



The Breeding Season in 2000 for Common Eiders in the Dutch Wadden Region

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Introduction

This article attempts to ascertain whether the high death rates observed in Common Eider populations in the winter and spring of 1999/2000 have had an effect on the breeding season in the whole Dutch Wadden Sea region. The majority of deaths occurred in the young, sub-adult population in the western Wadden Sea region (Van den Berk et al., 2000). Even though no specific research has been carried out to answer this question, there is a considerable amount of research data available on breeding grounds suitable for Common Eiders, thanks to the nature wardens in the region (mainly Staatsbosbeheer and Natuurmonumenten). Some of these data are also used for the annual Joint Monitoring Program of Breeding Birds in the Wadden Sea (JMBS), which is carried out in the framework of the Trilateral Monitoring and Assessment Program (TMAP). This program encompasses an inventory of all relevant Wadden Sea species in the whole international Wadden area once every five years (1991, 1996 etc.). Every year, the presence of these relevant species is followed in a number of sampling areas. All colony birds are also counted. In The Netherlands, this research, in which large numbers of volunteers and nature wardens participate, is co-ordinated and partially carried out by SOVON Dutch Center for Field Ornithology, in The Netherlands.

Methods

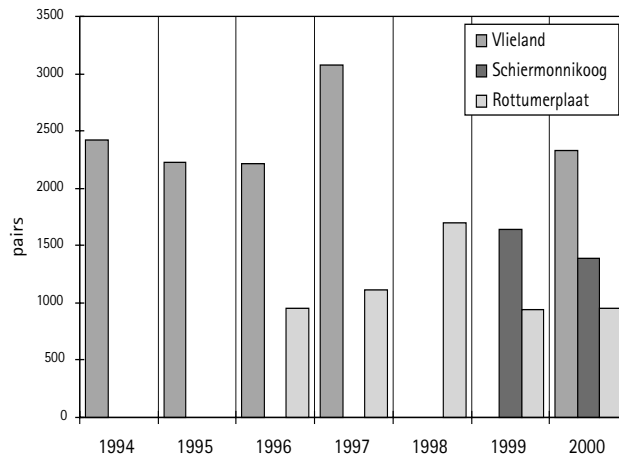
The Common Eider is one of the most difficult birds to follow. Two methods tend to be used:

1. nests in sampling areas are counted; this method tends to be used in those areas that are under permanent surveillance (Boschplaat, Rottum) due to its work-intensive nature;

2. the counting of adult males and females and sub-adult males during two counts (the differentiated counting method) in April and May. This counting method has been carried out on Vlieland and Schiermonnikoog.

The use of these two different methods could lead to the data being interpreted in contradictory ways. However, the data can also be looked at differently and in that case it can be concluded that the two sets complement one another well. This is because when the nests are counted, only the number of females brooding at that moment is counted and the number of sexually mature birds present in the total population is not estimated. It would be easy to conclude that the missing birds are dead. However, some of the potential breeding population could actually no longer be able to lay and brood eggs because of their poor condition. The advantage of counting the males and females along

Figure 1: Numbers of breeding Common Eiders in eight Dutch census areas of the JMBB in 1994– 2000.



the coast in April and May is that it is possible to make a reasonable estimate of the actual number of potential breeding birds in important breeding colonies.

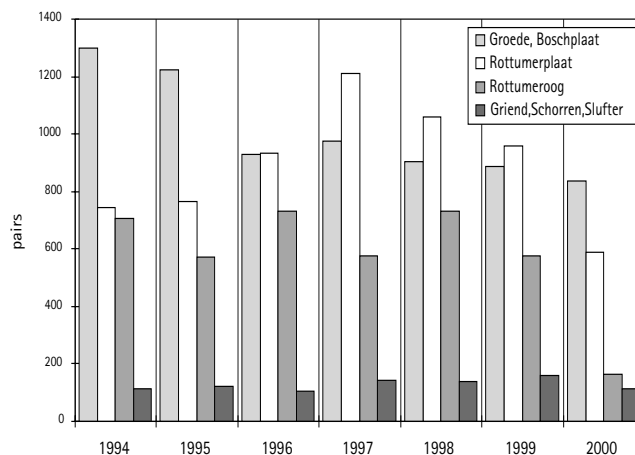
Results

Disregarding the differences in methods used, it is possible to establish the following.

