

WWT/JNCC/SNH Goose & Swan Monitoring Programme  
survey results 2015/16  
Taiga Bean Goose *Anser fabalis fabalis*

## 1. Abundance

During winter 2015/16, monitoring of Taiga Bean Goose was undertaken at the Slamannan Plateau, Falkirk, by members of the Bean Goose Action Group and at the Yare Valley, Norfolk, by RSPB reserve wardens. A peak count of 263 birds was recorded at Slamannan, similar to the previous ten year mean ( $258 \pm 8.1$  SE) (Figure 1) although still below the site peak of 300 birds in winters 2005/06 and 2007/08. At the Yare Valley, where the number of wintering Bean Geese has been declining since 1993/94, the peak count of 22 geese was lower than in 2014/15, when 32 geese were recorded, and far lower than the site peak of 485 birds in 1990/91. The slow decline of this important flock continues; the previous ten year mean has declined to 102 birds ( $\pm 13.7$  SE).

The first 100 birds arrived at Slamannan on 29 September and the autumn highest count was of 165 birds on 1 November. A second wave of arrivals occurred in early winter indicated by a peak count of 263 birds recorded on 14 January 2016. Migration back to the spring stop over sites in Denmark took place unusually early in February 2016, with birds having left Slamannan around 7 February, compared to recent departures which have occurred in the last two weeks of February. At the Yare Valley, the geese again arrived slightly later than in recent years. No geese were recorded in October and the first birds (22 individuals) were seen on 26 November – the highest count of the winter. That number was never surpassed or matched during the remainder of the winter and from 19 December only two birds were seen. Two birds were also seen on 4 January – the last sighting of the winter. The duration of stay of the Yare Valley flock appears to be getting shorter.. No neck collared birds ringed in Sweden were recorded at the Yare Valley during winter 2015/16.

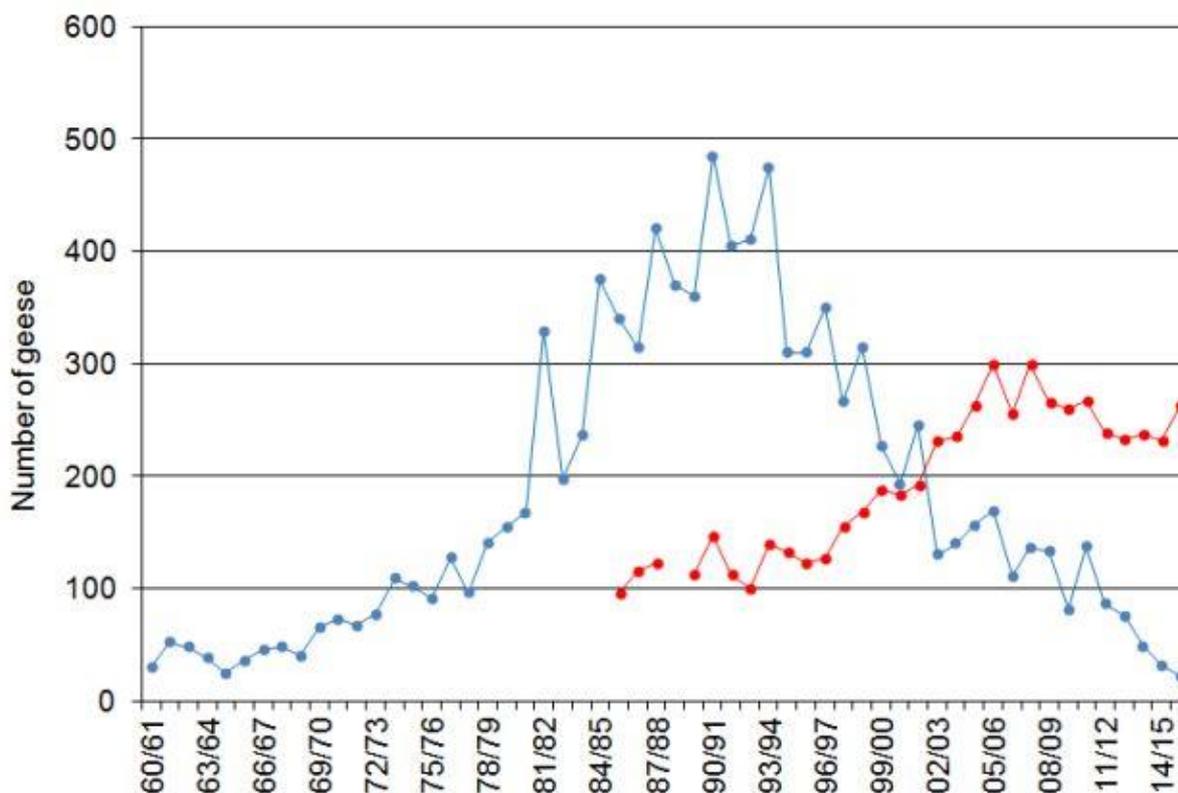


Figure 1. Winter peak counts of Taiga Bean Geese at Slamannan Plateau, Falkirk (red circles) and at Yare Valley, Norfolk (blue line) from 1960/61-2015/16.

## 2. Breeding success

Age assessments at Slamannan indicated that 2015 was a poor breeding year for Taiga Bean Geese wintering in Scotland. A flock of 152 birds was aged on 24 October, of which seven (4.6%) were young birds (Figure 2). Three families were identified with a mean brood size of 2.3 goslings per successful pair. The same seven first winter birds had been identified in an earlier sample of 50 birds aged a week earlier. Had the early count been the only age count carried out at Slamannan, breeding success would have been over-estimated (at 14.0%) and indicates the value of obtaining the largest sample possible. However, no age assessment was carried out in mid-winter after the arrival of more birds to Slamannan. Breeding success data were not collected at the Yare Valley.

