

WWT/JNCC/SNH Goose & Swan Monitoring Programme
survey results 2015/16
Svalbard Barnacle Goose *Branta leucopsis*

1. Abundance

The adopted total for the population wintering on the Solway Firth in 2015/16 was 41,000 geese (the mean of four counts that were within 10% of the maximum count of 42,017, rounded up to the nearest 100). This represents an increase of 3,700 birds on last winter's adopted total of 37,300 geese (Figure 1).

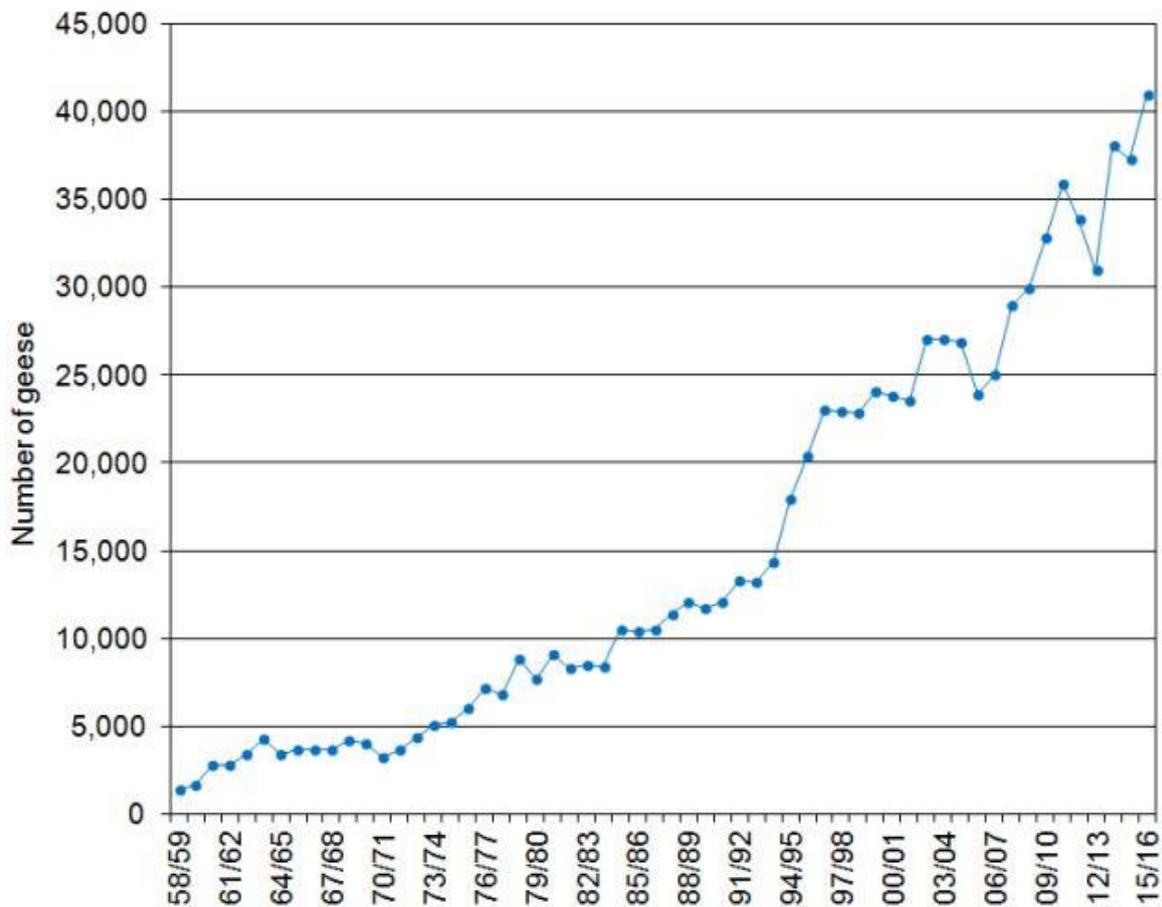


Figure 1. Annual census-derived estimates of the number of Svalbard Barnacle Geese wintering on the Solway Firth, 1958/59 – 2015/16.

Total population counts of Svalbard Barnacle Geese built up slowly on the Solway Firth with only 3,000 present by the start of October. The first arrival of Barnacle Geese thought to be genuine migrants were recorded at the WWT Caerlaverock reserve on 25 September and there were only 800 present at the end of that month. The numbers recorded then built fairly steadily up throughout October with nearly 40,000 geese present on the Solway by 22 October, only 2,017 fewer than the peak count recorded at the end of April. Over 35,000 geese were recorded quite regularly – five out of nine counts – between the end of October and the end of April.

The first sign of spring migration was evident by 27 April when over 29,000 geese, over 70% of the Solway population, gathered on Rockcliffe Marsh, Cumbria. By 10 May this had dropped to 11,880 in the Rockcliffe area with zero geese recorded elsewhere on the Solway. By 18 May 2016, only 2,050 Barnacle Geese remained on Rockcliffe Marsh, the remainder being in Norway or Svalbard, with just 30 remaining at the end of that month.

