

# WWT/JNCC/SNH Goose & Swan Monitoring Programme

## survey results 2014/15

### Svalbard Barnacle Goose *Branta leucopsis*

#### 1. Abundance

The adopted estimate for the number of birds from this population wintering on the Solway Firth in 2014/15 was 37,300 geese (the mean of four counts that were within 10% of the maximum of 38,826 recorded, rounded up to the nearest 100). This represents a probable decrease of c.800 birds since last winter's adopted estimate of 38,100 geese (Figure 1).

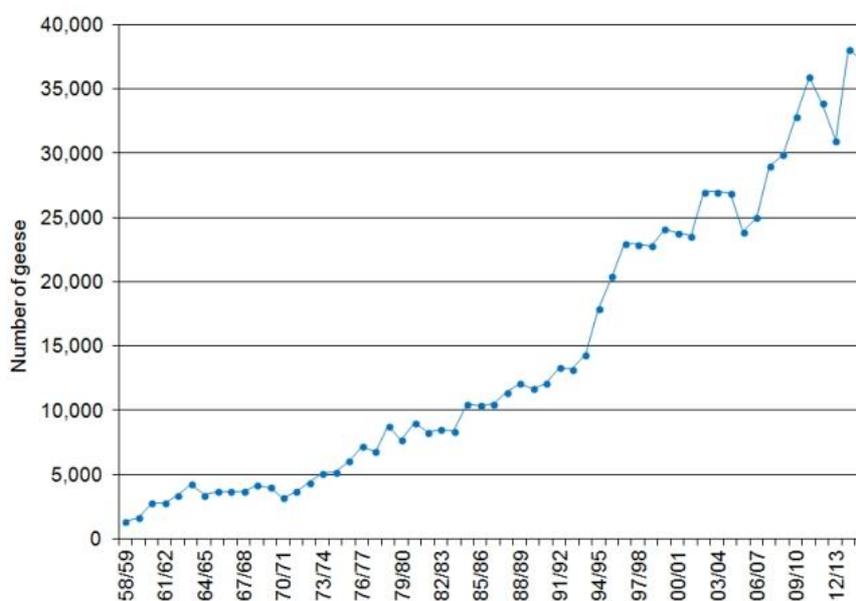


Figure 1. Annual census-derived estimates of Svalbard Barnacle Goose population size, 1958/59-2014/15.

Total population counts of Svalbard Barnacle Geese built up rapidly on the Solway Firth with nearly 20,000 present by the start of October 2014. The first arrivals of Barnacle Geese thought to be genuine migrants were recorded at the WWT Caerlaverock reserve on 21 September and there were nearly 8,000 geese present by 25 September.

The numbers recorded then built fairly steadily up to the end of October when over 30,000 birds were present on the Solway Firth and continued to rise to 38,886 by 18 December, the peak count for the winter. A fairly consistent 35,000 to 38,000 was recorded from mid-December to the end of April across five censuses – very similar to the previous winter. This consistency in the counts was perhaps due to the constancy of the weather during the winter in that very few episodes of prolonged freezing conditions were recorded 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.

The first evidence of spring migration was evident by 29 April when a massive flock of nearly 33,000 birds, almost the whole Solway population, gathered on Rockcliffe Marsh. By 6 May this had dropped to just 10,000 in the Rockcliffe area with no geese recorded elsewhere on the Solway Firth. By 20 May, only 2,000 Barnacle Geese remained on Rockcliffe Marsh, the remainder being in Norway or Svalbard, and this had dropped to just 30 geese by 27 May 2015.

Due to count variation, with possible inaccuracies and the chance of double-counting, an adopted estimate for the population is usually derived by averaging those counts within 10% of the maximum recorded during the winter. In 2014/15, the counts of 38,826 on 13 December, 38,249

on 23 February, 35,055 on 25 March and 36,858 on 22 April fulfilled this criterion and were thus averaged to produce an adopted estimate of 37,300 Barnacle Geese (rounded up to the nearest 100; *c.f.* 38,100 in 2013/14).

## 2. Breeding success

The breeding success of Svalbard Barnacle Geese was sampled on the Inner Solway Firth from September to December 2014 and ranged from 2.7% to 14.7% (*c.f.* 2.0% to 30.8% in 2013/14) with a mean of 5.0% young from 15 flocks with 13,104 geese sampled (*c.f.* 7.0%;  $n = 14$  flocks; 10,135 geese sampled in 2013/14) (Figure 2). Across the same area, the total number of broods sampled was 215, with a mean family size of 1.7 young, range 1–4 young (*c.f.* 2.0 young;  $n = 80$  broods; range 1–4 young in 2013/14).

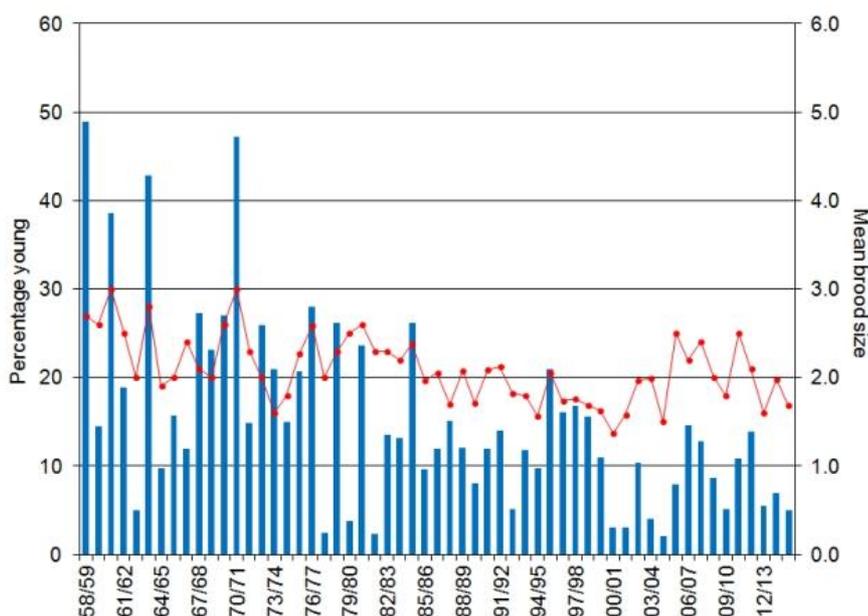


Figure 2. The mean percentage of young (blue columns) and mean brood size (red circles) of Svalbard Barnacle Geese, 1958/59–2014/15.

## 3. Discussion

The winters of 2013/14 and 2014/15 were fairly mild and similar in terms of the way the geese distributed themselves around the Solway Firth. This has meant that there have been two winters of fairly consistent counts. In 2014/15, the counts suggest that the population has possibly declined marginally, or at the very least, stabilised. This is likely to be due to the poor breeding success in 2014, the lowest recorded in the current 10 year period. Average family size was the second smallest recorded during that same period.

## 4. Acknowledgements

Many thanks go to the sustained commitment of the census team including Mike Carrier, Bob Jones, David Charnock, Dave Blackledge, Rowena Flavelle, Paul Tarling, and Marian and Dave Rochester

This report should be cited as:

*WWT. 2015. Goose & Swan Monitoring Programme: survey results 2014/15 Svalbard Barnacle Goose Branta leucopsis. WWT/JNCC/SNH, Slimbridge.*

© Wildfowl & Wetlands Trust

All rights reserved. No part of this document may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the copyright holder.

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 Department of Agriculture, Environment and Rural Affairs, Northern Ireland.) and Scottish Natural Heritage.



## Goose & Swan Monitoring