population wintering on the Solway in 2012/13 was 31,000 geese (the mean of six counts that were within 10% of the maximum of 32,044 recorded, rounded up to the nearest 100), this represents a decrease of 2,900 birds on last winter's adopted total of 33,900 geese (Figure 1).

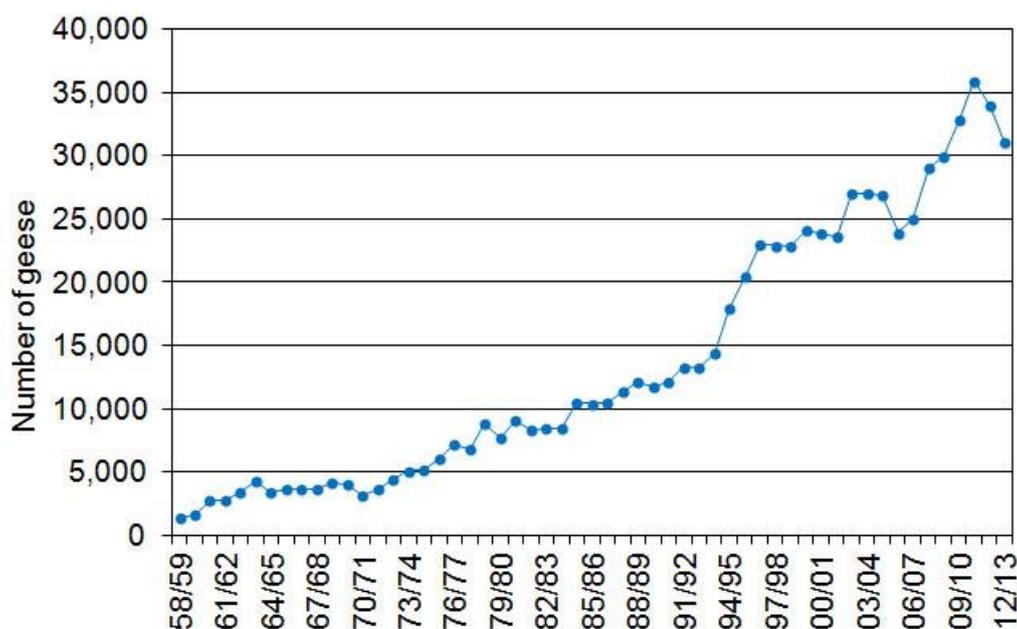


Figure 1. Annual census-derived estimates of Svalbard Barnacle Goose population size, 1958/59 – 2012/13.

The number of Svalbard Barnacle Geese on the Solway was already more than 23,000 by the first coordinated count on 3 October due to a rapid build up in the first few days of October following a late and slow start to the season; the first birds recorded were 91 at Caerlaverock on 23 September. The numbers then fluctuated as in previous years mainly in relation to count visibility conditions and goose dispersal. Due to this count variation, with possible inaccuracies and the chance of double-counting, an adopted count total for the population was derived by averaging those counts within 10% of the maximum recorded during the winter. In 2012/13 the counts of 31,621 on 24 October, 31,041 on 31 October, 30,208 on 14 December, 31,823 on 17 January, 28,895 on 24 April and 32,044 on 1 May (the maximum count recorded), fulfilled this criterion and were thus averaged to produce an adopted population total of 31,000 Barnacle Geese (rounded up to the nearest 100; compared to 33,900 in 2011/12).

2. Breeding success

The breeding success of Svalbard Barnacle Geese sampled on the Inner Solway from October 2012 to January 2013 ranged from 0.8% to 15.0% (*c.f.* 6.1% to 23.5% in 2011/12), with a mean of 5.5% young from 21 flocks with 12,372 geese sampled (*c.f.* 12.8% in 15 flocks, with 6,643 geese sampled in 2011/12) (Figure 2). Across the same area, the total number of broods sampled was 172, with a mean family size of 1.6 goslings, ranging from 1–5 goslings (*c.f.* 2.1 goslings, $n = 124$ and a range 1–5 goslings in 2011/12).