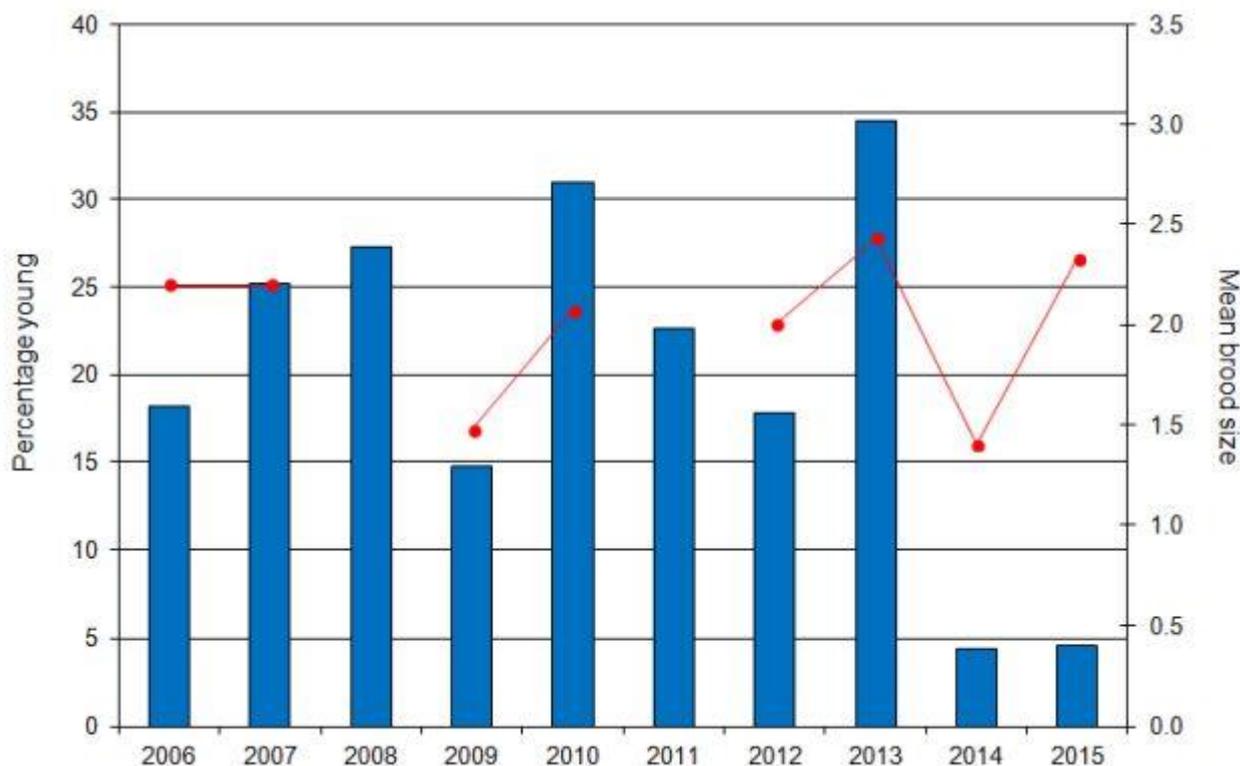


Figure 2. The percentage of young (blue columns) and mean brood size (red line) of Taiga Bean Geese recorded at Slamannan Plateau, 2006-2015.

#### Migration and site use

One of the five Bean Geese caught in October 2013 at Slamannan and fitted with telemetry equipment enabling the birds' feeding and roosting habits to be studied in detail, continued to collect data during winter 2015/16. In addition, seven Bean Geese were caught using cannon-nets in October 2015 and four of these (all adults) were fitted with new telemetry devices. This allowed detailed feeding distribution data to be collected for another winter in addition to providing valuable data on roost use. The migration route and stop over sites in northwest Jutland, Denmark were also tracked. We know from the movements of previously marked individuals that the geese move to Dalarna County in west Sweden where it is believed they spend the summer and probably breed.

### 3. Discussion

Since the peak count of 300 Bean Geese in 2005/06 and 2007/08, numbers at Slamannan have declined to approximately at 200-270 birds, although the peak count in 2015/16 (263 birds) was an increase on recent years. Breeding success in 2015, as recorded at Slamannan, was again poor, however, because this flock is <1% of the whole population, this estimate may not be representative of overall breeding success in the population. Bean Geese are not legal quarry in Scotland and few are probably shot in Sweden, Norway or Denmark. With average or good breeding success recorded at Slamannan in most years since 2004 (Figure 2), it is therefore surprising that the number of geese recorded there has fallen from a peak of 300 in 2007/08. There may be unknown sources of mortality affecting this small group, or there may be connectivity between the Scottish winter flock and those wintering on the continent. Based on sightings of colour ringed

birds, we know that one of the 33 Bean Geese marked at Slamannan since 2011 has over-wintered on the continent.

Numbers at the Yare Valley continue to decline and the winter 2015/16 count of 22 birds is the lowest since 1954/55. The decline has been remarkable, since over 400 birds were recorded there as recently as 1993/94. We know through sightings of neck collared individuals that the Norfolk flock is separate from the Slamannan flock in Scotland and is linked to wintering flocks in west Denmark. It is likely, therefore that rather than crossing the North Sea to winter in Norfolk, Bean Geese are 'short-stopping' and wintering in Denmark instead. This phenomenon might also help explain why the Slamannan flock is not increasing (see above).

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## Goose & Swan Monitoring