

**Call for 40<sup>th</sup> international Bewick's Swan age count 11/12 December 2021  
And results of the international age  
count: 12-13 December 2020**



**Wim Tijssen, Kees Koffijberg and Preben Clausen**

*This synchronous international survey is part of the long-term monitoring scheme coordinated by the Swan Specialist Group, in order to assess annual productivity in the species. In 2020, the 39<sup>th</sup> age count was held in the weekend of 12-13 December. Data were received from ten countries and pointed out at 8.3% juveniles: a bit higher than in 2019, but still below the level that would be required to compensate for annual mortality rates. We hope that all countries, coordinators and observers will continue their contribution in this anniversary year for the 40<sup>th</sup> age count in this long term study to 'keep a finger on the pulse' of the Bewick's Swan population.*

**Purpose of age counts**

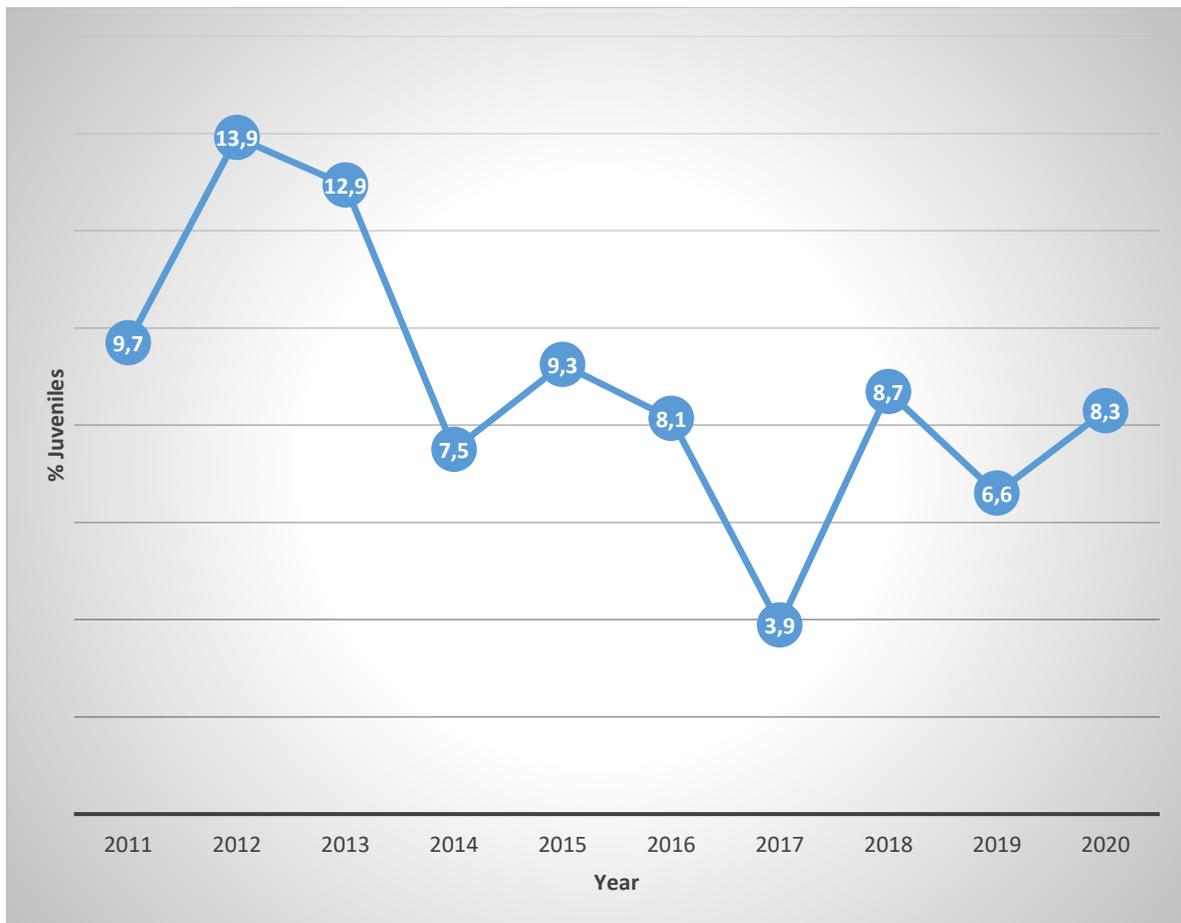
Since the early 1980s, the Swan Specialist Group has monitored the NW-European Bewick's Swan population carefully, to keep track on the population status and assess its conservation requirements. For this purpose, an international counts of the population size is organised once every five years (last in 2020) and productivity is assessed on an annual basis. This setup is important because historically the population size was small and, following an increase in numbers between the 1970s and mid-1990s, is now in decline and subject to major changes in winter distribution. Indeed, having peaked at just below 30,000 birds in 1995, numbers dropped to 18,100 in 2010. Whether a slight recovery to c. 20,100 birds in 2015 (Beekman *et al.* 2019) has been maintained hereafter remains to be seen, pending on the final results of the 2020-census. Age counts are an important tool for understanding such fluctuations in population size, along with results of ring-readings which give insight in survival and mortality patterns (and changes in migration strategy).