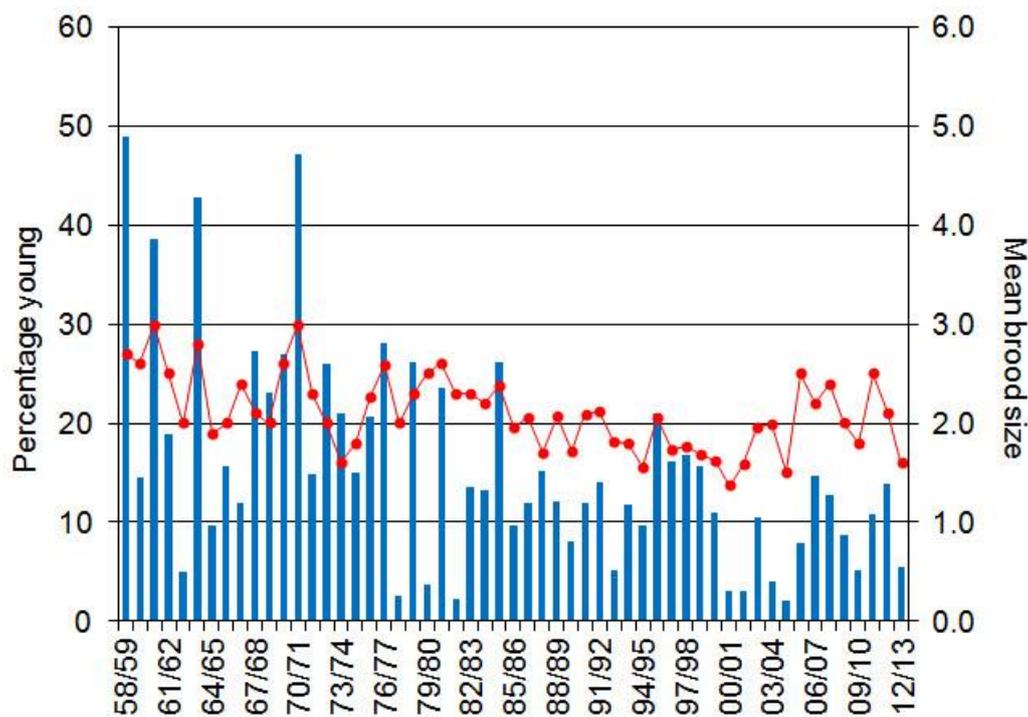


Figure 2. The mean percentage of young (blue columns) and mean brood size (red circles) of Svalbard Barnacle Geese, 1958/59 – 2012/13.

3. Discussion

As the population has increased, so has its distribution on the Solway, although its core feeding areas remain broadly the same. Rockcliffe Marsh at the eastern end of the Solway continues to play a vital role throughout the winter, with its importance further highlighted in late April/early May during a period of rapid turnover when at least 99% of the population will visit the site for up to a week or more to feed on the newly accreted saltmarsh vegetation before departing for Svalbard. Rockcliffe Marsh is currently in a phase of rapid growth on its seaward edge, as it has been for the last decade, and is probably supporting increasing numbers of geese each year. This, coupled with an expanding distribution on the Solway more generally, makes it more and more difficult to achieve rigorous population counts with coordinated weekly or fortnightly ground counts that have historically been used. As Rockcliffe Marsh expands it becomes increasingly difficult to cover the ground (safely) on foot and make accurate assessments of goose numbers without disturbing them and thus risking double counting. As a result, the possibility of undertaking aerial counts with high definition photography of the flocks is being explored, so it is possible to assess the true population size at perhaps the start and end of the winter as a comparison to the ground counts.

There is also a tendency for a proportion of the birds to stay longer on the Solway, particularly on the saltmarsh at Rockcliffe Marsh, Cumbria, and especially on the newly accreted marsh vegetation in that tidal area at the eastern end of the Solway. This marsh is now acting as a spring pre-migration site as well as a wintering ground for over a quarter of the population in most years up to and sometimes beyond the middle of May.

This report should be cited as:

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Goose & Swan Monitoring