

# WWT/JNCC/NatureScot Goose & Swan Monitoring Programme survey results 2019/20

## Greenland Barnacle Goose *Branta leucopsis*

### 1. Abundance

#### International Census 2018

A flyway-wide census of Greenland Barnacle Geese took place in March 2018 (Mitchell & Hall 2020). The census was undertaken by WWT in Scotland, funded by NatureScot, and by the National Parks and Wildlife Service in Ireland. A brief summary of the results was presented in the 2017/18 report for Greenland Barnacle Goose: see earlier results tab.

The census yielded a population estimate of 72,162, a 10.5% decrease compared with the previous census in 2013 (80,670) (Figure 1). In Ireland, 16,237 birds were counted, a decrease of 7.2% compared with 2013, whilst a total of 55,424 birds was recorded for Scotland, representing a decrease of 11.5%.

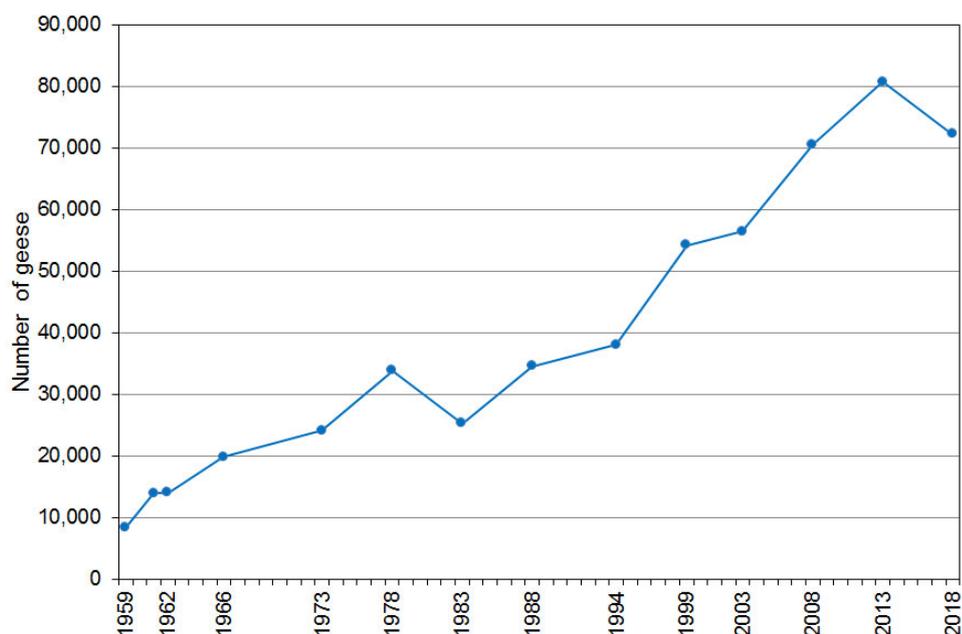


Figure 1. Population estimates of Greenland Barnacle Goose, 1959 – 2018, derived from the International Barnacle Goose Census.

#### International census 2020

The most recent flyway-wide census of Greenland Barnacle Geese took place in March 2020. The census was undertaken by WWT in Scotland, funded by NatureScot, and by the National Parks and Wildlife Service in Ireland. A full account of the 2020 census will be available in due course.

This census was carried out every five years but is likely to be ever three years in the future.

### Annual counts at key sites

On Islay, the most important wintering site in the UK for Greenland Barnacle Geese, four co-ordinated counts were undertaken during winter 2019/20. These revealed 32,253 birds in November, 32,017 December, 34,795 in January and 33,202 in March. The mean of these four counts was 33,067 birds which represents a modest 3% increase compared to the winter 2018/19 mean (32,000 geese; Figure 2). The over-winter population there has now decreased by a third in the last four winters, likely as a result of the management culls that are taking place there.

Winter maxima at other key sites include 910 birds on Danna, Argyll (March), 1,146 on Coll, Argyll (March), 5,656 on Tiree (March), 2,579 on Orkney, 8,340 on North Uist (March) and 3,016 on Oronsay (December).