**December 2020; Bewick's swans on the isle of Texel, Nths – Picture Cor Fikkert**

### Breeding success – long term

Breeding success over the past 10 years has been rather poor; on average 8.9% juvenile birds were found in the population over this period (Fig. 1). As a result - with an apparent adult mortality of between 15–23% per year (Wood *et al.* 2018) - the population size has declined since 1995, although the latest results from the annual five-year-count in 2015 showed a little increase up to 20,100 birds (see above). At this moment the Swan Specialist Group is analysing the latest information from the last annual five-year-count from January 2020. Even if our age counts do not cover the entire flyway population, several national coordinators mentioned that it has become increasingly difficult to make large samples during the age count, suggesting that the population is still not in recovery and nowadays more widely distributed. But overall we are pleased that we have been able to monitor a substantial part of the NW European Bewick's Swans population every year since 1982!



**Fig. 1.** Breeding success for Bewick's Swans in the NW-European population from 2011–2020, measured as the percentage of cygnets in the wintering flocks, recorded from winters 2011/12 to 2020/21 respectively.



**Bewick's in shallow wet grassland; 12 December 2020 in Denmark – Picture Aage Matthiesen**

### Results from 2020 age counts

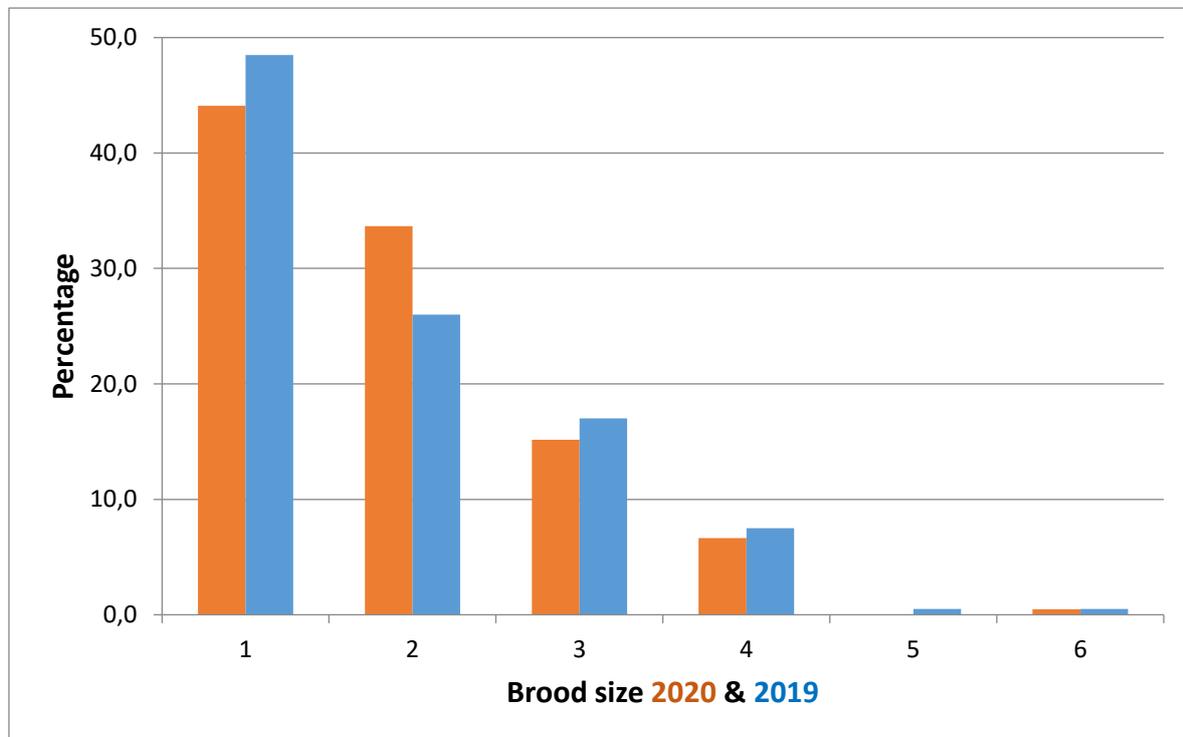
In December 2020, 9,197 Bewick's Swans were aged, so about a similar figure as in 2019 (Table 1). Thus in both years, c. 50% of the flyway population has been checked. The overall percentage of cygnets recorded was 8.3% in 2020 and 6.6% in 2019. Both winters were categorised as being very mild during the Mid-December counting period. Arrivals at the main wintering sites were rather late, which is more and more common due to the milder winters in NW-Europe (Nuijten *et al.* 2020).

**Table 1.** Summary of Bewick's Swan age counts recorded in each country during 12–13 December 2020 and 14–15 December 2019.

| Country      | Total no. of birds aged in 2020 | Total no. of birds aged in 2019 | No. of adults in 2020 | No. of adults in 2019 | No. of cygnets in 2020 | No. of cygnets in 2019 | % cygnets in 2020 | % cygnets in 2019 |
|--------------|---------------------------------|---------------------------------|-----------------------|-----------------------|------------------------|------------------------|-------------------|-------------------|