During the last complete count in 1996, the number of breeding pairs of Common Eiders in the Dutch Wadden Region was estimated at 10,000 (Rasmussen et al., 2000). Thanks to the monitoring of sampling areas (in which both counting methods are used), we know that this number must have been slightly higher in 1997 and that it dropped slightly in 1998 and 1999. This was not particularly worrying. However, the drop in population in 2000 was very clear (Fig. 1). Three missing numbers in this figure were estimated using the TRIM program (Pannekoek & Van Strien, 1998). It is striking that the differentiated counts show the drop to be less sharp, than was shown using the nest counts (Figs. 2 & 3). This could lead to the conclusion that a con-

siderable number of the adult females were in such a bad condition that they were not able to lay eggs. While carrying out field work ourselves on Vlieland, Terschelling, Ameland and Schiermonnikoog, we saw that those Common Eiders that did brood, did not start laying eggs until very late and that there were very few young later that year. Other researchers confirmed our observations. The first young were not seen on Rottumerplaat until 20th May for example, while they are usually seen between 5th and 10th May (Lutterop & Kasemir, 2000). This also indicates that the older birds were in bad shape. These observations are confirmed by research on nesting success rates on Griend (Oosterhuis, 2000). The first chicks were spotted on 22nd May (in 1999 it was 4th May), while the number of nests dropped by one third when compared with the 1999 figure. In 1999, approximately 23.8 % of the 21 nests studied were unsuccessful, compared with 67.7 % of the 31 nests studied in 2000. It is striking that a number of nests were left for no apparent reason during the breeding period (this was also observed in De Slufter on Texel, by E. van Egmond, SBB). The final brood success (nest success) on Griend (calculat-

Figure 2: Numbers of breeding Common Eiders, in some Dutch areas, integrated counts.



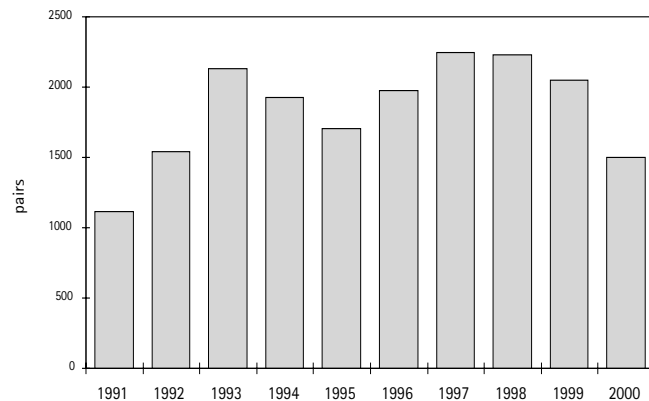


Figure 3: Numbers of breeding Common Eiders in some Dutch areas, nest counts.

ed using the Mayfield method) appears to have decreased from 40.8% in 1999 to 17.6% in 2000. The number of chicks born on Griend to actually reach flying age is not known since the females often move far away with their young. It was possible to calculate this on Rottumerplaat, where considerable mussel banks are found to the east. Approximately 140 ducklings out of 589 nests actually reached flying age. Even though this might not seem too bad, the number of Common Eiders actually breeding was much lower than in previous years (see Fig. 2) (Lutterop & Kasemir 2000).

Summary

1. The total population of sexually mature Common Eiders has dropped in the entire Dutch Wadden Sea area due to the high death rate in the winter and spring of 1999/2000.
2. Only a small number of the females laid eggs and this took place much later than normal in the entire Dutch Wadden Sea Region
3. There are strong indications that the breeding success was moderate to low, not only on Griend but also over a large area of the Dutch Wadden Sea region.
4. This indicates a persistent food shortage for Common Eiders in April, May and June 2000 in a large

part of the Dutch Wadden Sea.

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