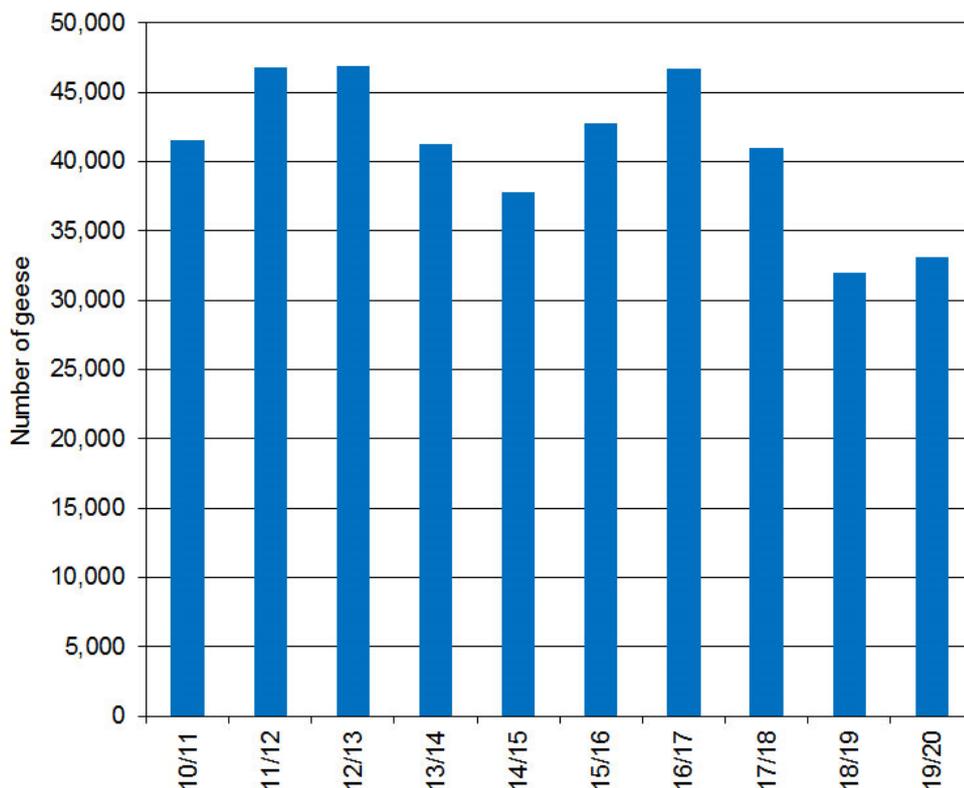


Figure 2. Adopted counts (mean of the winter counts) of Greenland Barnacle Geese on Islay, 2010/11–2019/20.

## 2. Breeding success

Breeding success is measured annually on Islay and counts in winter 2019/20 revealed an average breeding season. Just over 5,000 birds were aged and showed that 10.1% were young with a mean brood size of 2.04 young per successful pair (Table 1, Figure 3). On Tiree, a sample of 600 birds held 43 young (7.2%) with a mean brood size of 1.43 young per successful pair.

Table 1. The percentage of young and mean brood size of Greenland Barnacle Geese during winter 2019/20.

Site	Number aged	Percentage of young (%)	Mean brood size	Number of broods
Islay	5,184	10.1	2.04	169
Tiree	600	7.2	1.43	30
<b>Overall</b>	<b>5,784</b>	<b>9.8</b>	<b>1.95</b>	<b>199</b>

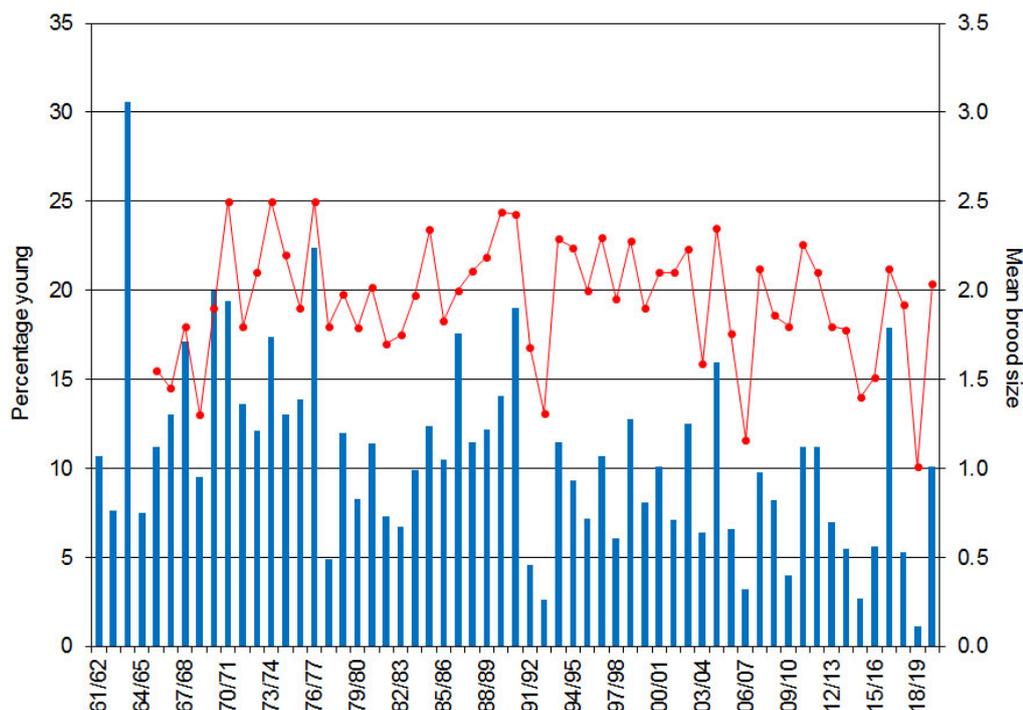


Figure 3. Percentage young (blue columns) and mean brood size (red circles) of Greenland Barnacle Goose on Islay (where data have been collected regularly), 1961/62–2019/20.

### 3. Discussion

The population total of this protected species has declined in the last five years and this is probably due to increased mortality through legal hunting in Iceland and the culls on Islay which have increased, at a time when annual reproductive success has been low. The culls, carried out by NatureScot, are in response to perceived economic losses to the agriculture industry and are explained in the Islay Sustainable Goose Management Strategy.

Results from age assessments conducted during autumn 2019 on Islay (from where the largest sample is provided) show that the breeding season was above average; the figure of 10.1% young recorded in flocks on Islay being higher than the previous ten-year mean of 7.1% ( $\pm 1.57$  SE). The long-term mean for the period 1961 to 2019 was 10.7% young. The mean brood size on Islay in 2019 was also slightly higher than average at 2.04 young per successful pair, compared to the previous ten-year mean of 1.77 young ( $\pm 0.12$  SE). 2019 was however, only the second year when breeding success was higher than 10% young in the

last eight years, and followed the worst breeding season since records began in 1959 (1.1% young recorded in 2018).

#### 4. Acknowledgements

Thanks are extended to Malcolm Ogilvie and John Bowler for providing age counts. NatureScot provided additional counts.

#### 5. References

Mitchell, C. & C. Hall. 2020. *Greenland Barnacle Geese Branta leucopsis in Britain and Ireland: results of the international census, spring 2018*. Scottish Natural Heritage Research Report No. 1154.

This report should be cited as:

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## Goose & Swan Monitoring