| France       | 264                             | 253                             | 240                   | 237                   | 24                     | 16                     | 8.7               | 6.3               |
| Belgium      | 101                             | 38                              | 75                    | 37                    | 26                     | 1                      | 25.7              | 2.6               |
| Netherlands  | 2,836                           | 2,965                           | 2,690                 | 2,817                 | 146                    | 148                    | 5.1               | 5.2               |
| UK           | 480                             | 445                             | 430                   | 420                   | 50                     | 25                     | 12.8              | 5.6               |
| Germany      | 2,725                           | 4,006                           | 2,444                 | 3,731                 | 281                    | 275                    | 10.3              | 6.9               |
| Poland       | 1,321                           | 1,280                           | 1,194                 | 1,149                 | 127                    | 131                    | 9.6               | 10.2              |
| Denmark      | 1,465                           | 264                             | 1,360                 | 251                   | 105                    | 13                     | 7.7               | 4.9               |
| Latvia       | 0                               | 5                               | 0                     | 4                     | 0                      | 1                      | 0                 | 20.0              |
| Lithuania    | 0                               | 0                               | 0                     | 0                     | 0                      | 0                      | 0                 | 0                 |
| Estonia      | 5                               | 13                              | 4                     | 11                    | 1                      | 2                      | 20.0              | 15.4              |
| <b>TOTAL</b> | <b>9,197</b>                    | <b>9,269</b>                    | <b>8,437</b>          | <b>8,657</b>          | <b>760</b>             | <b>612</b>             | <b>8.3</b>        | <b>6.6</b>        |

Between countries, we see some variation in the number of cygnets recorded (especially in 2020), which makes it clear why such a census is only working sufficiently when carried out on a flyway scale.