Due to count variation, with possible inaccuracies and the chance of double-counting, an adopted count total for the population is derived by averaging those counts within 10% of the maximum recorded during the winter. In 2015/16 the counts of 39,652 on 22 October, 41,183 on 10 February, 40,919 on 13 April and 42,017 on 27 April, fulfilled this criterion and were thus averaged to produce an adopted Solway total of 41,000 Barnacle Geese (rounded up to the nearest 100; *c.f.* 37,300 in 2014/15).

2. Breeding success

The breeding success of Svalbard Barnacle Geese sampled on the Solway Firth from October 2015 to January 2016 ranged from 2.2% to 18.8% (*c.f.* 2.7% to 14.7% in 2014/15) with a mean of 7.8% young from 16 flocks with 6,654 geese sampled (*c.f.* 5.0%; $n = 15$ flocks; 13,104 geese sampled in 2014/15). Across the same area, the total number of broods sampled was 95, with a mean family size of 1.9 young, range 1-4 young (*c.f.* 1.7 young; $n = 215$ broods; range 1-4 young in 2014/15).

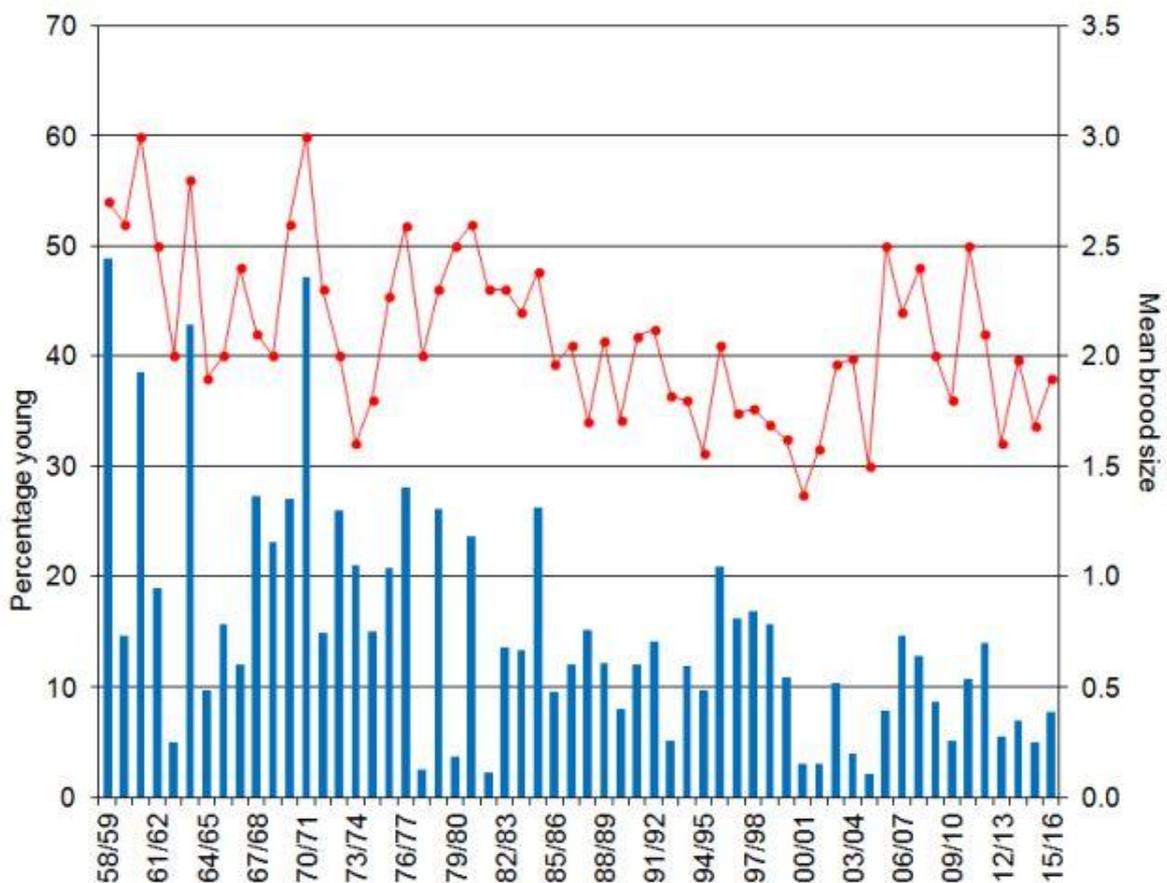


Figure 2. The mean percentage of young (blue columns) and mean brood size (red circles) of Svalbard Barnacle Geese, 1958/59 – 2015/16.

3. Discussion

It is clear from the three late winter counts recorded in 2015/16 that the Svalbard Barnacle Goose population has continued to increase and has now passed 40,000 birds.

The consistency in the counts recorded between October and April, as with last winter, was perhaps due to the relatively benign conditions with the first prolonged periods of frosts not coming until February and so it was felt that the geese did not spread out across the Solway as much as usual due to food resources being largely maintained.

This is a remarkable example of population recovery, from less than 400 birds just 70 years ago, which can be attributed to the conservation actions implemented across the length of its international flyway. Even so, the population remains reliant on just a handful of limited roosting sites on the Inner Solway and in that regard should still be considered as vulnerable.

This report should be cited as:

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Goose & Swan Monitoring