Compared to the data shown in Figure 1, the percentage of cygnets in 2020 was about average for the past decade. In 2019 it was below-average. The results of the flyway census in January 2020 will become available soon, and the effect of the ongoing low productivity on total population size can be assessed.

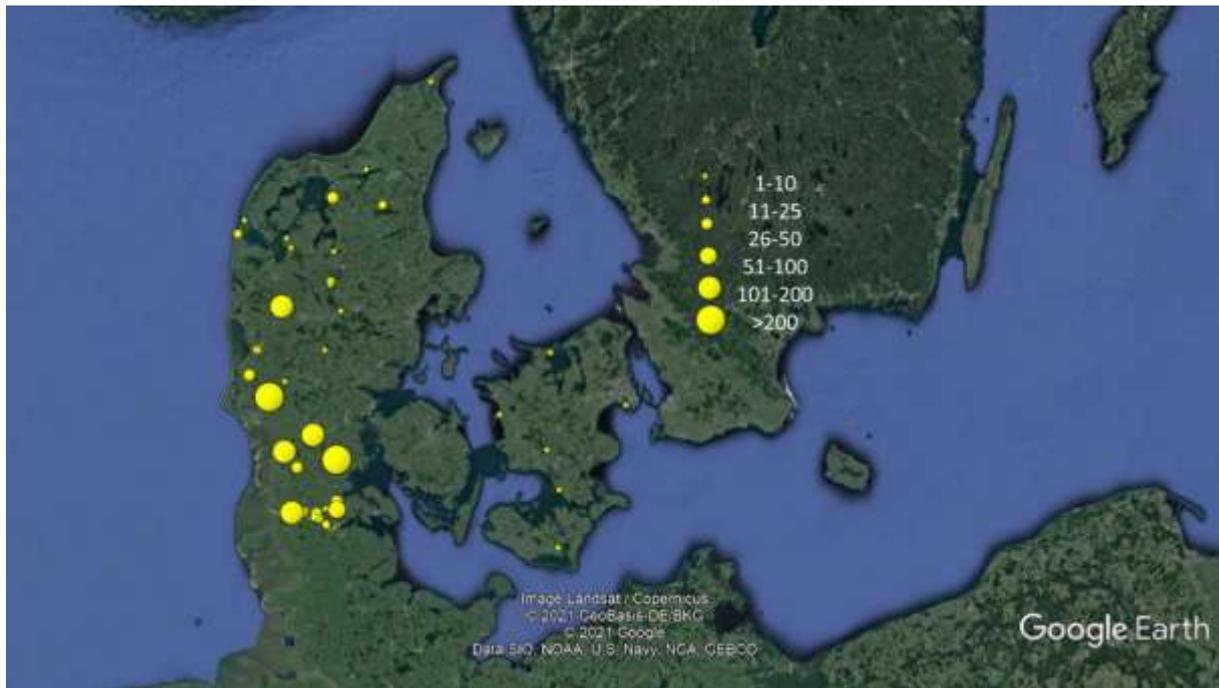


**Fig. 3** Brood size (number of pairs with 1 cygnet, 2 cygnets, etc.) in 2020 and 2019.

In addition to the percentage of cygnets in the wintering flocks, most observers also reported on brood sizes, *i.e.* the number of cygnets recorded in each successful family. We received information from 211 pairs with cygnets from seven countries. In 2019 we got information from 200 successful pairs. The average brood size in 2020 was 1.86. One third of the pairs had two cygnets, which was 8% higher as in 2019. The proportion of pairs with only one cygnet was 44%, which was the same as in 2018, but 5% lower than in 2019. Due to a lower proportion (22%) of families with three or four cygnets, the average brood size did not differ from 2019, when 1.87 cygnets per pair were recorded. We would like to emphasize that collecting brood size data is an important part of the count, as it enables further investigations in the part of the population that is actually breeding.

Special effort in Denmark in December 2020 by Preben Clausen

In Denmark numbers and distribution of Bewick's swan are monitored under NOVANA – the National Monitoring and Assessment Programme for the Aquatic and Terrestrial Environment of Denmark. The program currently involve annual midwinter counts (contributing to the International Waterbird Census), and counts every second year in March (even years) and November (uneven years)(Holm *et al.* 2021). The latter two counts periods have been chosen because earlier experience suggested numbers of the species usually occur in highest numbers in Denmark during these months. All counts are aimed at being country-wide censuses, where the majority of birds and sites are counted by a volunteer network of professional and dedicated amateur observers under coordination from the NOVANA count organizers at Kalø, Department of Bioscience, Aarhus University. Supplementary data are then collected from BirdLife Denmark's citizen science portal DOFbasen.dk, quality assessed, and duplicate filtered, before they are merged with the Kalø-NOVANA data, to compose a full data set.



**Fig.2** Distribution of Bewick's swans in Denmark during breeding success count in December 2020 (Data P. Clausen, J. Tofft and others).

Hence the December count is not part of the formal monitoring schemes, but was undertaken to second the annual assessment of productivity of the Bewick's Swans. In southern Jutland there is an ongoing monthly volunteer organized count, that is an extension of the German counts in Schleswig-Holstein, organized by Hans-Joachim Augst. In December 2020 Jesper Tofft from the local Danish group organized a more comprehensive count in the region, combining age-assessments with head-counts from feeding or night-roosts, to come up with a proper regional total. For the rest of Denmark a public call was made on DOFbasen.dk, announcing the count and encouraging observers to be accurate in recording their observations, contributing with age assessments and habitat use data.

#### Views on other countries

Poland made again a great effort in participating in the age count in December 2020 coordinated by Przemek Wylegala and his team. Age counts were organised for most of the main wintering locations, where 1,321 Bewick's Swans were present at the time. Almost the same high number as in 2019. The increasing numbers in Poland also coincides with the major eastward shift in the swans' distribution over the past decades (Nuijten *et al.* 2020). Germany held a much lower number of birds as in 2019, which could have been a partly northerly shift from birds normally wintering in northern Germany to Denmark. And the Danish border is not far away for birds wintering in northern parts of Schleswig-Holstein. In France the birds are using lakes with pondweeds in the north-eastern parts of the country and fewer small flocks migrate to the south in the Camargue area. Which is the most southern wintering place for the swans in NW Europe. For many years Jean-Baptiste Mouronval, from organisation Camarque Gardoise, coordinated the areal counts in this area to provide us with interesting counts. Which is not too easy, because there are lots of white wintering birds in this area! His colleague, Fabrice Passeri, will take over his 'yearly Bewick's Swans count job'. Thanks a lot to Jean-Baptiste, organising for many years the brood counts in this area of the Swan Specialist Group. In the Netherlands the majority of the birds was found on the Border Lakes between mainland and polders Flevoland and on the eastside of lake IJsselmeer. These regions, with swans feeding aquatically, normally held low percentages of juveniles, in this case 2.9% on 2.100 birds. Wintering numbers in the Netherlands, which used to be the main wintering country for the Bewick's Swans, are

steadily decreasing further. In the United Kingdom numbers were concentrating in the Ouse Washes(406), Slimbridge(54) and Kent.

### **Next age count: 11-12 December 2021**

The next International age count will take place in the weekend of 11-12 December 2021. We have little information about the conditions in the breeding areas, as due to the pandemic field expeditions were not possible. At least it seems that weather conditions in many parts of the Arctic were very warm. The first impressions from arriving flocks in NW-Europe, and along the flyway, have some signs for a bit better breeding season as last years. Juveniles percentages for other arctic species such as Barnacle Goose and Greater White-fronted Goose do not point at exceptional breeding conditions. But the season has just started, and hopefully the survey in two weeks' time will show what has been going on. We hope that all coordinators and organisations will continue their efforts in collecting these important data, which helps to understand the fluctuations and changes in the population. We are very grateful to all those observers, coordinators and institutes for the response.

We will send the excel-sheet to collect the data for the international age count in a separate email to all coordinators as a reminder.

Many thanks and with all best wishes,

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|--------------------|--------------------------------------|
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